

A COMPARATIVE INVESTIGATION OF EARLY CHILDHOOD TEACHERS'
PORTFOLIO PRACTICES:
CASES FROM TURKEY AND THE UNITED STATES

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CASES FROM TURKEY AND THE UNITED STATES**

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ABSTRACT

A COMPARATIVE INVESTIGATION OF EARLY CHILDHOOD TEACHERS' PORTFOLIO PRACTICES: CASES FROM TURKEY AND THE UNITED STATES

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The current study has a multi-method research design and investigated portfolio assessment comprehensively in three parts. First, teachers' portfolio practices and views were investigated by means of semi-structured individual interviews in a qualitative design. Secondly, portfolio contents were examined with a developed content checklist and rubric under the methodology of document analysis. In these parts, 24 teachers participated and 19 child portfolios were examined in a Reggio Emilia-inspired preschool and university preschool in Turkey and the U.S. In the final part, teachers' portfolio assessment practices and related predictors were investigated using a quantitative methodology. Data were collected from 605 early childhood teachers in Turkey, scales were developed for data collection, and descriptive statistics, MANOVA, and Hierarchical Multiple Regression were utilized in data analysis.

Qualitative findings revealed that portfolio practices meet on similar points in the same country rather than in the same preschool type. Teachers expressed several benefits of portfolio assessment for each stakeholder including the child, teacher, and parents. Document analysis supported interviews findings, and it was seen that portfolios serve the purpose of assessment when evaluated overall. However, those need to be enriched in terms of child reflection. Finally, through quantitative analysis, it was found that intention and self-efficacy beliefs are the significant predictors of teachers' portfolio practices, and teachers' portfolio practices do not change significantly with respect to teaching experience. Furthermore, teachers practicing portfolio assessment were also found to have higher scores in internal constructs (e.g. attitudes, beliefs) compared to others who are not using portfolios.

Keywords: Early Childhood Education, Cross-Cultural Study, Assessment, Portfolio Assessment, Teacher Self-Efficacy

ÖZ

OKUL ÖNCESİ ÖĞRETMENLERİNİN PORTFOLYO UYGULAMALARININ KARŞILAŞTIRILMALI OLARAK İNCELENMESİ: TÜRKİYE VE ABD'DEN ÖRNEKLER

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Karma desenli bu çalışma, portfolyo değerlendirmesini kapsamlı bir şekilde üç ayrı bölümde incelemektedir. İlk olarak öğretmenlerin portfolyo uygulamaları ve görüşleri yarı yapılandırılmış bireysel görüşmeler aracılığı ile nitel araştırma deseninde incelenmiştir. İkinci olarak, doküman incelemesi kapsamında geliştirilen kontrol listesi ve rubrik aracılığı ile portfolyoların içerik analizi yapılmıştır. Türkiye ve ABD’de Reggio Emilia felsefesinden ilham alan bir anaokulundan ve bir üniversite anaokulundan 24 öğretmen görüşmelere katılmıştır ve 19 çocuk portfolyosu incelenmiştir. Üçüncü bölümde ise öğretmenlerin portfolyo uygulamaları ve yordayıcıları nicel bir araştırma deseninde incelenmiştir. Türkiye’den 605 okul öncesi öğretmeninden veri toplanmış, veri toplamak için ölçekler geliştirilmiş ve veri

analizinde betimsel istatistikler, MANOVA ve Hiyerarşik Çoklu Regresyon Analizi kullanılmıştır.

Nitel bölüm sonuçları, portfolyo uygulamalarının aynı okuldan çok aynı ülke içerisinde benzerlik gösterdiğini ortaya koymaktadır. Öğretmenler, portfolyonun çocuk, öğretmen ve aileler dâhil olmak üzere her paydaş için birçok faydasından bahsetmişlerdir. Doküman analizi sonuçları, görüşme bulgularını desteklerken, portfolyoların genel olarak değerlendirme amacına hizmet ettiğini göstermektedir. Fakat portfolyoların çocuk yansımaları açısından zenginleştirilmesine ihtiyaç duyulmaktadır. Son olarak, nicel analizlerde niyet ve özyeterlik inançları portfolyo uygulamalarının önemli yordayıcıları olarak bulunmuş ve öğretmenlerin portfolyo uygulamalarının öğretmenlik tecrübesine göre önemli ölçüde değişmediğine ulaşılmıştır. Ayrıca portfolyo değerlendirmesi uygulayan öğretmenlerin, portfolyo kullanmayan diğer öğretmenlere göre içsel değişkenlerde (örn. tutum, inançlar) daha yüksek puanlara sahip oldukları bulunmuştur.

Anahtar Kelimeler: Okul Öncesi Eğitim, Kùltürler Arası Çalışma, Değerlendirme, Portfolyo Değerlendirmesi, Öğretmen Özyeterliğı

To memory of my grandmother, Şayan Alaçam,



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LIST OF ABBREVIATIONS

ECE	Early Childhood Education
MoNE	Ministry of National Education
NAEYC	National Association for the Education of Young Children
U.S.	United States
TPB	Theory of Planned Behavior
RT	Reggio Emilia-inspired Preschool in Turkey
UT	University Preschool in Turkey
RA	Reggio Emilia-inspired Preschool in the U.S.
UA	University preschool in the U.S.
EFA	Exploratory Factor Analysis
CFA	Confirmatory Factor Analysis
MANOVA	Multivariate Analysis of Variance
SPSS	Statistical Package for the Social Sciences
AMOS	Analysis of Moment Structures
NFI	Normed Fit Index
CFI	Comparative Fit Index
RMSEA	Root Mean Square Error of Approximation
VIF	Variance Inflation Factor

CHAPTER 1

INTRODUCTION

This chapter presents the background of the study and introduces the purpose, significance, and definitions of the key terms in this research.

1.1. Background of the Study

“Assessment and curriculum are two sides of the same coin. Each is more effective when they are integrated to form a continuous teaching-learning process” (Chen & McNamee, 2007, p. 11).

Developmentally appropriate curriculum and assessment are some of the characteristics of high-quality early childhood programs (Couchenour & Chrisman, 2000). Therefore, it is crucial to implement a systematic program to assess an individual child in success of any early childhood education program (Abbott & Crane, 1977). When the term assessment is heard, tests generally come into mind (Russell & Airasian, 2012). However, assessment of children from birth to preschool years is different. They cannot read or write (Wortham & Hardin, 2016), and they also learn differently and at different rates. Therefore, it is necessary to accommodate assessment accordingly (Shepard et al., 1998). By considering these points, assessment in early childhood education is defined as the process of collecting information about children from several sources and then organizing and interpreting that information (McAfee et al., 2004).

To look back, classroom assessments had little impact on instructional planning until the arrival of educational accountability in the 1970s and 1980s (Popham, 2014). Standardized tests began to be used in education to provide accountability for students' learning in the 1980s (Wortham & Hardin, 2016). The probable reason might be that there was an increase in funding for early childhood education by

governments and funding organizations, and they wanted to be sure that their investments were attaining the desired goals (Dodge et al., 2004). However, there is now a growing dissatisfaction with traditional test-based assessment (Berry, 2008) since knowledge about assessment has changed considerably over the years (Hall & Burke, 2004) to reflect the predominant theory of child development (Losardo & Notari-Syverson, 2001).

Currently, as educators move from traditional views of learning to constructivist view of learning, assessment research also changes direction towards enabling learners to become owners of their own learning (Andrade & Brookhart, 2020). With this new emphasis, learners are actively participating in all phases of learning, from planning to evaluation (Butler & McMunn, 2006). To this end, educators differentiate assessment to serve children's needs more effectively (Stefanakis, 2010). Therefore, there is an awareness of the necessity of collecting information about student learning from different sources (Berry, 2008). In response to this need, assessment is done through a process of comparison of child performance with previous performances (Lewin-Benham, 2011). For instance, they observe children, collect and analyze work samples, set up portfolios, or conduct teacher-made assessments. Teachers' assessment practices depend on the children's age and grade level, and the requirements of the school or center. Moreover, laws, regulations, and policies also impact assessment practices (McAfee et al., 2016).

If assessment and curriculum development are linked, progress in children's growth and learning can be documented systematically. More specifically, authentic assessment can provide this relationship (Grisham-Brown et al., 2006) since it is integrated into teaching and learning to improve instruction, teaching practices, and curriculum development (Litchfield & Dempsey, 2015). A portfolio is a well-accepted authentic assessment type (Gronlund & Engel, 2001). It is at the heart of assessment with young children because of its potential to recognize the uniqueness of each child (Kingore, 2008). To define the concept, portfolio means a collection of student work over time and documentation of growth in specific curriculum areas (Fiore, 2012). Assess is derived from the Latin word "assidere," which means "to

sit beside” (Belgrad et al., 2008; Gronlund & James, 2013). Purposeful and student-centered portfolio assessment enables students and teachers to “sit beside” each other. Students become active participants in portfolio assessment and invite others to sit beside them when they evaluate their educational experiences (Belgrad et al., 2008). They provide a complete story of a child in an early childhood setting. It becomes a way to document and follow a child’s ongoing development (Gronlund & Engel, 2001). It also provides a basis for evaluation and guides further development and learning (McAfee et al., 2016). Overall, sharing a portfolio, which is based on observations and developmental principles, provides a window into learning in an early childhood setting (Gronlund & Engel, 2001). However, it is not necessary for it to be a single assessment. Portfolios can be integrated with traditional assessment methods (Johnson, et al., 2006). A combination of standardized tests and a portfolio provides a comprehensive assessment profile in addition to providing insight into the child learning process (Hebert, 2001).

Despite the reported advantages, there are several challenges of the portfolio assessment process to reach offered benefits. For instance, because the portfolio looks at children’s development over a period, it requires time and extra effort to plan and evaluate (Banta, 2003). Early childhood teaching is a demanding job. Teachers need to be on their feet for long hours. Daily tasks are already lengthy and time-consuming for them. They always need to be attentive to children. Because of these reasons, although many teachers are interested in portfolios, they find it overwhelming and time-consuming (Gronlund & Engel, 2001). On the other hand, there is no single way to do a portfolio. Each folder is individual, different, and represents the owner. It is possible to show child development and learning in different areas. Therefore, teachers might create their own system which works for them (Kankaaranta, 1996). That being said, this uncertainty and flexibility of formative assessment can be demanding for teachers at the same time (Bell & Cowie, 2001). One probable reason is that preservice education is limited in providing assessment literacy because it is theory based, disconnected from teachers’ daily assessment practices, and potentially not aligned to current

educational standards (DeLuca & Klinger, 2010; Graham, 2005; Stiggins, 1999). Moreover, early childhood educators often do not have access to professional development, which helps them understand, apply, and advocate sound assessment practices (Hyson, 2002). Another possible reason is that the lack of research and examples on this topic might lead to inadequate training and support for teachers. In fact, it was confirmed in the related literature that professional development has a significant impact on assessment practices (Zimmerman, 2018).

A teacher has an important role in achieving the intended purposes and benefits of portfolio assessment. It does not automatically provide benefits. It can even be misleading if it is done and interpreted improperly. For instance, it can be simply a folder to store documents without a purpose (Arter & Spandel, 1992), or it can be viewed as an extra workload for teachers (Knauf, 2017b). Teachers have a direct impact on the assessment process (Gullo, 2006). To take this a step further, it is necessary that they should view formative assessment as valuable for students' learning. If not, they will consider it another duty for them (Heritage, 2007). Therefore, both their attitudinal and cognitive factors may impact their practices in the classroom (Yan & Cheng, 2015). Although there are some studies regarding teachers' attitudes and practices, most research focuses on one aspect of assessment (Brown, 2004; Brown et al., 2011). Having a broad focus, Theory of planned behavior (TPB) provides a comprehensive framework about people's tendency to perform or not to perform a certain behavior. It explains and predicts behaviors in a variety of domains and is supported by a number of research studies. According to the first level of the TPB model, behavior is determined by intentions and perceived behavioral control. Three factors also affect intentions: attitude towards behavior, subjective norms, and perceived behavioral control, which are explained by behavioral, normative, and control beliefs in the final level of the model (Ajzen, 2005).

According to TPB, people are also more likely to engage in the intended behavior if there are strong intentions (Ajzen, 1996). Goal intention provides commitment to achieve it and has a primary role in understanding the motivated behavior

(Gollwitzer & Bargh, 1996). Another identified predictor of behavior in this theory is perceived behavioral control. It was proposed that *“From a theoretical perspective, self-efficacy and perceived behavioral control are virtually identical”* (Fishbein & Ajzen, 2010, p.161). Both refer to perception of capability of performing a specific behavior or reaching a certain goal (Fishbein & Ajzen, 2010). However, since perceived behavioral control might be influenced by external factors, it is less predictive than self-efficacy (Yan & Cheng, 2015). Efficacy beliefs contribute to both motivation and performance (Bandura, 1997). Teacher self-efficacy is the most researched area of teacher motivation. A high level of self-efficacy is positively related to teachers’ beliefs about teaching and instructional behaviors, high level of job satisfaction, low level of stress, and fewer difficulty in teaching (Richardson et al., 2014). Furthermore, teachers with high self-efficacy were found to have a high level of professional commitment (Coladarci, 1992). The probable reason for this is that self-efficacy beliefs can contribute to teachers’ ability to deal with stressful and challenging situations (Bray-Clark & Bates, 2003). For instance, it was confirmed in the related literature that teachers are more likely to practice assessment if they feel confident (Yan & Cheng, 2015), but they are not willing to use assessment methods if they have low self-efficacy (Guo et al., 2014). In this light, it might be necessary for teachers to believe in themselves to practice assessment methods.

In addition to theory constructs, related literature also points to different variables as possible predictors of teachers’ behavioral intentions. For instance, personal norm is strongly and positively related to behavioral intentions (Doran & Larsen, 2016). Similarly, it was agreed that barrier perception might contribute to predictability of intention (Bozioneles & Bennett, 1999). Moreover, it is suggested that teachers’ beliefs related to teaching and learning shape their understanding of classroom assessment (Earl, 2003). To illustrate, a portfolio is a child-centered method of documentation and assessment which brings out children’s ideas and opinions (Kankaraanta, 1996). It is overwhelming for teachers who have teacher-centered classrooms (Barton & Collins, 1997). Therefore, child-teacher centered

beliefs might be another considerable factor upon their portfolio related intentions. Examination of all these variables together might provide a comprehensive picture to interpret portfolio assessment practices.

Moreover, contextual differences might be another considerable factor upon portfolio practices. Portfolio assessment is used widely in different countries and educational philosophies around the world. However, since each country has a different approach to early childhood and development, its format, utilization, and purpose change (McKenna, 2005). Therefore, it is necessary to include contextual and cultural influences in assessment that facilitate or hinder learning (Losardo & Notari-Syverson, 2001). For instance, in the U.S., for accountability demands and program evaluation, quality is measured by assessing children's performance in achieving specific outcomes. Preschool educators show program effectiveness with children's attainment of specific skills (McKenna, 2005). These are also reflected in children's portfolio pages. On the other hand, in Turkey, there is a centralized early childhood education program and teachers are expected to prepare a portfolio folder for each child by including suggested content (MoNE, 2013). Teachers reflect on children's development through child activities and some assessment documents in the portfolio. These show that portfolio assessment can easily be adapted with respect to country and preschool requirements when there is no strict guideline to follow. However, there is a lack of literature on this issue right now despite its growing popularity around the world. There is a need in the related literature to examine portfolio assessment practices in different contexts and educational philosophies. Research on this topic might have implications for international literature to adapt portfolio assessment for different contexts or to convince educators of its usability in their educational philosophy.

Overall, teachers have a crucial role in portfolio assessment process. Hence, their practices and views on portfolio assessment are worth to examine in the field. However, the literature does not provide a comprehensive picture of teachers' portfolio assessment practices, views, and its predictors. There are fewer research studies on portfolio assessment in both national and international literature. In

Turkey, there are only a few empirical research studies that investigate early childhood teachers' views on portfolio assessment (Alaçam & Olgan, 2016; Balcı & Tezel-Şahin, 2021; Zelyurt & Karakaş, 2018). There are some in international contexts, but these focus on specific portfolio types or teachers' perspectives on portfolio assessment (Appl et al., 2014; Gilkerson & Hanson, 2000; Krnjaja & Pavlović- Breneselović, 2016; Pickens, 2018). Related literature also confirmed different challenges (Chen & Cheng, 2011) and misconceptions of teachers in portfolio assessment (Tangdhanakanond & Archwamety, 2019). All these imply a demand for research studies on portfolio assessment in early childhood education in both national and international contexts. More research studies carrying out both qualitative and quantitative research designs could provide a comprehensive picture of the portfolio assessment practices. This research should also consider different educational philosophies and needs in national and international contexts to provide practical implications to international literature.

1.2. Purpose of the Study

This dissertation is designed as a multi-method study and consists of three parts. The first is a qualitative study, and it was aimed to examine and compare early childhood education (ECE) teachers' practices and views on portfolio assessment in a Reggio Emilia-inspired preschool and university preschool in Turkey and the U.S. Semi-structured interviews were employed to collect the data. The second study is content analysis, and it was aimed to examine and compare the content of child portfolios to assess quality in terms of serving the portfolio's purpose of assessment in the same preschools in Turkey and the U.S. In this way, it was aimed to investigate whether teachers' self-reported practices are reflected in their actual child portfolio contents. To this end, the content checklist was filled and the rubric was used by the researcher to rate portfolios after examination. The last part is a quantitative study, and it was aimed to investigate early childhood education teachers' portfolio practices and predictors of those practices in the capital city of Turkey. The following surveys were used for data collection: practice, norms,

behavioral beliefs, attitude, self-efficacy beliefs, barrier perceptions, intention, and child-teacher centered beliefs.

In brief, this dissertation research has three parts, including three different studies, and aims to answer the following research questions:

For Study 1:

1.1. What are the ECE teachers' portfolio assessment practices in the selected preschools in Turkey and the U.S. in terms of content, organization, and parent involvement?

1.2. What are the ECE teachers' views on portfolio assessment in the selected preschools in Turkey and the U.S. in terms of definition and purpose, advantages, challenges, support, and suggestions?

1.3. What are the similarities and differences in ECE teachers' portfolio assessment practices and views between Turkey and the U.S.?

For Study 2:

2.1. What are the most frequently included components in the child portfolios in the selected preschools in Turkey and the U.S.?

2.2. What is the level of quality in the content of child portfolios in the selected preschools in Turkey and the U.S.?

2.3. What are the similarities and differences in components and quality of child portfolio contents between Turkey and the U.S.?

For Study 3:

3.1. Is there a significant difference between ECE teachers practicing or not practicing portfolio assessment in terms of portfolio-related behavioral beliefs, attitudes, self-efficacy beliefs, barrier perceptions, intention, and child-teacher centered beliefs?

3.2. How well can early childhood teachers' portfolio practices be predicted by years of teaching experience, portfolio-related intention, and self-efficacy beliefs?

1.3. Significance of the Study

“Teaching without assessment is like driving a car without headlights” (as cited in Morrison, 2014, p. 165).

Children's development is dynamic and changes even day to day (McAfee et al., 2016). Assessment is important in understanding whether children are developing and learning, and what is helping their learning in the process (Smidt, 2015). Specifically, performance assessment applied through portfolios provides a comprehensive view of what a child understands and uses (Wortham & Hardin, 2016). It provides a visual representation of child development over time with respect to developmental domains and content standards (Piker & Jewskes, 2013). In this way, it reflects the whole child with all developmental domains of learning (Wortham et al., 1998), and it provides a comprehensive picture of the individual child (Laski, 2013; Losardo & Notari-Syverson, 2001). However, to reach these offered benefits, there is no right way to create a portfolio system (Banta, 2003). There are many purposes and formats (Wortham et al., 1998). This flexibility gives a crucial role to teachers in creating their own portfolio assessment system. Therefore, offered benefits of portfolio change with respect to teachers' portfolio assessment practices. Yet, there are also different affective factors to consider upon teachers' practices. Investigation of portfolio assessment and all these possible factors together might provide a comprehensive picture of portfolio assessment and provide practical implications to the field and teacher training.

Portfolio assessment reflects the used program (Banta, 2003) since assessment and curriculum are interrelated in the teaching-learning process (Chen & McNamee, 2007). Therefore, it is important to investigate portfolio assessment practices by considering curriculum and preschool philosophies. These might provide a background to understand the why behind what teachers are doing. In this light, having participant in-service teachers from Turkey and the U.S., the current

research focuses on portfolio assessment practices in these two different contexts. Turkey has a centralized early childhood education curriculum, and teachers are expected to assess child development by including child activities and assessment-related documents in the portfolio. On the other hand, in the U.S., there is not a centralized early childhood education system, yet a portfolio is a required assessment in the participant preschools. They have learning standards and indicators to assess for each child, and they document the representative ones on their portfolio pages. Overall, the common point is that the portfolio is a comprehensive assessment that includes representative content to present child development. The focus is similar, and suitable to the nature of portfolio assessment; however, the assessed points and the ways of presenting change between these two countries with respect to their curriculum. Therefore, investigating portfolio assessment in these two contexts, with a centralized and not centralized education system, might provide comprehensive information to international literature about portfolio assessment practices in these different educational systems. It might also contribute to the international literature by providing a comparative investigation of portfolio assessment in these two different countries. As a result, it can provide practical implications regarding portfolio practices for teachers, administrators or policy makers in both national and international settings. To illustrate, it might give indications to teachers about its adaptability to different contexts and present different ways to see child development by considering relevant curriculum or philosophies. Particularly in Turkey, examining how teachers perceive and practice portfolio assessment in a centralized curriculum is important in understanding reflections of these policies and standards in instruction.

Portfolio assessment was investigated in two different types of preschools in these countries. Both preschool types were using portfolios as a primary assessment method, and they have a supportive preschool philosophy or context for it. In the Reggio Emilia philosophy, documentation is integrated into the teaching and learning process of children and teachers (Rinaldi, 2012). Teachers are educated

and experienced about documentation and use it for a variety of purposes like understanding children, evaluating their own work, and sharing ideas with other educators (Gandini, 1993). Similarly, university preschools also have a child-centered educational philosophy, and documentation has an important role in reaching the intended educational objectives in this setting. Individualized portfolio folders enable them to know and assess each child and become a powerful tool to engage students in process (Jones & Shelton, 2006). The current study's results were expected to present how teachers make sense and practice portfolio assessment to serve their purposes in these preschools, which integrated portfolio assessment into their curriculum. These preschools were selected from two different countries, as justified above, Turkey and the U.S. Regarding the role of different contexts, it was supported in the related literature that countries' policy and cultural contexts may impact educators' practices related to pedagogical documentation. For instance, the purpose of documentation and with whom documentation is shared change in different contexts (Lee-Hammond & Bjervas, 2020). Similar to pedagogical documentation, an individual portfolio is a type of documentation (Helm et al., 2007). Therefore, in line with the related literature, portfolio practices might also change even in the same type of preschools in different cultures. In this light, examination of portfolio practices from these two different preschools in two cultural contexts might contribute to international literature by presenting the different practices. For instance, it could yield information about how Reggio Emilia-inspired preschool teachers are practicing portfolio assessment in their classroom and what they suggest based upon their extensive training and experience. Providing examples from such documentation-focused preschools might be helpful for teachers to develop their own portfolio system which works for them and may have implications on its adaptation to different educational philosophies or contexts.

Furthermore, this research might provide clues about the quality of portfolio practices by examining portfolio folders in different classrooms. In this way, the research can give indications about the strengths and weaknesses of portfolio

folders by illustrating with portfolio pages. These can be a valuable source and could provide evidence or guidance for in-service and pre-service teacher training in the international context. Although teacher education and training are essential for the quality of early childhood education (Bowman et al., 2000), there is a lack of teacher training on assessment techniques (Nassif, 2007). This research might provide a baseline for future portfolio-focused trainings and could in turn contribute to the quality of child portfolios. In addition, this dissertation's findings might also be an important source for teachers, policymakers, and researchers to explore alternative portfolio practices. Policymakers especially can see the strengths and deficiencies of available systems and decide on required changes in the curriculum. This can guide the necessary actions to be taken to support teachers in their practices on this issue since teachers who have district support, and extensive experience are more likely to implement portfolio assessment in their classrooms (Walcavich, 1995).

Another significance of the study could be explained as investigating the predictors of teachers' portfolio assessment practices, as is done in the quantitative part of this dissertation. It is important to identify determinants of behavior to understand human behavior (Ajzen, 1988). Identifying relationships and examining factors that affect teachers' portfolio practices might enable understanding of teacher participation and allow for more successful portfolio practices in the portfolio assessment process (Kiser, 2008). Available related literature on assessment and TPB constituted the background for this research study, and intention and self-efficacy beliefs were proposed as predictors of teachers' portfolio assessment practices. To explain, intention to perform or not to perform was identified as the most important determinant of a behavior, according to TPB (Ajzen, 2005). Supporting this, intention and self-efficacy beliefs were found to have similar impacts on formative assessment practices (Yan & Cheng, 2015). It is justified that understanding the effect of self-efficacy on assessment will provide knowledge about teaching practices related to assessment in early years and contribute to student outcomes in early childhood classrooms (Zimmerman, 2018). However,

since teacher self-efficacy is context-specific and differs across different tasks (Bandura, 1997), teachers can feel more or less efficacious in different circumstances (Tschannen-Moran et al., 1998). For this reason, the current study focused on preschool teachers' self-efficacy specifically in portfolio assessment. Based on the abovementioned justifications, the current study aimed to contribute to related literature by investigating predictors of teacher portfolio practices, namely intention and self-efficacy beliefs. Learning about these affective factors on teachers' portfolio-related practices might help understand their practices and provide policy implications to improve overall teacher education systems.

Moreover, this study can contribute to literature by investigating the years of teaching as a predictor on teachers' portfolio practices. Some research studies investigated the role of teaching experience upon portfolio assessment but contradictory results were reported. For instance, teachers' years of experience has been found as a significant factor on portfolio practices (Walcavich, 1995). A probable reason for this is that as teachers gain experience, they value assessment more and implement self-created assessments rather than readily available ones (Unal & Unal, 2019). However, in another study, years of experience was not found as significant on teachers' portfolio attitudes (Butts, 1997) and portfolio usage (Nick, 1995). Likewise, no relationship was found between teaching experience and perceptions or usage of formative assessment (Johnson et al., 2019). As a part of this study, investigating teaching experience in addition to the predictors of portfolio practices could provide a complete picture and enable interpretation of comprehensive findings by considering different factors. For instance, the significance or insignificance of results might be interpreted with respect to findings in teacher interviews. Furthermore, as explained in the purpose of the study, both qualitative and quantitative data collection were carried out in this study. Quantitative data were collected from a large sample size through questionnaires developed as part of this study and aimed to investigate teachers' portfolio practices and related predictors. Similarly, interviews with early childhood teachers and content analysis of child portfolios also provided in-depth

information about teachers' portfolio practices and views in two different preschools in Turkey and the U.S. Carrying out these three parts in this dissertation is expected to increase the trustworthiness of research by presenting consistencies or contradictions in findings in different parts of the study. It is also expected to provide complementary explanations to enrich discussion of overall findings and provide well considered implications for the field and future research.

In addition to predictors of practices as analyzed in this study, TPB highlighted different variables as determinants of the intention including attitudes, subjective norms, and perceived behavioral control (Ajzen, 2005), and this theory also constituted a baseline for some assessment-focused research studies in the related literature (e.g. Schaaf et al., 2008; Yan & Cheng, 2015). However, TPB has not been utilized as a theoretical framework to investigate portfolio assessment, particularly in early childhood education. Therefore, it is believed that the current research study can contribute to related literature by developing scales both related to the theory and other related constructs (personal norms, self-efficacy, and barrier perceptions) and also adapting the child-teacher centered beliefs scale. Examination of all these variables together with portfolio practices might provide indications about the possible connections among them and may also enable a comprehensive perspective to understand teachers' portfolio assessment practices. To illustrate, child-teacher centered beliefs may provide a different perspective to look into the portfolio assessment practices of participating early childhood teachers. Furthermore, this research might provide implications and suggestions both for stakeholders and future research studies in national and international literature. For instance, learning about barrier perceptions might provide insight into challenging issues to better support teachers. The scales were developed as a part of this study based on an extensive national and international literature review. These might be used in future studies, and findings in different parts of this research might also guide researchers in developing a model on portfolio assessment practices. In other words, overall research findings might provide a base and background for future research attempts in this area.

Related literature confirmed that teachers have a variety of misconceptions related to portfolio assessment (Tangdhanakanond & Archwamety, 2019). Therefore, it was concluded that preschool teachers need support and professional development through training, and they benefit from academic literature (Krnjaja & Pavlović-Breneselović, 2016). This dissertation expects to contribute to teacher education programs and related literature with the findings collected in the multiple parts of the research. Collecting teachers' suggestions and examining their portfolio practices together can offer a comprehensive guide on portfolio assessment to be added to teacher education literature. Moreover, overall findings of the dissertation can serve as a source for teacher training on portfolio assessment. Since there is no one best way or method (Fenwick & Parsons, 1999), these trainings on actual portfolio practices can support teachers in improving their portfolio practices.

There is a limited number of empirical research studies on portfolio assessment in both national and international literature. For instance, a curriculum-based portfolio development model was presented in one research study in an international context (Chen & Cheng, 2011). In another, teachers' perspectives about portfolio assessment were primarily investigated (e.g. Cadlwell, 2007; Krnjaja & Pavlović-Breneselović, 2016; Pickens, 2018). In Turkey, there are only a few empirical studies on portfolio assessment, and these mostly focus on the views of teachers or teacher candidates on portfolio assessment (Alaçam & Olgan, 2016; Balcı & Tezel-Şahin, 2021; Demircan et al., 2015; Zelyurt & Karakaş, 2018). In these research studies, a variety of benefits of portfolio assessment are reported, including easy transition to school (Peters et al., 2009), improved educational practice (Pekis & Gourgiotou, 2017), improved self-assessment and self-efficacy of children (Alaçam & Olgan, 2016), and effective communication with families (Benson & Smith, 1998). Moreover, some studies focused on specific elements or sides of the portfolio assessment process. For instance, Hou and Hsieh (2019) focused on portfolio sharing conferences in their research and reported its benefit as the resulting rapport between parent and teacher and teachers' understanding of parents' perspectives. Using a different methodology, Knauf (2017; 2017b)

examined portfolio contents and found teachers' dominance in the portfolio process since the portfolio was mostly seen as an educator's responsibility rather than a child's. Challenges were also reported, mostly related to the difficulty of documentation during the portfolio assessment process and allocation of time for it (Chen & Cheng, 2011). There is a lack of research on how portfolios are used in classrooms to reach potential benefits (Barton & Collins, 1997; Pickens, 2018). In response to this need in both national and international literature, in the current study, the aim was to investigate portfolio assessment comprehensively in a cross-cultural study. Teachers' portfolio practices were examined together with their views on portfolio assessment in order to uncover and understand implications for reaching offered benefits. Moreover, it was also investigated whether teachers' self-reported practices are reflected in their actual child portfolio contents in practice. This comparison was done by analyzing the content of the child portfolios.

To sum up, in this comprehensive study, the aim was to provide implications to improve assessment practices, better preparation of teachers, and better education of children. These overall findings are also expected to contribute to the quality of early childhood programs in turn. This connected aim was supported in the literature, *"If early childhood assessments improve, children's learning will improve, teacher performance will improve, and early childhood services and programs will improve"* (Gullo, 2013, p. 423).

1.4. Definition of the Key Terms

- **Assessment:** Process of collecting information about children from several forms of evidence, then organizing and interpreting that information (McAfee et al., 2004).
- **Portfolio assessment:** Systematic collection of child work and teacher data from formal and informal assessment to provide information about child development and learning (Wortham & Hardin, 2016).
- **Self-efficacy:** *"Beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments"* (Bandura, 1997, p. 3).

- **Personal Norms:** Feelings of personal obligations to engage in certain behavior (Schwartz, 1977).
- **Subjective Norms:** Perception of social pressure to perform or not to perform the behavior (Ajzen, 2005).
- **Behavioral Beliefs:** Beliefs about the likely beneficial outcomes of the practices (Ajzen, 2005).
- **Attitude:** “A disposition to respond favorably or unfavorably to an object, person, institution, or event” (Ajzen, 1988, p. 4).
- **Intention:** The amount of effort one is willing to expend for reaching a certain goal (Ajzen, 1991).
- **Child/Teacher Centered Beliefs:** Having progressive or traditional perspectives on interaction with the children (Pianta et al., 2005).

CHAPTER 2

LITERATURE REVIEW

In this chapter, assessment and portfolio assessment in early childhood education are explained in detail. Then, the theoretical framework of the study is introduced by presenting the theory of planned behavior and social cognitive theory. Moreover, the possible relationship between teacher beliefs, child-centered beliefs, and portfolio assessment practices are discussed. Afterward, the Reggio Emilia Approach is explained, and teacher education and early childhood education in Turkey and the U.S. are reviewed. In the last section, research studies concerning portfolio assessment and other assessment and documentation methods are presented. Finally, a concise summary of the literature review is provided to end.

2.1. Assessment in Early Childhood Education

Assessment is defined as an ongoing and continuous process of observing, recording, documenting, and collecting information for making educational decisions about students, curricula, programs, schools, and educational policy (Jardine, 1995; Morrison, 2014; Nitko & Brookhart, 2007). Specifically, in early childhood, *“Assessment is the process of gathering information about children from several forms of evidence, then organizing and interpreting that information”* (McAfee et al., 2004, p. 3). Educational assessment is an ongoing process to improve learning (Butler & McMunn, 2006). If something is important for educators, they need to understand and assess it. A significance to assess might be a new behavior or activity, something achieved for the first time, or understanding or mastery. Assessment results are an important element of knowing children and

understanding their learning in order to support their learning and development (Dubiel, 2014).

Although assessment might be used interchangeably with evaluation, these are different from each other. Evaluation refers to the judgement of the quality or worth of the assessment results (Butler & McMunn, 2006). In other words, evaluation is the product of the assessment which enables a decision about the value or worth of a performance with respect to reflected assessment information (Russell & Airasian, 2012). Multiple sources of assessment information affect this judgment (Butler & McMunn, 2006). Evaluation is used to determine one's overall progress in reaching standards for a skill or field of study (Johnson et al., 2006).

There are different categorizations of assessments in the related literature. Mainly, assessments can have either a quantitative or qualitative perspective, and both qualitative and quantitative measures are used in early childhood education. Using a quantitative perspective, assessment results in numerical representation of children's behaviors and abilities, and they have standardized conditions. On the other hand, from a qualitative perspective, assessment is viewed as a documentation of complex and holistic behaviors in natural environments (Losardo & Notari-Syverson, 2001). Corresponding to these perspectives, assessment was divided into two categories as formal and informal, respectively (Helm et al., 2007; Hills, 1992; Losardo & Notari-Syverson, 2001). Formal assessment is based on predetermined content and specific guidelines for administration. On the other hand, informal assessment basically includes systematic observation in meaningful context (Losardo & Notari-Syverson, 2001), such as performance assessment or authentic assessment (Helm et al., 2007). In addition to this, a similar classification was also introduced, formative and summative assessment. Formative assessment is practiced through educational experiences. It aims to identify child strengths, behavior, and learning behaviors, and it supports a child's learning. Formative assessment also informs teachers of the effectiveness of their teaching and student achievement, and provides a basis for teachers to make decisions about teaching methods. On the other hand, summative assessment is implemented at the end of

the educational experience and provides a summary of student achievement. It focuses on a point in time and describes a child's learning and development at that point of time (Black & Wiliam, 1998; Dubiel, 2014; Fyfe, 2012; Shermis & Di Vesta, 2011). In addition to these, there are also different classifications of assessment methods including traditional, alternative, authentic, performance, project based, and problem-based assessment. There is overlap among each of these terms. However, each one has its own distinction of assessment (Berry, 2008).

Having different assessments, there are also different recognized approaches to assessment, which include assessment of learning, assessment for learning, and assessment as learning. Although assessment of learning has a summative focus, the others have a formative purpose. However, these are not in conflict with each other. Assessment for learning proposes that assessment should contribute to student support, motivation, and growth rather than judgement (Butt, 2010).

Assessment has a variety of purposes (Wortham & Hardin, 2016), and the specific purpose of an assessment determines how the assessment is conducted (Shepard et al., 1998). To explain, assessment is mainly used to decide children's developmental level and monitor progress and change over time. This progress is assessed in terms of two broad areas: developmental areas (e.g. cognitive, intellectual) and academic disciplines or subjects (e.g. science, math) (McAfee et al., 2016). Moreover, assessment serves the aim of diagnosis and placement. It determines a child's or group's strengths and needs, and it is used to identify children who may need special services or intervention (McAfee, et al., 2016; Morrison, 2014; Wortham & Hardin, 2016). As a result, it is also used as guide for classroom planning and decision making to help children's learning (McAfee et al., 2016). For instance, if there is no progress for most students, this indicates a necessity to change the instructional program. In this way, assessment results help teachers to see the effectiveness of their teaching and also determine which educational objectives to pursue (Popham, 2014). Assessment can be used to plan instruction for individuals and groups and inform program development. Furthermore, it can also be used to communicate with families (Morrison, 2014) or

report and communicate with others (McAfee et al., 2016). Overall, the four main purposes of assessment are summarized as supporting learning and instruction, identifying children with special needs, program evaluation and following trends, and high-stakes accountability (Meisels & Atkins-Burnett, 2006; Shepard et al., 1998).

To achieve these purposes, some principles are identified regarding the assessment of young children. The first is that it should use multiple sources of information (Wortham & Hardin, 2016) since a variety of strategies can assess child development comprehensively and from different perspectives (Feld & Bergan, 2002) and can become helpful in making useful decisions about children's learning (Helm et al., 2007). The second principle is that assessment should benefit the child and improve learning (Morrison, 2014; Shepard et al., 1998; Wortham & Hardin, 2016). To this end, appropriate assessment is based on strengths and improving capabilities rather than only focusing on what the child cannot do (Moreno & Klute, 2011). Thirdly, assessment should involve the child and family because it can be accomplished together with student, parent, and teachers (Wortham & Hardin, 2016). It is essential to value parents as a source of information in the process (Morrison, 2014). Fourth is that assessment should be fair for each child, including children with disabilities and children from culturally or linguistically diverse families (Wortham & Hardin, 2016). To provide this fairness, it is necessary to include contextual and cultural influences in assessment which facilitate or hinder learning (Losardo & Notari-Syverson, 2001). Fifth, assessment should have a specific purpose and it should be reliable and valid for that purpose. For instance, it should be age appropriate in terms of content and data collection method (Morrison, 2014; Shepard et al., 1998). Sixth, assessment practices should be compatible with ethical principles. Lastly, assessment evidence should be collected in a realistic setting and situation that reflects children's actual performance (NAEYC & NAECS/SDE, 2003). Assessment needs to be accurate and authentic and reflect knowledge and understanding about child development in a variety of contexts (Dubiel, 2014). Therefore, it is important that assessment should be

ongoing in a natural context while children are participating in curricular activities and regular classroom routine (Gullo, 2006; Helm et al., 2007; McAfee et al., 2016). In brief, assessment should be a continuous, comprehensive, and integrated process with learning goals and instructional methods (Gullo & Hughes, 2011).

To specifically define, classroom assessment is the process of collecting, synthesizing, and interpreting information to help teachers' decision making (Tomlinson & Moon, 2013) and support and improve student learning. Assessment activities are practiced before, during, and after the instruction. Assessment prior to instruction provides information about background and prior knowledge of students. Assessment during instruction allows teachers to see and monitor progress. After instruction, assessment is also necessary to confirm achievement of the goals (Phye, 1996). These align with teachers' philosophy of education and style of instruction (Wright, 2015) and the process includes multiple methods for obtaining student information using a variety of assessment strategies (McMunn, 2000). A combination of different approaches provides support and a comprehensive picture of the child (VanTassel-Baska, 2013). For instance, data should be collected in a variety of ways by observe, document, collect work samples, and talk with children and families (Dodge et al, 2004).

Classroom assessments can be varied in terms of three aspects to provide multiple windows or perspectives to teachers. These are: the source of information (children, parents, other adults, records), the method of information gathering (systematic observation, classroom products, interviews), and the context, setting, or situation for the appraisal (outdoor, indoor, classroom, individual, group) (McAfee et al., 2016). While deciding the most appropriate assessment type, it is important to identify purpose and content of assessment, type of knowledge to assess (Jones, 2004), kind of assessment, time, and frequency of assessment, and how assessment results will affect the instruction (Shermis & Di Vesta, 2011). Overall, to get meaningful data, all assessments including both formal and informal ones, should satisfy the following criteria: it should not make children anxious, it should be obtained over time, it should be obtained from multiple sources, it should be

sensitive to children's interests and attention spans, and it should employ appropriate sampling methods for accountability (Epstein et al., 2004).

Highly qualified classroom assessments are valid, reliable, and fair (McAfee et al., 2016; Wright, 2015). Validity and reliability help teachers to decide whether assessment information is appropriate to inform a decision (Russell & Airasian, 2012). Validity is the soundness of interpretations and students' assessment results (Nitko & Brookhart, 2007). It provides accurate information about the intended construct (McAfee et al., 2016). For validity, a variety of sources should be combined to demonstrate appropriateness of interpretations and usage. Assessment procedures should also match the learning targets to be valid. On the other hand, reliability refers to the consistency of assessment results. In other words, it refers to the degree which students' results stay consistent in replications of the assessment process (Nitko & Brookhart, 2007). It means stability, consistency, or dependability of the scores (Wright, 2015). Reliability of any effective assessment depends on three important factors. The first one is relationship because if children trust, they can show their full capabilities. The second one is environment and context since children can show different attitudes, skills, and understandings in different environments and context. Therefore, it is important to talk to people who know them from previous settings or observe them in different environments. The third one is being based on factual or unbiased observation to tune into the individual child (Sancisi & Edgington, 2015).

Apart from these, fairness also means providing reasonable opportunities to all children regardless of their characteristics or circumstances to show learning (Wright, 2015). For education of children from diverse societies, different backgrounds or with special needs, fair assessment is necessary. For fairness, it is necessary for teachers to be sensitive to the needs of children to allow them to demonstrate their capabilities in a supportive and familiar context (McAfee et al., 2016). For instance, assessment of children with special needs especially should be fair and equitable. To ensure this, it is necessary to make some accommodations like format accommodation or response accommodation (Morrison, 2014).

Moreover, it is necessary for teachers to keep sensitive information in confidential files. For instance, if the portfolio consists of work products, it might be on an open shelf. However, if the portfolio contains private information, it is necessary to keep private (McAfee et al., 2016). Additionally, another construct, objectivity, also refers to the degree which two or more evaluators agree on the rating or score of the student's performance (Nitko & Brookhart, 2007). It refers to the ability to see things without being influenced by feelings, emotions, and judgements (Couchenour & Chrisman, 2000) or by excluding personal feelings, beliefs or prejudices (McAfee et al., 2016).

It is noteworthy to highlight that assessment is a part of high-quality early childhood programs (Epstein et al., 2004) because a majority of teachers' important decisions about children are based on the assessment results. It has a direct impact on learning outcomes. It can enhance teaching and learning (Morrison, 2014). When children are assessed as a part of the teaching and learning process, it tells teachers about the child's capabilities. By means of assessment, teachers can see what is working and what is not working (Shepard et al., 1998). It enables teachers to see progress and plan better. It is also used in selection decisions or placement decisions through which students are placed into appropriate educational programs (Nitko & Brookhart, 2007). Furthermore, a teacher uses assessment to decide what to teach, what to communicate with parents, and for promotion to the next grade (Earl, 2013). Documentation of child work with evaluations helps parents to learn curriculum and appropriate expectations and see child performance (Shepard et al., 1998). On the other side, students also assess their personal accomplishment, feeling of self-worth, and willingness to participate in academic work (Earl, 2013).

However, "*Assessments are useless if you do not take action when you see the results*" (Nitko & Brookhart, 2007, p. 111). It is necessary for teachers to plan assessment instruments prior to instructional planning to internalize what is intended and integrate that into instructional activities. Clarified instructional intentions provide effective instructional decisions for the teacher (Popham, 2014). It highlights children's skills, knowledge, and attitudes. It documents growth over

time, and it describes child progress towards specific learning goals. It provides constructivist feedback to instructional programs (Jones, 2004). Therefore, good assessment methods are integrated into curriculum and instruction and improve teaching and learning (Grace & Shores, 1992). Teachers use them to improve their instructional methods by modifying and validating instruction (Fisher & Frey, 2007). Overall, each child needs to be accepted and appreciated. Ongoing assessment contributes to positive relationship between each child and teacher. It contributes to building a relationship with each child's family. When family members see that the teacher knows their child and is supporting learning and development, they appreciate the program (Dodge et al., 2004).

2.1.1. Assessment of children with special needs and different backgrounds

There is an increase in the number of children with special needs and children who are from culturally and linguistically diverse background. This brings challenges into the assessment process with regards to identifying children with special needs because assessment procedures should be different for these children (Gullo, 2013). More specifically, early childhood intervention necessitates specific features in assessment. Bagnato (2005) identified three features of this assessment as authenticity, utility, and universality. Authenticity refers to an individual child's natural expression of capabilities in everyday situations under the ongoing observation of parent, teacher, and other caregivers. The second feature is utility and indicates identifying child individual needs to assess the effectiveness of goals and strategies for instruction and therapy. The last one is universality, and it refers to the appropriateness of assessment for all children without considering functional limitations. For this purpose, assessment should be functional and flexible to enable children to demonstrate their capabilities in a variety of ways. In line with these, early childhood intervention has four main purposes. These are: *“screening and eligibility, individualized program planning, child progress monitoring, and program evaluation”* (Neisworth & Bagnato, 2004, p. 1999).

It is necessary that early childhood teachers should be conscious about issues concerning assessment and identification of children with special needs. Teachers are often the first individuals to realize children who need special services (Gullo, 2013). Therefore, childcare professionals have an important role in identifying delays early. However, they need additional knowledge and tools to identify delays and make referrals through developmental monitoring. Training childcare providers to conduct developmental monitoring and screening can improve early detection and access to intervention before entering school (Chödrön et al., 2019).

Nonbiased assessment needs to be used for valid and reliable results. For this purpose, the assessment process should be individualized and developmentally appropriate as well as becoming family centered and team-based for children with special needs. There should be a match between children's developmental and disability characteristics and assessment methods and materials (Bagnato, 2007; Gullo, 2013). Moreover, it is the responsibility of teachers to facilitate involvement of families in a way which allows them to better understand assessment procedures. When families are involved in the comprehensive assessment of their children, their fears and concerns begin to lessen. They better understand child strengths and needs. They also provide information for teachers to accurately understand the child (Brink, 2002).

Since there are concerns regarding the usage of formal or standardized assessments in assessment of children from culturally and linguistically different backgrounds, generally, non-standardized authentic assessment strategies are used by teachers such as observation notes, work samples, checklists, and rating scales (Gullo, 2013). Specifically, authentic assessment helps to identify strengths and weaknesses of children, and it helps to design more successful interventions (McCrary et al., 2017). For instance, performance assessment is a suitable approach for students with gifted learning. Challenging tasks enable them to demonstrate their capacity and knowledge. Teachers can get insight about their true level of capability (VanTassel-Baska, 2013).

2.2. Assessment Techniques in Early Childhood Education

2.2.1. Standardized tests

Standardized tests are implemented, scored, and interpreted in the same way for all students (Russell & Airasian, 2012) since those have specific procedures and instructions for administration (Morrison, 2014). Therefore, they provide uniformity in test administration and provide valid and reliable quantifiable scores. Standardized tests are useful to make comparisons between performances at different times. However, they should be considered as only one piece of information about children's capabilities as a snapshot of children's abilities. These standardized instruments can be norm-referenced or criterion-referenced (McAfee et al., 2016; Wortham & Hardin, 2016). Although norm-referenced tests give information on how an individual's performance is compared to others, criterion-referenced tests present information on how an individual performs on some standard or objective (Butler & McMunn, 2006; McAfee et al., 2016; Wortham & Hardin, 2016).

Although there are limitations, standardized tests are useful as being carefully developed through a series of steps to measure students' characteristics like ability, achievement, aptitude, interest, attitude, values, and personality characteristics. However, it is important to keep in mind that these tests should consist of concrete tasks or activities suitable to children's ability to respond in order to ensure validity and reliability issues (McAfee et al., 2016; Wortham & Hardin, 2016). Most norm-references test are invalidated for use in early childhood intervention since these tests are not contextualized into daily routines of children (Bagnato & Ho, 2006). In early childhood education, four types of standardized tests are used, developmental screening tests, readiness tests, diagnostic tests, and achievement tests. Screening compares child scores with children of a similar age. Diagnostic tests are used to explore whether a child has any disability or weakness and are administrated by the trained individuals. Readiness tests assess whether children

are ready for the program, and achievement tests assess children's progress and achievement (Gullo, 2005).

2.2.2. Informal assessment

Informal assessment is a procedure of using methods other than standardized instruments to obtain information about children's learning, behavior, and development. It enables assessment of a child's progress and follow it through experiences (Morrison, 2014). Informal assessment is in line with the constructivist approach to teaching and learning. It has a flexible approach to assessment (Gullo, 2005). A variety of informal evaluation measures are used in preschool like observation, a checklist, rating scale, teacher-designed assessment, and a portfolio. A teacher assesses child progress with these informal strategies and summarizes and interprets it narratively in the narrative report. Informal measures are more advantageous than standardized tests since they are directly related to teachers' curriculum objectives. However, it is necessary to learn how to use informal methods appropriately. Extensive training is necessary for teachers. Validity, reliability, and bias are other possible disadvantages (Wortham, 1995). Informal assessment methods are explained below. Specifically, authentic assessment and portfolio assessment are presented in detail under related separate subtitles as becoming the focus issues of the current dissertation.

2.2.2.1. Observation

Observation is defined as a systematic method for collecting information about children by watching or listening them (Mindes, 2011; Shepard et al., 1998). It is intentionally and systematically looking at children's behavior in a particular setting, program, or situation. Therefore, it is an authentic way to learn about children's knowledge and abilities (Morrison, 2014) as well as becoming the most direct and valid method to get information about the learning and development of the child (McAfee et al., 2016; Wortham & Hardin, 2016). Since younger children cannot clearly express themselves as older children and adults can, observation is one of the most accurate ways to learn about the child according to child

development experts. It enables teachers to know a child as an individual, providing valuable information about individual characteristics and individual learning styles. In line with these, three major purposes were identified by Wortham and Hardin (2016) as: understanding children's behavior, evaluating children's development, and evaluating the learning progress.

For systematic observation, it is suggested for teachers: to observe and record precisely what child does, record as soon as possible, observe children in different settings and at different times, be realistic in scheduling observations, focus on one child at a time, protect confidentiality, and select a workable recording system. Moreover, it is necessary for teachers to have an objective in mind to focus on it during observation (Grace & Shores, 1992). It is essential to plan what to observe, how to observe, and how to record anecdotes (Helm et al., 2007). To this end, it is necessary to think and plan the conducting of regular observations, finding time during the school day to observe, deciding what to observe, and recording the observations (Jablon et al., 2007). Therefore, observation skills and training are necessary for teachers (Gullo, 2005). These skills are learned by practice and it takes time for new teachers to obtain observation skills over time (Grace & Shores, 1992).

Three main types of observation are identified. These are informal observation conducted spontaneously, participant observation which indicates observation while working with the child and taking note of brief significant moments, and focused observation which refers to recording factually as much as possible what the child is saying or doing (Sancisi & Edgington, 2015). Other than these, observation types also include anecdotal records, running records, specimen records, time sampling, event sampling, checklist, and rating scales (Saracho, 2015; Wortham & Hardin, 2016). Both anecdotal record and running record are used to record child behavior but running record provides a detailed narrative on a sequence of events over a period of time (Gullo, 2005; Morrison, 2014; Wortham & Hardin, 2016). Anecdotal record provides a brief description of student behavior at a specific time (Morrison, 2014). Specimen record is similar to running record, but it

is more detailed and precise (Wortham, 1995). In addition, although time sampling records frequency of behavior, event sampling focuses on a particular behavior during particular events (Morrison, 2014; Saracho, 2015). Checklists list descriptive statements about performance and indicate whether children have those characteristics or behaviors. Rating scale also assesses children's behaviors or characteristics along a continuum (Saracho, 2015).

To conclude, as addressed in the related literature, observation has a variety of benefits. It does not interrupt the education process and provides an opportunity to assess children in a variety of context (Gullo, 2005). It helps to explore the whole child including developmental capabilities, personalities, interests and passions, knowledge, and cultural background (Gronlund & James, 2013). Moreover, it provides concrete information to report to parents in conference time (Morrison, 2014). It helps teachers to explain what they are doing in the class and helps families to understand the curriculum. Furthermore, observation information is used for assessment and curriculum planning to meet child needs. Planned and documented observation enables teachers not to miss any child (Gronlund & James, 2013) since it is necessary to focus on an individual child, see each child personal experience, and plan developmentally appropriate experiences for each one (Sancisi & Edgington, 2015).

2.2.2.2. Teacher-designed assessment

In teacher designed measures, teachers devise informal assessments to measure learning after instruction. Concrete tasks and oral questions are more likely to be used in early childhood level. However, teacher designed assessments might also be written or oral tests and activities. These are flexible to modify and increase accountability in teachers' educational decisions. These can be conducted during a teaching activity or designed as a separate assessment. It allows children to demonstrate their learning in more than one way. These assessments can also support diagnostic decisions and allows teachers to evaluate the instructional program. Therefore, its main advantage is the flexibility and adaptability to

individual class needs. These classroom tests assess student accomplishment and learning in relation to classroom objectives. However, the main disadvantage is that it is dependent on teacher's skills to design classroom assessment (Wortham, 1995; Wortham & Hardin, 2016). Teachers may also have concerns about accountability with these methods. In addition, there are concerns about acceptance by parents, administrators, public, and policy makers. Time to conduct assessments and keep record is also an important issue concerning these methods (Adamson & Darling-Hammond, 2010; Stecher, 2010). Lastly, there is also no evidence for validity, reliability, and freedom of bias. Therefore, extensive training is necessary for teachers to feel comfortable with these methods (Winograd & Webb, 1994).

2.2.2.3. Checklist

“Checklist is a list of specific characteristics with a place for marking whether that characteristic is present or absent” (Brookhart, 2013, p. 77). In other words, it includes a list of behaviors, characteristics, or activities, and it indicates whether each one is present. There are different types of checklists like procedure checklist, product checklist, behavior checklist, and self-evaluation checklist. For instance, a product checklist focuses on the quality of the thing which a student makes (Nitko & Brookhart, 2007). If the same checklist is used over a period of time, it can also be used to evaluate progress and achievement (Morrison, 2014).

A checklist creates a framework for different purposes such as assessment and evaluation, instructional planning, record keeping, and communicating with parents about their child's progress. Moreover, checklists can be used to report both individual and group progress. Checklist items reflect how the child is progressing through maturation and experiences. In particular, developmental checklists help teachers develop developmentally appropriate instruction and balance activities. Furthermore, since, it presents clear information to parents about their child's progress (Gullo, 2005; Wortham & Hardin, 2016), they can be used as a basis in the conferences with parents (Morrison, 2014). Mainly, checklists are easy to use, flexible, and can be used with a variety of assessment methods. However, it can

only indicate whether a child can perform a particular behavior or skill adequately but cannot describe the quality of the child's work (MacDonald, 1997; Wortham & Hardin, 2016).

2.2.2.4. Rating scale

Rating scale is a list of specific characteristics with a place for marking the degree to which each characteristic is displayed" (Brookhart, 2013, p. 78). It is similar to checklist, but it necessitates making a qualitative judgement about the extent of the present behavior. It contains a criterion for measurement which is provided on a continuum and assesses the degree which students have achieved in the performance tasks. This might be in the form of numerical or graphic rating scale or descriptive graphic rating scale (Nitko & Brookhart, 2007; Wortham & Hardin, 2016). For instance, frequency rating scales list the frequency of observation (e.g., very often to very seldom), and quality rating scales list the judgements of the quality (e.g., excellent to poor) (Brookhart, 2013).

In brief, rating scales are fast and easy to complete. They are easy to develop and use, and minimum training is needed to use them. These are often used to report development on a report card. However, ratings are highly subjective and not detailed about the causes of the behavior. Checklist and rating scales can be combined with other assessment methods to provide a more comprehensive assessment (Gullo, 2005; Wortham, 1995; Wortham & Hardin, 2016).

2.2.2.5. Rubric

"Rubrics are performance or scoring guides that differentiate among levels of student performance" (Morrison, 2014). These work as a guideline to distinguish performances or products of different quality (Wiggins, 1996). Therefore, it makes the assessment of student work easier and makes it more uniform and consistent (Butler & McMunn, 2006). For an effective rubric, it is necessary to have appropriate criteria and well written descriptions of performance (Brookhart, 2013) since performance is assessed with respect to determined criteria (Morrison, 2014).

Rubrics are designed to assess authentic or performance assessment. They are most frequently used with the portfolio assessment, student work or products to qualitatively assess student progress (Wortham & Hardin, 2016).

There are three types of rubrics, holistic, analytical, and developmental. A single score is assigned to overall task or product in a holistic rubric (Montgomery, 2005; Wortham & Hardin, 2016). It makes a judgement about the overall quality (Nitko & Brookhart, 2007) because all important components are combined into a single overall judgement of quality (Arter & McTiche, 2001). This single score is based on the criteria which defines what the performance involves (Butler & McMunn, 2006). In contrast, on an analytical rubric, separate descriptors and scores are assigned to each attribute (Cohen & Wiener, 2003). It is more specific and used for diagnostic purposes (Wortham & Hardin, 2016). It is used to evaluate specific dimensions, traits, or elements (Nitko & Brookhart, 2007) and provides a separate ranking for each criterion being assessed (Butler & McMunn, 2006; Montgomery, 2005). The last, a developmental rubric also assesses students on a continuum that shows developmental progress (Wortham & Hardin, 2016). Rubrics might also be generalized or task specific in format. Task specific ones have a unique purpose and design, yet, generalized ones have criteria covering several tasks (Butler & McMunn, 2006), called generic. In other words, although a generic rubric assesses performance quality in general, a task specific rubric describes performance quality in relation to a specific assignment or particular task (Nitko & Brookhart, 2007). Number of score points can also vary across the rubrics with respect to rubric purpose or nature of what is assessed (Arter & McTicher, 2001).

Each rubric type has specific strengths and limitations. Although a holistic rubric provides a quick snapshot for overall quality or achievement, an analytical rubric judges complex performances. It provides specific information and feedback to students, parents, and teachers about the performance. In ongoing classroom assessment, it is suggested to use analytical rubric for guiding the improvement of teaching and learning (Arter & McTiche, 2001). An analytic rubric better works for

classroom purpose because focusing on one criterion is better for instruction (Brookhart, 2013).

In brief, rubrics are valuable tools as both an instructional tool and assessment tool (Martin-Kniep, 2000). Rubric usage helps to ensure that certain criteria are met in each students' work. It makes performance expectations and standards clear for students, parents, teachers, and others (Cooper & Gargan, 2011) because of the clarifying expected quality of student work. Rubrics help teachers to focus on the criteria, not tasks. Therefore, it helps teachers to coordinate instruction and assessment and help students' learning (Brookhart, 2013). Furthermore, rubrics are also flexible and adaptable. Yet, one difficulty might be to determine assessment and scoring criteria and ensure validity and reliability for especially holistic rubric (Wortham & Hardin, 2016).

2.2.2.6. Interviews

An interview is an assessment method to obtain information from students through oral interaction (Berry, 2008). Asking questions is one of the most effective and easiest ways to gather information. It provides insight into why children behave in the way they do (Grace & Shores, 1992) and can present information about students' thinking and learning difficulties (Nitko & Brookhart, 2007). Teachers use interviews to see children's understanding (Wortham, 1995) since they allow children to explain their behavior, work sample, or particular answer (Morrison, 2014). Informal interviews can be conducted while children are playing or in classroom activities. On the other hand, a structured interview is planned by the teacher to obtain specific understanding about the child. A diagnostic interview is also conducted to explore a child's instructional needs (Wortham, 1995).

2.2.2.7. Projects and project assessment

A project is an in-depth study of a topic, which may include an individual, small group, or whole class over a period of time (Helm & Katz, 2001; Katz & Chard, 2000) and consists of assignments which are directed toward a common goal

(Butler & McMunn, 2006). In this way, children are emotionally involved in learning experiences (Helm et al, 2007), and children's progress is assessed in projects by observing them in actual problem-solving situations. These problems are the actual curriculum activities (Gullo, 2006). Therefore, projects are powerful assessments to assess students' mastery of skills or completion of specific tasks (Butler & McMunn, 2006). Since projects are child-directed and teacher guided, they also provide an opportunity to observe child development. Documentation of projects shows a variety of intellectual and social dispositions with systematic recording. It enables teachers to enrich complexity of items in authentic assessment (Helm et al.,2007).

2.2.2.8. Narrative/Summary report

A narrative or summary report is a written evaluation or narratives by the teacher which describe child development, learning, and effort in the class. These can be written periodically or combined with other assessment methods. For instance, it can be part of a portfolio assessment system (Nitko & Brookhart, 2007; Wortham & Hardin, 2016). It can summarize and evaluate information about each child from checklists and portfolios (McAfee et al., 2016). According to Horn-Wingerd (1992), a narrative report includes: descriptions of child behavior examples, examples of a child's capabilities, concerns about a child's progress, and goals and plans for the child in the future. While writing narratives, it might begin with an overall statement about a child's progress. It can include specific examples of behavior to describe the change in the child. It might also include notes about how to support child development at home.

A narrative report is used to report a child's progress and growth to parents in a meaningful way. However, there is a concern that teachers are writing these reports without including concerns. It is suggested that not only strengths but also weaknesses should be stressed in these reports. However, teachers should use a positive tone without blaming the child. In this way, these reports should both inform parents about their child's progress and educate them about appropriate

instruction and assessment practices (Wortham & Hardin, 2016). Therefore, good narrative reports emphasize strengths, but they also communicate concerns and recommendations. Allocating time to such summarized assessment information has many benefits. While summarizing, teachers have an opportunity to think about each child, what is going on in the classroom, goals, and needed modifications. It helps not to neglect any important dimension or any child. Otherwise, teachers may have little time for this in daily classroom activities (McAfee et al., 2016).

2.2.2.9. Work sampling

Work samples are the examples of children's work which demonstrate a child's developmental progress and accomplishments (Morrison, 2014). A work sampling system has three components: developmental guidelines and checklists, portfolios of children's work, and summary reports completed by teachers (Gullo, 2005; Gullo, 2013; Helm et al., 2007; Meisels, 1995; Meisels, 1997; Wortham & Hardin, 2016). Checklists include developmentally appropriate classroom activities and expectations (Meisels, 1997) and provide a comprehensive picture of children's knowledge and capabilities across all domains of growth and learning (Helm, et al., 2007). Another component is the portfolio, which includes items selected by both teacher and children. Portfolio items represent the developmental domains included in the checklist (Wortham & Hardin, 2016). There are both core and individual items in a portfolio. Core portfolio items are included from the five domains of learning: language and literacy, mathematical thinking, scientific thinking, social studies, and the arts. Individual items also represent multiple domains or a specific area of interest of the child (Helm et al., 2007; Meisels et al., 1995). It shows student progress, effort, and achievement in an organized way (Meisels, 1997) and enables children, parents, teachers, administrators, and policy makers to see the power of children's growth and development. It integrates instruction and assessment (Meisels, 1995). The last component is the summary report, which is completed for each child. It summarizes child development with respect to specific criteria. The child's overall progress is reported with the obtained information from checklist and portfolio, and it is shared with the parents (Gullo, 2005; Wortham & Hardin,

2016). Reporting or assessment based on work sampling system is done three times a year (Helm et al., 2007; Meisels, 1995; Wortham & Hardin, 2016). This system systematizes observation by well-defined procedure (Meisels et al., 1995) and improves the teaching practices (Gullo, 2013). It helps teachers in instructional decision making. Moreover, it contributes to student motivation, and it becomes an effective tool to share a child's progress with families, educators, and community (Dichtelmiller et al., 2001).

2.2.2.10. Documentation

Documentation is recording children's learning by taking photos and writing notes in an ongoing process (Lewin-Benham, 2011). It includes children's work samples at different stages in the process, the comments of teachers or other adults working with children, transcriptions of children's comments or explanations, and parents' comments (Katz & Chart, 1996). Covering all of these, documentation was divided into five categories: narratives, observations of progress and performance, child self-reflections, products of work and play activities, and individual portfolios (Helm et al., 2007; Wortham & Hardin, 2016).

To explain, narratives tell stories of learning experience. Those can be in the forms of stories for and by children, conversation records, teacher journals, narrative for parents like a book or letter, or visual displays (Helm et al., 2007). In the second category, observing progress and achievement is the main focus of documentation. Teachers might document this by writing anecdotal notes or using developmental checklists to monitor progress. Thirdly, different individual and group products are one of the most obvious ways to document growth. They are especially useful when accompanied with written documentation of significance. For child reflections, child conversations are recorded by the teacher. Child reflections are children's own statements which indicate their awareness of knowledge and feelings. The last category, portfolio, is the most comprehensive one as it includes a variety of documentation. Ongoing collection of child work is referred to as a portfolio, and it is used to assess young children. If teachers systematically collect children's work

in fall and spring, they are able to document growth over time (Helm et al., 2007; Wortham & Hardin, 2016).

Overall, documentation is a powerful skill for teachers. However, documentation is especially useful when there is a specific purpose and when accompanied by thoughtful written documentation (Helm et al., 1997). To decide on what to record or document, it is necessary for practitioners to consider: what provides understanding of the child as a learner, what is significant to them, or what they will forget (Dubiel, 2014). It is important for teachers to decide what kind of documentation is needed. Three different perspectives are identified for documentation. These are: limited documentation which only includes photos, child-centered documentation which focuses on activities children participated in, and learning-oriented documentation which focuses on what children learn (Alvestad & Sheridan, 2015).

Documentation of children's learning is one of the most important skills for teachers to develop. Since documentation shows how children learn, teachers can contribute to children's learning with it (Helm et al., 2007). It provides an opportunity to explore children's ideas and observe and interact with them in order to understand (Stacey, 2019). It informs the teaching and helps teachers in planning educational experiences. It helps teachers to decide whether children need additional support and respond accurately to their needs in education. Teachers also can show others how developmentally appropriate teaching provides learning. In this way, it fosters a relationship between school and home, and it helps parents while making decisions about their child's education (Helm et al., 2007). This collaboration creates a classroom community which provides teachers, parents, and children's thinking about the process of learning (Seitz, 2008). Moreover, documentation also enables self-reflection for teachers through analyzing, discussing, and guiding the teaching process by communicating with other professionals upon documentation (Helm et al., 2007). This reflection on their own teaching is a method for teachers to develop their skills as professionals (Jalongo, 1991; Jones, 1993) and grow professionally (Helm et al., 2007). To sum up, high

quality documentation contributes to early childhood programs' quality in six ways: improving children's learning, taking children's ideas and work seriously, a teacher's continuous planning and evaluation with children, parent appreciation and participation, teacher research and awareness, and making children's learning visible (Katz & Chart, 1996).

2.2.2.11. Pedagogical documentation

“Pedagogical documentation is a process for making pedagogical (or other) work visible and subject to dialogue, interpretation, contestation, and transformation” (Dahlberg, 2012). It is a performance assessment, which was developed in Reggio Emilia schools in Italy, and it is widely used in the U.S. now (Wurm, 2005). It refers to the process of reflecting and interpreting documentary material. If there is no analysis, collected materials are just a collection of artifacts (Fleet, et al., 2017). Negotiation between process and content differentiate pedagogical documentation from other forms early childhood assessment (Katz & Chard, 1996; MacDonald, 1997). In other words, documentation can be pedagogical only if someone reflects upon it. It primarily serves as a basis for reflection among teachers (Alasuutari et al., 2014).

It starts with active listening (Dahlberg, 2012) since pedagogical documentation is a strategy for listening to children and responding educationally to them. It makes each child's competency and agency visible and promotes respectful educational responses. It allows children to see their learning. It makes pedagogical practices visible (Oliveira-Formosinho & Formosinho, 2012). In relation to this, pedagogical documentation is related with democratic expectations (Alasuutari, et al., 2014). To explain, it provides respect for the child. It becomes a strategy to create descriptions, analysis, interpretations, and understanding to identify a competent and participatory child, and develop and evaluate learning with the child. It is built around children and adult learning (Oliveira-Formosinho & Formosinho, 2012). It also makes teachers' perspectives and interpretations explicit through debate, dialogue, and negotiation (Rinaldi, 2006). Furthermore, since pedagogical

documentation makes pedagogical work visible and open to debate, it provides prestige and legitimacy for early childhood education in society (Dahlberg, 2012).

It was agreed that pedagogical documentation can be a viable alternative for traditional standardized assessment techniques. Documentation panels in particular provide an opportunity to highlight classroom learning. Teachers can benefit from them while communicating with families about concepts and issues. Panels help parents to see what is happening in the learning environment. It also promotes parent-teacher partnership by providing a springboard to discuss best practices, projects, themes, classroom experiences, curriculum, and child development (Brown-Dupaul et al., 2001). In this way, parents can see and appreciate child progress by means of documentation panels and share their own observations with teachers. They can work together to improve child learning (Carr, 2001; Katz & Chard, 1996). Overall, pedagogical documentation provides more participatory and equal early childhood education (Paanen & Lipponen, 2018). It has sophisticated outcomes for children, parents, and teachers, yet, those depend on the effectiveness of teachers fulfilling their roles in the process (Alaçam & Olgan, 2021). Therefore, knowledge and skill are necessary for teachers to manage the pedagogical documentation process (Buldu, 2010).

2.3. Authentic Assessment

Different phrases are used synonymously in the related literature like authentic assessment (because assessment tasks are more closely related to real life or non-school tasks) and alternative assessment (because assessments create an alternative to traditional tests) (Popham, 2014). Performance assessment also necessitates that children demonstrate what they know and what they can do (Morrison, 2014). In authentic, alternative, or performance assessment, the main principle is to examine child growth within the context of what they do (Bergman, 1993). Rather than a product or right answer, these emphasize how children learn and solve problems (Gullo, 2005). Students learn best when there is a relevant reason for learning that information or when the learning environment is familiar to them. Authentic

assessment provides this environment for students (Butler & McMunn, 2006). Children's abilities are documented through practice of real-life tasks (Losardo & Notari-Syverson, 2001). Children are assessed based on their actual work or what they are doing. It provides an ongoing assessment for an entire year by using different assessment tools to evaluate the child (Morrison, 2014).

Authentic assessment is alternative to conventional testing of infants, toddlers, and preschoolers. It links assessment and programs. It provides a holistic picture of a child by collecting information over a period of time. It includes materials which are familiar to children (Macy et al., 2016). Assessing a child within a learning context is highly useful and informative (Bergen, 1997). These alternative assessments provide a more complete picture of child knowledge, understanding, and ability. It enables teachers to see the child as a whole (Culbertson & Jalongo, 1999). However, it is crucial to plan thoughtfully authentic assessments to guide child performance and provide opportunities for improvement. Otherwise, there is a greater possibility of bias and subjectivity, and it takes a significant amount of time to organize and manage (Fiore, 2012).

In an authentic assessment context, performance assessment measures a child's ability to demonstrate skills in a natural and relevant way (Fiore, 2012). It includes carrying out a process or producing a product in a realistic context, which demonstrates understanding and application (Nitko & Brookhart, 2007; Wortham & Hardin, 2016). Performance assessment is especially important in early education years because of children's limited communication skills (McAfee et al., 2016). Assessment is done on the way a student completes a task (Popham, 2014). It enables children to demonstrate what they know and what they are able to do in real life situation (McAfee et al., 2016). It assesses the ability to use knowledge or solve the problem rather than only answering the question. Therefore, it enables assessment of the process not only product and improves the teaching (Nitko & Brookhart, 2007). Performance assessment extends and deepens students' learning (Kleinert et al., 2002). It focuses on child strength and enables communication and collaboration between professionals and families (Losardo & Notari-Syverson,

2001). Different strategies are used for performance assessment, including a checklist, observation, videos, digital recordings, work samples, interviews, direct assessments, games, projects, and portfolios (Wortham & Hardin, 2016).

It is suggested to consider a variety of strategies in making alternative assessment decisions. It should be developmentally and culturally appropriate, and it should reflect classroom learning. There should be a link between assessment and curriculum goals. Both teachers and children should be involved in the assessment process, and it should be informative to others like teachers, parents, and administrators (Gullo, 2006; 2013). Moreover, assessors should be knowledgeable about assessment methods and materials (Epstein et al., 2004). For instance, performance assessment requires active participation of the practitioners, and therefore a high level of expertise is required. It is important to be familiar with child development and assessment and curriculum practices (Losardo & Notari-Syverson, 2001). It is necessary for practitioners to understand the process. Moreover, it might be more time consuming. Teacher bias and interpretation might also be part of the process as well as validity and reliability issues. All these challenges are related to appropriate preparation and planning for performance assessment and increase responsibility and accountability in the assessment (Wortham & Hardin, 2016). Referring to these challenges, in the related literature, barriers to alternative assessment are categorized into two groups. The first is implementation barriers such as lack of time, information, support, or resources. The second is affective barriers like teacher ideas, issues or concerns about alternative assessment which impact their perceptions (Jonson, 1999).

2.4. Portfolio Assessment in Early Childhood Education

2.4.1. Definition, purposes, and types of portfolio assessment

Portfolio is the “*collection of child work and teacher data from informal and formal assessment to evaluate development and learning*” (Wortham & Hardin, 2016, p. 241). This is the purposeful, systematic, and meaningful collection of children’s representative works, artifacts, and teacher observations which teachers and student

select to provide information about child developmental readiness, interest, effort, progress, achievement, proficiency, and learning growth over time (Arter & Spandel, 1992; Butler & McMunn, 2006; Gelfer & Perkins, 1996; Kingore, 2008; Morrison, 2014; Paulson et al., 1991; Popham, 2014). To explain, systematic collection is important to ensure that a portfolio is developed purposefully regarding its content, organization, and assessment applications. Products must be representative of child work, not just the best works of children. It is also important to include both teacher-selected and child-selected products in portfolio. The teacher determines which products are necessary to report child achievement and learning. On the other hand, child-selected products also individualize the portfolio, reflect child interests, contribute to child ownership, motivate student learning (Kingore, 2008), and enable child self-assessment (Butler & McMunn, 2006).

Because the portfolio is the purposeful collection of student work which tells the story about student effort for particular instructional goals (Jardine, 1995), it assesses competencies in relation to an objective, goal or standard and examines how learner achievement in that area (Johnson et al., 2006). Therefore, determining the purpose is one of the most important steps of the portfolio process (Jardine, 1995; Jones & Shelton, 2006). Otherwise, a portfolio is just a folder without purpose (Arter & Spandel, 1992). Purpose will guide most decisions about the type of portfolio, context, and audience (Jardine, 1995). Actually, portfolios can be used for different purposes, including assessment and evaluation, self-assessment and reflection, informing instruction, preliminary identification of children who need special help, reporting progress (Martin-Kniep, 2000; McAfee et al., 2016; Wortham & Hardin, 2016), showing growth, process and product, communicating with student's following teacher, creating a collection of student work, program evaluation, parent conferences (Jardine, 1995), exploring child interests, and providing concrete evidence of child progress (Wortham et al., 1998). Among these, Popham (2014) highlighted the documentation of student progress to provide evidence about student growth. In relation to this, it can also give feedback to teachers as they observe and improve instruction in class. It can be used to

determine effective instructional accommodations (Kingore, 2008), presenting developmental growth and learning over time (Martin-Kniep, 2000).

Moreover, students can also observe own growth and progress by comparing work samples and drawings from throughout the process (Hebert & Schultz, 1996). In this case, it has a goal of student self-assessment (Tierney et al., 1991) and it can be used to develop students' feeling of self-worth (Kingore, 2008). Furthermore, it can be used to create a connection between prior knowledge and current learning. In addition, all students, parents, teachers, and administrators are audiences in the portfolio process, and the portfolio creates partnership between them (Rolheiser et al., 2000). It can be used as a communication tool between children, families, and educators (Kingore, 2008).

Purpose and type are closely related (Jones & Shelton, 2006). As there are different purposes in portfolio usage, there are also different portfolio types which fit these different purposes. These are: working portfolio, evaluative portfolios, showcase portfolios, and archival portfolios (Wortham & Hardin, 2016). In a working portfolio, student works are collected for future evaluation by both teacher and child. It is important to have progress notes and a plan for subsequent work (Fernsten, 2009; Gronlund, 1998; Gronlund & Engel, 2001; Gronlund & James, 2013). In an evaluative portfolio, teachers assess child progress with both formative and summative assessment. This portfolio is used to report progress to parents and administrators and plan for curriculum and instruction (Barbour & Desjean-Perrotta, 1998; Fernsten, 2009). A showcase portfolio is used to exhibit a child's best works or favorite works (Gronlund & Engel, 2001; McAfee et al., 2016), and it is used to share a child's accomplishments with parents (Gronlund & Engel, 2001). The last, an archival portfolio, also follows students from one year to another, and provides information for the child's next teacher or future teachers (Puckett & Black, 2000; Seidel et al, 1997; Seitz & Bartholomew, 2008). Gullo (2005; 2006) also explained the three most frequently used types of portfolios in early childhood education. The first is a work in progress portfolio which contains all of the work that the child is doing. Because of the richness of content, it might

lose its assessment focus. The second is a current year portfolio. This includes both child and teacher selected works. The last is a permanent portfolio, and it includes highly selective child products.

In the literature, many different portfolio types have been identified in addition to those explained above, such as product, process, progress, documentation, developmental, assessment, professional, private, learning, and pass-along portfolio (Montgomery, 2005; McAfee et al., 2016; Jones and Shelton, 2006; Shores and Grace, 1998). Although the names are different, their purposes overlap. To simplify decision making, it is suggested to focus on two classifications. These are best work portfolio and growth portfolio. A best work portfolio, which is also frequently called a showcase portfolio, consists of the best works of the learner. A growth portfolio focuses on individual growth and development over time (Rolheiser et al., 2000). To illustrate, a growth and learning progress portfolio consists of a sequence of student works to demonstrate progress and development toward achieving the learning targets. The best works portfolio consists of selected representative student works which provide the degree of student achievement of the specified learning target (Nitko & Brookhart, 2007).

The amount of material might be overwhelming for the teacher to collect, manage and reflect on (Helm et al. 2007; Wortham & Hardin, 2016). It is important to consider type of portfolio at this point. A working portfolio can include a collection of works, but the number can be reduced to significant samples for the evaluative portfolio. Portfolios with student work samples and narrative reports allow teachers to describe child activities. They might be used to assess and report student progress and accomplishment to parents and administrators (Wortham & Hardin, 2016). However, if all student work is collected, it will not be an assessment tool; it will just be a notebook (Butler & McMunn, 2006). Therefore, a portfolio includes a limited collection of student work, whether to present a student's best work or to show a child's growth over time. Items are carefully selected to serve the purpose of the portfolio since having many entries in a portfolio might be confusing and difficult to understand (Nitko & Brookhart, 2007). In light of all this, it is necessary

to decide the criteria for what to put into portfolio before compiling it. Samples of a child's work which are representative of the child's ability should be included in the portfolio (Morrison, 2014). It is better to have one good example which represents child knowledge and ability than to have many samples of lesser quality. Excessive documentation can take away from a teacher's time for planning (Helm et al., 2007). Moreover, the work in the portfolio should be linked with instructional objectives, otherwise it will be only a collection. It should also be ongoing assessment to observe child growth. It should not be teacher manufactured documents. Both parent and child voices should be included in it as well, in addition to its being performance based (Hanson & Gilkerson, 1999).

2.4.2. Content, organization, and implementation of portfolio assessment

There is no one way to develop a portfolio. It depends on context, purpose and audience (Arter & Spandel, 1992). It is important to consider purpose, audience, range of works, and presentation. It is also important to consider content (actual student work collections), time frame (period of time to cover), organizing principles, and student involvement (Seidel et al., 1997). The basic portfolio process involves planning, production, collection, selection, organization, assessment, reflection, presentation, and celebration (Kingore, 2008; Pergola, 2015; Seitz & Bartholomew, 2008). To start with, it is important to allocate time for planning (Kingore, 2008) and set time for portfolio building. Teacher planning and intentionality is necessary to address domains, show evidence of specific learning goals, and show unique capabilities of children (Gronlund, 2016). Thus, it is necessary for teachers to establish the portfolio process prior to beginning, such as deciding portfolio containers, storage location, management procedures, evaluation, etc. (Kingore, 2008; Wortham & Hardin, 2016).

To serve its purpose as an assessment, it is necessary for the teacher to select some items in every child's portfolio. These are not best works. This is the systematic documentation of achieved skills in relation to learning standards over time. It is necessary to collect representative works rather than a collection of everything. To

reflect individuality and child uniqueness, children also select some products. Child selection provides more value and ownership of portfolio by the child, and it provides variety in each child's portfolio (Kingore, 2008). It is necessary to involve students in the portfolio process through steps such as selecting portfolio content, developing criteria for success, and self-reflection (Arter, 1995). Children's involvement makes it a portfolio rather than only a work folder (Shores & Grace, 1998). Students and teachers review the portfolio together to see improvements in skills. For portfolio reporting, grading can be done but the portfolio is more than grading. Alternatively, a narrative report provides detailed analysis of the portfolio (Seidel, et al., 1997). In many schools, it is required to write a narrative about the collected portfolio content. This is about child development in each domain, child developmental level, and suggestions and recommendations about the child. It can be brief and present the most significant elements in portfolio (MacDonald, 1997).

While determining the content of a portfolio, it is suggested to consider curricular goals, instructional goals, and decide whether it will be structured, unstructured or a mix of the two. For a structured portfolio, the teacher decides the required items. For unstructured ones, there are no specific requirements. Many teachers use a method between the two types, which includes some required items and gives options for students to select others (Jardine, 1995). Corresponding to the goals of portfolio assessment, information from a variety of sources should be included in the portfolio, which is collected systematically over time (Grace & Shores, 1992). In portfolio content, teacher, child, and family contributions can be included. Collected data should reflect the whole child with all developmental domains of learning (Wortham et al., 1998). To explain, it is suggested that the following can be included: photographs, research projects, awards, surveys, videotapes, audiotapes, test results, ratings scales, logs, journals, scrapbooks, checklists, anecdotal observations, progress notes, reports, pre/post assignments, experiments, self-reflections, drawings, standardized and informal tests, parent-teacher observations, student self-reports, samples of student work which are selected by student and teacher, parent teacher conferences, and parent-teacher

communications (Gelfer & Perkins, 1996; Gelfer & Perkins, 1998; Jardine, 1995; Shores & Grace, 1998). Furthermore, for various portfolio formats, the following can also be included: a table of contents, a title page which explains the portfolio and introduces the content, dividers with labels, dated entries, and an assessment section (Wortham & Hardin, 2016). It is helpful to include a table of contents and some background information about the individual to help the reader (Hamm & Adams, 1992). Depending on the age and ability of the learner, the teacher can also structure an introductory piece (Rolheiser et al., 2000). Content of the portfolio can change with respect to the purpose of it. Materials can change with respect to age of the child or purpose of the program. Therefore, different factors should be considered such as developmental level of the child, ease of storage, program goal, curriculum, type and purpose of portfolio, and teacher preference (McAfee et al., 2016; Wortham et al., 1998; Wortham & Hardin, 2016).

Mainly, to make sure to include information about progress, it might be necessary to include classroom assessments, not only performance products. It is important to ensure that all developmental and subject matter areas are adequately documented for all children, and a child's thinking and learning process is also documented (McAfee et al., 2016). It is suggested that actual child work samples be included as a major component of the portfolio (Dichtelmiller et al., 2001; Meisels and Steele, 1991). However, careful planning is also necessary so that teachers are not overwhelmed by work samples. Therefore, identifying criteria is helpful to see how children are progressing towards the goals (Gronlund, 1998). For instance, it is suggested to collect the same type of item several times during the year to compare the samples (MacDonald, 1997). In other words, it is advised to choose specific activities and do them for all children, assessing the same thing at certain time periods to see whether there is a change. In addition, it is also suggested to collect spontaneous samples to represent child growth (Hansen & Gilkerson, 1999). Examples from various classroom and curriculum contexts should be included (Gullo, 2006). Apart from these, it is important that there are enough samples to represent, the samples are representative, and samples are from different methods

or contexts. It is important that all work samples are dated, which will allow to see the change. There should be a narrative sample for the pieces because it can be forgotten in time, and this is helpful for parent understanding and accountability (Hanson & Gilkerson, 1999). Selected items should also be informative, easy to collect, and representative of meaningful classroom activities (Meisels et al., 1994).

A portfolio can include both core items for all children and individualized items (Losardo & Notari-Syverson, 2001). To elaborate, there should be a common portfolio structure for all children that includes goals, standards, and a systematized procedure (Paulson et al., 1991). To illustrate, collecting work samples and taking anecdotal records gives a snapshot of child development at a particular point in time. It enables viewer to focus on what the child can do rather than cannot do (MacDonald, 1997). When portfolios are combined with developmental checklists, anecdotal records and student works, this organized information provides a manageable method for developmentally appropriate assessment in preschool. It creates a useful assessment tool, and it also enables teachers to evaluate the curriculum (Gibson, 1994). Those become evidence for a teacher's judgements about child development and is helpful when sharing insights with parents and other teachers. Those samples can also be related to the instructional objectives (Grace & Shores, 1992). Connecting portfolio content with local and state standards contributes to the evidence of teacher and student accountability (Belgrad et al., 2008). Therefore, each item of the portfolio should include the child's name, the date, and a caption on the product which presents incorporated skills, concepts, or reflections (Kingore, 2008). Moreover, the portfolio is not complete without reflections. It is one of the defining characteristics of portfolios. It provides insight into learning and personal/professional development (Jones & Shelton, 2006). Incorporation of reflections also have significance since these help families, teachers, and students to connect learning objectives with the items over time (Kingore, 2008).

There is no best way to organize portfolio content (McAfee et al., 2016). A portfolio might be organized with respect to content area, goals, themes, or chronological

order of the works (Losardo & Notari-Syverson, 2001). For instance, portfolios can be organized with respect to content area, or topic or theme if there is an integrated curriculum or thematic curriculum. If it is an evaluative portfolio, chronological organization will best serve to the purpose to show progress in developmental domains. In preschool and primary grades, portfolios are organized by developmental domains in a sensible way using dividers (e.g. language, cognitive development) (Wortham & Hardin, 2016). There are two main ways to organize portfolios, by traditional developmental domains (e.g. cognitive, language) or subject areas (e.g. reading, writing) (Wortham et al., 1998). For ease of reference, it is suggested that portfolios be organized with respect to category and time sequence (Grace & Shores, 1992).

A variety of containers can be used for portfolio. It is important to consider size, durability, and easy of storage while selecting the manner of storage (Wortham et al., 1998). For instance, a variety of materials can be stored in an expandable folder, a box, a shopping bag, or on a shelf (Farr & Tone, 1998). In addition, file folders, file pockets, three-ring binders, x-ray folders, pizza boxes, grocery bags, large mailing envelopes, scrap books, office boxes, paper briefcases, shoe boxes, plastic crates, CD-ROM, accordion files, and magazine holders could be used (Barbour & Desjean-Perrotta, 1998; Grace & Shores, 1992; MacDonald, 1997; McAfee et al., 2016; Montgomery, 2005; Shores & Grace, 1998; Wortham et al., 1998). The nature of the collected content might affect the actual organization of the portfolio (Popham, 2014). Although private portfolios and pass-along portfolios can be simple files, learning portfolios need to be large enough for work samples (Shores & Grace, 1998). For large sample of works, pizza boxes or X ray folders might be adequate. Expandable folders with dividers might also be helpful for some teachers (Grace & Shores, 1992). While choosing how to store these, it is important to consider that the container can be divided into sections. It should have easy access for filling and retrieval. It needs to take up minimum space. It needs to hold everything about the entire year. It also needs to be inexpensive (MacDonald, 1997).

Bearing in mind the entire process, a portfolio necessitates two storage systems, the work folder and permanent portfolio folder. Teachers select and discuss items from the work folder for the portfolio. Work folders should be in a place which children and teachers can easily reach (McAfee et al., 2016). If there is a privacy issue, portfolios need to be stored in locked cabinets. Moreover, keeping track of entries with a tracking sheet or table of contents can be helpful during the portfolio process (Rolheiser et al., 2000). To this end, it is advisable to decide what to collect and make a chart to keep track of what is to be collected (MacDonald, 1997). To be beneficial, portfolio content also should be summarized at least twice a year. This step can document child progress, identify special needs, develop plans to meet child needs, or be used to prepare for conferences with parents, and document program effectiveness (Nelson & Nelson, 2001). Furthermore, it is important to communicate with other teachers, administrators, families, and children throughout the portfolio process (Kingore, 2008). Portfolios should be discussed with parents at least two times a year (Gelfer & Perkins, 1996). It also suggested for teachers to share the portfolio with the child's next teacher (Gelfer & Perkins, 1998).

2.4.3. Family involvement in portfolio assessment

Parents, families, and communities are part of the educational process as much as students and teacher, and their involvement increases positive educational outcomes and student achievement (Morrison, 2014). If parent partnership can be achieved, children feel that they and their family are respected, and they feel trust in their teacher (Wortham & Hardin, 2016). Moreover, families and professionals build on each other's expertise and resources to benefit children (Turnbull et al., 2006). Therefore, this is a reciprocal process. When parents know more about school objectives and procedures, they can better support their children's learning. When teachers know more about the child outside of the school, they can better understand and guide them in school. When children also see that parents and teachers communicate better, they see that their learning is important and valued by them (Kingore, 2008). To establish such a partnership, the following are suggested: ongoing and honest communication, professional competence, respect for one

other, commitment as being sensitive to family needs, enablement of equality by sharing power and decision making, advocacy, and trust (Turnbull et al., 2006). Communication in particular is the critical factor in providing parent-teacher and family-school partnership (Swick, 2003). Respectful and reciprocal relationships are important to support family involvement in their children's education (Morrison, 2014). To this end, teachers' reports to parents can be done in different ways. Formal ways include parent conferences, progress reports, report cards, forms, summarized and interpreted child portfolios, and grades. Informal reporting methods are displaying sample work and sending home, exhibitions, informal conversations, telephone messages, e-mails, folders of student work sent back and forth between home and school, notes, websites, and others. Most often, a combination of these methods is used (McAfee et al., 2016).

It is important to involve parents especially in assessment because they know the child better than anyone else (Couchenour & Chrisman, 2000). Therefore, children should be evaluated at both home and school for complete assessment (Casper et al., 2013). If there is a partnership between home and school, parents will be able to realize child needs and will propose ways to guide the child. However, it is important that in the evaluation process, parents feel that they are part of the evaluation process, not only recipients of the evaluation report (Wortham & Hardin, 2016). To this end, it is important to welcome them to share their observations and participate in school decisions (Kingore, 2008). To foster such a collaborative child assessment, the following are suggested: creating various opportunities for families and teachers to communicate, ensuring that assessment includes child development and behavior in multiple settings, using assessment results to connect home and school teaching practices, helping families to make a connection between assessments and educational standards, and inviting families to join a community of learners around child assessment. To explain, family-teacher conferences, ongoing written notes, phone-calls, and home visits provide an opportunity to discuss assessment results. Classroom meetings, parenting groups, school workshops and in-school family events also provide an opportunity to talk about

how standards are related to child development and learning milestones (Casper et al., 2013).

Parent involvement is also an important part of the portfolio assessment process (Kankaaranta, 1996). Portfolios improve communication between child, teacher, and parents as providing observable products and understandable or concrete evidence about child performance (Kingore, 2008; Stiggins, 2005). Viewing actual products will provide richer information to them about their child's learning and depth of thinking (Kingore, 2008). In these conferences, children share portfolio content with teachers, parents, and others, and they assess and reflect on their own progress (McAfee et al., 2016). In this way, a portfolio can be a tool for a child to reflect on progress. Moreover, parents can interact with teachers and child about the portfolio and have a conversation about plans and goals together (Smith, 2000). This means that parent-teacher conferences are important to establish a strong connection with the parents and help them to understand their children's strengths and needs as well as involving them in their children's learning (Nitko & Brookhart, 2007). However, diverse backgrounds of children should be considered for a conference to create a welcoming environment for parents. While conducting conferences, it is necessary to help parents to understand and interpret evaluation information and solicit parental and child input for assessment and planning for child. Otherwise, it might be overwhelming for parents to see and understand all work samples and assessments. If parents are prepared for this, they will appreciate the effort and work in the portfolio (Wortham & Hardin, 2016). For instance, conference times can be accommodated to fit parents' schedules (Montgomery, 2005). Since one strategy does not work for every family, it is also important to use a variety of strategies to involve families (Shores & Grace, 1998).

Portfolio focused conferences are practiced in two different forms. Children present and explain their portfolio to parents, or portfolios become a focus or supplement to parent conferences (McAfee et al., 2016). In three-way conferences, student, teacher, and parent participate. All participants have an opportunity to interact and all plan together for future goals (Wortham & Hardin, 2016). In student/child led

conference, student discuss their own portfolio with parents, and teachers participate later to answer possible questions (McAfee et al., 2016; Wortham & Hardin, 2016). This necessitates a certain level of maturity and experience. Children assess their learning and use metacognitive skills to interpret what they have done (McAfee et al., 2016). Children communicate the evidence of their achievement to their parents (Belgrad et al., 2008). It is suggested to schedule these conferences one or more times at school with parent or families. These clarify children's perceptions of learning and gives an active role to children in the assessment process. These child-involved conferences can also be organized in two forms. In the first, multiple child-parent conferences are conducted simultaneously. It focuses on child-parent communication, and the teacher only facilitates the communication. The second form is a three-way conference, and child, parent and teacher all participate. One conference is conducted at one time, and the focus is the communication between child, teacher, and parent (Kingore, 2008).

On the other hand, in teacher led conferences, whether parent-teacher or parent-student-teacher, the portfolio facilitates explanation and shared satisfaction by going through the selected items. It provides an objective focus for the conference (McAfee et al., 2016). In parent-teacher conferences, the teacher shares concrete evidence of child progress with parents. Teachers support information with observation and products from child portfolio. Parents are also encouraged to share insights and participate in decision making. In this conference, parents can better understand school objectives and how children are performing the aimed skills (Kingore, 2008). However, the drawback of these conferences is that these are time intensive, and parent attendance might be a problem. It is also important that these conferences should be private between teacher and the parents of one student (Nitko & Brookhart, 2007). If it is not possible to have such individual meetings with families, parent group meeting conferences might also be designed. The teacher explains assessments and information on study topic to parents. After group meeting, the teacher can still contact families who have concerns individually (Wortham & Hardin, 2016).

For parent-teacher conferences, it is suggested to plan the conference ahead of time, know families, communicate at parents' level, emphasize the positive, allow families to talk, listen to them, and develop a plan about what can be done (Morrison, 2014). Furthermore, for parent-teacher conferences, it is also necessary to prepare parents and children as well as prepare as a teacher. Some guide questions can be shared with parents before the conference for consideration. Although children do not participate in this conference, it might be required that they select a product to be shared with parents at the conference to increase their ownership and feeling of responsibility. To increase the child's comfort and enable them to practice, portfolio sharing can be done in pairs in class. Children's thoughts can be attached as a note to parents. Teachers can also prepare by selecting three products from beginning, middle, and end to show child growth and achievement (Kingore, 2008). In parent-teacher conferences, it is important to emphasize that their children are doing well in school. If there is an issue, it is important to begin with child abilities and then continue with the goals for the child, including those which the child is having problems achieving. It is also very important to explain how to help the child and what the role of parents can be in reaching the goals. Moreover, while working with parents, it is advised that conferences are conducted at distance such as using Skype. Alternative times can also be offered for conferences (Morrison, 2014). It is also advised to plan a place and time before or after conferences for parents to look at portfolios on their own (McAfee et al., 2016).

Bearing in mind that parent involvement is essential in the portfolio assessment process, at the beginning of the semester, it is necessary that parents understand the nature of the portfolio assessment (Popham, 2014). Parent trainings can be organized including purpose, content selection, format design, and evaluation of the portfolio assessment, to create a partnership with parents in the portfolio process (Seitz & Bartholomew, 2008). It is necessary to explain the why and how of documentation to parents. Many teachers invite parents to school at the beginning of the semester to explain how documentation is used in assessment (Helm et al.,

2007). Moreover, a teacher can share a letter with parents that describes the assessment. Suggestions and the assistance of parents can be integrated into the plan including the completion of the portfolio (Montgomery, 2005). Furthermore, narrative reports might be part of portfolio assessment, which are used to report a child's progress to parents. When a portfolio is supported with a narrative report, it presents a profile of the progress. If it is not possible to have a face-to-face meeting parents, these reports might present essential information and teacher interpretation to parents (Wortham & Hardin, 2016).

For sharing a portfolio with parents, it is also suggested to send portfolios to home to share with parents and children together, making portfolios available to review on different occasions, organizing portfolio workshops with parents, enabling parents to look at the portfolio anytime in school, or organizing portfolio day to bring parents and students together (Farr & Tone, 1998). It is also suggested to include children in family conferences. Their input is important while discussing their education. In this way, they have responsibility for their own learning. In conferences, it is also important to focus on just the main ideas about work samples, child development level and influence of these experience on the next year (MacDonald, 1997). To conclude, sharing documentation fosters family conversations about child learning experiences and helps to create connections between center, home, and extended family according to families. Children also gain pride and a positive sense of identity when documentation is shared with families (Reynolds & Duff, 2016).

2.4.4. Sharing a portfolio with the next teacher

Children come to classrooms with diverse backgrounds and experiences (Piker & Jewkes, 2013). It is necessary for teachers to understand the assessment which children bring with them, and share the information with the child's next teacher, which will be helpful for that child (McAfee et al., 2016). In this regard, a portfolio can be seen as a bridge from kindergarten to school. A preschool to primary school portfolio can provide continuity in teaching and learning and can be a tool for future

planning (Kankaaranta, 1996). Specifically, a progress monitoring portfolio can be beneficial for teachers to support transition of children with special needs into kindergarten (Stokall et al., 2014).

A child's portfolio folder and a teacher's anecdotal notes provide valuable information for the child's next teacher. This can help the next teacher to work on developmental and learning needs of students. However, the challenge is to avoid massive storage problems and manage the portfolio process throughout the years. The suggested solution is to select some representative works from each portfolio and share with the next teacher to guide the instructional planning. Remaining items can be sent to home. It is the primary responsibility of the teacher to select the most significant and representative items of the child. In this way, a school career portfolio can be created for each child throughout the years, to document long term achievement and learning growth (Kingore, 2008). To illustrate, for these portfolios, it is suggested to include the most significant works such as writing, painting, math, written stories, and drawings. A comprehensive picture of the child, including abilities, accomplishments and future suggestions are important. As another example, some schools scan portfolios and record on a CD-ROM and share virtually with the next teachers (MacDonald, 1997).

On the other hand, some teachers think that portfolios should not be shared. The first reason for this is that it will create storage problems in classrooms to store all portfolios. Secondly, students like to take their work home for sharing. Thirdly, they also do not see the benefit of reviewing several portfolios from previous years (Montgomery, 2005). However, it is highlighted that if there is a concern about child progress, these portfolios become invaluable. Actually, very few schools use these portfolio practices. These are also called pass-along portfolios (Seidel et al., 1997) and they enable teachers and children to review past work and gain insights for new projects (Shores & Grace, 1998).

2.4.5. Role of teachers in the portfolio assessment process

Teachers have a variety of responsibilities in educational assessment including selecting, developing, administering, scoring, and interpreting different assessment methods, using assessment results for educational decisions, and communicating assessment results to each stakeholder (Phye, 1996). It is necessary for teachers to know how to get children's best efforts and how to use assessment information to guide teaching and learning experiences. Moreover, a teacher has a key role in bridging the assessment process. Bridging helps early childhood teachers to reach the potential of children and puts activities at the center of assessment, documentation, and analysis of child learning. To bridge assessment and instruction, teachers have the role of decision maker, participant, observer, interpreter, and translator (interpreting results to guide plans and goals). It is also important to spend time with colleagues in the bridging assessment process (Chen & McNamee, 2007).

To translate assessment results into differentiated instruction and activities, it is necessary for teachers to plan (McAfee et al., 2016). It is suggested for teachers to integrate documentation into their plans and have reasonable goals for documentation. Moreover, reflection and discussion with colleagues improve teachers' understanding and has an impact on children's growth and development. Therefore, it is necessary to allocate time for reflection (Helm et al., 2007) and reflect upon effectiveness of the assessment system and discuss with colleagues the values of assessment and evaluation information (Kingore, 2008). Reflective practice is essential for becoming a professional. It enables time for thinking about how children learn and decide how to support child development and learning (Morrison, 2014). To this end, teachers also need to be flexible to make adaptations in the moment with respect to observations (Gronlund, 2016). That being said, these necessitate time and expertise. This requires development of knowledge and skill to practice assessment effectively to serve its purpose (McAfee et al., 2016).

Teachers have an important role, particularly in the portfolio assessment process. Especially if children are younger, the teacher has a central role. They both listen and encourage children to reflect by asking questions (Kankaaranta, 1996). It is essential for teachers to investigate evidence from different perspective to understand the meaning of assessment information. Interpretations should reflect what is actually known (McAfee et al., 2016). Therefore, a particular collection of student work is necessary to show growth (Popham, 2014). By including collected work samples, observations, and electronic media, teachers can focus on each child's whole development. Portfolio organization enables them to collect items from each domain. The teacher periodically reviews child work with a developmental checklist (Helm et al., 2007). Specifically, growth and learning progress portfolios are evaluated qualitatively. All these necessitate skill and learning about the student learning and subject matter in addition to requiring knowledge, skill, and ability. Furthermore, it is also necessary to be disciplined to assess progress (Nitko & Brookhart, 2007) in addition to being flexible and versatile. Having these characteristics, they can have different roles at different times (Crockett, 1998).

In brief, teachers should understand the curriculum and standards. This will help them to provide evidence of child progress and learning in portfolio (Seitz & Bartholomew, 2008). Moreover, it is necessary for teachers to become familiar with age-appropriate developmental domains and grade-level standards to understand where children are and where they need to go next (Shepard et al., 1998). Teachers should also plan when, how, how often, and for which purpose to assess children. Teachers need to summarize the collected assessment information (Piker & Jewkes, 2013). Teachers also become a guide when students self-assess during the process (Farr & Tone, 1998). Overall, a portfolio necessitates teacher ownership in linking curriculum, assessment, and student learning (Kim & Yazdian, 2014).

2.4.6. Benefits of the portfolio assessment

Portfolio assessment has a variety of benefits for children, families, and teachers (Harris, 2009). Mainly, a portfolio demonstrates child growth and development in

a variety of ways (Wortham & Hardin, 2016). It is not one-size-fits-all documents. It is adapted to fit specific needs for specific purposes (Jones & Shelton, 2006) or it can be tailored to individual students' needs, interests, and abilities (Popham, 2014). It can be used to make modifications in curriculum with respect to children's needs and strengths (Gullo, 2006). It focuses on child strengths in particular (McAfee et al., 2016). It assesses what children can do, not just what they know (Damiani, 2004). It addresses improvement, effort, and achievement (Tierney et al., 1991). The teacher has flexibility in how to document child progress (Wortham & Hardin, 2016), and this allows individual differences while assessing student achievement (Tierney et al., 1991).

A child is actively engaged in the portfolio evaluation process (Damiani, 2004; Wortham & Hardin, 2016). A portfolio encourages learners to be active in the assessment and evaluation process by providing complex thinking and self-evaluation in choosing representations of their learning (Johnson et al., 2006). To elaborate, a child makes a selection for portfolio content (McAfee et al., 2016; Wortham & Hardin, 2016), makes an assessment in the process, and discusses progress with parents in portfolio conferences (Wortham & Hardin, 2016). In this way, they engage in assessing their progress and accomplishment, and determining the learning goals (Tierney et al., 1991). This helps students to see their strengths and weaknesses (Pergola, 2015). Selection of work samples enables students to think critically about their learning and work in relation to standards. It helps them to feel ownership of the learning and portfolio (Klenowski, 2002). In this way, the portfolio process helps students to become more self-directed and more responsible for their learning in an authentic way (Seitz & Bartholomew, 2008). Thus, when portfolio assessment is used, they develop better self-assessment skills and become less dependent on grades (Lambdin & Walker, 1994). Moreover, in the portfolio process, children become part of the assessment process and they make decisions about their own learning. This also contributes to their self-esteem (MacDonald, 1997). As a result, it provides increased student self-awareness, discovery, and responsibility for learning objectives (Belgrad et al., 2008; Jones & Shelton, 2006)

and enables them to take ownership for assessing their learning (Jones & Shelton, 2006; McAfee et al., 2016; Montgomery, 2005). They can recognize the areas which they need to improve (Banta, 2003). This self-evaluation also improves communication, problem solving, and metacognitive skills (Laski, 2013; Losardo & Notari-Syverson, 2001).

Furthermore, a portfolio is related with democratic practices because of its emphasis on student participation (Alasuutari et al., 2014). It provides child voice and teacher reflection on material (McKenna, 2005). Through ongoing reflection and self-evaluation of the portfolio, students value their work. While presenting a portfolio, they celebrate their accomplishments and become more focused when they see their growth or skill development by means of the portfolio (Belgrad et al., 2008). As a result, it encourages students to appraise their own work (Popham, 2014) and increases their sense of personal accomplishment (Barton & Collins, 1997; Cook-Benjamin, 2001). This increases pride in their work and extends their motivation to learn. A portfolio also increases self-esteem because children recognize their strengths, abilities, efforts and progress, not only achievements (Crockett, 1998; Kingore, 2008). It provides opportunities for children to demonstrate their creativity and unique abilities (Bergan & Feld, 1993). Moreover, with documentation, children see the appreciation for their efforts from their parents and other adults (Helm et al. 2007), and they become motivated when they see satisfaction and pride of achievement from stakeholders (Belgrad et al., 2008).

A portfolio clearly communicates learning progress to students, parents, and others (Belgrad et al., 2008) by providing concrete and meaningful information. Actual examples help parents to better understand their child's development (Gullo, 2006) since it becomes evidence and documentation about child development. In this way, teacher can provide examples of child growth rather than checking off accomplishments. It shows how play and developmentally appropriate practices help children's learning (Harris, 2009). It provides other people and parents an opportunity to see and understand the story of each student's learning. Parents understand the standards and goals as they hear about students' learning stories.

They become more enthusiastic about participating in conferences (Belgrad et al., 2008). Work folders provide documentation and evidence for teachers' report card grades and teachers' comments (Montgomery, 2005). They help parents to see how their child is progressing towards expected goals (Pergola, 2015) and provide apparent and meaningful evidence of child progress for them (Laski, 2013), and this enables parents to actively participate in and support assessment and instruction (Shores & Grace, 1998). Furthermore, portfolios demonstrate instruction which students have received. It clearly represents what teacher has taught (Haladyna, 1997). It shows families, teachers, and administrators that the program is effective and provides useful and clear information about child development and learning (MacDonald, 1997). Therefore, documentation enables teachers to demonstrate their expertise to others (Helm et al., 2007). Since a portfolio exemplifies pedagogical activities in the classroom, it also enables student, teacher, parent, and community to reflect on the practice and progress of preschool. This provides all stakeholders and the community to clearly understand methods and pedagogy in early childhood education (McKenna, 2005).

Teachers mostly focus on weakness of a child, and strengths might be ignored. A portfolio helps to focus on what is right about the child by considering what a child can do and cannot do. This helps teachers to do self-assessment and see the weaknesses of their program (MacDonald, 1997). In other words, it provides information to teachers about student progress and the effectiveness of their instruction (Pergola, 2015). In this way, a teacher can respond to the individual needs of children by investigating portfolio content and discussing the process with the child (Harris, 2009). Since it provides ongoing assessment, it captures many dimensions of child development and learning (McAfee et al., 2016), and it provides a comprehensive picture of the individual child (Laski, 2013; Losardo & Notari-Syverson, 2001). It makes teaching more satisfying and contributes to student and teacher accountability (Belgrad et al., 2008). Moreover, it links assessment and teaching to learning (Tierney et al., 1991). It links artifacts to

learning, and it provides evidence of growth and change over time in this way (Jones & Shelton, 2006).

Furthermore, a portfolio encourages cultural diversity and supports children with special needs. The collection of a variety of items in a portfolio provides evidence for teachers and parents about different intelligences of children. It provides a variety of options to children to present their skills and concepts (Shores & Grace, 1998) or demonstrate their understanding in multiple ways. At this point, a portfolio helps teachers to adjust their teaching and experience with respect to children (Laski, 2013). It provides documentation of child growth and development in natural learning environments for parents and caregivers of children who receive early intervention (Appl et al., 2014). Therefore, it offers an alternative to traditional tests for children with special needs (Damiani, 2004) as helping to understand individual children's understanding (Belgrad et al., 2008). Moreover, it also provides equity in assessment for culturally and linguistically diverse learners by using authentic examples of knowledge, skills, and dispositions. Both process and products of learning is displayed. It allows for the possibility of adapting to different learning styles and provides multiple ways to demonstrate competence (Johnson et al., 2006).

Overall, a portfolio is an alternative to standardized tests and evaluates student growth through daily activities (Gronlund & Engel 2001). It provides a holistic view of changes in student performance for the student, teacher, and parents (Cizek, 1997). In this way, a portfolio helps teachers to understand student learning and contribute to quality teaching (Kim & Yazdian, 2014). It facilitates constructive dialogue and quality assessment by providing concrete display of pedagogy and learning (McKenna, 2005). For instance, portfolios allow for reflection on progress and create a moment to establish future education goals. It helps to develop comprehensive instruction and an assessment program for teachers. It contributes to self-regulated student learning and ownership for students. Portfolios also help parents and teachers to see the child as a learner beyond the report card (Weldin & Tumarkin, 1998). To sum up, the three main aspects of portfolio assessment are:

demonstration of student growth and progress over time; facilitation of communication and collaboration among teachers, students, and parents; and providing opportunities to transform teaching to meet the needs of individual students (Kim & Yazdian, 2014).

2.4.7. Challenges of the portfolio assessment

A significant number of researchers have shown that time is a challenge in effective portfolio implementation process (Alaçam & Olgan, 2016; Kim & Yazdian, 2014). To explain, the portfolio process requires time to plan, organize, develop, and implement (Fenwick & Parsons, 1999; Jones & Shelton, 2006; Popham, 2014; Seitz & Bartholomew, 2008). For instance, it takes a significant amount of time and effort to collect student works, select key items, and review them in certain periods of time together with children (Belgrad et al., 2008). A portfolio also necessitates a large time commitment for reflection, discussion, and recording. Committed and dedicated teachers can reach its potential (McKenna, 2005). To be effective, a portfolio needs to be organized and current (Wortham & Hardin, 2016); however, organization and storage of portfolios might especially be problematic in crowded classrooms (Alaçam & Olgan, 2016). It is necessary to work regularly to review, discuss, and make changes related to content (Wortham & Hardin, 2016).

There is no one best way for portfolios (Fenwick & Parsons, 1999), yet increased training is needed for portfolio assessment (Bushman & Schnitker, 1995). Portfolio creation necessitates skill, reflection, and self-analysis, and it requires assistance and patience to develop these skills (Fenwick & Parsons, 1999). In relation to these, one possible disadvantage of portfolio assessment is its reliance on teachers to make informed decisions and judgements about child progress and achievements (Goolsby, 1995). To illustrate, portfolio assessment requires teachers to work with team members, plan time and procedures, have a strong background in child development, understand benchmarks to evaluate child work samples, and develop specific guidelines and expectations to evaluate child work (Losardo & Notari-Syverson, 2001). However, it was found that teachers have a lack of knowledge about portfolio types, which might be because of a lack of content in undergraduate

courses (Alaçam & Olgan, 2016). It is necessary for teachers to receive sufficient training in order to carry out portfolio assessment effectively. It is waste of time to put only some student stuff into a folder as a portfolio assessment. Professional development is a requirement for proper portfolio assessment (Popham, 2014).

Teachers may also have concerns about accountability and grading of portfolios. If teachers need to compare or assign grades to portfolios, accountability and grading in particular might be concerns in the portfolio process. Validity might be another issue to consider in addition to fairness since all children do not have the same opportunities outside of school. Moreover, interpretation of portfolio results outside of the school can be the other issue (Wortham, 1995; Wortham & Hardin, 2016). It can be a challenge to minimize evaluator bias and inconsistency (Johnson et al., 2006). Reliability, time, fairness, interpretation of results, and focusing on assessment purpose can also detract from its contribution to learning process (Damiani, 2004).

If children's work samples are bulky and numerous, challenges with storage might also occur (Losardo & Notari-Syverson, 2001). In other words, using children's actual work samples in a portfolio might create a disadvantage in storage. Technology such as a scanner can be a solution for this problem (Gullo, 2006). However, it is necessary to have technological equipment and the knowledge and ability to use it (Seitz & Bartholomew, 2008). Another challenge of the portfolio is to know how many samples will be represented or which samples will represent child potential and capabilities (Gullo, 2006). It might be difficult for some teachers to decide what kind of materials to collect and know how to evaluate them (Chen & McNamee, 2007). If a portfolio only includes a child's representative works, this might also be a limitation to see effort or true performance of the student (Haladyna, 1997).

Overall, portfolios do not provide benefits automatically. They can be misleading if done and interpreted improperly (Arter & Spandel, 1992). If purpose is not defined ahead of time, flexibility and nonstandard format of portfolio assessment

can be a disadvantage too. A portfolio can be simply a collection of stuff if practiced without a clear purpose. Furthermore, portfolio assessment often lacks standards and criteria (Carpenter et al., 1995). There might be misconceptions about the role of formative assessment in teachers. They might see it as an addition which requires extra time and resources rather than as a part of instruction (Yan & Cheng, 2015).

In brief, the difficulties faced are summarized as time constraints, training to be an observer, deciding materials to include, working in isolation (Barton & Collins, 1997), storage, duplication, cost of materials (Jones & Shelton, 2006), measuring student achievement validly and reliably, including disparate items which make evaluation difficult, and students' being skeptical about using portfolios (Fenwick & Parsons, 1999). Portfolio assessment is time-consuming and labor-intensive for teachers, especially those who have many students. However, it will become easier with careful planning and establishment of routines (Lambdin & Walker, 1994). It necessitates patience. It takes time to plan, organize and practice (Seitz & Bartholomew, 2008). New digital tools help teachers to work more comprehensively. However, teachers need training on how to use digital platforms and how to plan assessments (Yaffe, 2016). Despite such challenges, in general, the advantages of portfolio outweigh the disadvantages (Gullo, 2006).

2.4.8. Suggestions for portfolio assessment

It is necessary to provide ongoing support for teachers regarding training and usage of assessment methods for young children (Piker & Jewkes, 2013). More specifically, it is necessary to convince and educate teachers about the usefulness of portfolios (Nitko & Brookhart, 2007). To this end, staff development and ongoing dialogue regarding evaluation need to be part of the portfolio evaluation process (Johnson et al., 2006). For instance, workshops can enable teachers to see that change in assessment practices positively affects students' learning (Butler & McMunn, 2006). Moreover, if several teachers are using portfolio assessment in the same school, a teacher learning community can be created to meet and share insights and work collaboratively on common problems (Popham, 2014). It is important that each teacher shares what they are doing and learning in school.

Allowing time for these conversations contribute to wisdom of assessment in the school. This collaboration enables teachers to benefit from diverse perspectives and expertise. Experts and educators can be invited from outside of the school. Collaborative assessment conferences can be organized for an examination of children's work and portfolios by a small number of teachers (Seidel et al., 1997). Therefore, it is necessary for school districts to provide appropriate in-service education and time for planning and constructing assessments in line with constructivist strategies. Administrators, faculty, and staff should discuss all questions to find solutions (Montgomery, 2005). Furthermore, it is also advised that teacher education programs should increase opportunities for pre-service teachers to learn about various forms of assessment and how to use them. A course can be offered to enable them to use their knowledge and skills through clinical and field experiences in an early childhood context (Gullo, 2013). Bridging assessment and instruction can be integrated into coursework and the student teaching experiences of preservice teachers (Chen & McNamee, 2007).

Starting small is the key issue while changing assessment practices (Seidel et al., 1997). It is suggested to start small with one subject or focus to be able to manage the process (Rolheiser et al., 2000). It is also suggested to start with easy assessment techniques gradually and make it organized and current while moving through the portfolio process. To this end, it is advised to make assessment a part of classroom routine and identify the role of other people (McAfee et al., 2016). Thus, it is necessary to start the portfolio at the beginning of the school year, identify purpose and expectations with team members, and plan when and how data will be collected (Losardo & Notari-Syverson, 2001). Together colleagues can determine the main domains to be observed, broader goals to show progress, and how many times they will complete portfolios (Gronlund, 2016). Developing a plan will prevent teachers from feeling overwhelmed in the portfolio process (Wortham et al., 1998).

To determine or see progress over time, it is suggested to compare child performance on the same type of behavior at two or more points in time (McAfee et al., 2016). It is viewed as helpful to collect the same type of sample for a specific

learning area over a period of time to see development clearly. It is also suggested for teachers to use a core item sheet, on which they later put only the child work or photos after collecting a specific piece of work. Teachers can add an anecdote if they have one. These sheets are prepared at the beginning of the semester for each child, and they remind teachers what needs to be collected (Helm et al., 2007). To understand assessment results, those can be compared with the expected outcomes, goals, objectives, or standards. Moreover, rubrics are also seen as helpful to judge children's progress towards standards or benchmarks. It is also suggested to complement and supplement the portfolio with other documentation. It is difficult to plan a portfolio when it is the only documentation, and it is also difficult to incorporate all required information into a portfolio (McAfee et al., 2016). Supporting this, experienced teachers suggested to limit the number of products in portfolio and combine traditional methods with it (Fenwick & Parsons, 1999). Restricting samples in portfolio content to a specific number prevents teachers from becoming overwhelmed by the task, and it makes it more manageable to review and reflect (Helm et al., 2007). Put simply, it is suggested that items should be informative, easy to collect, and reflective of classroom activities (Dichtelmiller et al., 2001). Furthermore, to increase the amount of information in each portfolio item, it is suggested to make each item as informative as possible. For instance, work products and photos can be identified with child name and date, and annotations can also be included (McAfee et al., 2016). Children's spontaneous work and play might also provide rich and informative items for the portfolio (McAfee et al., 2016). In this light, detailed documentation of process, and student work and voices are emphasized ingredients in classroom portfolios (Barton & Collins, 1997).

Children's voices should be demonstrated (McKenna, 2005). Children should be involved in the selection of their works for the portfolio (Barton & Collins, 1997; Carpenter et al., 1995). Teachers should invite children to examine work samples and select for the portfolio not less frequently than once a month. Teachers can guide children in this selection process (Meisels & Steele, 1991). Furthermore,

families should be involved in the development of student portfolios (Barton & Collins, 1997). It is suggested to get comments from parents to provide insight into developing portfolio practices. Parent training sessions can also be integrated into the school portfolio process (Weldin & Tumarkin, 1998). Children's prior knowledge, beliefs, and experiences provide a basis for their current learning (Glaser, 1987). Therefore, it is suggested to share summarized assessment information to ease transition and provide continuity as children move from one setting to another (McAfee et al., 2016).

It is also suggested that technologies can improve assessment and recording keeping practices in an early childhood setting (Boardman, 2007). It was viewed as effective by teachers to use electronic media such as tape recordings, videotapes, and photographs to document children's learning. These enable both teachers and children to revisit and reflect on their learning (Helm et al., 2007). For ease, it is suggested to put cameras in an available place for photographs. It is also important to take notes in a notebook while photographing (Shores & Grace, 1998). Furthermore, the portfolio should be stored in an accessible place to student, teachers, and families (Gelfer & Perkins, 1996). It was viewed as beneficial for both teachers and students to review example student portfolios (Rolheiser et al., 2000). It was also found as useful by some teachers to organize a portfolio center in class, consisting of a table on which to store portfolios and all other required additions. Children can file their items, or they can make reflections in this center (Kingore, 2008).

Overall, while beginning a portfolio, as a guideline, the following are suggested (p. 70): deciding on portfolio purpose and audience, identifying learning outcomes, starting small and focused, informing parents about the portfolio usage including a schedule, integrating portfolio into classroom routine, deciding criteria to select and judge the content, integrating reflection and self-assessment into the portfolio process, giving ownership of portfolios to students, and sharing portfolios (Martin-Kniep, 2000). Time becomes a less significant factor when teachers have organization and have made decisions on how the portfolio will be used (Wortham

et al.,1998). To this end, for making documentation more systematic and selective, it is suggested to record less but organize and analyze more. It is suggested to integrate specific documentation activities into the lesson plans. It is suggested to use a template for recording, organizing, analyzing, and displaying. To see documentation as a part of good teaching, it also suggested to slowly develop mindset (Kang & Walsh, 2018). In this respect, patience is the key to becoming successful in the portfolio process (Seitz & Bartholomew, 2008).

2.4.9. Electronic (digital) portfolios

Portfolios can be electronic or traditional paper-based (Fisher & Frey, 2007). In other words, those can be created in both print and electronic format. Each version has pluses and minuses (Nitko & Brookhart, 2007). Paper portfolios are easier for young children because they can easily add and remove items independently (Fisher & Frey, 2007). However, for e-portfolios, it is important to think about students' technological ability (Belgrad et al., 2008). Training needs, access, and costs should also be considered while selecting technology (Macy et al., 2016). For digital portfolio development, it is necessary to access computers and information networks. It is crucial to have the enthusiasm to learn and experiment with new information and communication technologies (Kankaaranta, 2002). Despite such challenges, an e-portfolio can be used to strengthen parent-teacher relationship, support parent involvement, and improve children's learning (Higgins & Cherrington, 2017).

E-portfolio can be both webs based, or non-web based. A web-based portfolio is designed to be viewed on the internet. Non-web-based portfolios are created using a software, and they are saved to CD-ROM or DVD (Jones & Shelton, 2006). These portfolios help to create and store children's work using digital technology. It can be stored and shared with parents and the next year's teachers. It can be useful for long term storage and tracking a child's progress from one level to another (McAfee et al., 2016). It makes it easy to share with parents over the internet through a password-accessible site, and enables teachers to easily integrate audio, video, graphics, and text (Helm et al.,2007). Those are also easy to store and distribute,

and are affordable to duplicate. A digital portfolio has a more flexible structure than a print version. However, it necessitates access to technology, technical skill, and may require technical support. Inclusion of personal and contact information also needs to be considered in web-based ones. Non-web-based digital portfolios are portable, easy to store and distribute, and secure. For instance, Power point is useful software for portfolio creation. It is easy to integrate documents in it. It gives flexibility to individualize documents (Jones & Shelton, 2006).

Overall, digital portfolios enable teachers to save and share children's work digitally. Digital portfolios enable families to access child's learning at any time and therefore, are convenient for families. Families are connected to the child learning in process. Parent contribution provides a reciprocal relationship between home and school and provides complete representation of child strengths and needs (Bates, 2014).

2.5. Theoretical Framework of the Study

2.5.1. Theory of planned behavior

2.5.1.1. Description of the theory

Theory of planned behavior is a useful framework to understand human behavior and predict intentions and behavior (Armitage & Conner, 2001). It is a social psychology theory, and it is widely used in a variety of fields including management, nursing, marketing, etc. (Zhang, 2018). It is an extension of Ajzen and Fishbein's Theory of Reasoned Action (Ajzen & Fishbein, 1980) by integrating perceived behavioral control to indicate the possibility of incomplete volitional control (Ajzen 1985; 2005). In the first level of the theory model, behavior is determined by intention and behavioral control. Intentions are explained by attitudes, subjective norms, and perceived behavioral control in the second level. Finally, in the last level, attitudes, subjective norms, and perceived behavioral control are explained by behavioral beliefs, normative beliefs, and control beliefs (Ajzen, 2005).

Intention to perform or not to perform is the most important determinant of behavior, according to this theory (Ajzen, 2005). However, to understand human behavior, it is necessary to know more than intentions. The underlying factors of intentions, its determinants, must be specified (Fishbein & Ajzen, 1975). Three main determinants of intentions were identified according to this theory, personal, reflection of social influence, and dealing with issues of control. The personal factor is the attitude towards the behavior (Ajzen, 2005). *“Attitude is the individual’s positive or negative evaluation of performing the particular behavior of interest”* (Ajzen, 2005, p. 188). *“Attitude is a disposition to respond favorably or unfavorably to an object, person, institution, or event”* (Ajzen, 1988, p. 4). Semantic differential scale is mostly used to get an indication of attitude. It consists of bipolar evaluative adjective pairs such as good-bad, awful-nice, etc. (Ajzen, 1988). The second factor, subjective norm, is the perception of the social pressure related to performing or not performing the behavior (Ajzen, 2005). *“The last one is the sense of efficacy or ability to perform the behavior of interest, termed perceived behavioral control”* (Ajzen, 2005, p. 118). Perceived behavioral control refers to the extent to which people believe that they have the capability to perform a behavior, or they can control it (Fishbein & Ajzen, 2010). Some realistic constraints are considered in perceived behavioral control (Ajzen, 2005), and it can be measured by directly asking about capability to perform a behavior (Fishbein & Ajzen, 2010).

A significant number of studies support that attitudes, subjective norms, and perceived behavioral control can predict the intention to perform a behavior. People have intention to perform behavior when they see it positively, when they have social pressure to perform it, and when they have opportunities to do it. Only one or two of these might be necessary to explain intention in some instances. However, for complete understanding, it is also necessary to investigate the underlying reasons for attitudes, subjective norms, and perceived behavioral control. According to theory of planned behavior, attitude towards a behavior is determined by behavioral belief, which is related to the consequences of the behavior. Behavior is linked to certain outcomes in each behavioral belief. Subjective norms’

underlying beliefs are also called normative beliefs. This refers to the belief that individuals or groups approve or disapprove of the behavior or expectation of people. People with normative beliefs feel pressured to perform with respect to referents. Last is perceived behavioral control, which is also dependent on the beliefs about the presence or absence of factors which facilitate or hinder performance. These beliefs might be dependent on many factors such as past experiences, or observation of models, and these factors cause perceptions related to whether or not an individual has or does not have the capacity to practice the behavior (Ajzen, 2002; 2005).

Both intention and perceived behavioral control have significant correlation with goal attainment. However, if there is little information about the behavior or if there are changes or new elements in the process, perceived behavioral control may not provide accurate behavioral prediction (Ajzen, 2005). Therefore, intention is the best and most immediate predictor of a person's behavior (Fishbein & Ajzen, 1975), and it is the central factor in Theory of Planned Behavior. It has an impact on motivational factors, which include how hard people try, and how much effort they expend to perform the behavior. Stronger intention is more likely to provide performance (Ajzen, 1991). However, success in reaching goals also depends on different factors including internal factors such as skills, abilities, emotions, and external factors such as opportunities, resources, and dependence on others. A variety of variables can also influence people's behavioral, normative, and control beliefs like age, gender, education, nationality, socio-economic status, intelligence, experience, etc. As a result, those can also affect intention and behaviors. These background factors are divided into three categories: personal (such as values, emotions, intelligence), social (such as age, gender, education, income), and informational (such as experience, knowledge, media) (Ajzen, 2005).

A relationship is expected between perceived behavioral control and intention because people will not be intent on performing the behavior if they do not have resources or opportunities. When people have control over their behavior, they tend to behave with respect to their intentions. This can also be used to predict behavior

directly. This construct is closely related to self-efficacy (Ajzen, 2005) since both are concerned with the perceived ability to perform a behavior (Ajzen, 2002). Bandura's (1997) definition of self-efficacy refers to one's capabilities to organize and perform the action to produce given attainments. Similarly, perceived behavioral control also refers to the extent of beliefs regarding capability to perform a behavior (Fishbein & Ajzen, 2010), and most of the knowledge about perceived behavioral control comes from the research of Bandura and his associates (Ajzen, 1991). Although operations to measure them might be different, it seems that they assess the same underlying construct. It is asked for participants to indicate how certain they are in performing certain behaviors (Fishbein & Ajzen, 2010) and indicates perceived ease or difficulty of performing the behavior (Ajzen, 2005). Several studies showed the relationship between self-efficacy beliefs and behavior (Bandura, 1997).

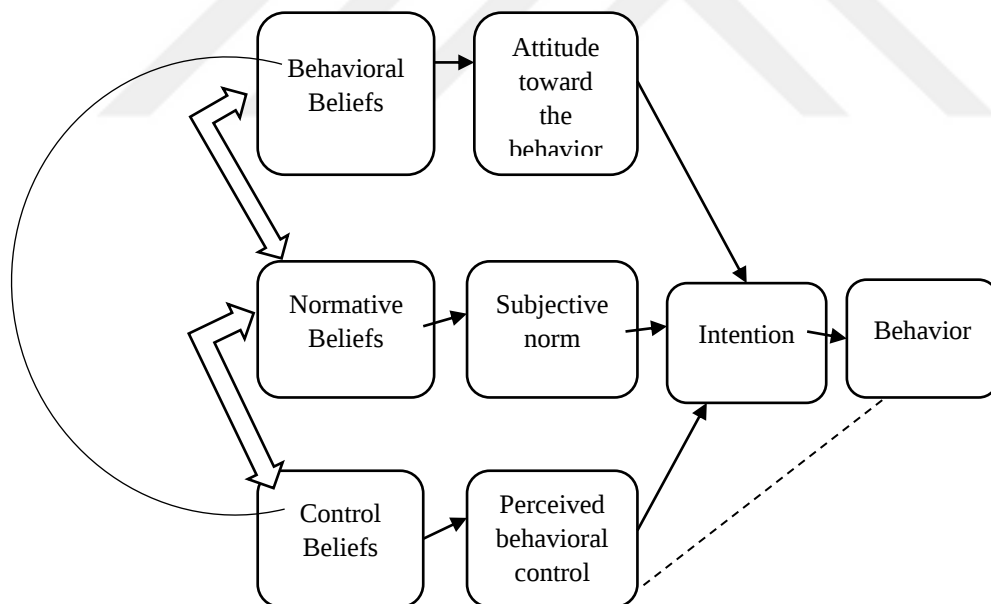


Figure 2.1. Theory of Planned Behavior Schema

2.5.1.2. Research on theory of planned behavior

Meta-analysis of empirical literature supports the theory of planned behavior (such as Albarracin et al., 2001; Armitage & Conner, 2001; Godin & Kok, 1996; Sheeran & Taylor, 1999). For instance, Armitage and Conner (2001) found in their meta-analysis that attitude, perceived behavioral control, and subjective norm are predictors of intentions. Theory of planned behavior (TPB) also explained the 20% in variance in measurement of actual behavior by perceived behavioral control and intention. However, it was concluded that additional normative variables can increase the predictive power of the normative component in the model (Armitage & Conner, 2001). Similarly, several authors suggested that additional variables are necessary for theory of planned behavior. These variables can increase the variance accounted for in a person's intentions and behavior (e.g., Conner & Armitage, 1998). To illustrate, other factors influencing intention and behavior were found to include past behavior, self-efficacy, and implementation intention (Zhang, 2018). Personal norms were also found as a predictor of intention in different research studies (Harland et al., 1999; Roos & Hahn, 2019).

Researchers referred to perceived behavioral control as self-efficacy or perceived control. Some researchers equate these two concepts, but some operationalize self-efficacy and perceived control differently (Lanigan, 1997). Ajzen and Madden (1986) agreed that self-efficacy and perceived behavioral control are similar. Both account for equal proportion of variance in behavior, and both are useful predictors of intention and behavior. There is no evidence about which one to choose but self-efficacy is more clearly defined and operationalized than perceived behavioral control. Therefore, it is suggested that self-efficacy should be the preferred measure of perceived behavioral control within Theory of Planned Behavior (Armitage & Conner, 2001). On the other hand, a meta-analysis of 11 empirical studies showed that there is a distinction between self-efficacy and controllability across a range of behaviors (Trafimow et al., 2002). Different from self-efficacy, controllability was not found as a significant predictor of intention (Yan & Cheng, 2015). Therefore, it was supported that self-efficacy is superior to controllability in predicting intention

and behavior (Trafimow et al., 2002) since it was more correlated with intention and behavior than perceived behavioral control over behavior (Armitage & Conner, 2001).

Likewise, in another study, early childhood teachers' intention and self-efficacy beliefs were significantly related to teachers' frequency of science instruction in the classroom. Their science teaching intentions were also found as significantly related to attitudes, subjective and personal norms, perceived behavioral control and self-efficacy beliefs. Attitude was found as the strongest, and perceived behavioral control was found as the weakest predictor of teachers' science intention (Özcan, 2016). Based on a review, it was also concluded that attitude, self-efficacy, and normative constructs are closely related to each other (Yoo, 2020). In another study, Dunn et al. (2018) investigated the factors which influence teachers' intentions to participate in professional learning on mathematics. It was verified that intention is significantly predicted by perceived behavioral control, subjective norm, and attitude towards behavior. Similarly, Lee et al. (2010) found that attitude toward behavior, subjective norm and perceived behavioral control are significant predictors of teachers' intentions regarding using educational technology. Likewise, Teo et al. (2016) reported that attitudes towards computers usage have the largest influence on intention, followed by perceived behavioral control. However, subjective norm was found to have a negative impact on intention. In contrast, Yan and Sin (2014) found that subjective norm was the greatest predictor followed by perceived behavioral control and attitude. It was found that attitudes towards inclusion, feelings of social pressure from others to practice inclusive education, and confidence in professional training for involved staff significantly predict intentions for inclusive education. Those who have favorable attitudes, positive subjective norm, and high level of perceived behavioral control are more likely to have intention. Intention and perceived behavioral control also have a direct effect on behavior. Moreover, Sussman and Gifford (2019) pointed out a reciprocal relationship between attitude and intention, subjective norm and intention, and perceived behavioral control and intention. The relation between

perceived behavioral control was not found as stable which was interpreted as influence of extraneous variables.

On the other hand, Boziones and Bennett (1999) found that subjective norm and attitude are significant predictors of intention, yet perceived behavioral control was not found as a significant predictor of behavior. Moreover, it was also stated that perceived behavioral control and perceived barrier perception are not equal terms and should be treated as separate variables, which contribute to predictability of the model. In another study, Tsigilis (2007) found that theory of planned behavior components explained 52.5% of the student intentions. However, a weak relationship was found between subjective norms and intentions. Likewise, Linder et al. (2017) found that intention and attitude have the largest significant impact on whether university students engage in performance (physical activity engagement of college students). In dissertation, Akyol (2015) also revealed that intention is related with attitude and perceived behavioral control, not with subjective norms to integrate NOS into their science instruction. Similarly, Patterson (2000) confirmed attitude as an important construct in the prediction of intention, but subjective norm was found as unimportant in the prediction of intention.

In contrast, subjective norms were also found as a significant predictor in different research studies. Knabe (2012) found that subjective norm is the strongest predictor of intention. Martin and Kulinna (2004) also found that teacher's intention to teach a physically active physical education class is determined by subjective norm, attitude, and perceived behavioral control. On the other side, Macfarlane and Woolfson (2013) reported that subjective norm (school principal expectations) predicted teacher behaviors but not intentions. It was found that teachers with positive beliefs and high level of perceived behavioral control (self-efficacy) have a high level of intention to participate in inclusive practices. Menand et al. (2021) also concluded that early childhood educators' intention to support in parental violence is predicted by attitudes, subjective norms, and behavioral control.

Self-efficacy beliefs were also integrated into several studies related to assessment. For instance, Yan (2014) concluded that self-efficacy has stronger predictive impact on teacher's intention to conduct school-based assessment than instrumental attitude. Teachers are most likely to practice assessment when and if they feel confident with that assessment method (Yan & Cheng, 2015). Similarly, Dixon and Haigh (2009) stated that teachers with high self-efficacy are more likely to try new initiatives in assessment. Furthermore, self-efficacy was also found as the strongest predictor of actual behavior (Lanigan, 1997).

Schaaf et al. (2008) examined the relationship between secondary level teachers' beliefs towards teaching behavior, and their real classroom behavior in portfolio assessment. The portfolio was assessed by two raters on content standards, and teachers' classroom behavior was assessed using a survey taken by their students. It was found that teachers' portfolio related beliefs and behaviors are significantly related to students' assessment of their teaching behavior. Teachers who have a high rating on the content standard of "choosing and arguing for teaching strategies that meet students' knowledge, abilities and experience" had higher student assessment than teachers who are low on this standard. To interpret teacher beliefs, Theory of Planned Behavior was used. Similarly, Yan (2014) explored Hong Kong secondary teachers' intention to practice school-based assessment and predictors of it. It was found that instrumental attitude and self-efficacy significantly contribute to prediction of intention to implement school-based assessment. However, it was also found that affective attitude, subjective norm, and knowledge did not have significant predictive power on formation of intentions to practice school-based assessment.

Yan and Cheng (2015) investigated the relationship between teachers' attitudes, intentions, and practices regarding formative assessment in the framework of Theory of Planned Behavior. It was found that instrumental attitude, subjective norm, and self-efficacy are significant predictors of teachers' intention in practicing formative assessment. Self-efficacy was the strongest and subjective norm was the weakest. However, it was also found that TPB constructs are not significant

predictors of teachers' formative assessment practices. A proposed model explained 51% of the variance in teachers' intention in formative assessment and only 6% of variance on teachers' practices. It was concluded that teacher intention to practice formative assessment is dependent on internal factors rather than external ones. However, perceived behavioral control was not found as a significant predictor of intention. Perceived behavioral control might be influenced by external factors and it is less predictive than perceived difficulty (self-efficacy). Teachers are more likely to practice assessment if they feel confident. It was concluded that positive attitude and self-efficacy are necessary for teachers to practice formative assessment. If teachers become aware of the benefits of formative assessment, they will be more eager to practice it.

2.5.2. Social cognitive theory

2.5.2.1. Definition of self-efficacy

According to social-cognitive theory, human functioning is affected by a triadic reciprocal relationship between personal, behavioral, and environmental influences (Bandura, 1977). Reciprocal determinism means that behavior, cognitive and other personal factors, and environmental influences all work interactively as determinants of each other (Bandura, 1986; 1997; 1999). Self-efficacy beliefs are especially crucial in the exercise of control and personal agency, and this has a key role in social-cognitive theory as acting upon other classes of determinants (Bandura, 1997). To explain, human functioning is regulated by self-efficacy through cognitive, motivational, affective, and decisional processes (Bandura, 2002). Self-efficacy improves motivation, learning, self-regulation, and achievement (Wright, 2015). It affects cognitive processes, determines level of motivation, and affects how much stress one will experience in difficult situations (Bandura, 1989).

To define, “*Perceived self-efficacy is people’s judgements of their capabilities to organize and execute courses of action required to attain designated types of performances*” (Bandura, 1986, p. 391) or “*manage prospective situations*”

(Bandura, 1995, p. 2). This refers to an individual's beliefs in capabilities to achieve a goal or produce a performance which has an impact on an individual's life and determines individual feelings, thoughts, words, actions, and interactions (Bandura, 1997). According to Bandura (1977), self-efficacy has two dimensions: personal efficacy and outcome expectancy. People practice actions if they believe in their abilities (personal efficacy) and if they believe that actions will result in desirable outcome (outcome expectancy).

Self-efficacy beliefs regulate human behavior or functioning through four processes, which are cognitive, motivational, affective, and selection processes. To further explain, people with strong efficacy beliefs set challenging goals for themselves and use good analytical thinking for performance accomplishment. Self-efficacy beliefs are also effective in self-regulation of motivation and affect their motivation level and how much stress and depression they have in difficult situations. People avoid activities which they believe exceed their capabilities. They take challenging activities which they think they are capable of (Bandura, 1995). If people do not believe that they can produce desired performances, they have little incentive to do it (Bandura, 2000). In this respect, efficacy determines how much effort people will expend and how long they will persist in the face of the obstacles. People with strong self-efficacy are more likely to select challenging tasks, persist, and perform them successfully (Bandura, 1986). However, people who doubt their capabilities stay away from difficult tasks (Bandura, 1988). They may give up when their efforts fail (Bandura, 1997). Therefore, self-efficacy beliefs have an impact on an individual's thought patterns and emotional reactions and contribute to human accomplishment and well-being in many ways (Bandura, 1994; 1995; Pajares, 2002).

Intention is important in social cognitive theory for self-regulation of the behavior. Intention means being determined to perform certain activities or to bring about a certain future situation (Bandura, 1986, p. 467). Goals improve motivation through self-reaction according to social cognitive theory. Therefore, goal attainment contributes to self-efficacy (Bandura, 1986), physiological well-being and

accomplishment in different ways. Since they provide a purpose and direction, they have motivational effects. This motivation provides commitment to goals and feedback. Accomplishing goals also provides self-satisfaction and interest on the issue. People who believe in themselves provide higher goals for themselves and therefore, goals are also affective on motivation through self-evaluative reactions related to capabilities for attaining the goal (Bandura, 1988). Moreover, efficacy beliefs can have a direct impact on performance or can affect performance by influencing intentions (Bandura, 1997).

Perceived self-efficacy and locus of control are not the same. Although self-efficacy perception refers to beliefs whether one can produce specific actions, locus of control concerns whether actions have an impact on outcomes. Therefore, self-efficacy is viewed as a good predictor of behavior, but locus control is an inconsistent predictor (Bandura, 1997). However, people's self-efficacy beliefs differ among domains and situational conditions (Bandura, 2012), and they can also change in terms of generality. People might view themselves as efficacious in a variety of activities or in a specific domain. Efficacy beliefs might also change with respect to strength. If personal efficacy is stronger, the chosen activity is more likely to be performed successfully since self-efficacy improves the sense of accomplishment and well-being (Bandura, 1997).

2.5.2.2. Sources of self-efficacy

Bandura (1986;1997) identified the four sources of self-efficacy to be enactive mastery experience, vicarious experience, social persuasion, and physiological and affective state. Enactive mastery experiences are the most effective source of efficacy information because they provide authentic evidence of capability by achieving a success. Put another way, overcoming obstacles through persistent effort provides a resilient sense of efficacy. Therefore, some difficulties might serve a useful purpose. The second way to support self-efficacy is through vicarious experience, which is provided by social models. In vicarious experience, success is observed in comparable peers. This modeling is especially affective when the learner has little experience to base evaluations about personal competence.

Moreover, personal efficacy is more influenced by the model's success or failure if the model is more similar (Bandura, 1995; 1997).

Furthermore, the learner hears about success from a credible source with persuasive and productive feedback through verbal persuasion. Verbal persuasion alone might be limited to support perceived self-efficacy, but it can contribute to self-change if in realistic bounds. If people are verbally persuaded that they have the capability to master the tasks, they will expend more effort and sustain it. In particular, a significant other's expression of faith helps to sustain a sense of efficacy in face of difficulties. In addition, people can judge their capabilities with respect to conveyed information from physiological and affective state. In other words, mood states can affect people's judgements of personal efficacy (Bandura, 1997). They view stress reactions as vulnerability to poor performance. On the other hand, positive mood contributes to self-efficacy (Bandura, 1994). Therefore, improving physical status, reducing stress and negative emotions, and correcting misinterpretations of bodily states contribute to efficacy beliefs (Bandura, 1995).

Tschannen-Moran and colleagues (1998) proposed a multidisciplinary model of teacher efficacy. Similarly, sources of teacher efficacy are mastery experiences, physiological and emotional cues, vicarious experiences, verbal persuasion, and cognitive processes (interpretation of experiences) (Tschannen Moran et al., 1998). For instance, in schools, teachers can get verbal persuasion as a form of feedback or encouragement from a supervisor or colleague to convince them that they can successfully practice the new method. As vicarious experience, when an observer sees a successful teaching exchange, they are also more likely to think that teaching task is manageable (Tschannen-Moran & McMaster, 2009).

2.5.2.3. Teacher self-efficacy beliefs

Teacher efficacy refers to a teacher's confidence in their ability to affect and promote student learning even for those who may be difficult or unmotivated (Bandura, 2007; Dembo & Gibson, 1985; Guskey & Passaro, 1994; Hoy, 2000). It refers to teachers' judgements or perceptions of their ability to plan and practice

instructional tasks which will provide desired learning outcomes (Bautista & Boone, 2015; Skaalvik & Skaalvik, 2007). Tschannen-Moran et al. (1998) emphasized contextual nature of efficacy beliefs by defining teacher efficacy as *“teacher’s beliefs in his or her ability to organize and execute the courses of action required to successfully accomplish a specific teaching task in a particular context”* (p. 233).

Teacher self-efficacy has an impact on their general orientation to the educational process and their specific instructional activities (Bandura, 1995; Woolfolk & Hoy, 1990) by affecting teaching practices through a variety of instructional decisions (Bandura, 1997; Tschannen-Moran & Woolfolk Hoy, 2007). To explain, teachers who have low self-efficacy have trouble in teaching, have a low level of job satisfaction, and a high level of job stress (Richardson et al., 2014). Teacher efficacy is an important predictor of productive teaching practices. Teachers with higher efficacy are more likely to overcome obstacles and persist through failure (Raths & McAninch, 2003). Teacher self-efficacy beliefs can affect teachers goal setting, their efforts in teaching, and their persistence when faced with obstacles (Rimm-Kaufman & Hamre, 2010; Tschannen-Moran et al., 1998). Teachers with high instructional efficacy beliefs allocate more time to support students who have difficulties or who need support for academic success (Bandura, 1997). They are more likely to develop challenging activities, help students to be successful, and persist working with students who have difficulties (Wright, 2015).

Teacher self-efficacy beliefs also determine teachers’ attitude and approach to instructional practice (Tschannen-Moran et al., 1998). For instance, teachers with high self-efficacy are more likely to invite families and believe that they can overcome negative community influences (Vartuli, 2005). Teacher self-efficacy also determines the usage of constructivist instructional practices (Nie et al., 2013). Moreover, teachers with positive self-efficacy can transfer the skills learned in in-service training to the classroom. Self-efficacy beliefs can contribute to teachers’ ability to deal with stressful and challenging situations (Bray-Clark & Bates, 2003). Accordingly, teachers with high self-efficacy were found to have a high level of

professional commitment (Coladarci, 1992). Therefore, supporting teacher self-efficacy is necessary to produce effective, committed, and enthusiastic teachers (Tschannen-Moran & Woolfolk Hoy, 2001). It is related with high developmentally appropriate practice scores (McMullen, 1999), and correspondingly, supporting teacher self-efficacy beliefs can in turn promote children's learning and development (Suchodoletz et al., 2018). Teachers' efficacy beliefs are particularly affective for young children because their beliefs about their capabilities are not stable and they are less likely to use social comparison to assess their capabilities (Bandura, 1997).

Teacher self-efficacy has been related to classroom outcomes like student achievement (Ross, 1992) and increased job satisfaction (Caprara et al., 2003). To explain, teachers who have strong self-efficacy also practice a high level of planning and organization. They are more open to new ideas and are willing to experiment with new methods to meet student needs (Simbula et al., 2011; Tschannen-Moran & Woolfolk Hoy, 2001). They believe that they can help children to learn a new concept, put more time and effort in teaching process, and this provides better outcomes (Vartuli, 2005). Self-efficacy is also a high predictor of degree of behavioral change (Bandura & Adams, 1977). They are confident that they can affect student learning. They integrate students in decision making regarding goals and strategies for achieving goals (Ashton, 1984). However, it is important to understand that general self-efficacy beliefs are different from teachers' subject specific self-efficacy (Tschannen Moran & Woolfolk Hoy, 2001). Teacher self-efficacy is context specific and differs across different tasks (Bandura, 1997). They can feel more or less efficacious in different circumstances (Tschannen Moran et al., 1998). Therefore, self-efficacy is more predictive when it is specifically defined (Pajares, 1992). For instance, preschool teacher self-efficacy was defined as teachers' self-perception of competencies to perform educational tasks. Regarding assessment, these tasks refer to assessment and promotion of school relevant skills in young children. However, there is a limited number of

research studies about the task specific self-efficacy beliefs of preschool teachers (Höltge, et al., 2019).

There are several measures of teacher self-efficacy. The measure of Gibson and Dembo (1984) consists of two factors as personal teaching efficacy, which refers to teachers' competence beliefs, and general teaching efficacy, which indicates teachers' expectancy beliefs about how their effectiveness is limited by environmental factors. Tschannen-Moran and Woolfolk Hoy (2001) also developed the Teachers' Sense of Efficacy Scale (TSES), and it consists of three dimensions: student engagement, efficacy for instructional strategies, and efficacy for classroom management. TSES was adapted into Turkish by Çapa et al. (2005). Moreover, Bandura also assesses efficacy in his own scale with a variety of dimensions like participation in decision making, affecting school climate, and working with parents and community (Alexander & Winne, 2008). Overall, a lot of studies on teacher self-efficacy assess in terms of classroom management, student engagement and instruction based upon Tschannen-Moran and Woolfolk Hoy (2001), or they assess two dimensions, personal teaching efficacy and general teaching efficacy or outcome expectancy like in the Gibson and Dembo (1984) scale (Höltge et al., 2019).

2.5.2.4. Research on teacher self-efficacy beliefs

“Teacher self-efficacy is a little idea with big impact” (Tschannen-Moran & Woolfolk Hoy, 2007, p. 954), and it is the most researched area of teacher motivation (Richardson et al., 2014). It was associated with instructional quality (Holzberger et al., 2013), professional commitment (Grant et al., 2019), physiological well-being (Cansoy et al., 2020), and job-satisfaction (Caprara et al., 2006; Kasalak & Dağyar, 2020). It was found that teachers with self-efficacy use personal approaches to overcome challenges (Bowles & Pearman, 2017) and expend more effort and persistence in particular teaching tasks (Ross, 1998). Strong efficacy beliefs can support high motivation, greater effort, and resilience through teaching career (Alexander & Winne, 2008). Therefore, teachers with a high sense

of instructional efficacy believe that they can teach all children through goal setting, extra effort, and appropriate techniques (Ashton & Webb, 1986).

It was supported that teacher self-efficacy beliefs are one of the important sources of teacher beliefs about developmentally appropriate practices (DAP) (Çobanoğlu et al., 2019). In line with this, teacher self-efficacy beliefs were found to be a significant predictor of child-centered educational practices (Perren et al., 2017), and a significant relationship was also found between teacher efficacy and teacher learner-centeredness related to classroom management, teaching practices, and beliefs about children (Line, 2016). To explain, teacher self-efficacy improves teachers' awareness and effort to take responsibility for student engagement and outcomes (Dembo & Gibson, 1985). They work in collaboration with children because they respect children's abilities. They help children to develop self-esteem, motivation to learn, and positive attitudes towards school. Moreover, they are more likely to invite families for involvement (Vartuli, 2005). Therefore, teacher self-efficacy was significantly correlated to different types of parent involvement practices (Garcia, 2004).

Tschannen Moran and Woolfolk Hoy (2007) found that although contextual factors including teaching resources and interpersonal support might be affective on novice teachers' self-efficacy beliefs, they play a less important role for experienced teachers. On the other hand, a significant increase is predicted in teacher self-efficacy during teacher training, which is followed by a reality shock and decline at the end of the first year experience in the classroom (Woolfolk Hoy & Burke Spero, 2005). One possible explanation is that social support is decreased when teachers move to public school settings (Cantrell, et al., 2003; Woolfolk Hoy & Burke-Spero, 2005). A strong mentoring program can contribute to teacher effectiveness by enabling a supportive environment for them to develop professionally (Bowles & Pearman, 2017). Teachers' self-efficacy can also change when they acquire sufficient knowledge about a subject or task (Bautista & Boone, 2015). In particular, mastery experiences make the strongest contribution to teacher self-efficacy (Yada et al., 2019).

Early childhood teachers' self-efficacy is affective on young children because children's beliefs about their intellectual abilities are based on teachers' academic expectations or ability evaluations (Bandura, 1997). In relation to this, it was found that Turkish preservice prospective and experienced early childhood teachers have a moderately high sense of teacher self-efficacy. Particularly, practicing teachers have a higher sense of self-efficacy than prospective teachers (Kotaman, 2010). Supporting this, it was also found that preservice teachers' self-efficacy increased after practicum (Berg & Smith, 2018; Carter, 2006). In addition, Pentergast et al. (2011) showed that students in early childhood education departments have higher teacher self-efficacy beliefs than teachers in primary and secondary education programs. However, no significant difference has been reached on teachers' self-efficacy with respect to demographics including age, gender, and program. Yet, it was also revealed that preservice teachers have a lower level of self-efficacy during the final semester of a teacher education program than their previous self-efficacy in the program. This was interpreted as greater understanding of the teaching profession during university and practical experiences.

Xiang et al. (2020) found using structural equation modeling that teacher self-efficacy of formative assessment and perception of a school mastery goal structure positively predict the use of formative assessment practices (Xiang et al., 2020). Likewise, Hartley (2016) reported a strong positive correlation between teachers' self-efficacy and use of formative assessment practices in the classroom. On the other hand, İzci et al. (2014) examined the preservice teachers' views and efficacy related to alternative assessment. Although teachers think that they have some limitations, teachers agreed that it positively supports the teaching process. They were also found to have competent and slightly competent self-efficacy beliefs in relation to using alternative assessment methods and tools. Furthermore, it was revealed that prospective teachers' assessment related values and practices are mediated by their self-efficacy beliefs. It is suggested that prospective teachers' conceptions of assessment should be considered with their efficacy beliefs during teacher education (Eren, 2013).

2.6. Teacher Personal Norms

A personal norm is an individual's moral obligation or responsibility to perform or not to perform a behavior (Ajzen, 1991). Personal norms are also defined as self-expectations which are based on internalized values. These reflect commitment to internalized values and feelings of personal obligation to engage in certain behaviors (Schwartz, 1977). Personal norm has three structural components: affective, cognitive, and behavioral. Affective component refers to the degree of internalization of norm in terms of internal sanctions. Cognitive component refers to individuals' perception of instrumentality of norm. Behavioral component means tendency towards behavior consistent or tendency contrary to norm. If affective and cognitive component are consistent, behavioral component most probably will be consistent (Olkinuora, 1972).

In the related literature, personal norm was found as a significant predictor of intention (Bamberg et al., 2007). It was uncovered that behavior is better predicted by personal norms and environmental identity than external social norms (Bertoldo & Castro, 2016). Personal norm is also more strongly and positively related with behavioral intentions than social norms. It was explained that social norms have an indirect effect on behavioral intention through personal norms. Therefore, both personal and social norms are related to choices, but especially personal norms should be emphasized (Doran & Larsen, 2016). Moreover, compliance with personal norms is related to pride, but noncompliance with personal norms is related to feelings of guilt (Onwezen et al., 2013). In other words, personal norms are also based on two distinct and related processes: anticipated feelings of guilt and perceived social norm (Bamberg et al., 2007). Roos and Hahn (2019) integrated personal norms to theory of planned behavior. They found that specific behavior is strongly influenced by personal norms and attitudes through intentions rather than subjective norms. They suggested inclusion of personal norms for behavior prediction.

2.7. Teacher Beliefs and Practices

Beliefs are “*psychologically held understandings, premises, or propositions about the world that are felt to be true*” (Raths & McAninch, 2003, p. 2). Those are accepted or desired to be true (Alexander & Winne, 2008) but do not necessitate a truth condition (Raths & McAninch, 2003). Beliefs can form the basis of attitudes and behavior, but they are difficult to change (Baumeister & Vohs, 2007). Rokeach (1968) indicated three major components of beliefs as: cognitive component (i.e., knowledge), affective component (i.e., judgement, evaluation, emotion), and behavioral component if it requires action.

“*Beliefs are the heart of teaching*” (Vartuli, 2005, p. 82). Teachers’ beliefs refer to the unconsciously held attitudes about education, schooling, teaching, learning, students, classrooms, and academic material to be taught (Kagan, 1992; Pajares, 1992). There are three major sources of teacher beliefs: personal experience, experience with schooling and instruction, and experience with formal knowledge (Richardson, 1996). Among them, experience with schooling and instruction might be the most important one (Raths & McAninch, 2003). However, teachers’ knowledge and beliefs are also influenced by classroom and students in the immediate context, state and national policies in the larger context, and cultural norms and values in the surrounding context (Alexander & Winne, 2008).

“*Teachers’ perceptions and beliefs are the most significant predictors of individual change*” (Smylie, 1988, p. 23). It was supported by Fang (1996) that teacher beliefs and attitudes guide their interactions and activities in the classroom. Kagan (1992) also stated that “*Teachers’ beliefs lie at the heart of teaching*” (p. 85). Therefore, teachers’ beliefs might be significant in understanding classroom practices (Raths & McAninch, 2003). Understanding the beliefs of teachers can also provide routine for quality early childhood education (Erdiller Akın, 2013).

Although it was confirmed in several studies that teachers’ teaching beliefs and philosophies have an important role in their teaching practices and classroom decisions (McMullen, 1999; McMullen et al., 2006; Pajares, 1992; Smith, 1993), a

discrepancy was also found between teacher beliefs and practices in a majority of the research studies. For instance, although teachers believe in child-centered practices, they cannot practice in the way which they preached (Charlesworth et al., 1993; Erdiller, 2003; McCarty et al., 2001; McMullen, 1999; Stipek & Byler, 1997; Vartuli, 1999). Teachers' beliefs were found to be more appropriate than their practices at each grade level (Vartuli, 1999). Teachers' beliefs were also found as more developmentally appropriate than their intentions (Sakellariou & Rentzou, 2012). It was stated that teachers are affected by local or state requirements, peer pressure or school culture (Vartuli, 1999). The discrepancy might also be because of teaching setting (Stipek & Byler, 1997) or age of children (Vartuli, 1999). Moreover, discrepancy between beliefs and practices are attributed to barriers such as physical conditions, limited resources, crowded classrooms, lack of partnership between parents and teachers, and low status of the profession (Erdiller & McMullen, 2004). Additionally, it was supported that the main factor for the discrepancy between teacher beliefs and practices is teacher education and professional development. It is important to improve teacher education for understanding, internalization, practice and reflection of teacher beliefs, which might support them in improving their beliefs (Chan, 2016). Supporting this, it was found that there is a relationship between beliefs and practices for teachers who have professional training and more years of teaching experience. If experienced teachers have teacher directed beliefs, they are more likely to practice directive behaviors in class. A high level of experience and professional training might help teachers to bridge the gap between their beliefs and practices, and practice their knowledge and beliefs (Wen et al., 2011).

The contradiction between teacher beliefs and practices leads to inconsistent child learning outcomes, lessened teacher effectiveness, and damage to high quality education (Wen et al., 2011). Therefore, teacher beliefs are an important part of their ability to provide high quality early education. There is a relationship between a teacher's beliefs and classroom practice (Scott-Little et al., 2006). Teacher beliefs guide their interactions and activities in the classroom (Fang, 1996; Pajares, 1992;

Wang et al., 2008). Those also affect teacher perceptions, judgements, decisions, and direct teachers to behave in certain ways (Vartuli, 2005). Therefore, it is believed that if teachers clearly perceive their own values and understand the theoretical basis for teaching, they are more likely to be successful in the classroom (Feeney & Chun, 1985). It is accepted by early childhood researchers that teachers' beliefs and thought processes about their roles affect their teaching and learning as well as affecting their pedagogy (Fang, 1996; Kagan, 1992; Pajares, 1992; Vartuli, 1999). A strong consistent relationship was found in early childhood teachers' assessment related self-reported beliefs and practices (Buldu & Tantekin-Erden, 2017), and it is important for researchers, teacher educators, and instructional leaders to understand teacher beliefs about the purpose of assessment (Brown, 2008). Teacher beliefs about the assessment processes have an impact on their processes of assessment practices and also guide their instructional practices in the classroom (Barnes et al., 2017).

On the other hand, there are inconsistent findings on the congruence between the beliefs and practices of teachers. Although some studies showed that preschool and kindergarten teachers teach with respect to their beliefs, other studies discovered contradictions between beliefs and practices as the age of children increases. It is important to understand the reasons for the inconsistencies between teachers' beliefs and practices, in order to improve teacher education and practices. It is also important in curriculum development and teacher education to raise teachers' awareness of their beliefs. Therefore, further research is needed in this area (Saracho & Spodek, 2003). To improve preservice and in-service professional development programs and quality of early care and education service, it is important to examine the beliefs and practices of teachers (McMullen et al., 2006).

2.8. Teacher Beliefs, Practices, and Assessment

Assessment related beliefs might be a guide in teachers' actions and decisions in classroom practices, such as instructional techniques or motivational strategies. For instance, teacher beliefs related to purpose of assessment can have an impact on

how teachers process new information about assessment or help them to frame situations where assessments are examined, developed, or selected (Barnes et al., 2017). On the other hand, teachers' ability to practice new assessment and instructional strategies are also affective on their beliefs and practices (Butler & McMunn, 2006).

Moreover, teachers' socio-demographic profile has an impact on their formative assessment practices. It was found that primary school teachers with less than 5 years of experience agreed less on the formative assessment related factors than experienced teachers with more than 16 years of teaching experience. Teachers who attend formal assessment training were also more in agreement on factors than others who did not attend training (Alotaibi, 2019). The probable reason is that the confidence level of teachers increases with more experience (Sach, 2012). If teachers have low self-efficacy, teachers are not willing to use assessment methods (Guo et al., 2014).

On the other hand, no relationship was found between teachers' teaching experience and their perceptions or usage of formative assessment. This suggests that new teachers and experienced teachers have similar views about formative assessment (Johnson et al., 2019). In contrast, Buldu and Tantekin-Erden (2017) found a significant difference in teachers' assessment beliefs with respect to their teaching experience in favor of experienced teachers. Likewise, a significant difference was found in teachers' assessment practices and beliefs with respect to education level in favor of those who have a high education level. Education level of teachers is also positively related to quality of early childhood education and care. A positive correlation was reported between teacher education and classroom quality (Manning et al., 2019). On the other hand, Wilcox-Herzog (1999) found that teaching beliefs and intentions are not significantly predicted by expertise. Certified teachers are more likely to use verbalizations. Beliefs-intention-action relationship is not affected by expertise.

2.9. Teacher Child/Teacher Centered Beliefs

Teacher child centered beliefs refer to attitudes or beliefs about how children learn, what children need to learn, and the manner or extent to which teachers direct to intervene in children's learning (Schaefer & Edgerton, 1985; Stipek et al., 1995). Child-centered beliefs emphasize that children are capable of constructing their own knowledge while interacting with the world. They learn best when teachers are sensitive and responsive to their actions and interests (Charlesworth et al., 1993; Schaefer & Edgerton, 1985). Therefore, teachers with child-centered beliefs are more accepting and respectful to children. They are more sensitive and responsive in their interactions with children and give them more time to make choices about activities (Clarke-Steward et al., 2002; Pianta et al., 2005; Stipek & Byler, 1997).

A positive relationship was found between job related satisfaction and child-centered beliefs. Teachers' educational degree was also positively associated with child-centered beliefs (Hur et al., 2016). Moreover, Işıkoğlu et al. (2009) found in their quantitative research that in-service teachers have positive beliefs about student centered education. Teachers at early grades favor student centered education. In particular, early childhood teachers' student-centered beliefs were found to be more powerful than in other fields. It was also noticed that experienced teachers place greater emphasis on student centered teaching than others with less experience. They believe in constructivism and are less likely to believe in direct transmission (Berger et al., 2018). On the other hand, Temiz and Topçu (2013) found that although preservice teachers with high self-efficacy tend to practice a constructivist approach in their teaching, preservice teachers with low self-efficacy tend to utilize a traditional approach in their teaching.

Tan and Rao (2017) also concluded that teachers' child-centered and teacher-centered beliefs predicted their instructional practices. In a true child-centered classroom, children choose what they want to learn, how to learn that, and how to assess their learning. Although teachers need to follow certain routines, they try to be flexible, minimize time for direct instruction and teacher directed activities (Bautista et al., 2020). Child-centered curriculum provides autonomy for children

to construct their own learning (Fung, 2015). In line with this, it was confirmed that teachers' student-centered practices contribute to development of students' positive lifelong learning skills and their motivation to learn and achieve (McCombs, 2006). To explain, children can think about their own progress, reflect on their work, and plan for the future (Shores & Grace, 1998). In teaching and learning, children are active and supported to initiate learning activities. The teacher creates a context or environment for their interactions and collaborations. They are partners with children, and there is mutual respect and cooperation. The teacher provides guidance if required, and contributes to knowledge construction by observing, asking questions, and making suggestions. Or they connect children's prior knowledge and experiences with current classroom experiences (Morrison, 2014). Overall, children learn from hands-on experiences and they are challenged to think in this way (Helm et al., 2007).

2.10. Child-Centered Approach and Portfolio Assessment

Assessment purpose differs in student-centered and teacher-centered instruction. Teachers use assessment to determine grades in teacher-centered assessment (Kohn, 1994). On the other hand, in constructivist classrooms, students participate in the decision making process of assessment (Anderson, 1998). This supports students' active construction of meaning rather than passive acquisition of knowledge (Montgomery, 2005). In the twenty first century, there is a movement towards student-centered and inquiry-based learning (Belgrad et al., 2008), and developments in constructivist learning theory supported the transition to alternative assessments (Klenowski, 2002). In learner-centered classrooms, assessment is done through student products, observing student performances, or listening to conversations in classroom dialogues. Learner centered curriculum also requires teachers to design embedded formative assessment into the process, provide feedback, and allow self-assessment and reflection (Cunningham, 2013).

This philosophy leads to portfolio usage in particular as a major data collection tool (Airasian & Abrams, 2000). A portfolio is a child-centered method of

documentation and assessment which brings out children's ideas and opinions (Kankaraanta, 1996). It provides a powerful method and tool to engage students (Jones & Shelton, 2006). It enables students to actively participate in the evaluation process and select portfolio content as evidence of learning (Banta, 2003). In the portfolio process, children actively participate in assessment with their reflections and their role in the portfolio development process (Kingore, 2008). In these processes, the portfolio enables students to speak and be heard in the classroom (Barton & Collins, 1997). It also provides an opportunity for teachers and students to participate in dialogue and maintain communication (Calfee & Perfumo, 1993; Lucas-Lescher, 1995). In these ways, it presents and considers children's active participation in construction of their own knowledge and documents children's learning process and construction of knowledge (Losardo & Notari-Syverson, 2001). It demonstrates unique performance and progress of learners towards intended objectives (Barton & Collins, 1997). Therefore, portfolio practices provide opportunities to create a context for improving assessment as learning in early childhood education (Yılmaz, et al., 2021).

Teacher beliefs and knowledge play an especially important role in portfolio assessment, performance assessment, and written responses to open-ended questions. For instance, portfolio evaluation might be difficult for novice teachers or teachers with weak content knowledge (Alexander & Winne, 2008). Portfolios are overwhelming for teachers who have teacher-centered classrooms. In classrooms where teachers use a portfolio, teachers enable students to take risks and become responsible for their decisions. In this environment, they can find time for projects, reflection on learning, conferences, student observation, and record keeping (Barton & Collins, 1997).

2.11. Reggio-Emilia Approach

Reggio Emilia is a city in Northern Italy. After World War II, a group of educators, parents, and children came together to reconstruct a society through a new kind of education for young children in this city. Under the leadership of Malaguzzi, first

preschools and infant-toddler centers were opened (Edwards, 2003). Vygotsky's ideas provided a theoretical basis for the Reggio Emilia Approach, which proposes that human development results from people's relationship with the environment and people around them (Lewin-Benham, 2011). In Reggio Emilia classrooms, learning is a child-initiated process where children's interests guide the learning process (Guyevsky, 2005). Curriculum emerges through dialogues between teachers and children during an activity or project (Morrison, 2014). While planning and implementing activities and projects, children's own sense of time and personal rhythm is considered (Gandini, 1993; Morrison, 2007).

The underlying belief of the Reggio Emilia Approach is that children are competent (Bredekamp, 1993; Lewin-Benham, 2011). Children are viewed as strong, rich, and capable (Gandini, 1993). They learn through projects in which they actively participate. The teacher is also a learner in Reggio Emilia (Thornton & Brunton, 2015). The teacher's job is not simply transmitting knowledge traditionally. They have different roles and competencies (Rinaldi, 2006). For instance, the teacher facilitates children's exploration and guides their experiences (Edwards et al., 1993). They listen and observe children closely (Gandini, 1993; Morrison, 2007) and support learning in an ongoing process. They become partners and collaborators. Collegial relationships between teachers and staff are highly important in this school, to discuss and interpret both teacher and children's work (Morrison, 2014). Infant-toddler or preschool teachers always work with a co-teacher in Reggio Emilia. As a pair, these teachers also work in collaboration with pedagogista, atelierista, and other staff (Edwards, 2012). Therefore, they see themselves as researchers preparing work documentation (Cadwell, 1997). They plan curriculum to improve children's development in all domains. They prepare programs and organize the environment. They interact with children to improve their learning and provide nurturance and guidance to them. They also need to observe and assess children's progress (Edwards, 2002). Teachers become researchers while they are listening and documenting practices (Rinaldi, 2012). A studio teacher, an atelierista who is trained in visual arts, works with children and

teachers to explore materials and use different languages to make their thinking visible (Cadwell, 1997; Morrison, 2007). There is also a team of pedagogistas. They provide advice for projects and learning environments. Teachers, atelierista, and pedagogista meet weekly to review documentation and share their observations (Thornton & Brunton, 2015).

Beautiful, welcoming, and personal spaces are created for children in this preschool (Thornton & Brunton, 2015). It is aesthetically and intellectually stimulating (Fu, 2003). There is an atelier, which is a workshop or laboratory to experiment and explore. Classrooms are organized around a central piazza, which is the heart of the building that houses most of the large-scale equipment. There is also a welcoming physical space full of the children's own work (Morrison, 2014). Documentation is displayed on the walls throughout the school (Thornton & Brunton, 2015). In this way, the environment encourages communication (Cadwell, 1997). It is noteworthy to mention that art is an important element in their learning or demonstrating their learning (Guyevsky, 2005). Projects are also extensively used in these schools, and learning in these projects is demonstrated through documentation (Helm et al., 2007).

Education focuses on the child, and each child is viewed in correlation with family, teachers, environment, and community (Gandini, 1993). In other words, children, teachers, and parents are the three protagonists, and school is framed in this system of relationships (Fu, 2003). Therefore, a relationship with children, family or community is an important part of the education process (Morrison, 2014). In this respect, parent involvement is a necessity in this school, and parents have an active role in their children's learning (Cadwell, 1997; Thornton & Brunton, 2015). Time is allocated for children and adults to cooperatively learn and develop a relationship. Children construct their own learning through partnership with children and adults. There is also time for adults to document, reflect, interpret, and share (Thornton & Brunton, 2015).

Moreover, both assessment and documentation are integrated into all activities (Lewin-Benham, 2011). A child's work and process of learning is documented (Morrison, 2014). Documentation is crucial for understanding young children's learning in Reggio-Emilia preschools and infant-toddler centers. It shows how children acquire, organize, and process the knowledge (Thornton & Brunton, 2015) and enables teachers to assess it (Rinaldi, 2012). It also enables teachers to understand children, evaluate their own work, and share ideas with other educators (Gandini, 1993). Meanwhile, this contributes to teachers' professional development and understanding of the children as well as facilitating communication with other educators (Morrison, 2014). In other words, documentation enables teachers to reflect, revisit, assess and self-assess continually about the processes which they are part of. It provides evidence about how children's learning develops (Thornton & Brunton, 2015). Furthermore, documentation makes parents aware of their children's experiences (Morrison, 2007) since documentation enables teachers to show the value of learning experiences that are provided to their children (Helm et al., 2007). In this way, it makes the learning visible (Guyevsky, 2005). In addition, sharing documentation with children also shows children that what they do has value and meaning. They see that what they say and do is important. It can be heard, understood, valued, shared, and appreciated (Rinaldi, 2012). It also allows for reflection and self-assessment. By looking at this documentation, they can remember their past experiences and ideas (Thornton & Brunton, 2015).

2.12. Early Childhood Education and Teacher Preparation in Turkey

2.12.1. Early childhood teacher preparation

The teacher has an important role in the ECE program in Turkey as one of the crucial factors determining quality of early childhood education and affecting child development. Children can only explore and learn in environments where they are valued and feel secure. The teacher-child relationship is one of the most important components of this relationship (MoNE, 2013). The Higher Education Council is responsible for teacher education in Turkey. University placement requires an

entrance testing system with high school graduation. Students are accepted into teacher education programs through a nationwide university entrance examination. After graduation, teachers are also appointed to public schools with respect to their nationwide MoNE based exam scores. For private school teachers, there is no such requirement.

All higher education institutions are coordinated through the central Council of Higher Education (YOK). Therefore, the Turkish teacher education system is centralized and follows the same program suggested by the Higher Education Council. There are required courses in different categories in early childhood education program. These are: professional information (e.g., introduction to education), general culture (e.g., history), and field education (e.g., art in early childhood education). Both compulsory and elective courses are offered for students in each category (YOK, 2018). Graduates from Turkish preschool teacher education programs have a preschool/kindergarten teaching license. They can teach in public/private schools or kindergartens.

After graduation, Turkish teachers attend in-service trainings for their professional development. Erdem and Alici (2018) found that teachers moderately benefit from in-service training seminars in Turkey. Common difficulties according to teachers are lack of motivation in seminars, lack of well-planned work, and deficiency of materials to use in seminars. Teachers recommended appointment of experts for in-service training, updating topics, considering teacher needs when determining topics, giving practical training, and increasing collaborative studies for teachers from the same branches. When teachers feel the necessity for in-service training, they become more willing to participate in-service training (Ozer, 2004).

2.12.2. Early childhood education

ECE is not compulsory in Turkey. Children aged between 0 and 66 months can access early childhood education. There are both public and private early childhood institutions, and both full day or half day education is provided in these programs. This early childhood education system is centralized and controlled by the Ministry

of National Education (MoNE) in Turkey. This ECE program is an eclectic program integrating different educational models, and it aims to address child holistic development in all developmental areas including social, emotional, cognitive, motor development and self-care skills. Since this program aims to prevent deficiencies in children, it also has aims of supporting and preventing. Including these, the four main objectives are: physical, emotional, and cognitive development of children, preparing for primary education, providing equity among all children, and appropriate usage of Turkish (MoNE, 2013).

To summarize, the main features of the early childhood program are: child-centered, flexible, spiral by enabling to review the same thing in different periods, eclectic by bringing together different models, balanced as supporting whole child development, play-based, encouraging exploratory learning, bringing creativity forward, using daily experiences for educational purposes, topics' becoming a tool rather than purpose, giving importance to learning centers, taking into consideration cultural values, giving importance to parent education and involvement, having a multisided assessment process, including adaptations for children with special needs, and giving importance to guiding services (MoNE, 2013).

According to curriculum, teachers plan their day including warm-up, play times, activity times, and assessment times. It is also suggested for teachers to prepare monthly plans in the program. Program is primarily based on objectives and indicators, and those are presented with respect to children's age group with explanations in tables. A variety of learning centers are also identified, which include different materials to reach intended objectives and indicators. To provide an example for teachers, the program has an addition of activity examples which are prepared for different age groups. Moreover, the Parent Support Education Guide is also prepared and integrated into the program, which explains parent education in detail and presents examples of parent education and parent involvement activities (MoNE, 2013).

2.12.3. Assessment in early childhood education

It is important to assess effectiveness of educational activities and monitor how children reach the intended objectives and indicators. Therefore, assessment is one of the crucial parts of early childhood education. In the curriculum, assessment is examined in terms of three sides: assessment of child, assessment of teacher, and assessment of the program. To assess the child, observation of child development is recorded into the Child Development Observation Form. This provides detailed information about what a child is able to do and how a child does something. A child's whole development is also summarized in the Child Development Report at the end of each semester two times a year. Moreover, it is expected that teachers prepare a portfolio folder (developmental folder) for each child. This includes activities selected together with children, documents from families, child development forms, and child development reports. The teacher is expected to organize developmental folder sharing days at the end of each semester by inviting families to the school. It is also suggested for teachers to guide children while they are presenting their folder to families (MoNE, 2013).

In addition, in the Parent Support Education Guide, which is an addition integrated to this program, portfolios are explained as a parent involvement activity type. It is explained that it is necessary for teachers to have portfolios for growth and developmental records of children. It is a systematic folder which includes children's specific products, photos, video and voice records, and child development reports. It includes objective information to reflect the child and demonstrates improvements in child development. It is not a collection of art activities to exhibit at the end of the semester. In that manner, it would only become a collection of products, not a portfolio. It is necessary to provide active child participation in the portfolio. This consists of consciously selected products, and some of these products should be selected and placed by the child. Expressions of children about their own products contribute to children's self-evaluation skills. To sum up, the portfolio is a reflection of the learning process, and therefore it includes concrete evidence of child interactions with educators, friends, and families. In the

portfolio and presentation process, children have an opportunity to use and develop cognitive and social skills like selecting, making decisions, and taking responsibility. Portfolio presentations help children to see their own development and improvement and feel pride in themselves. Therefore, portfolios are one of the most encouraging tools for knowing a child and a child knowing their own self (MoNE, 2013).

In addition to this, teachers need to write their daily assessments into a daily plan, monthly assessments into a monthly plan, and all of these also guide teachers in assessing the program. A variety of methods can be used to assess the daily education process like conversations with children, presentations, working pages, drawings, posters, photographs, and exhibitions. A variety of questions can also be asked to the child, including descriptive, sensory, objective related, and daily life related. Furthermore, for teacher assessment, it is expected that teachers assess themselves by analyzing the program and child assessments, determining their own interests, and reviewing their personality traits. According to these assessment results, it is necessary for teachers to expend their effort to improve themselves, reach sources, and get guidance and support from school administration (MoNE, 2013).

2.13. Early Childhood Education and Teacher Preparation in the U.S.

2.13.1. Early childhood teacher preparation

Teachers are more accountable for children's learning in comparison to any other time in American history (Morrison, 2014). That being said, there is not a central early childhood education program in the United States. Programs are accredited by The National Association for the Education of Young Children (NAEYC). The NAEYC provides some guidelines for four-and five-year teacher education programs. The National Council for the Accreditation of Teacher Education (NCATE) uses these to assess quality of early childhood teacher education programs in the accreditation process (Saracho & Spodek, 2003). However, this accreditation is voluntary. To ensure quality of teacher education, it is necessary to

graduate from a teacher education program which is approved by a state department of education (Saracho & Spodek, 2006). Colleges and universities have the primary role in preparation of the professionals (Saracho & Spodek, 1992).

The NAEYC identified some expected standards for professionals in early childhood education. These are: improving child development and learning; establishing family and community relationships; observing, documenting, and assessing to support young children; using developmentally appropriate approaches to connect with children and family; using content knowledge to constitute a meaningful curriculum; and becoming a professional (Friedman, 2012; Morrison, 2014). To explain, it is necessary to know the stages of child development to predict a child's capabilities in a certain age group and decide appropriate strategies, environment, and materials to improve learning. To have strong relationships, it is also necessary to be respectful to children and families, and it is essential to know family and community characteristics. Observation and documentation are two forms of assessment used to collect information about children. Integrating developmentally appropriate practices provide high quality learning for children and therefore, it is necessary for teachers to have content knowledge and skills to provide an appropriate environment for children. Moreover, it is important to identify oneself as a professional through participation in lifelong learning and professional development (Morrison, 2014). In relation to this, the six basic competency areas for credentialing include: establishing and maintaining a safe and healthy environment, improving physical and intellectual competence, supporting social and emotional development and providing positive guidance, establishing a positive relationship with families, providing a program responsive to participant needs, and maintaining a commitment to professionalism (Saracho & Spodek, 1992).

State certification guidelines, program accreditation guidelines, and position statements might have an impact upon content and structure of early childhood teacher education (Spodek & Saracho, 1990). Training and certification requirements change from state to state in the U.S., and there are many ways to

enter the early childhood profession. Some ways include a child development associate program, associate degree program, baccalaureate programs, alternative certification programs, and master's degree program. In addition, apart from formal education, there are also many ongoing professional development opportunities for teachers. For instance, in academic coaching, experienced teachers help others work toward improvement (Morrison, 2014). However, it is necessary to have a certificate for public school teaching in all states. Certification means legal admission to the profession. It ensures possession of minimum competencies for successful teaching. Individual states offer teaching certificates for different levels of education and for different subjects (Saracho & Spodek, 1992). To clarify, there are two main systems of early childhood teacher preparation. One is for public schools, the other is for childcare and non-public schools (Spodek & Saracho, 1990). In public schools, teachers need to have at least a Bachelor's degree and a state teachers' certificate, license, or endorsement (Ryan & Gibson, 2006; Saracho & Spodek, 2006). Requirements change in other school settings. There are no state or national requirements for teachers outside of the public schools (Saracho & Spodek, 2006).

State and private universities have the responsibility of preparing teachers (Spodek & Saracho, 1990). Preschool teacher education programs in higher education are also a minimum two years to maximum 4 to 5 years in length (Ryan & Gibson, 2006). A majority of U.S. early childhood education programs cover child development, program and classroom management, family and community, academic instruction and curricula, and observation and assessment through a number of required courses (Buettner et al., 2016). Teachers need to complete a major in the field of education, which includes 18 to 40 credits and 8 to 18 weeks of student teaching. They also need to complete a certain number of courses in general education and a minor in a field other than education. Therefore, getting a teaching certificate indicates teachers' qualifications (Saracho & Spodek, 2006). According to a recent policy report, there is an increase in the number of states which require a bachelor's degree in some state funded pre-k programs (Schilder,

2016). For instance, in Wisconsin, to become a teacher in kindergarten and state financed Pre-K, it is necessary to have a bachelor's degree with courses or certification in early childhood (Saracho & Spodek, 2006).

To sum up, there is no national requirement for preschool teachers, which leads to variation in training and education of teachers. Individual states have their own standards for teachers. Teachers have different levels of education from high school to graduate school. Although some teachers graduate from programs in child development or early childhood education and care, others do not (McMullen et al., 2005). Depending on state and program requirements, working in before school settings such as childcare centers, a high school diploma might be required to be a lead teacher (Ryan & Gibson, 2006).

2.13.2. Early childhood education

Early childhood education covers the education of children “*in infant-toddler programs, in preschools or nursery schools, in public school kindergartens and prekindergarten, and in the lower primary grades of elementary schools*” (Saracho & Spodek, 2006, p. 423). There is no centralized early childhood education and curriculum in the U.S. These schools might be public schools, private profit schools, or private nonprofit schools (Saracho & Spodek, 2006). They also consist of a variety of part-day, full school-day, and full work-day programs which focus on care, education, or both (Kamerman & Gatenio, 2003). For instance, there are a variety of options for affordable parents like Montessori, Waldorf, and Reggio Emilia (New, 2006). To categorize, there are three main systems in the U.S. The first one, Head Start, is for low-income preschool children. Another one, the “purchase-of-service system” serves preschool, infant, toddler, and school age children outside of school hours, part or full time in private centers or homes. The last system, the public school system, provides education for compulsory school-age children and sometimes preschool programs (Morgan, 2003).

Early childhood mission statements in the U.S. include terms including “*nurturing, warm, child-centered, play-based, and informed by research*” (New, 2006, p. 9).

Child-centeredness is in the focus, and environment and curriculum are arranged with respect to this focus. In line with this, some important features of early childhood environments also include child-centeredness, a focus on autonomy of children, the importance of play, guidance through developmental goals, staffing with lead and assistant teachers and giving importance to their professional expertise, significance of physical safety and emotional well-being, and availability of inclusive classrooms (New, 2006).

In Wisconsin in particular, in prekindergarten for three to five years olds, children are placed into multi ability classes. Wisconsin state suggests that early childhood curriculum should be developmentally appropriate, which refers to age appropriateness, individual appropriateness, and cultural appropriateness. Age appropriateness is based on the research that there are universal sequences in growth and change for children in the first nine years of life. According to individual appropriateness, each child is unique with an individual personality, learning style, and family background. Cultural appropriateness also recognizes the importance of knowledge of social and cultural contexts to make sure that learning experiences are meaningful and respectful for children and families (O'Dennel, 2001).

2.13.3. Assessment in early childhood education

In the U.S., there is an emphasis on academic learning in preschools, and there is a demand to assess cognitive abilities of children. For accountability demands and program evaluation, quality is measured by assessing children's performance in achieving specific outcomes. Preschool educators show program effectiveness using a child's attainment of specific skills (McKenna, 2005).

U.S. national policies on early childhood assessment allow states to select instrumentation (Goldstein & Flake, 2016). For instance, since U.S. education compares children, classes, teachers, and schools, there are report cards, standardized tests, and accreditations (Shores & Grace, 1998). Moreover, some of the widely used commercial measures are Work Sampling System, Child

Observation Record, and Ounce Scale (Goldstein & Flake, 2016). Teachers often use a combination of assessment tools. In particular, observation is used as a tool for developing emergent curriculum based on child interests and needs (Hatch & Grieshaber, 2002).

Furthermore, performance assessment has been widely used in U.S. schools for more than a decade (Meisels et al., 2001). Specifically, portfolios provide an opportunity to record an individual child's unique experiences and accomplishments (Shores & Grace, 1998). Portfolios have also been recognized as a part of pedagogical practices around the world. However, since each country has a different approach to early childhood and development, its format, utilization and purpose differ. For instance, in the U.S., child assessment is the main issue when looking at young children and their learning. A portfolio is used for developmentally appropriate assessment (McKenna, 2005).

2.14. Research on Assessment in Early Childhood/Elementary Education

2.14.1. Research studies conducted abroad on portfolio assessment

A variety of benefits of portfolio assessment were reported in a number of research studies. For instance, Peters et al. (2009) designed action research with three teacher researchers and found that portfolios improve children's learning in transition to school. Portfolios were identified as "*a belonging and empowerment tool, a mean for teacher to access children's knowledge, playing a role in constructing a positive image about learning, and a valuable literacy artefact*" (Peters et al., 2009, p. 4). Likewise, Benson and Smith (1998) examined first grade teachers' portfolio usage and revealed a variety of benefits including communicating more effectively with families about their child's progress, improving self-assessment skills of the children, and assessing and improving their own instructional skills and curriculum modifications.

In another research study, Chen and Cheng (2011) investigated a curriculum-based portfolio development model for preschool children in Taiwan. Data were collected

by means of observation, in-depth interviews, questionnaires, and documentation from a preschool principal, two administrators, six teachers, and three assistant teachers. Results showed that a learning portfolio consists of work samples, observation records, developmental checklists, summary reports, and minutes of parent-teacher meetings. Moreover, findings unveiled the significance of systemizing documentation in reducing teacher workload. A variety of benefits of portfolio assessment were also uncovered, e.g. showing children's development, presenting teaching results, providing communication between teachers and parents, helping teachers to review curriculum and teaching, and helping parents to understand child development and participate in child learning willingly. However, challenges were also reported at the same time related to workload of documentation and managing the documentation process. Based upon these findings, suggestions were offered like communicating with parents, setting criteria for selecting objectives, providing samples for parent-teacher meetings, working on remedial teaching strategies for children who do not achieve the objectives, organizing workshops for photography, providing sample reports for novice teachers, and providing evidence to parents for collecting learning evidence at home.

Because of the important role they play in the portfolio process, teachers became the focus of most of the research studies. In dissertation, Pickens (2018) investigated perceptions of Pre-K and kindergarten teachers in public schools of Tennessee with regards to appropriateness of a student growth portfolio model. Data were collected with a survey from 16 pre-k teachers and 51 kindergarten teachers and concluded that included standards are appropriate in the student growth portfolio model. However, scoring guides need to be revised with respect to Pre-K and kindergarten standards. Similarly, Krnjaja and Pavlović-Breneselović (2016) examined preschool teachers' perspectives on the purpose of a child portfolio. 140 preschool teachers from Belgrade participated in the study, and data were collected by means of a questionnaire. It was found that preschool teachers have different perspectives, and they suggested providing systematic support to

teachers for better understanding of the purpose of the portfolio and developing it. To explain, less than half of teachers stated that the main purpose of the portfolio is to evidence children's development and progress. However, nearly all of the teachers agreed that children's drawings are the main products in the portfolio, in addition to photos and other child activity products. Moreover, a large percentage of teachers pointed out that documentation is made mostly by teachers. Portfolios generally serve as memory scrapbook, and teachers decide on the content with a co-teacher. In line with the literature, a variety of portfolio benefits were also reported. For instance, more than half of the teachers agreed that portfolios contribute to visibility and transferability of the process and children's and parents' voices to be heard. On the other hand, mentioned problems were also number of children, lack of time, resources, and space, and unclearly and insufficiently explained purpose, function, and structure in the curriculum. Although portfolios are physically available, there is no intellectual access in some cases. Children and families only provide material and collect information for the portfolio. Therefore, it was advocated that a clear definition of the portfolio is necessary within preschool curriculum framework. Preschool teachers need professional development support through training and professional literature.

Likewise, Caldwell (2007) examined teachers' perceptions on portfolio development and their implementation and assessment for students, particularly for students with disabilities. Interviews were conducted with 10 teachers in southern Wisconsin, and it was found that teachers are knowledgeable about portfolios. Most of the teachers stated that they like teaching portfolios, and they view it as beneficial to student learning and assessment. However, they have concerns about allocating time to prepare and grade portfolios. Having a similar focus, Nick (1995) examined kindergarten, first grade, and second grade teachers' familiarity, use of portfolios, and their concerns about it. 153 teachers participated in the study, and data were collected by means of a survey. It was found that teachers are using portfolios as an assessment tool, and it was their decision to use them. Teachers are less likely to include standardized tests in a portfolio, and they are more likely to include writing

and drawing samples, selections of student work, checklists, teacher observation, and student self-evaluation. Furthermore, it was uncovered that teachers who are familiar with portfolios are more likely to use them as an assessment method. In addition, it was also depicted that teachers with in-service training are more likely to implement portfolio assessment in their classroom. However, no significant relationship was found between teachers' level of concern, teaching experience, education level, college preparation for portfolios, and their portfolio usage.

In contrast, Tangdhanakanond and Archwamety (2019) examined teachers' misconceptions in practicing portfolio assessment, and they collected data from elementary school teachers by means of a survey questionnaire. It was verified that teachers have misconceptions about the principles and utilization of the portfolio assessment such as: a portfolio is a container of student work; it is necessary to use the same portfolio format for all students; it must be used to assess child learning separately for each course; it is necessary to integrate a portfolio into courses which have learning products; a portfolio is consistent with the instruction method of lecture; and it is not necessary to plan activities at the beginning of the semester. Teachers who had training and who had no training on portfolio assessment have the same misconceptions in this regard, and it was interpreted that training is not enough to change the misconceptions teachers have. On the other hand, despite the misconceptions, it was noted that portfolio performance is higher for the teachers who had attended the training. Teachers who attended training were found to have higher scores in four steps of portfolio assessment including planning, collecting, selecting, and revising. However, teachers in both groups were also found to have medium scores in terms of selecting and reflecting on the selected products, and revising and evaluating products.

Teacher demographics were also integrated into different research studies, and it was suggested to be examined in related literature. For instance, Harris and Curran (1998) examined knowledge, attitudes, and concerns about portfolio assessment by including 209 educators in general education and the special education field. It was found that general education teachers are more knowledgeable about portfolios than

special education teachers. Women were found to be more knowledgeable and be more positive towards portfolios than men. Therefore, it was suggested that demographics of educators should be considered while examining knowledge, attitudes, and concerns of portfolios and developing services related to them. Other mentioned nontrivial problems were also planning, organizing, updating, collaboration with teachers, storage, accessibility to children, and cost of materials and their use in parent conferences. It was underlined that more research on portfolio use and attitudes is necessary. In-service training, graduate courses, and special workshops were also suggested to be organized to increase knowledge about portfolio assessment.

Similarly, in thesis, Kiser (2008) examined the relationship between demographic characteristics (teacher age, education level, and prior NAEYC accreditation experience) and external factors (organizational structure and work climate) which support teacher motivation during the NAEYC classroom portfolio process. Survey research design was employed, and thirty-five teachers participated in the study. It was demonstrated that teachers with previous NAEYC experience are more likely to report high perceptions of work climate. It was also discussed that teacher age might be related to the perceptions of external factors supporting portfolio process since teacher age contributed the most variation on organizational structure and work climate in the portfolio process in the model. Accordingly, as teachers get older, they might view the portfolio as an effort to improve quality. However, a significant relationship cannot be found between educational level and organizational structure, or work climate. Likewise, Walcavich (1995) investigated the factors related to portfolio implementation. Data were collected from elementary teachers by means of a survey. It was depicted that district support and teacher level of professionalism significantly affect portfolio implementation. Moreover, although teachers' years of experience has an impact on portfolio usage, teachers' level of education and gender were not found to be significant. It was concluded that teachers who have district support and extensive experience are more likely to implement portfolio assessment in their classroom.

Different demographic factors were found as effective, specifically on teachers' attitudes towards portfolio. For instance, Jones (1998) verified no significant relationship between training, experience in portfolio assessment, and teacher attitudes. In contrast, a significant relationship was found with respect to age in favor of the older teachers. Having a similar focus, in dissertation, Butts (1997) investigated elementary teachers' attitudes towards portfolios for measuring student success. 139 third, fourth, and fifth grade teachers participated in the study. No significant difference was reached with respect to teaching experience, educational level, grade level, subject matter of the teacher, and teachers' type of teaching situation. In contrast, a significant difference was found with respect to recency of teachers' attainment of last degree. Teachers who had been enrolled in the last five years or less had more positive attitudes towards portfolios than teachers who obtained a degree more than five years prior. In another dissertation, Alexander (2020) investigated kindergarten teachers' instructional practices and attitudes regarding a student growth portfolio model within a public school in Tennessee. Data were collected with semi-structured interviews. It was found that pre-K and kindergarten teachers believe that portfolio standards and assessments are not developmentally appropriate for pre-k and kindergarten students. However, they believe that their instructional practices were enhanced because of the portfolio process.

Specifically, portfolio training was uncovered as a significant factor in different research studies. To illustrate, Sonnier (1999) collected data from 76 elementary school teachers by means of a questionnaire and interview. It was revealed that after participating in a portfolio workshop, teachers had positive attitudes about portfolio assessment. Training on portfolio assessment helps teachers to successfully use portfolio assessment and have more positive attitudes towards portfolios. It was also noted that a portfolio is an effective way to monitor student growth and development. It is complementary to standardized assessment and helps teachers to report child progress to parents and students. Through portfolio assessment, moreover, students learn to judge their own work without being competitive with

peers. They are better able to communicate about their progress with parents and teachers. Their self-worth and self-esteem increase. Furthermore, through portfolio assessment, parents can see what is happening in the classroom. They can see and understand students' growth. It helps them to understand how to help and encourage a child. They feel pride in students' academic achievement. Because of these reasons, it eases the communication between parents and teachers.

As an increasingly important part of the portfolio process, portfolio conferences also became a focus of research studies. For instance, Hou and Hsieh (2019) examined how teachers implement individual portfolio conferences with parents to help them to understand children's emergent writing skills. Three volunteer parents were selected for the study in a classroom setting. Data included children's writing samples, parent interviews, parent-teacher portfolio sharing conference records, teacher interviews, and teacher's reflective journals, which were collected throughout one year. After the conference, parents developed better understanding of the children's emergent writing, and they acknowledged the benefits of one-to-one portfolio sharing. Portfolio sharing also contributed to rapport between parent and teacher and contributed to teachers' understanding of parents' perspective.

Using a different methodology, Knauf (2017) examined the contribution of portfolios to parents and early childhood education and care centers by examining 25 portfolios from 23 German early childhood centers. 2,104 portfolio entries were examined with content analysis to see what impression they intended to create. It was seen that teachers have a dominant role in portfolios because the majority of portfolio comments include photos with teacher comments. There are a small number of entries by children. It was also demonstrated that teachers see it important to convey impressions to parents which show children as having fun, cultivating friendships, being prepared for school, receiving high quality care, and being valued as individuals. In contrast, Steele (2007) examined how to improve portfolio assessment practices by making children's portfolios freely available in early childhood centers. Findings showed that making portfolios freely available helps children to understand the purpose, content, and ownership of their portfolio.

It improves children's critical self-reflection and self-assessment of their learning as well as contributing to parents' understanding of their children's experiences at the center.

In addition to print portfolios, e-portfolios have also begun to be practiced in schools and became a focus of research studies. For instance, Hooker (2017) investigated the impact of e-portfolios on teachers' formative assessment practices in early childhood education in New Zealand. This study used a mixed method approach including surveys, semi-structured interviews, and observation. Both paper-based and e-portfolios were examined, and data were collected over a period of a year. Six families (family and children) and their teachers were selected as case studies. It was agreed by both teachers and families that e-portfolio entries are more consistent and frequent than paper-based portfolios. One probable reason is that e-portfolios can be reached anytime and anywhere. Portfolio reviews also showed that most entries in paper-based portfolios do not identify what learning was happening in the documented experience. Moreover, no child or family voice or contributions were seen in paper-based portfolios. On the other hand, it was showed that e-portfolios increase communication in comparison to paper-based portfolios. Teachers talk more about their writing with teachers, families, and children. Therefore, this study suggests that e-portfolios can strengthen formative assessment by more often including voices of teachers, parents, and children. However, it was highlighted that an online platform can only be effective if it is thoughtfully and meaningfully constructed using a theoretical base. It is also necessary that children should access them whenever they want, without assistance. If this cannot be provided, children cannot revisit their learning, which is problematic formative assessment.

Likewise, Hooker (2019) examined the impact of e-portfolios in an early childhood education setting. A mixed method design was employed. Participants were teachers, families, and children in an early childhood education setting. It was found that e-portfolios support children's learning through recalling, reconnecting, and restarting. It involves children in their learning process, it contributes to a child's

sense of ownership and extends their learning. Furthermore, it also improves teachers' planning. It facilitates team communication about children's learning progress and strengthens the relationship between teacher and families in this way. In particular, the addition of videos to the e-portfolio was viewed as an important component. Overall, this study concluded that portfolios in each format are important in supporting children's learning. However, it was stated that the introduction of e-portfolios should be considered carefully. If children, teachers, and families do not have continuous access to them, they cannot replace the hardcopy portfolios.

Similarly, Knauf and Lepold (2021) examined both digitally created and printed portfolios in their study. They noticed that all portfolios include pictures and handcrafts of children as voices of them, yet those do not include children's voices recorded with digital media. For instance, photos which are taken by children are not seen in portfolios. Children are generally the objects of documentation. Therefore, it was concluded that representation of children is very similar in both analogue and digital portfolio entries, and the way of capturing children's perspectives is less dependent on it being an analog or digital portfolio. In light of these conclusions, it was underlined that technology does not create participation, but it can help to lower barriers and make participation easier. In another study, Goodman and Cherrington (2017) examined children's engagement with their learning using e-portfolios. It was designed as a mixed method design, and an online survey was sent to a kindergarten in New Zealand. Two centers using e-portfolios were randomly chosen for the study. Results demonstrated that although a majority of the settings enable children to access the e-portfolio, almost half of the teachers pointed out that children engage less with it. They indicated that children prefer hardcopy portfolios because children revisit the e-portfolio with a teacher, parent, or peer rather than independently. However, teachers proposed that an e-portfolio contributes to making connections between home and the center. It was concluded by both teachers and parents that hardcopy portfolios and e-portfolios serve

different purposes, and children cannot revisit their learning without hardcopy portfolios.

2.14.2. Research studies conducted abroad on assessment and documentation

There are different factors that affect teachers' assessment practices that have been uncovered in different research studies. For instance, Birbili and Myrovali (2020) investigated how professional and policy contexts mediate early childhood teachers' relationship with official curriculum, particularly in relation to assessment practices. In one study, 28 Greek kindergarten teachers participated, and semi-structured in-depth interviews were used to collect the data. It was revealed that teachers' professional contexts play an important role in teachers' efforts to make sense of the curriculum. Teachers complained about the inadequacy of professional training in the first years of new curriculum and mentioned discovering meaning and practices of portfolios amongst colleagues. They also pointed out the impact of interactions in professional contexts.

Another important factor, the challenges of the assessment process have become a focus of different research studies in related literature. To illustrate, Hidayat et al. (2021) examined the constraints which early childhood teachers face during the authentic assessment process in North Aceh. Data were collected through a mixed design including survey, interviews, and document analysis. It was found that teachers get strong pressure from parents to emphasize the teaching of reading, writing, and counting to children, and they identified this as one of their constraints. In addition to this, other reported challenges were understanding authentic assessment, difficulty of its implementation, familiarity with traditional assessment, lack of training on authentic assessment, lack of detailed guidebook from Ministry of National Education, and a lack of tools and materials for authentic assessment. Moreover, content analysis findings also demonstrated that many teachers do not make assessment plans, do not plan assessment according to the Ministry of National Education, and use labeling in providing assessment results.

By considering different factors, teachers' preferences in assessment methods became a focus in several research studies. For instance, Brown and Rolfe (2005) investigated usage of formal and informal instruments used by early childhood practitioners and students in their final year of a Bachelor of Early Childhood Studies, and in addition, investigated the factors which influence their decisions related to these instruments. Data were collected by means of a questionnaire and the results showed that informal assessments were used by most of the early childhood practitioners and all students. To explain, all early childhood practitioners mentioned usage of a checklist and observation as an informal assessment. Similarly, all students indicated that they would use a checklist. On the other hand, 70% of the students and 10% of the early childhood practitioners mentioned usage of formal assessment. Although the most important factor for early childhood practitioners was ease of use, it was accuracy of the instrument for students. In another study, similarly, Pyle et al. (2020) found that teachers use assessment for multiple reasons and educational decisions. They observed three types of assessment as a part of their study with kindergarten teachers: withdrawal, embedded, and observational. Withdrawal is teacher directed and mostly assesses academic learning. Embedded is teacher and child directed. Assessment is conducted through play, and it is used to assess both academic and developmental learning. Observational assessment is also child-initiated and conducted within play. The teacher observes children unobtrusively while children are playing and mostly uses this method to assess developmental learning. However, it is observed that teachers rarely use these three types of assessment. There is limited evidence from embedded and observational assessment. Teachers mostly give importance to academic learning goals rather than developmental ones. Based upon these observations, it was suggested that assessment should be a continuous process in classrooms, and it was also suggested that teachers use multiple forms of assessment. Assessment practices should reflect child-centered and developmentally appropriate practice.

In another study, Banerjee and Luckner (2013) examined current assessment practices and training needs of early childhood professionals. Also investigated were the challenges faced by professionals in assessing young children and their recommendations for assessment training. A survey was used to collect both qualitative and quantitative data from 534 participants. It was found that they use multiple instruments to assess each area. The most frequently used unstandardized tools are observation, play based, parent report, developmental checklist, and teacher created tests. The five most important training needs were found to be: selecting appropriate tools for assessment, conducting assessment of children from culturally and linguistically diverse backgrounds, obtaining knowledge about developmentally appropriate assessment, modifying assessment tools for children with special needs or from diverse backgrounds, and using assessment to identify goals or plan instruction. Moreover, time was stated as the greatest challenge in assessment of young children. Likewise, Rethza and Jamaluddin (2010) examined assessment practices of preschool teachers. It was designed as mixed method research, and data were collected by means of survey, open ended questions and interviews. It was verified that informal assessment is common among teachers. They mostly use collection of samples of child works, direct observation, and a rating scale. However, although participants stated that they use portfolios, the content of portfolios consisted of worksheets. Furthermore, no links were found between assessment and instruction except language and communication.

Similarly, McNair et al. (2003) examined types, frequency and utility of assessment techniques used by classroom teachers. In this study 157 elementary teachers from Michigan participated. Data were divided into two groups: preschool and kindergarten are the first group of teachers, and third and fourth grade teachers are the second group. It was found that paper-pencil tests were regularly used by grade 3 and 4 teachers, yet they are rarely used by teachers below that level. In addition, it was demonstrated that a majority of the teachers practice observation, checklist, and portfolio assessment for summative rather than formative purposes. Although most teachers in all levels indicated a preference for authentic assessment, it was

seen as difficult by teachers to form opinions and improve authentic assessment practices because of their questioning of knowledge and ability to assess children in an individualized way. In light of these results, it was concluded that teachers may lack the knowledge and skills to assess children systematically and meaningfully.

DeLuca and Hughes (2014) examined teachers' approaches to early primary assessment within five different school contexts: public, independent, Froebel, Waldorf, and Montessori. Data were collected from 12 kindergartens to grade 2 teachers through in-depth interviews and ethnographic observations of eight classrooms. It was found that there are diverse conceptions of assessment. They mentioned three different conceptions and purposes: assessment as a growth trajectory which focuses on student progress over developmental trajectories, assessment as a normative structure which creates normative comparisons and contexts, and assessment of the whole child which makes assessment by reflecting upon the whole child. It was reported that primary educators have common approaches to assessment despite diverse educational backgrounds. The two main fundamental commitments were found to be whole child teaching and continuous practice of student observation. Having a similar focus, DeLuca et al. (2019) also aimed to explore key points of kindergarten assessment in Reggio Emilia, Waldorf, and Montessori to inform policy and practices in public education contexts. It was found that there are some commonalities between these traditions. Three key points were identified as: commitment to child-centered and developmentally appropriate teaching, continuously embedded formative assessment approach, and usage of multiple methods for obtaining assessment information. To facilitate assessment practices in kindergarten, four iterative cycles were also suggested: participating in teaching and learning, reconstructing teaching and learning, engaging in assessment dialogues, and integrating feedback into teaching and learning.

In addition to assessment methods, teachers' views about assessment have been also investigated in several research studies. For instance, in dissertation, Bailey (1997) examined teachers' perceptions of alternative assessment methods.

Interviews were conducted with 19 early childhood teachers who have been trained on appropriate assessment techniques. It was revealed that a majority of the teachers are using portfolio assessment. Most of the teachers believed that it is beneficial in individualizing instruction, planning and designing curriculum, and communicating with parents. It allows children to achieve their potential by improving teaching and learning. However, a majority were concerned about the time necessary to complete portfolio assessment. Likewise, Keengwe (2020) investigated how early childhood teachers approach and use assessment. Seven early childhood teachers from two programs participated in the study. Data were collected in six months by means of semi-structured and audio recorded interviews. It was found that teachers collect a variety of information on children. They mostly use anecdotal records, work samples, and pictures for data collection. One of the stated reasons for data collection is: meeting program requirements or the state's evaluation quality rating system. In addition, teachers mentioned different reasons for how they choose what they will document, such as basing on their plans about children's learning or information from other assessments. Frequency of teacher collection of information was also dependent on program requirements or program evaluation requirements.

Diffily (1994) also examined assessment related beliefs and practices of early childhood educators in Texas. In this study 84 teachers who taught from prekindergarten through third grade participated. Questionnaire, interview, and journal were used to collect the data. It was found that early childhood educators have negative views about standardized assessment. All teachers were aware of alternative assessment terms, and teachers' beliefs and practices were mostly in line with alternative assessment. The strongest factors which affect teacher beliefs and practices were uncovered as teacher knowledge about assessment methods, school atmosphere in which they worked, and their beliefs about the educational practices. Likewise, Hanes (2009) investigated perceptions of preschool educators in relation to usefulness of assessment. Data were collected by means of a survey. Survey participants were 230 volunteers from an early childhood conference. A majority of participants were teachers, and others included administrators and teacher

assistants. It was seen that the majority of the participants have positive perceptions about the appropriateness of school assessment tools. Observation was found as the most used approach, and checklist was the second popular. A majority of the participants agreed that school assessments are helpful, as they make decisions about curriculum content. It was also revealed that participants have positive attitudes towards their roles in assessment of young children, and they believe in the importance of assessment in early childhood education.

Moreover, Zimmerman (2018) delved into the impact of four independent variables on assessment practices and instructional methods: professional development, years of experience, pedagogical content knowledge and teacher self-efficacy. It was designed as a quantitative study, and data were collected by means of questionnaires. It was found that professional development has a significant impact on assessment practices. However, it was revealed that self-efficacy, years of experience, professional development, and pedagogical content knowledge do not predict usage of assessment by teachers. Similarly, Pang and Leung (2011) provided training programs, workshops, and meetings to teachers to improve their practices of assessment for learning and found that there was considerable improvement in teachers' habits of assessment for learning. It was suggested that more professional development programs and support should be provided for teachers to improve assessment for learning literacy in their daily life. In relation to this, in dissertation, Nassif (2007) also investigated teacher in-service training needs in classrooms. Data were collected from 292 teachers in 18 randomly selected public and private schools. In depth interviews were also conducted with 6 volunteers from the survey sample. Teachers reported lack of knowledge, skill, and confidence in usage of appropriate assessment methods due to lack of training in assessment techniques. All teachers also agreed upon time management as an issue. They indicated their preference for formal hands-on training, which would include overview and practice of new skills; collaboration with mentors and colleagues; and access to self-training materials like books, videos, and CDs. Moreover, it was also

uncovered that teachers' years of experience did not significantly affect their assessment views

In addition to professional development, different demographic factors were found to be affective on teachers' assessment related views. Alotaibi (2019) conducted a survey to investigate Saudi Arabian primary teachers' perceptions regarding the selected factors which inhibit practice of formative assessment. In this investigation 210 completed questionnaires were collected from 15 schools in Saudi Arabia. Interviews were also conducted with 25 teachers. Significant perceptual differences were found with respect to gender, training, age, tenure, and subject. Female teachers were found to be more receptive to factors than male teachers. Teachers who attended training agreed more upon factors than others who do not. In addition, both younger teachers and less tenured teachers agreed less than the older teachers and tenured teachers, and general subject teachers agreed more upon factors than other specific subject teachers. Interviews showed that teachers generally practice formative assessment as a group activity rather than meeting learning goals for individual students. It was also depicted that teachers have misconceptions about formative assessments. To overcome challenges, teachers suggested training on how to conduct current assessment methods.

Furthermore, Unal and Unal (2019) examined teachers' assessment beliefs and practices with respect to their years of teaching experience. Data were gathered from 87 K-12 teachers by means of surveys. It was found that experienced teachers value assessment more than beginning teachers. Although both beginning and experienced teachers use assessment in their classroom, beginning teachers use short answer and publisher assessment. On the other hand, experienced teachers prefer teacher designed assessments, performance assessments, projects, and authentic assessments more than beginning teachers. It was concluded that teachers' beliefs on assessment increases as their years of experience increases. As teachers gain experience, they value assessment more and implement self-created assessments rather than readily available ones. Beginning teachers do not feel comfortable developing their own assessments.

In addition to demographics, different variables in teacher assessment practices were also investigated in the literature. Yan and Cheng (2015) investigated the relationship between primary teachers' attitudes, intentions, and practices regarding formative assessment under the framework of Theory of Planned Behavior. Data were collected by means of a survey from 450 teachers in ten primary schools. The strongest predictors of intention were found as self-efficacy, attitude, and subjective norm, respectively. Intention and self-efficacy were also found to have similar impacts on behavior. It was concluded that internal factors are more likely to impact formative assessment intention than external factors. Moreover, perceived control (i.e., controllability) was found as less predictive than perceived difficulty (i.e., self-efficacy). Therefore, it was concluded that there are factors other than TPB influencing teachers' formative assessment practices.

Specific assessment methods were also investigated in different research studies. Work sampling is one of these alternative assessments. Meisels et al. (2001) investigated parents' reactions to Work Sampling System and gathered data by means of surveys from 246 low income, African American participants. Results revealed that parents have positive attitudes towards work sampling system. Teachers' willingness to use work sampling system and availability of staff to answer parent questions were found as affective factors on their attitudes. Most parents prefer work sampling system to conventional reports since they appreciate when they get detailed information about their children's performance and progress by means of a work sampling summary report and portfolio. In light of these findings, it was concluded that when schools inform parents about the assessment and have consistent informal communication with parents in the process, parents' reactions to performance assessment can be positive. Likewise, parent perceptions regarding work sampling system were investigated in another study by Pekis and Gourgiotou (2017). Data were collected with a questionnaire from 18 parents whose children were enrolled in kindergarten in Greece. It was found that parents view it as advantageous in educational setting. A majority of the parents agreed that portfolios enable children to actively participate in their learning and reflect and

rethink their work in kindergarten. Checklists and summary reports were also viewed as advantageous, as they enable them to see their child's development and learning in multiple ways. A majority did not mention any drawback about the work sampling system. Parents think that work sampling system presents their child's knowledge, skills, attitudes, and provide feedback about their learning process. They also viewed it as important to communicate with teachers about their child's progress and development.

Documentation and pedagogical documentation have also become a focus in several research studies. Knauf (2017b) investigated documentation practices in 40 early childhood education centers in Germany. In data collection mixed methods were used, including a systematic record of documentation practices, visual data entry form, photographic record of situations, and qualitative interviews with the head of the department. In results, three forms of documentation were found as predominate: portfolio, documentation panel, and presentation of children's work. It was also found that only a few centers enable children's involvement in documentation and integrate documentation in their daily work. To explain, examined portfolios were mostly in the form of folders and organized in chronological order. All portfolios include children's drawings and other work products. In nearly all of them, portfolios are in reachable places. However, a portfolio was mostly seen as an educator's responsibility rather than the children's. It was mostly seen as showcasing efforts rather than understanding the child. Another method, a documentation panel, includes pictures, field trips or other activities of the child. Less than a quarter of centers integrate quotes or annotations by children. In most centers, child participation was seen as extra work for teachers in addition to their childcare. Centers which are advanced in their documentation practices enable children's participation in documentation.

In their comprehensive study, Alvestad and Sheridan (2015) investigated Norwegian teachers' experiences of challenges, problems, and dilemmas related to their planning and documentation. Nine teachers from four preschools participated in the study, and data were gathered through interviews. Results demonstrated that

teachers document in different ways and for different reasons. This variation changes with respect to purpose of the documentation. To explain, documentation mostly records information to inform parents about the activities in the preschool. Moreover, teachers use documentation as a tool for learning. Photo documentation, in particular, is directly linked to the learning process of children because teachers use photo documentation for reflection and improving the practice. Furthermore, a close relationship was found between planning and documentation. This understanding improves their understanding of pedagogical work and giving meaning to it. However, it was also uncovered that documentation mostly focuses on teachers' planning rather than the children's learning process. Therefore, there are specific problems or dilemmas regarding the relationship between teachers' planning, documentation, and reflection on children's learning in preschool.

Focusing on a similar topic, in a comprehensive study, Buldu (2010) examined pedagogical documentation including kindergarten children, families and teachers in the United Arab Emirates. Six teachers, 141 kindergarten children, and 67 parents from six kindergarten classroom participated in the study. For data collection, participant observations, semi-structured individual interviews, focus group interviews, and parent questionnaires were used. Findings pointed out six challenges in the documentation process: lack of parent presence to view documentation, lack of equipment, necessity of time and effort, children's changing of typical behavior after becoming aware of recording, difficulty of fitting all data in one documentation panel, and difficulty of documenting interactions while teaching. Despite the challenges, teachers viewed pedagogical documentation as valuable for children because of the scaffolding of children's learning; creating a community of learners, increasing children's participation, motivation, and interest in learning, and increasing children's self-awareness. Moreover, parents also viewed pedagogical documentation as valuable due to increased awareness of their child's learning experiences at school, increased dialogue with children and school, and education on effective practices and ways to support children. Overall, it was concluded that pedagogical documentation becomes a documentation tool among

children, parents, and teachers. It creates a professional learning community for teachers by providing collaborative meetings with colleagues.

Likewise, in the study of Rintakorpi (2016), the challenges of pedagogical documentation were reported as time constraints, deficiency of technical equipment or teacher's technical skills, and difficulty of the learning documentation method. However, the benefits were acknowledged more than these difficulties, including professional development, making early childhood education and care visible, pedagogical process, child-centeredness, and participation. It was concluded that documentation empowers teachers as professionals and helps them to communicate with families and children. It guides them to focus on child views.

Similarly, pedagogical documentation was the focus in several research studies including different stakeholders. In the study of MacDonald (2007), pedagogical documentation was introduced to five classrooms over six months to explore its potential as a formative assessment and to communicate learning to children and families. Interviews were conducted with teachers and parents. Pedagogical documentation was viewed as useful for parents and teachers to document children's strengths, interests, and curiosities more deeply. It was identified as an alternative to standardized tests in kindergarten classrooms as providing significant record of teaching and learning and providing evidence to support or refute the standardized measures. McLean (2019) also collected survey data from 45 parents about their views on pedagogical documentation and conducted interview with 7 parents after and before documentation. It was demonstrated that pedagogical documentation contributes to parents' understanding of their children, and it contributes to communication among child, teacher, and parent.

Having a different focus, Hostyn et al. (2020) examined how pedagogical documentation is employed in professional practice. They collected data through semi-structured interview and analyzed using grounded theory approach. It was noticed that pedagogical documentation is used in a variety of ways but not often for professional development. Early childhood education staff use pedagogical

documentation for three main reasons: demonstrating both facts and growth with documentation, provoking deeper thinking by influencing the thinking of people with documentation, and facilitating interaction between each stakeholder in the process to create the feeling of togetherness. On the other side, Lee-Hammond and Bjervas, (2020) found that differences between countries' early childhood education policies may lead to differences in how pedagogical documentation is used by educators in their practice. It was pointed out that both policy and cultural contexts have an impact on educators' practices related to pedagogical documentation. To explain, in Swedish preschools, the main purpose of pedagogical documentation is to improve the quality of the preschool. On the other hand, Australian early childhood educators focus on children meeting achievement standards. In this regard, educators in Sweden focus on achieving goals because of the policy, and they saw children as a part of the process. Australian educators focus on covering the content prescribed by the curriculum, and children are recipients of the learning, and documentation is about them, not with them. However, educators from both countries agreed that documentation is important for reflecting on pedagogy to understand how their practices affect children's learning.

In dissertation, Whetstone (2013) investigated Reggio Emilia inspired kindergarten parents' perspectives about pedagogical documentation in the U.S. In this study seven parents participated, and it was found that documentation helps them to better understand children's learning experiences in school. It also provides an encouraging, engaging, and informing environment for them, in addition to providing meaningful dialogue with their children. Furthermore, it was also explained that children feel valued in this process through belief that their idea is respected in the classroom. Focusing on a similar context, in dissertation, Sosnaud (2017) investigated how early childhood educators in a Reggio Emilia inspired preschool use documentation in preschool classroom. Interviews were conducted with four teachers from a Reggio Emilia inspired preschool in California, and observations were conducted in each preschool teacher's classroom. Teachers also shared a piece of their documentation. It was found that the four teachers define and

use the portfolio in the same way. Documentation was not described as a task for teachers. It was described as a way of being a teacher and honoring children. It was also found that using documentation affected teachers' view of children.

Knauf (2019) also investigated documentation strategies teachers use to integrate documentation into their day. Interviews were conducted with 24 teachers in Germany and New Zealand. It was found that teachers develop strategies to save time for documentation and structure it in a way to deal with obstacles. To explain, regarding the purpose of documentation, most teachers agreed upon identifying children's interests with documentation. In addition, all teachers also mentioned multiple usages of documentation in reporting, and they developed a specific method to take notes, photos and combine documentation. For instance, to deal with documentation, they stated that they define specific phases of documentation for particular times. They also emphasized setting priorities and the importance of digital tools in documentation.

In contrast, Wang and Hou (2021) examined how experienced Chinese in-service teachers are using learning stories. It was demonstrated that Chinese teachers are more careful about the general development of the entire class rather than individuals because of high teacher-to-children ratio in a traditional Chinese classroom and educational policy. Forms of evaluations were also found as teacher-centered which aim to document learning as objectively as possible, the negatives of which are pointing out children's mistakes or weaknesses, and non-targeted evaluations without a specific focus on the individual child whom the teachers were observing. In line with these, it was concluded that parents and children mostly do not have access to learning stories.

2.14.3. Research studies conducted in Turkey on portfolio assessment

Teacher views on portfolio assessment have been investigated in a number of research studies in Turkey. For this purpose, Zelyurt and Karakaş (2018) collected data from 40 kindergarten teachers from different cities by means of semi-

structured interviews. A majority of the teachers stated that they were not informed about portfolio assessment in undergraduate years, but they learned portfolio assessment while practicing teaching. They were using portfolios for assessing development and agreed that children's products should be included. Moreover, they suggested to inform teachers about portfolio assessment in undergraduate years and provide more information to them during in-service training.

Likewise, Alaçam and Olgan (2016) examined the views of preschool teachers and first grade teachers with regards to portfolio assessment and found that participants have similar ideas about the conception and content of portfolio assessment. They mostly described the portfolio as a folder and described the purpose of the portfolio as observing the development of the child. It was noted that mostly activities are included in a portfolio, all of which are chosen by teachers. Moreover, advantages were described as: reflecting and concretizing child development in all areas and improving self-assessment and self-efficacy of children. On the other hand, the disadvantage was stated as comparison of children. Challenges mentioned included time, crowded classrooms, organization, and storage. Although teachers stated that they know how to communicate with families, they practice different communication for different reasons. Furthermore, both groups of teachers agreed that portfolios are not shared with the first-grade teachers. That being said, most teachers stated that a transferred portfolio can present how children are prepared for the first grade.

Similarly, Balcı and Tezel-Şahin (2021) aimed to examine preschool teachers' views on portfolios using a basic qualitative research design, and data were collected by means of semi-structured individual telephone interviews. Findings demonstrated that preschool teachers do not view their undergraduate education on portfolio preparation as sufficient, and they expressed a need for training on it. Moreover, it was agreed that for the most part, a portfolio included child and family information forms and art activities, which inform viewers about child development. Teachers viewed the portfolio as beneficial because of the detailed information it provided about child development and how it enables children's self-

assessment. However, they also expressed several challenges including time, storage, crowded classrooms, and enabling parent involvement. Furthermore, teachers pointed out that they have active roles in the portfolio process but families and children do not. Having a similar focus, Demircan et al. (2015) also examined nursery school teachers' views on portfolio content. In their study, teachers viewed the following items as necessary: personal information, student documents, demographic information, health status, observations and observation records, photos and video recordings, art work, drawings, finger paintings, and projects.

With a different focus, in thesis, Eren (2007) examined the impact of portfolio assessment on preschool teachers, children and parents. Data were collected in a private preschool in Ankara from 6 preschool teachers, 10 children, and their parents. Data were collected by means of observation, interviews, and questionnaires. It was found that teachers have positive attitudes towards portfolio assessment, and portfolio assessment supported preschool children's self-expression skills, self-confidence, and self-responsibilities. Moreover, it helped parents to investigate children's attitudes, interests, and capabilities.

2.14.4. Research studies conducted in Turkey on assessment and documentation

Teacher practices and views on assessment have been the focus of several research studies in related national literature. For instance, Durukan and Şahin (2015) found that teachers have positive beliefs towards measurement and evaluation, and teacher beliefs are in line with their practices. However, a significant difference was not found in teachers' beliefs and practices on measurement and evaluation with respect to gender, school area, class size, grade level, education level, and in-service training. Having a similar purpose, Buldu and Tantekin-Erden (2017) also examined Turkish early childhood education teachers' self-reported beliefs and practices about assessment and investigated its relationship with teachers' educational and professional background. In this research 194 teachers from private and public centers participated in the study. It was found that there is a correlation

between early childhood education teachers' beliefs and practices, and they practice with respect to their developmentally appropriate beliefs. It was also revealed that having an undergraduate and postgraduate degree and years of teaching experience affect their self-reported beliefs and practices in favor of the group with a high level of education or high level of experience.

Likewise, Topuz (2015) examined preschool teachers' views about assessment. In this instance, 34 public school teachers participated in the study, and data were collected by means of semi-structured interviews. It was found that preschool teachers view knowing and assessing a child as necessary. To this end, they generally use observation and interview, and use collected information in writing assessment reports, to inform parents, and to plan activities. However, they mostly face difficulties in relation to crowded classrooms, allocating time, and collaboration with families. A majority of the teachers also think that revision of child assessment forms would be beneficial. Therefore, they pointed out the necessity of more publications and seminars about the techniques for knowing a child. Similarly, Elden (2019) examined assessment practices and perceptions of early childhood teachers. In this study 15 teachers participated, and semi-structured interviews were used to collect the data. It was found that teachers prefer observation as an assessment method. They generally use MoNE required assessment methods including development report, development observation form, and portfolio. However, they voiced difficulties of assessment concerning crowded classrooms, lack of time, and increased workload. This study indicated that teachers need professional support related to assessment methods.

In another study, Kaya (2018) also investigated preschool teachers' assessment methods and their opinions, knowledge, and competencies related to these methods. Participants included 10 kindergarten teachers who have a bachelor's degree and have been working as a teacher for at least five years. A semi-structured interview was conducted to collect the data. It was found that play-based assessment provides concrete information to teachers in children's evaluation, and they frequently use it. However, they did not find program-based assessment as useful to assess student

development and program aims. Rather than using forms, they stated that they observe children to assess their development. Furthermore, it was uncovered that although teachers keep portfolio files, they have different opinions and practices regarding implementation of portfolio assessment. It was also noted that dynamic assessment is new for teachers and its practices are limited. To sum up, although teachers are not satisfied with the implementation of alternative assessment methods, they want to improve themselves.

Moreover, Işıkoğlu et al. (2009) aimed to examine the tools which early childhood teachers' use for assessment and determine their self-efficacy beliefs in relation to these tools. Mixed method research design was used. It was found that teachers use observation and portfolio assessment for assessment and sharing results with other stakeholders. They were also found to have a moderate level of self-efficacy beliefs on assessment. Similarly, teachers' self-efficacy beliefs about especially alternative assessment methods were investigated in several research studies in the national literature. For instance, Şaşmaz Ören et al. (2014) examined the views and self-efficacy beliefs of preservice teachers related to alternative assessment methods. Data were collected from 174 preservice teachers by means of surveys. It was found that preservice teachers have a moderate level of self-efficacy towards assessment. Although their self-efficacy significantly differs with respect to gender, it did not differ with respect to department and classroom variables. Moreover, they indicated that they want to frequently use portfolios, performance assessment, concepts maps, and observations. Likewise, Özenç and Çakır (2015) examined competencies and self-efficacy beliefs of primary school teachers related to alternative assessment. Data were collected by means of semi-structured interviews from nine participants. It was uncovered that primary school teachers practice performance evaluation, portfolio, project, and self-assessment techniques. Providing feedback was found as the most obvious performance indicator. However, results showed that teachers are not sufficient in alternative assessment methods, and it was concluded that primary school teachers need support for understanding alternative assessment and evaluation and integrate these into their teaching.

In addition to self-efficacy, views related to alternative assessment were also mostly examined in research studies. Şahin and Öztürk (2014) examined primary school teacher candidates' views about alternative assessment. Data were collected by means of semi-structured interviews from 47 primary school teacher candidates. It was found that teacher candidates want to practice process assessment, and they want to use alternative assessment for this purpose. Portfolio, self-assessment, and project were the most mentioned alternative assessment methods. However, they thought that assessment in preschools is mostly based on products and interpretation, and assessment of objectives is not enough. Children's skills and individual differences are not considered. Similarly, İzci et al. (2014) investigated senior preservice teacher's opinions about alternative measurement and evaluation with respect to different variables. It was also aimed to explore self-efficacy beliefs of preservice teachers about the usage of alternative assessment methods and tools. Data were collected from 229 senior teacher candidates from different departments of Education Faculty, who have taken the measurement and evaluation course. According to teacher candidates, although alternative assessments have some limitations, they support the teaching and learning process in a positive way. Moreover, it was found that their competency beliefs are changing between competent and slightly competent. However, most of the participants stated that training in measurement and evaluation is not enough, and it needs to be improved by putting more emphasis on alternative assessment and evaluation measures.

Moreover, Kuran and Kanatlı (2009) examined elementary education teachers' views on alternative assessment, frequency in their usage of them, and the problems which they face while implementing these methods. Data were collected from 255 fourth and fifth grade teachers by means of surveys. The most frequently used alternative assessment methods were found as performance tasks, projects, and portfolios. Male teachers and teachers aged 22-28 were noticed to have more positive views on alternative assessment than females and other age groups. However, a significant difference could not be reached with respect to their teaching experience and taking in-service education. Teachers' practices of alternative

assessment methods were found to change with respect to their views on alternative assessment. Furthermore, findings indicated teachers' problems regarding implementation of alternative assessment methods because of limitation of time, resources, crowded classrooms, uncaring parents and students, and their lack of knowledge about alternative assessment methods. However, in general, a majority of the teachers viewed portfolio assessment as beneficial in this study. They also agreed that portfolio content should be selected together with students.

In dissertation, Vatansever (2019) examined attitudes of preschool teachers related to performance assessment by surveys and found their attitudes at a moderate level. It was revealed that preschool teachers' attitudes related to performance assessment do not change with respect to age, gender, tenure, working as an administrator or administrator demographics. On the other hand, a significant difference was seen with respect to education level, administrator observation, administrator experience, duty place, and the number of teachers in the school. Having a different focus, Dereli (2013) investigated the impact of taking documentation education on teachers' opinions about classroom practices and teaching attitudes. Mixed method approach was used in data collection. In results, although no difference was found for the group who had not received education, democratic attitudes and child-centered practices were increased for the group who had received the education.

Challenges were also reported by teachers with regards to alternative assessment. Özenç et al. (2017) investigated primary school teachers' perspectives related to alternative assessment by means of semi-structured interviews. Teachers agreed that it takes time to implement alternative assessment strategies. Moreover, they listed other problems as crowded classrooms, intensity of their program, and their insufficiency related to alternative assessment methods. Despite challenges, primary school teachers agreed that alternative assessment improves students' self-efficacy, helps them to know themselves better, and improves their self-evaluation abilities. Similarly, Anıl and Acar (2008) examined the problems which primary school teachers faced in assessment and evaluation process. In this study 96 primary school teachers participated, and data were collected by means of a survey. It was

found that teachers do not have enough knowledge about traditional and alternative assessment methods. In relation to this, they explained that education is not enough for alternative assessment, and they have problems related to time and crowded classrooms in the practice of alternative assessment. They also viewed these methods as complex, and they need an expert to guide them.

Specifically, pedagogical documentation has been investigated in several research studies. Buldu et al. (2018) investigated the perspective of teachers in relation to pedagogical documentation as a teaching, learning, and assessment method and tool. Semi-structured interviews were conducted with teachers who have practiced pedagogical documentation for a considerable period of time. Three themes were found as a result. These are: contribution of pedagogical documentation to individual, interpersonal, and learning process. It was concluded that pedagogical documentation clarifies and supports children's learning in early childhood. Supporting these findings, Aras and Tantekin Erden (2019) aimed to explore young children's self-regulatory and metacognitive abilities while practicing pedagogical documentation. They collected data from 11 children through pedagogical documentation by means of participant observation and interviews over several weeks. It was uncovered that documentation panels support children's self-regulatory and metacognitive abilities since it helps children to see their own abilities and cognition. It helped them to talk about past experiences in a visible context and share their experiences.

Buldu and Olgan (2021) also aimed to investigate how pedagogical documentation practices are changed after participating in a PD training. Two teachers participated in the study, and data were collected by means of video-based observations, interviews, and photographs for two semesters. It was found that after participating in a training, teacher began to use a variety of PD tools, and they enabled children to share their learning with their peers. On the other side, by including parents as participants, Aras et al. (2021) examined how pedagogical documentation contributes to the school-parent collaboration in terms of parents. Data were collected from 27 parents by means of semi-structured interviews. Documentation

panels, bulletins, and portfolios were used by teachers for sharing information. It was found that pedagogical documentation contributes to the visibility of learning, parent-school bridge, and child, parent, teacher collaboration. It helps them to understand their children better, guides them about parenting, contributes to their interaction with their children, improve school-parent collaboration, and supports child development and learning at home. They understand what kind of activities their children are doing at school and support them at home.

In contrast, Yılmaz et al. (2020) investigated the challenges of pedagogical documentation faced by early childhood teachers. These were categorized into three groups. The first is the challenges that result from the contextual factors including the need for assistant support, lack of parental interest, and lack of resources. The second is challenges originating from the nature of pedagogical documentation like necessitating extra time and effort and workload of teachers. The last is also related to the teachers' adaptation to the pedagogical documentation process which includes recording interactions, selecting content for documentation panel, and difficulty of transforming practice.

In addition to pedagogical documentation, different assessment methods were also investigated. For instance, Turupcu Doğan, and Ömeroğlu (2019) examined opinions of preschool teachers about evaluation questions (descriptive, affective, objective related and daily life related questions). In this study 323 preschool teachers participated, and data were collected by means of a questionnaire. It was found that teachers mostly prefer descriptive questions and objective related questions in comparison to affective and daily life related questions. No significant difference was noticed between frequency of teachers' usage of daily life related to questions and having training on evaluation of young children. In another study, Turupcu (2014) examined early childhood teachers' views about observation in young children's education. In this case 6 early childhood teachers from a private kindergarten participated in the study, and data were collected by means of one-to-one interviews. In addition, three participants among them were observed to determine how they use observation in their classroom. It was concluded that

observation is beneficial for children. It contributes to teachers' self-assessment. However, class size and documentation in a systematic way were found as mainly faced obstacles during observation. In order to overcome observation obstacles, teachers suggested to group children and provide teacher training to increase teachers' knowledge about young children's education.

Having a different focus, Özkan Yıldız and Yılmaz (2020) examined parent teacher collaboration in assessment of children in early childhood settings. They designed a case study and collected data by means of interview, observation, and content analysis from preschool teachers and parents. It was found that parents give importance to time and space of meetings. Face to face communication was found as the most preferred method by parents since it provides better rapport and better sharing of information as well as providing more privacy to share personal issues. Correspondingly, teachers were also found to have positive views regarding parents' involvement in the assessment process to better understand their children's learning. However, they viewed the main problem as discussing issues related to children's special needs situations with parents. In addition, lack of a private place for communication was also found as a primary problem.

2.15. Summary of the Literature Review

Assessment in early childhood education is identified as a process of collecting information and then organizing and interpreting it to make educational decisions. There are different categorizations of assessment methods in the related literature with a variety of assessment tools. Alternative assessment in particular is supported for early childhood education by considering children's developmental characteristics. These assessment methods were introduced in this part, and in particular, portfolio assessment was explained in detail as becoming the focus of this study. It was explained that portfolio assessment is a comprehensive assessment method to follow child development as a process and has a variety of benefits for each stakeholder in the process including child, teacher, and parent. However, its time intensive nature was verified as a challenge in several research studies. To

overcome challenges including the time issue, it was suggested for teachers to systemize the portfolio assessment process. It was highlighted to integrate it into classroom plans and be organized in the process.

After presenting assessment and portfolio assessment related literature, theoretical background of this study was explained by relating to Theory of Planned Behavior and Social Cognitive Theory. Based upon the theoretical background and conducted research studies, it was concluded that intention and self-efficacy beliefs have a determinant role on teacher behaviors. Moreover, internal factors (e.g., beliefs, personal norms) were also concluded as having more effect on teachers' intentions or practices compared to external ones (e.g., subjective norms).

To sum up, it is advocated that early childhood teachers have a crucial role in providing quality in early childhood education. Since assessment is an important component of early childhood education, its success also depends on teacher related factors. However, there are fewer research studies on portfolio assessment in the related literature despite its common practice in the field. After reviewing and presenting both portfolio and assessment related research studies in this part, it was noticed that portfolio focused research studies mostly investigate teacher views on portfolio assessment. There is a lack of research and a need to investigate portfolio assessment comprehensively. In response to this gap, this dissertation investigates teachers' portfolio assessment practices, views, and predictors in a multi-method design in three different parts through gathering data with interviews, document analysis, and surveys.

CHAPTER 3

METHOD

This chapter presents the research design, participants, data collection tools, data analyses, and limitations in three different parts of the study. Trustworthiness and validity of these studies are also justified in the related sections.

3.1. Design of the Study

Multi-method research design is commonly used as synonymous or interchangeable with mixed method research (Creswell & Clark, 2007; Johnson & Christensen, 2008). It is a supported method benefiting from the strengths of both quantitative and qualitative approaches, and in addition, decreases limitations (Drew et al., 2008). In other words, it provides a complete picture of the problem by mixing the qualitative and quantitative data (Creswell & Clark, 2007) and analyzing considerably more data than just one approach (Fraenkel et al., 2018).

In mixed method design, there is a complementary purpose, which means that purpose in the usage of two different research methods is complementary (Johnson & Christensen, 2008). Mixed method studies may involve qualitative or quantitative data within a single study or multiple studies as a part of large projects. Each study is reported separately as a distinct study for multiple studies, but it is called multiple study mixed methods research (Creswell & Clark, 2007). Similarly, in multi method design, each study is self-contained and autonomous in terms of methodological requirements (Tasakkori & Teddle, 2003). Two or more research methods, whether quantitative or qualitative, are combined in a study (Hunter & Brewer, 2015). Because of overlapping definitions in the literature and having three different purposes in three parts of the current study, the present study design fits the definitions of both multiple study mixed methods research and multi-method design. It is decided to be called and reported as multi-method research.

Multiple studies were employed in this comprehensive study to investigate early childhood teachers' portfolio practices and portfolio-related views, and to examine the content of child portfolios in three separate parts of the study. To reach these goals, three different research designs were employed. These research designs and the rationale for selecting them are explained in detail in the following parts of this chapter, and their order is also visualized below.

Qualitative - Qualitative - Quantitative

Overall, the first two parts of this study were designed in a qualitative nature, and the last study was conducted with respect to quantitative philosophy. Qualitative research is used to find out the in-depth meaning and personal experiences of participants about a phenomenon (Johnson & Christensen, 2008), and its data mainly involve words (Fraenkel et al., 2018). On the other hand, quantitative research is useful for generalizing the population (Johnson & Christensen, 2008), and its data primarily deals with numbers (Fraenkel et al., 2018). It seeks to understand the relationship between the hypothesized variables (Creswell, 2009). Each having specific strengths and weaknesses, it is advocated to combine these methods into the same research study (Johnson & Christensen, 2008).

In order to present each study clearly within its own research context, the methodology was presented separately below for three studies.

3.2. Study 1

Study 1 is the first qualitative part of the study. This section presents the purpose, method, participant selection, instrumentation, data collection, data analysis, and trustworthiness of this qualitative part of the research.

3.2.1. Purpose and research questions

The main aim of Study 1 was to examine and compare early childhood education (ECE) teachers' practices and views on portfolio assessment in a Reggio Emilia-

inspired preschool and university preschool in Turkey and the U.S. For these purposes, the following research questions were investigated in this part:

1.1. What are the ECE teachers' portfolio assessment practices in the selected preschools in Turkey and the U.S. in terms of content, organization, and parent involvement?

1.2. What are the ECE teachers' views on portfolio assessment in the selected preschools in Turkey and the U.S. in terms of definition and purpose, advantages, challenges, support, and suggestions?

1.3. What are the similarities and differences in ECE teachers' portfolio assessment practices and views between Turkey and the U.S.?

3.2.2. Research method

Study 1 was designed as a basic qualitative research method (Merriam, 2009) to explore prior research questions more deeply. Basic or generic qualitative research refers to studies that exemplify the above-mentioned characteristics of qualitative research. These researchers focus on how people make sense of their lives and experiences. They aim to explore a phenomenon, a process, or perspectives and worldviews of the people. Analysis of these mostly results in recurring patterns or themes obtained from the data (Merriam, 2009). In this way, the aim is to understand and explain in basic research (Patton, 2002). Likewise, this study aims to understand and compare teachers' portfolio assessment practices and views in Turkey and the U.S. utilizing a basic qualitative research design. As having a comparative purpose on portfolio practices and views between Turkey and the U.S., it has also a cross-cultural side.

3.2.3. Participants

In selection of participants in this process, purposive sampling was integrated. Purposeful sampling contributes to the credibility of the sampling (Creswell, 2007). It enables selection of participants who will provide the needed data and who are suitable for the study, taking into account the intent of the study (Fraenkel et al.,

2018). In this way, it allows selection of a sample from which the most can be learned (Merriam, 1998).

Because assessment and curriculum are interrelated in the teaching-learning process (Chen & McNamee, 2007), it is natural to see curriculum impact on assessment practices. However, each country has different policies and curriculum in early childhood education, and therefore, practices of the same assessment methods also change within each context. In this study, research data were collected in both Turkey and the U.S., which have different policies for early childhood education. In the U.S., there is not a central early childhood education curriculum. Therefore, preschools create their own guidelines for teachers, and this gives them the freedom to adapt their practices with respect to educational philosophy. Specifically, the portfolio is used for developmentally appropriate assessment (McKenna, 2005). On the other hand, in Turkey, there is a central early childhood education curriculum, and portfolio assessment is a requirement. However, there are no strict guidelines for these practices. Therefore, teachers are able to develop their own way of doing portfolio assessment. Overall, these two countries were selected in order to investigate different portfolio assessment practices in two different contexts, both of which place importance on portfolio assessment and provide flexibility to teachers in their practices.

Two different types of preschools were included in this part of the study in both Turkey and the U.S. One is a Reggio Emilia-inspired preschool, and the other is a preschool which follows the national curriculum as a part of the university. These schools were selected purposively on the criteria of using the portfolio as a crucial assessment method in their preschool. To explain further, learning is a child-initiated process in Reggio Emilia classrooms (Guyevsky, 2005). Documentation has a central role for understanding children, and it has a variety of purposes in these preschools. This means that it is integrated into the curriculum, and teachers are educated and experienced about documentation. The Reggio Emilia-inspired preschool was purposefully selected in order to learn about their portfolio assessment practices in their supportive preschool context. The other preschool, a

university preschool, also has a child-centered educational philosophy, explicitly written in their curriculum, and they use portfolios as a main assessment method in the preschool. Since portfolio assessment enables educators to know and assess each individual child using prepared individual folders, portfolio assessment best fits the nature of child-centered philosophy. It provides a powerful method and tool to engage students (Jones & Shelton, 2006). This philosophy also enables teachers to individualize portfolio folders with respect to children. In this light, these two types of preschools were purposefully selected to examine portfolio assessment in these two contexts, providing a supportive atmosphere for the practices. Two Reggio Emilia-inspired preschools and two university preschools in Turkey and the U.S. were initially selected in this study.

After selecting these preschools, six volunteer teachers were selected randomly from each of these schools. In total, 24 early childhood teachers participated in this part of the study from four preschools in Turkey and the U.S. Regarding sample size, it is suggested to reach the sample until saturation or redundancy is reached. Saturation of categories or emergence of regularities might be indicators of the adequacy of sample size (Lincoln & Guba, 1985) or reasonable coverage of the intended phenomenon (Patton, 2002), which was the case in the present study.

Table 3.1 and Table 3.2 summarize the characteristics of participant ECE teachers in the preschools of both Turkey and the U.S. As presented in Table 3.1, most are female ($n = 23$) and have a bachelor's degree ($n = 15$) from the ECE department ($n = 15$). Most had taken an assessment course ($n = 21$) and in-service training on portfolio assessment ($n = 17$). Moreover, all teachers have assistant teachers in their classrooms. Their average year of teaching experience and number of children in their class are also different, as presented in the Table 3.2.

Below, RT refers to the Reggio Emilia inspired preschool in Turkey, and UT refers to the university preschool in Turkey. Moreover, RA means Reggio Emilia inspired preschool in the U.S., and UA means university preschool in the U.S.

Table 3.1.

Frequencies of Participant Teachers' Demographics

Country		Turkey		U.S.		Total
School		RT (Frequency)	UT (Frequency)	RA (Frequency)	UA (Frequency)	
Gender	Female	6	6	5	6	23
	Male	0	0	1	0	1
Level of Education	Associate Degree	2	0	0	0	2
	Bachelor's degree	4	5	3	3	15
	Graduate degree	0	1	3	3	7
Field of Education	ECE	1	3	6	6	16
	Child Development	5	3	0	0	8
	Having an assistant teacher	6	6	6	6	24
	Taking assessment course	4	6	5	6	21
	Taking in-service education on portfolio	2	5	5	5	17

Note: RT: Reggio Emilia inspired preschool in Turkey, UT: University preschool in Turkey, UA: University preschool in the U.S., RA: Reggio Emilia inspired preschool in the U.S.

Table 3.2.

Descriptive (Mean values) for Participant Teachers' Demographics

Country	Turkey				U.S.			
School	RT		UT		RA		UA	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Years of teaching experience	9	2.6	20	11	20	11	14	13
Number of children in the class	15	0	22	1.6	13	4	12	7

Note: RT: Reggio Emilia inspired preschool in Turkey, UT: University preschool in Turkey, UA: University preschool in the U.S., RA: Reggio Emilia inspired preschool in the U.S.

3.2.3.1. School philosophy

As an initial interview question, teachers were asked about the participant preschools' philosophies, and it was found that there are both commonalities and differences among them. Table 3.3 summarizes findings with frequencies. The first common point is that all the preschools have two classroom teachers in one classroom, and there is teacher consistency for two years in each group, which means that the same teacher is together with the children for two years. All the teachers ($n=24$) agreed on the importance of this teacher consistency for children. They explained that this consistency enables a close connection between teachers and children and their parents in this period (Alexandra, RA). Furthermore, each preschool is working on a full-time schedule. Different approaches are integrated into their curriculum, but child-centered education and documentation were specifically mentioned as important points by all teachers. To elaborate, children's interests are followed in the classroom (Karla, UA). Child-based philosophy allows educators to listen to ideas, thoughts, and wonders of the children (Alexandra, RA). One of the teachers pointed out the importance of documentation in child-centered philosophy by stating that "*Becoming a child-based school requires to document what they are doing and really think about it and talk about it with co-teachers*"

(Adriana, RA). Another teacher in the Reggio Emilia-inspired preschool in Turkey justified the significance of documentation as *“Wall documentations, which include children’s products, help them to feel belong to school in addition to improving their communication with others by talking about their own products”* (Çağla, RT).

A majority of the teachers ($n=18$) viewed parents as partners in education. Moreover, most preschool teachers ($n=18$) pointed out mixed age grouping and play based education in classrooms. Mixed age grouping provides integration of different approaches in the classroom. One of the teachers from the university preschool in Turkey (UT) commented that *“We divide children into two groups with respect to their ages. One classroom teacher is caring with one group; another one is together with other group”* (Begüm, UT). If they are together in the same activity such as book reading, different questions are asked to children with respect to their developmental level (Nehir, UT). Furthermore, a variety of branch classes like music, dance etc. were offered for children ($n=18$), and projects were stressed as another common practice among them ($n=18$).

Inquiry-based curriculum is the other theme highlighted by teachers. All U.S. teachers attracted attention to the importance of individualized education and inquiry-based curriculum ($n=12$). One stated that *“We believe the hundred languages of children. Children have the possibility of exploring their world and exploring their own learning through many different mediums, whether that be visual arts or all sorts of different things”* (Kathrine, RA). Another teacher illustrated this as follows, *“If they are curious about something, we are curious with them and we follow them to the next level of inquiry that they want to know”* (Sophia, RA). Different languages were also mentioned for supporting goals such as teaching them to be kind and what kind of citizen for the future they want to be (Natalie, RA). Teachers also highlighted that there are certain items which they hoped that children would learn at certain times, in zones of proximal development. This was practiced by adding complexity to the classroom and methods of challenging them to do certain things (Kathrine, RA). All developmental areas were pointed out but *“personal and social growth and development”* was explicitly

highlighted in the comments of a teacher in the Reggio Emilia inspired preschool in the U.S. (Teddy, RA). In addition, all U.S. teachers ($n=12$) pointed out the importance of outdoor learning in their preschools.

When we look into the differences between schools, the Reggio Emilia approach has been emphasized in curriculum by teachers in the Reggio Emilia-inspired preschools ($n=12$), and being a university preschool was explicitly stated by university preschool teachers in both countries ($n=12$). Specifically, Reggio Emilia inspired preschool teachers both in the U.S. and Turkey ($n=12$) emphasized the importance of assessment and art integration in their curriculum. Moreover, Reggio Emilia inspired preschool teachers in the U.S. ($n=6$) highlighted the importance of community building and the view of capable children in their school philosophy. For instance, to attract attention to the importance of this, teachers stated that *“children can do many things on their own if you provide them things that are appropriate to their ages”* (Adriana, RA). *“They are capable of entering into dialogue with the teachers and sharing their own ideas, having their own place and developing their learning”* (Kathrine, RA). *“They are fully capable of developing their own learning through the availability of good toys and materials”* (Teddy, RA). Collaboration was also highlighted in terms of collaborating with each other and collaborating with parents in this preschool (Adriana, RA). It was explained that *“Every child will feel really capable, very accepted in this community, so we need to help them to know themselves and know the people around them”* (Natalie, RA).

University preschool teachers in the U.S. ($n=6$) also pointed out their practice of primary caregiver, which indicates the assignment of one educator to specific children during the process. They indicated that this role creates trust with children. For instance, one of the teachers stated, *“Our consistent routine helps them feel secure and give them a firm foundation of security that they can be comfortable for exploring”* (Sally, UA). If babies don’t trust, they don’t explore. Therefore, this practice contributes to continuity of care in the school (Maggie, UA). This university preschool’s motto was stated as *“notice, wonder, explore and discover”*

(Maggie, UA). Therefore, it is relationship based and individualized. In relation to this, one of the teachers expressed that *“It is very individualized so we see each child as an individual and try to meet them where they are at because within one class, you might have quite a range”* (Sally, UA).

Comparing this to Turkey, all of the Turkish preschool teachers ($n=12$) mentioned development of monthly school programs by a school team, consisting of teachers and administrators together. After development, teachers have the freedom to interpret and practice this developed program in their own way (Beril, UT). Children’s interests in particular are considered while developing programs as a school community, and teachers have the autonomy to adapt them with respect to children’s interests (Çağla, RT). To illustrate, one teacher in the Reggio Emilia-inspired preschool in Turkey pointed out that *“Children’s questions might be a guide for us in determining our projects”* (Beyza, RT).

Table 3.3.

Frequencies of School Philosophy Codes

Code	TURKEY			U.S.		
	RT	UT	Total	RA	UA	Total
2 teachers	6	6	12	6	6	12
Full time schooling	6	6	12	6	6	12
Mixed age group	0	6	6	6	6	12
Teacher consistency for two years	6	6	12	6	6	12
Primary caregiver	0	0	0	0	6	6
Branch classes	6	6	12	6	0	6
Parents as partners	0	6	6	6	6	12
Community building	0	0	0	6	0	6
Reggio Emilia	6	0	6	6	0	6
University Preschool	0	6	6	0	6	6
Child-focused	6	6	12	6	6	12
Individualized	0	0	0	6	6	12

Table 3.3. (continued)

Code	TURKEY			U.S.		
	RT	UT	Total	RA	UA	Total
Capable children	0	0	0	6	0	6
Inquiry based curriculum	0	0	0	6	6	12
Play-based	0	6	6	6	6	12
Developed monthly school program	6	6	12	0	0	0
Integration of different approaches	6	6	12	6	6	12
Assessment	6	0	6	6	0	6
Documentation	6	6	12	6	6	12
Projects	6	6	12	6	0	6
Outdoor learning	0	0	0	6	6	12
Art integration	6	0	6	6	0	6

Note: RT: Reggio Emilia inspired preschool in Turkey, UT: University preschool in Turkey, UA: University preschool in the U.S., RA: Reggio Emilia inspired preschool in the U.S.

3.2.4. Data collection tools

3.2.4.1. Interview

Interviews provide personal perspectives and feelings of the participants as well as providing detailed information (Drew et al., 2008). Therefore, the purpose of interviews is to obtain a special kind of information (Patton, 2002). This part of the qualitative data was collected by means of face-to-face semi-structured individual interviews with ECE teachers. In semi-structured interviews, there is a mix of more- and less-structured questions, and questions are flexibly worded (Merriam, 2009). As suggested, in this study interview questions began with a general open-ended question about the school philosophy. This was followed with the questions in the interview protocol, and additional questions were included for clarification when needed as a probe. Probes are questions or comments to follow something already asked to seek more detail or clarification. A semi-structured interview guide includes both questions and probes to ask specific questions (Merriam, 1998).

In the present study, the interview protocol, including interview questions and probes, was developed by the researcher in the U.S. as a part of this study and based upon the literature review. This initial version of the interview protocol consisted of 13 questions. Expert opinions on questions were sought from three different professors whose native language was English. Two were experts in early childhood education, and one was an expert in qualitative research. According to this expert guidance, some revisions were made for clarity, and some questions were combined to prevent repetition. After the suggested revisions, the interview protocol consisted of seven questions. This same interview protocol was adapted into Turkish and reviewed by experts in ECE and Educational Measurement and Evaluations. According to their suggestions, only minor language revisions were made in the Turkish version, and the same protocol was used in both U.S. and Turkey (See Appendix K and L for interview questions). The interview protocol has two main sections. In the first section, there is a question about the preschool philosophy, which enables the researcher to learn about the preschool and also develop a rapport with the participant teachers prior to the main questions. In the second section, teachers were asked open-ended questions about portfolio assessment. This section investigates teachers' portfolio assessment practices in terms of content, organization and family involvement, and also examines their views about definition and purpose, advantage, challenges, support, and suggestions related to portfolio assessment. Sample interview questions are: How do you use portfolios in your classroom? Tell me about the advantages and disadvantages of using portfolios as an assessment tool. What suggestion would you give to another teacher to make portfolio assessment more effective as an assessment practice?

3.2.4.2. Demographic information form

Characteristics of the participants were obtained through a demographic information form, which includes questions about teachers like gender, age, teaching experience, education level, professional development regarding portfolio assessment (taken courses on portfolio assessment and in-service training

concerning the issue), having an assistant teacher in their classroom, the number and age of children in the classroom. (See Appendix J).

3.2.5. Pilot study

The pilot study was conducted to finalize the English and Turkish versions of interview protocols, including the seven questions. Two pilot interviews were conducted with one early childhood teacher in the U.S. and one in Turkey. Both teachers had more than five years of experience and were using portfolios in their classrooms. One of them was working in an elementary school classroom in Turkey, and the other one was working in a private preschool in the U.S. Both had teaching licenses or undergraduate degrees in ECE.

The main purpose of the pilot study was to test the clarity of the questions. Based on the responses from the two participants, after the pilot study, it was decided to use interview questions in their current form, after ensuring clarity of the questions. This pilot study allowed researchers to reorganize the order of questions to ease transitions between questions and provided insight on the duration of interviews for the main study.

3.2.6. Data collection procedure

3.2.6.1. Data collection in the U.S.

Before the data collection process, the research study process and data collection tools were reviewed by UW-Madison Education and Social/Behavioral Science Institutional Review Board (IRB). It was determined that this study is appropriate to qualify as exempt review (Appendix S). This means protection of human research participants and conducting the study in a manner that maintains the ethical standards.

After getting approval to conduct research, the researcher visited two selected preschools in Madison to ask their permission to conduct a study with early childhood teachers. This study and data collection tools were reviewed again by

each of these two school committees. After receiving their approval, the preschool required procedural documents (background check, health report, etc.) to be prepared prior to collecting data in the preschools. This approval process took place in the fall semester of 2018-2019. Then, research data were collected between March 2019 and May 2019 in the U.S. Six volunteer teachers were selected from each of the two preschools. In this selection process, initially, the researcher visited preschools and invited teachers from different classrooms to participate in the research study. Six volunteer preschool teachers were selected randomly from different classrooms to be able to see different practices.

Interviews were scheduled with respect to each teacher's schedule or preference. In both schools, teachers had planning times for resting and studying during the day. Therefore, interviews were generally scheduled in their planning time or after their shift in the evening. In one preschool, interviews were administered in the teachers' room. In the other preschool, interviews were conducted in an office designed for researchers. The accommodations ensured that the study was conducted in a quiet environment and when teachers were out of class.

Each of the teachers signed a consent form before the interview. All the interviews were conducted face-to-face and audio was recorded with the permission of all the teachers. Notes were also taken by the researcher during interviews. Each individual interview lasted about approximately 45 to 60 minutes. Interview protocol guided this data collection. After each interview, interview memos were written on that day by the researcher to benefit data analysis. The demographic information form was also given to participants at the interview time and collected after they completed it on a specified date.

3.2.6.2. Data collection in Turkey

In Turkey, ethical permission to conduct this study was secured from both the Human Subjects Ethics Committee at Middle East Technical University and the Provincial Directorate of National Education, and it was approved without any revision (Appendix P and R).

In parallel to the study conducted in the U.S., one Reggio Emilia-inspired preschool and one university preschool were selected by the researcher. After getting permission to conduct research, the researcher visited the two selected schools in Ankara to ask for permission to conduct the study with early childhood teachers. The study and data collection tools were reviewed again by the school administrator in the Reggio Emilia-inspired school, and it was also reviewed again by a school committee in the university preschool. After receiving permission, data were collected in Turkey between September 2019 and December 2019. Six volunteer teachers were selected from each preschool. In this selection process, different from the U.S., preschool administrators invited teachers to participate in the research study and selected six volunteer teachers from different classrooms for the research study.

Interviews were scheduled with respect to each teacher's schedule or preference. Both preschools have two classroom teachers in one classroom, and both have branch classes for children. Therefore, teachers preferred times when children are in branch class with their other classroom teacher so that they could be out of the classroom for the interview. In both schools, interviews were conducted in an available office in the school. Interviews were conducted at quiet times and in a quiet environment in both preschools.

Consent forms were signed by each of the teachers before the interview. All the interviews were conducted face-to-face and audio recorded with the permission of all the teachers. Notes were also taken by the researcher during the interview time. Each individual interview lasted approximately 40 to 60 minutes. Interview protocol guided the data collection. After each interview, interview memos were written on that day by the researcher to benefit data analysis, enabling one to reflect on the data and see the relationship between issues (Bogdan & Biklen, 1992). In addition, the demographic information forms were given to participants at the interview time and collected after they completed it on a specified date.

3.2.7. Data analysis

Data analysis refers to making sense of the data by consolidating, reducing, and interpreting what people said and what the researcher had seen and read. A unit of data is any meaningful part of the data, which might be either a word or several pages of notes. This unit of information is compared to explore recurring regularities in the data. In this way, through the constant comparative method of data analysis, categories and subcategories are constructed (Merriam, 2009). For instance, those might be characterized by similarity, difference, frequency, sequence, correspondence, and causation (Hatch, 2002). Lichtman's (2013) six steps became a guide in the analysis process of the current study. These steps are: "initial coding, revisiting initial coding, developing an initial list of categories, modifying initial list based on additional rereading, revisiting categories and subcategories, and moving from categories to concepts" (Lichtman, 2013, p. 252).

Qualitative data were transcribed and organized before analysis. Transcription is the process of transforming qualitative research data into a typed text (Johnson & Christensen, 2008). It is advocated that transcription of the interviews by the researcher provides the best data for analysis (Merriam, 1998). As suggested, all the audio-recorded interviews of the present study were transcribed by the researcher in its conducted language, English or Turkish. The researcher's native language is Turkish, but she has an advanced level of English skills and practice. A computer software (MAXQDA) was used by the researcher in the data coding process to facilitate the tracking of the process. Confidentiality was ensured by removing the names and personal information of the teachers from the transcripts. Pseudonyms were used while reporting the results.

For data analysis, raw data were initially read two times, and first impressions were written to make sense of the data. After initial processes, data were coded concerning the purposes of the qualitative study. During analysis, open coding was used, which refers to being open to anything while coding data (Merriam, 2009). "Open coding is the analytical process through which concepts are identified, and their properties and dimensions are discovered in data" (Strauss & Corbin, 1998,

p.101). In the open coding process, the researcher moved forth and back several times in several iterative cycles. Codes were extracted inductively from the data. Data were also divided into parts and compared for similarities and differences. Conceptually similar ones were grouped under categories. As suggested (Merriam, 2009), in the present study, codes were organized under patterns and categories. Themes were identified in the last step from the current data. Focused themes of the present study are: content, organization, parent involvement, definition and purpose, advantages, challenges, support, and suggestions. (Theme and codes with frequencies are provided in tables in the results section.)

Enumeration is the process of quantifying the data, i.e., presenting the frequency of codes and categories (Johnson & Christensen, 2008). Likewise, in this present study, the frequency of codes was also presented as a part of the results. The demographic information form was summarized using descriptive statistics.

3.2.8. Trustworthiness of the research

Lincoln and Guba (1985) suggested considering credibility, transferability, dependability, or consistency instead of the terms of internal validity, external validity, and reliability. Among previously mentioned terms, credibility refers to truth values of the study (Miles & Huberman, 1994), and transferability refers to the extent to which findings of one study can be applied to other situations (Merriam, 2009). Another term, objectivity or confirmability is associated with neutrality or exclusion of researcher bias (Miles & Huberman, 1994). Regarding reliability, Lincoln and Guba (1985, p. 288) also conceptualized the terms “dependability” and “consistency” of the results from the data. In other words, it is suggested to think about whether the results are consistent with the collected data rather than expecting the same results (Miles & Huberman, 1994).

Different strategies were considered for this study to ensure trustworthiness in this study. For instance, member checking refers to asking participants for accuracy of a research report or specific descriptions (Creswell, 2007; Creswell, 2009; Fraenkel et al., 2018) or asking them if results are plausible for them (Merriam, 1998). The

researcher listened to all the interview recordings after the interview time and contacted teachers about the confusing points to clarify. Four teachers were contacted in the U.S. and three teachers were contacted in Turkey in face-to-face meetings to clarify the points. Moreover, the researcher's biases and position mean clarifying the researcher's assumptions, dispositions, biases, worldview, or theoretical orientation at the beginning of the study (Merriam, 2009). The researcher's preconceptions and background are explained in a separate subtitle in Section 3.2.9.

Another strategy, peer review, provides an external check (Creswell, 2007). For an external check of the process, one Ph.D. student from the field participated in the peer review process and became an external coder. Fifty percent of the interviews, which include at least two interviews from each preschool, were coded by the second coder. The external coder spent a considerable amount of time on materials for coding, and then findings were discussed with the researcher until reaching a consensus on the agreed themes and codes. When there is high consistency among different coders, this indicates intercoder reliability (Creswell, 2007; Johnson & Christensen, 2008). It is suggested to reach at least 80% agreement by Miles and Huberman (1994). This was provided at 95% percent and supported that intercoder reliability was ensured in this study.

Moreover, in this research, experts from both the U.S. and Turkey provided continuous feedback in each process of the research. Interview questions were developed under their guidance, and receiving different views during the process contributed to credibility of the research. After each interview, the researcher wrote memos and continuously reflected on data to make sure of its credibility. For dependability and transferability, a detailed description of the study was provided. This research data was collected, transcribed, and analyzed in its own language by the same researcher who is fluent in both Turkish and English. It was also analyzed with a computer program, which enhances reliability of the study.

3.2.9. Description of the researcher and explication of the researcher's preconceptions

In qualitative research, the researcher is the primary instrument for data collection and analysis (Merriam, 2009). Therefore, the researcher's background is important for how to collect and analyze the data and how to present the findings. In this study, the researcher took a qualitative research course in the Faculty of Education at METU, and she followed a mixed-method research course in the U.S. She has also conducted and published qualitative research studies previously. Therefore, she is experienced in qualitative research methods.

In qualitative research, researchers are explicit about their personal experiences and biases (Merriam, 2009). The purpose of acknowledging biases is to be conscious about how they might affect data collection and analysis. The researcher of the present study previously has conducted a research study about portfolio assessment. Therefore, she has deep knowledge and personal beliefs about its implementation in Turkey.

Although the researcher is a Turkish citizen, she was in the U.S. as a Fulbright visiting student researcher for one academic year. Therefore, a part of this research data was collected in the U.S., and the researcher has spent a considerable amount of time in classroom environments there. The establishment of rapport is supported as an important factor in the success of the interview (Drew et al., 2008). As suggested, these school experiences in the U.S. provided deep knowledge and experience for the researcher, and these school experiences also enabled development of a relationship or rapport with the teachers before data collection.

3.2.10. Limitations of the study

Self-reported data is the main limitation of the study because accuracy of data depends on participants' reflecting on their actual beliefs and practices. Socially desirable responses might prevent obtaining sincere responses. To reduce the effect of social desirability in the scope of this study, confidentiality was ensured by the

researcher during the data collection process. Another limitation is that data were collected in two different types of preschools in this study. Including different types of preschools might broaden the focus of the study and present portfolio practices in different contexts.

3.3. Study 2

Study 2 utilized qualitative research. This section presents the method, instrumentation, data collection, data analysis, and reliability and validity of this part of the research.

3.3.1. Purpose and research questions

This study aimed to examine and compare the content of child portfolios to assess quality in terms of serving its purpose of assessment in Turkey and the U.S. After getting teachers' self-reported views in Study 1, in this part, it was aimed to provide an insight into how teachers put those views into practice. To this end, the main research questions are:

- 2.1. What are the most frequently included components in the child portfolios in the selected preschools in Turkey and the U.S.?
- 2.2. What is the level of quality in the content of child portfolios in the selected preschools in Turkey and the U.S.?
- 2.3. What are the similarities and differences in components and quality of child portfolio contents between Turkey and the U.S.?

3.3.2. Research method

This study was designed as document analysis. Document refers to the written, visual, or physical material relevant to the study (Merriam, 2009; Merriam & Tisdell, 2015). Portfolio documents were analyzed and compared between Turkey and the U.S. As having a comparative purpose in these countries, this research has also a cross-cultural side.

3.3.3. Documents

In Study 1, 24 ECE teachers participated in interviews. In this part of the study, the intention was to examine one child portfolio from each of these participant teachers. As expected, 12 portfolios were obtained in the U.S., which consisted of six portfolios from each school. However, seven portfolios could be obtained in Turkey. As intended, six portfolios were examined in the Reggio Emilia inspired preschool. However, only one portfolio could be examined in the university preschool in Turkey because of school closing related to Covid-19. To enrich information about the content of portfolios in that preschool, in addition to one child portfolio, school portfolio guidelines and example documents were also obtained from this university preschool. Overall, 19 portfolios were included in the content of this study.

In purposive sampling, a decision is made about which unit to include in the study. Population is also the set of units which the researcher studies or wishes to generalize in content analysis (Neuendorf, 2002). In the present study, individual portfolios were defined as the unit of the current study.

3.3.4. Data collection and analysis

The researcher filled a content checklist (Appendix M) for each portfolio to record common and rare components in portfolios. The checklist offered a yes/no format concerning the inclusion of specific components in the portfolio. It consisted of 26 items, e.g., observation notes, worksheets, suggestions for families. The researcher controlled whether each component was present or not. Child portfolios were also examined using an analytic rubric developed by the researcher (Appendix N). It included the following dimensions: content, the feature of the selected products, organization, reflection, and overall evaluation. Each dimension was evaluated on a three-point scale with labels “not enough yet,” “acceptable,” and “exemplary.”

Both rubric and checklist were developed based upon the literature review. They were tested by examining a sample portfolio. Content-related validity is ensured by

getting expert opinions on data collection instruments before the study. Expert opinions were obtained from seven faculty members: three from the field of early childhood education, two from the field of measurement and evaluation, and two from the field of science education.

Data collection was conducted in the U.S. and Turkey. As explained in Study 1, ethical permissions were obtained, and the researcher contacted each preschool to collect the data. In addition to Study 1, permissions were also gathered from the parents of children to examine the child portfolios in this study. Children's names and photos were hidden from the documents to provide anonymity. Data were collected at the same time as the interviews in Study 1. It was requested that each teacher bring one portfolio to the interview. Each portfolio was scanned, or photos of the portfolio were taken after the interview. Documents were collected in the U.S. between March 2019 and May 2019 and in Turkey between September 2019 and December 2019.

"Content analysis is systematic, objective, quantitative analysis of message characteristics" (Neuendorf, 2002, p.4). As a first step of analysis, it is necessary to organize a large amount of material. To this end, themes are created by grouping codes when there is a large amount of descriptive information in content analysis (Fraenkel et al., 2018). This step helps to see trends and patterns in documents (Stemler, 2001). As suggested in the literature, findings of content analysis were reported in the present study in terms of frequencies as well as giving detailed narrative descriptions. Findings obtained using the checklist were summarized using frequency statistics. Each portfolio's content was also rated by the researcher individually using the rubric. For interrater reliability, 10 portfolios were rated by another coder using the same rubric, and 90% agreement was reached with respect to the consistency of the rated points. For inconsistent ratings, reasons of rating were discussed with the second coder until reaching a consensus on a point for rating.

3.3.5. Limitations of the study

Portfolio contents were examined in two different types of preschools in this study, and due to Covid-19 restrictions, only one portfolio could be examined in the university preschool in Turkey. Therefore, this created limitations in generalizing results.

3.4. Study 3

In Study 3, quantitative data were collected. This section presents method, sampling and population, instrumentation, data collection, data analysis, internal validity, and external validity issues for this part of the research.

3.4.1. Purpose and research questions

Study 3 aimed to investigate ECE teachers' portfolio practices and their predictors in the capital city of Turkey.

The research questions were as follows:

3.1. Is there a significant difference between ECE teachers practicing or not practicing portfolio assessment in terms of portfolio-related behavioral beliefs, attitudes, self-efficacy beliefs, barrier perceptions, intention, and child-teacher centered beliefs?

3.2. How well can early childhood teachers' portfolio practices be predicted by years of teaching experience, portfolio-related intention, and self-efficacy beliefs?

3.4.2. Research method

This research design is correlational in which the relationships among variables are examined without any attempt to manipulate these variables (Fraenkel et al., 2018). With this research design, it was aimed to investigate predictors of early childhood teachers' portfolio related practices. Data collection instruments were developed as a part of the study and administrated by the researcher. Results were analyzed using inferential statistics to explore correlations between the variables.

3.4.3. Population and sampling

The target population of the present study was decided as ECE teachers employed at public preschools in Ankara, which refers to 3,999 ECE teachers according to 2018-2019 statistics. Ankara was selected because of its cosmopolitan structure and as capital of Turkey.

The accessible population was identified as ECE teachers working in public preschools in nine selected central districts of Ankara of different socio-economic status. These districts were: Pursaklar, Altındağ, Mamak, Keçiören, Sincan, Gölbaşı, Çankaya, Etimesgut, and Yenimahalle. Cluster random sampling was used in this study. Cluster random sampling refers to selecting groups or clusters rather than individuals (Fraenkel et al., 2018). Schools were randomly selected from each of these districts, and data were collected from all volunteer teachers in these schools. Data were collected from a total of 621 ECE teachers. After data cleaning, a total of 605 usable responses were included in the main data analysis. The number of participating teachers from nine districts are presented in Table 3.4.

Table 3.4.

Number of Teachers in Districts of Ankara

	Number (N)	Percentage (%)
1.Pursaklar	27	4.5
2.Altındağ	54	8.9
3.Mamak	66	10.9
4.Keçiören	116	19.2
5.Sincan	81	13.4
6.Gölbaşı	23	3.8
7.Çankaya	72	11.9
8.Etimesgut	86	14.2
9.Yenimahalle	80	13.2
Total	605	100

Characteristics of the participants are summarized in Table 3.5. As presented in the table, 99.3% ($f = 601$) of the teachers were female, and 83.1% ($f = 503$) graduated from the ECE department. These teachers were working in two types of public schools: a preschool classroom in an elementary school (47.8, $f = 289$) and independent preschool (52.2%, $f = 316$). There is an assistant teacher in the classrooms of 40.5% ($f = 245$) of these teachers. Although 79% ($f = 478$) of them took an assessment course during their education, 21% ($f = 127$) did not take any assessment course. Moreover, 17% ($f = 101$) of them took in-service education about portfolios but 83% ($f = 504$) did not take in-service education about portfolios.

Table 3.6 presents that teaching experience was around 14 years ($SD = 7.1$), and teachers had nearly 20 children ($SD = 3.9$) in their classroom. Participants' ages also ranged from 21 to 60.

Table 3.6.

Descriptive Statistics of Participant Teachers' Demographics

	Minimum	Maximum	<i>M</i>	<i>SD</i>
Age	21	60	37.57	7.11
Years of teaching experience	1	37	14.01	7.15
Number of children in the class	10	29	20.10	3.99

Participants were also asked whether they use portfolio assessment. Seventy-two percent ($n = 438$) reported using portfolio assessment, while 28% ($n = 167$) of the teachers reported that they did not. In addition, they were also asked to rate their sharing the portfolio with the next teacher of the child on a 5-point frequency scale. The mean value was 1.58, with a standard deviation of 0.94.

Table 3.5.

Characteristics of the Participating ECE Teachers (n = 605)

		Frequency (f)	Percentage (%)
Gender	Female	601	99.3
	Male	4	0.7
Level of Education	Associate Degree	21	3.5
	Open University	45	7.4
	Bachelor's degree	498	82.3
	Master or Ph.D. degree	41	6.8
Field of Education	ECE	503	83.1
	Child Development	75	12.4
	Other	27	4.5
School Type	Preschool classroom as a part of elementary school	289	47.8
	Independent preschool	316	52.2
Age of children (in months)	36-48	47	7.8
	38-60	215	35.5
	60-72	226	37.4
	Mixed	117	19.3
Having an assistant		245	40.5
Not having an assistant		360	59.5
Taking assessment course		478	79
Not taking assessment course		127	21
Taking in-service education on portfolio		101	16.7
Not taking in-service education on portfolio		504	83.3

3.4.4. Data collection instruments

In addition to the Demographic Information Form, nine different scales were developed and administered for the purpose of the current study. Eight of the scales were developed within the context of the present study. One scale, the child-teacher centered beliefs scale, was adapted into Turkish. In this section, first, scale development and adaptation processes are presented, then each scale is introduced.

3.4.4.1. Scale development and adaptation process

Instrument development steps offered by McCoach et al. (2013) and Netemeyer et al. (2003) were considered in the current study. Steps taken are explained in detail below: specifying the purpose of the scale, reviewing existing instruments, developing operational definitions, selecting a scaling technique, matching items with dimensions, expert review of items, developing directions and conducting the pilot study, and analyzing pilot data (McCoach et al., 2013). Moreover, during adaptation, guidelines proposed by the International Test Commission (ITC) (2017) were also followed. These guidelines include suggestions regarding the following categories “pre-condition, test development, confirmation, administration, scoring and interpretation, and documentation.”

3.4.4.1.1. Scale development process

In the process of scale development, the same steps were followed for all of the scales. Initially, an item pool was created based on the related literature review. There are no scales about portfolio assessment in ECE. However, there are some in the international literature yet having different purposes (e.g., Butts, 1997; Jones, 1998; Sonnier, 1999). As a first step, operational definitions were made based upon a detailed literature review related to both portfolio assessment and TPB. Next, an item pool was created for each scale by the researcher. Items were matched with the dimensions. Then, item pools were first examined by the supervisors who are experts in ECE and Educational Measurement and Evaluation.

Initially, the item pool for portfolio practice scale consisted of 18 items. It was reduced to 14 items by combining items together with respect to their commonalities. For instance, there were two different items regarding organization “Organizing portfolio with respect to date” and “Organizing portfolio with respect to subject area.” These two items were combined together in one item as “Organizing portfolio with respect to different criteria like date, subject area, etc.” Moreover, to clarify the item’s meaning for the relevant construct, the item of “Communication with children” was revised as “Enabling children to examine their own portfolio.” Finally, there were items regarding sharing of portfolios with colleagues or school administrators, and these were also excluded from the scale. The item “Organizing portfolio sharing days” was instead included.

For the norms scale, the following items were excluded because of irrelevancies to constructs: “I use portfolio because of feeling happy in the process” and “I use portfolio because of pedagogues’ expectation from me.” Moreover, to clarify the meaning, the item “Portfolio assessment enables me to assess myself” was revised as “I use portfolio assessment because of having opportunity to assess myself.” After these revisions, 11 items remained in total. Furthermore, in the behavioral beliefs scale, four items were excluded from the item pool due to items’ mismatching content of relevant constructs. To explain, one of the excluded items was “I assess development in different developmental areas with portfolio,” which was already included in the portfolio practice scale. The following are the other items excluded from the scale: “I use portfolios while preparing daily and monthly plans,” “I use portfolios to improve my collaboration with school administrators,” and “I use portfolios to compare children’s performances.” After these revisions, the pool consisted of 15 items. Similarly, for the attitude scale, two items were excluded from the item pool (enjoyable and flexible) because of irrelevancies to relevant construct, and it consisted of seven items in total.

In the self-efficacy beliefs scale, items were revised for clarification. For instance, “How much difficulty can you face in practicing portfolio for children with special needs?” was revised as “How much can you include children with special needs

into the portfolio process?” The following items were also removed from the construct: “How much can you use portfolio assessment effectively in comparison to other assessment methods?” “How much can you benefit from different resources in portfolio assessment process?” After these deletions, it consisted of 15 items in total. Furthermore, for the barrier perceptions scale, four items were combined together because of commonalities and it was reduced to eleven items. To illustrate, there were two items, “financial situation” and “reaching material and equipment.” These were combined together into one item as “availability of enough material.” “Classroom management” and “crowded classrooms” were also combined together as “class size.” Likewise, two items were excluded from intention scale because of repetitions and reduced to four items. To explain, there were two similar items “I intent to practice portfolio assessment” and “I aim to practice portfolio assessment.” These items were combined into one item as “I will use portfolio in the next year.” After these revisions, it consisted of four items in total.

For getting expert opinion, an informative document was prepared by the researcher. The document included information about the study and operational definitions of each construct. Opinions were gathered from seven faculty members: three from the field of early childhood education, two from the field of measurement and evaluation, and two from the field of science education. Experts were asked to evaluate each item’s suitability to a specified construct and evaluate each item in terms of clarity. After expert opinions, suggested revisions were conducted on the items. To explain, for portfolio practice scale, items were clarified by including explanation in parenthesis or revising the items. For instance, one of the items was “including reflections of children in portfolio”, and this was revised as “including ideas of children in portfolio.” Another revised item was “communicating with parents about the portfolios.” According to suggestions by majority of experts, it was detailed and revised as “communicating with parents about portfolio in different ways such as requesting materials, organizing portfolio sharing days, etc.” For norms scale, the item of “I use portfolio because of having

opportunity to assess and improve myself” was written as two separate items because of pointing out two courses of action (assess and improve) at the same time. One of the items was also deleted from the scale due to indicating very specific issue in comparison to other items (I use portfolio because of feeling responsible to parents). Moreover, in behavioral beliefs scale, one of the items was excluded according to suggestions because of its overlapping meaning with personal norms (Making self-assessment as a teacher). In contrast, for self-efficacy beliefs scale, some new items were added to scale according to expert opinions. For instance, it was initially written as “How can you help children in portfolio sharing process?” According to suggestions, this item was written as two different items: “How can you help children in portfolio preparation process?” “How can you help children in portfolio sharing process?” Moreover, for barrier scale, items were revised and written in a positive style. To explain, it was initially written as “difficulty of selecting products.” It was revised as “selecting works.” One new item was added to this scale according to suggestions, “Parents’ unwillingness to support portfolio process,” and two other items were also deleted from the scale (parent unwillingness, busy schedule of parents). Finally, there were not any suggestions for revisions of the intention and attitude scale.

After making necessary revisions suggested by experts, cognitive interviews with think-aloud protocol were conducted on scales with two early childhood teachers working in public preschools in Ankara. One of these teachers was using the portfolio, and the other was not. It was requested from participants to think aloud while answering the questions and tell everything that they were thinking (Collins, 2003; Drennan, 2003). The interview process was audiotaped by the researcher with the permission of the participating teachers. Cognitive interviews were conducted after school time in the school garden for two teachers on two different days. After the cognitive interviews, some minor changes were made on a few items for clarity. All the scales were finalized to be administered in the pilot study.

3.4.4.1.2. Adaptation process of child-teacher centered beliefs scale

The Child-Teacher Centered Beliefs Scale, developed by Pianta et al. (2005), was adapted into Turkish. Permission was received from Dr. Pianta by e-mail. Items were translated into Turkish by three bilingual experts, fluent in both English and Turkish. Then, these translations were examined by the researcher, and items were finalized for the Turkish version. This scale was translated back into English again by three bilingual experts. Translated and back-translated versions were compared, and only some minor changes were made by the researcher. For example, it was initially written as “It is more important for a child for preparing for the future than enjoying today.” This was revised as “It is more important for a child to prepare for the future than daily enjoyment.”

Opinions regarding the final form of the scale were gathered from the same seven experts who reviewed the developed scales. They suggested deletion of four items from the scale because of not matching with expected factor dimensions. To explain, the items of “Since parents lack special training in education, they should not question the teacher’s teaching methods” and “The most important thing to teach children is absolute obedience to parents” were excluded because of being related to family and not being related with teacher child-teacher centered beliefs. Moreover, the items, “Preparing for the future is more important for a child than enjoying today” and “Children like to teach other children” were also removed from the scale because of not matching with the content of underlying constructs. In addition, some items were revised with respect to suggestions of experts. For instance, the item “Children should be allowed to disagree with their parents if they feel their own ideas are better” was revised as “Child should be allowed to think differently from their teachers” since the first version was described as conditional. Similarly, the item “Children learn best by doing things themselves rather than listening to others” was revised because of including two statements at the same time. It was revised as “Children learn best by doing things themselves.”

3.4.4.2. Description of the scales

Detailed information is presented below for each scale. Scales are also summarized in Table 3.7.

Demographic Information Form: This was formed by the researcher in order to get personal information about teachers like gender, age, education level, field of education, teaching experience, preschool type, number of children in the class, age interval of children, having an assistant teacher in their classroom, and professional development regarding portfolio assessment (taken courses on portfolio assessment and in-service training concerning the issue) (Appendix J).

Portfolio Practice Scale: This scale was developed as a part of the present study to assess the effectiveness of teachers' portfolio practices in terms of three different constructs including content, child participation and sharing. The "content" factor gives indications about the components and organization of the portfolio assessment process. To explain, sample item reads "Enriching portfolio with different types of content (photos, videos, etc.)" and "Organizing portfolio according to specific criteria like development area, subject, date." Another factor, "child participation" presents information about the children's active engagement in the portfolio process. Sample item reads "Deciding what to include in portfolio with children" and "Giving place to children's own reflections about the products included in portfolio." Sharing also provides information about the practices of teachers for sharing the portfolio with different stakeholders including families, children, and the next teacher of the child. For instance, the sample items are "Organizing portfolio sharing days" and "Communicating with parents about the portfolio in matters such as supplying materials."

In this scale, it was asked of teachers to rate how often they implement specific practices from these three factors. It was designed as a 5-point rating scale ranging from "never" (1) to "always" (5) and consisted of 13 items (Appendix A).

Portfolio Content: This survey presents the components of the child portfolios. Teachers rate the frequency for including components like “personal information about the child,” “art activities,” “observation notes” and “suggestions for the next teacher of the child” in the child portfolio. It includes 26 items on a 5-point rating scale ranging from “never” (1) to “always” (5) (Appendix B).

Portfolio Norms Scale: This scale was developed by the researcher in order to measure teachers’ both personal norms and subjective norms about portfolio assessment, focusing on these two dimensions. Personal norms refer to the personal feeling of obligation to practice portfolio assessment. Sample item reads “I use portfolios to improve my teaching” and “I use portfolios as a self-evaluation practice.” Subjective norms also mean social pressure for practices of portfolio assessment. Example items are “I use portfolios because of the school administrations’ expectations to use them” and “I use portfolios because of feeling compelled as an early childhood teacher.” It consists of 10 items, and it was designed as a 7-point rating scale ranging from “strongly disagree” (1) to “strongly agree” (7) (Appendix C).

Portfolio-related Behavioral Beliefs Scale: This scale was developed by the researcher in order to determine teachers’ beliefs about the possible benefits of portfolio assessment. Sample item reads “Identify the strengths of children” and “Actively integrate families in the assessment process.” It consists of 15 items with one dimension, and it was designed as a 7-point rating scale ranging from “Not at all” (1) to “Completely” (7) (Appendix D).

Portfolio-related Attitude Scale: This scale was developed as a part of this study for identifying attitudes of teachers about portfolio assessment, which is referring to favorable and unfavorable assessments about portfolio assessment. For instance: “Necessary-Unnecessary,” “Beneficial- Not Beneficial,” “Not waste of time- Time consuming.” It was designed on a 7-point semantic differential scale and consisted of seven items with one dimension (Appendix E).

Portfolio-related Self-Efficacy Beliefs Scale: This scale was developed by the researcher to measure teachers' feelings of competency on practicing portfolio assessment. Example items are: "To what extent can you provide active participation of children in the portfolio process?" "How well can you work with your colleagues and school administration in the portfolio process?" It is unidimensional with 14 items, and it was designed as a 7-point rating scale ranging from "Not at all" (1) to "Completely" (7) (Appendix F).

Portfolio-related Barrier Perceptions Scale: This scale was developed by the researcher in order to determine teachers' perceptions of the factors which inhibit their practices for portfolio assessment such as "Selecting items for the portfolio" and "Crowded classroom." This is a unidimensional scale with 11 items. It was designed as a 7-point rating scale ranging from "Not at all" (1) to "Completely" (7) (Appendix G).

Portfolio-related Intention Scale: This scale was developed by the researcher for identifying teachers' willingness to expend effort to practice portfolio assessment. On this scale, teachers were asked to rate the statements, such as "I will use portfolio in the next year" and "I will organize portfolio sharing days in the next year." It consisted of four items with one dimension, and it was designed as a 7-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (7) (Appendix H).

Child/Teacher-Centered Beliefs Scale: This scale was originally developed by Schaefer and Edgerton (1985) to collect data from parents to measure their traditional and progressive beliefs towards children. The same scale was also shortened and adapted to collect data from teachers by Pianta et al. (2005). Cronbach's alpha value was reported .78. It was aimed to measure teachers' beliefs about child-centered and teacher-centered perspectives. The 16-item version of Pianta's scale was adapted into Turkish with necessary modifications to collect data from early childhood teachers. The scale was on a 5-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (5). It has 11 items with two dimensions, including child-centered and teacher-centered beliefs proposed in the original scale.

In these constructs, the aim is to assess teachers' traditional and progressive beliefs about children. The sample items from the teacher-centered dimension are "Children should always obey the teacher" and "The main purpose of the education is to put knowledge in the minds of children." In contrast, child-centered beliefs sample item read "Children learn best by doing things themselves" and "Children should be allowed to express their views" (Appendix I).

Table 3.7.

Characteristics of the Scales

Scale	Number of factors	Factors	Number of items	Sample item	Cronbach's alpha
1.Portfolio Practice	3	Content	6	"Organizing portfolio according to specific criteria like development area, subject, date"	.84
		Child participation	4	"Deciding what to include in portfolio with children"	.84
		Sharing	3	"Organizing portfolio sharing days"	.82
2.Portfolio Norms	2	Personal norms	4	"I use portfolios to improve my teaching"	.87
		Subjective norms	6	"I use portfolios because of the school administrations' expectations to use them"	.83
3.Portfolio-related Behavioral Beliefs	1	Behavioral beliefs	15	"Identify the strengths of children"	.97
4.Portfolio-related Attitude	1	Attitude	7	"Necessary-Unnecessary"	.96
5.Portfolio-related Self-Efficacy Beliefs	1	Self-efficacy beliefs	14	"To what extent can you provide active participation of children in the portfolio process?"	.95

Table 3.7. (continued)

Scale	Number of factors	Factors	Number of items	Sample item	Cronbach's alpha
6.Portfolio-related Barrier Perceptions	1	Barrier perceptions	11	"Crowded classroom"	.91
7.Portfolio-related Intention	1	Intentions	4	"I will organize portfolio sharing days in the next year"	.90
8.Child/Teacher-Centered Beliefs	2	Child-centered beliefs	5	"Children should always obey the teacher"	.71
		Teacher-centered beliefs	6	"Children learn best by doing things themselves"	.70

3.4.4.3. Pilot study

Pilot testing of an instrument provides information regarding clarity of instructions and questions. To serve its purpose, it is important to choose individuals who are similar to intended respondents in the main study (Drew et al., 2008). In this present study, the pilot study was conducted in the following districts of Ankara: Çankaya, Yenimahalle, Gölbaşı, Etimesgut, Sincan, Keçiören, and Altındağ. Since the target population was defined as ECE teachers who are working in a public preschool in Ankara for the main study, the pilot study was also conducted in a similar context. After getting ethical permission for a pilot study from both the Human Subjects Ethics Committee at Middle East Technical University and the Provincial Directorate of National Education (Appendix O and R), data were collected by the researcher in randomly selected preschools located in these districts. First, permission was received from each school administrator. Then scales were administered to all voluntary teachers. Three hundred seventy-one usable responses were obtained and included in the analysis of the pilot study. It is suggested that an acceptable sample size would be 10 cases for each item (Hair et al., 2010), which was satisfied for each scale in the present study.

Demographic information of the participating teachers in the pilot study is summarized in Table 3.8. As presented, 97% ($f = 360$) of the teachers were female, and 80.3% ($f = 298$) of them graduated from the ECE department. Nearly half of the participants were working in the preschool classroom as a part of the elementary school (52.3%, $f = 194$), while the other half were in independent preschools (47.7%, $f = 177$). Only 12.7% ($f = 47$) of these teachers had an assistant in their classroom. Their teaching experience was around 14 years ($SD = 8.33$), and they had 17 children ($SD = 6.86$) in their classroom. More than half of the participants (77.1%, $f = 286$) took an assessment course, and only 12.1% ($f = 45$) of them took in-service training about portfolios. A majority of these participant teachers (76.8%, $f = 285$) were also using portfolios, but 23.2% ($f = 86$) of the teachers were not.

Table 3.8.
Frequencies of Participant Teachers' Demographics in Pilot Study

		Frequency (f)	Percentage (%)
Gender	Female	360	97
	Male	11	3
Level of Education	Associate Degree	25	6.7
	Open University	19	5.1
	Bachelor's degree	301	81.1
	Master	25	6.7
	PhD	1	0.3
Field of Education	ECE	298	80.3
	Child Development	62	16.7
	Other	11	3
School Type	Preschool classroom as a part of elementary school	194	52.3
	Independent preschool	177	47.7
Age of children (in months)	36-48	35	9.4
	38-60	146	39.4
	60-72	151	40.7
	Mixed	39	10.5

Table 3.8. (continued)

	Frequency (<i>f</i>)	Percentage (%)
Having an assistant teacher	47	12.7
Not having an assistant teacher	324	87.3
Taking assessment course	286	77.1
Not taking assessment course	85	22.9
Taking in-service education on portfolio	45	12.1
Not taking in-service education on portfolio	326	87.9

Pilot data were subjected to exploratory factor analysis (EFA) for each scale developed/adapted in this study. In addition, Cronbach's Alphas were generated for each scale. SPSS 25 statistical program was used to conduct these analyses. Before conducting explanatory factor analysis, initial assumptions were checked. Then, EFA was conducted utilizing the principal axis factoring extraction method as multivariate normality was violated. The maximum likelihood method was preferred only for the barrier perceptions and child/teacher-centered beliefs scales. The number of factors was decided based on the eigenvalue greater-than-one rule and the scree plot (Netemeyer et al., 2003). A well-defined scree plot includes an elbow, and the number of factors is seen just before the elbow (McCoach et al., 2013). Direct oblimin rotation was also selected as a method for factor rotation in the present study. Oblique rotation allows correlations among factors if those improve the structure. These rotated factor loadings provide a clear picture of the relations among the items, and factor loadings also indicate which items best capture the dimensions (Fabrigar & Wegener, 2012). The literature supports that factor loading of .30 has practical significance for a sample size of 350 or greater (Hair et al., 2010). All factor loadings above .3 were reported in the present study in line with the suggestions. Moreover, factor correlation matrix findings were also presented for the scales which have more than one factor in this study. This matrix provides significant information about "the extent to which the factors are correlated with each other" (Fabrigar & Wegener, 2012, p. 136).

3.4.4.3.1. Portfolio practice scale

After ensuring those specific assumptions for this scale, factor analysis with principal axis factoring analysis was conducted on 14 items, using the direct oblimin rotation. The KMO value was found as .905, and Bartlett's Test of Sphericity was also found significant ($\chi^2 = 2052, 91$ and $p = .000$) as verifying the suitability of data for factor analysis. In the correlation matrix, all communality values were reached above .30. Still, only for the 14th item (Sharing portfolio with the next teacher of the child), it was .176. However, it is an essential item. Therefore, it was determined to be retained. Scree plot also indicated three factors as seen in Figure 3.1.

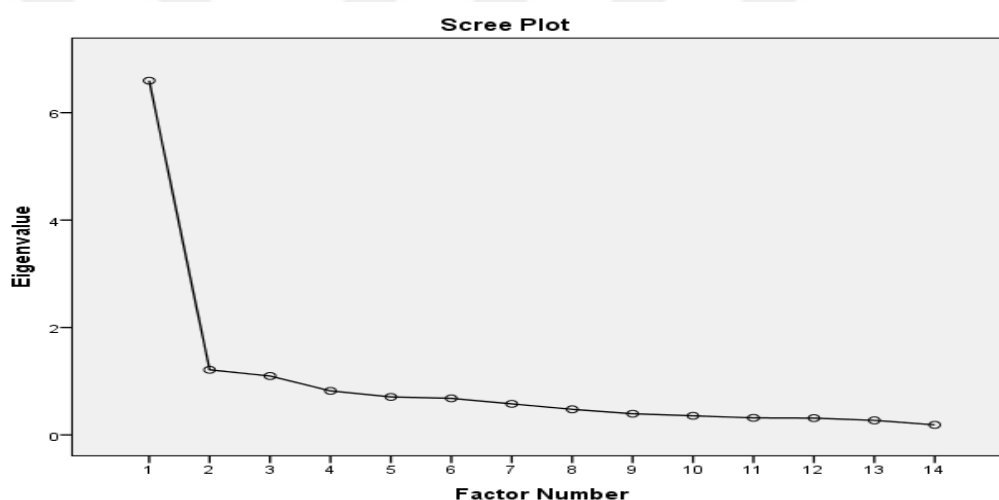


Figure 3.1. Scree plot of Portfolio Practice Scale

Moreover, eigenvalue greater-than-one rule revealed a three-factor structure, explaining a total of 63.595 variance. The three factors were named as content, child participation, and sharing. This structure is consistent with what is proposed at the beginning. To interpret the EFA results, item factor loadings of portfolio practice scale were examined. It was seen that almost all items (except item 9 and 10) loaded with the related three components (Table 3.9). However, item 9 and item 10 loaded in a different factor. To explain, Item 10 (Having a place for written reflections of teachers about children) was suitable for the first factor of "content" and item 9

(Giving place to children's own reflections about the products included in portfolio) was suitable for the second factor of "child participation" with respect to their content. It is suggested to investigate potential explanations for such low loaded items in the literature, for instance, whether it might be because of "poor item design, inadequate sampling or inappropriate inclusion of the variable" (Fabrigar & Wegener, 2012, p.138). Therefore, wording of these items was revised after pilot study for clarification and decided to be investigated again in CFA.

Table 3.9.
Pattern and Factor Correlation Matrix of Portfolio Practice Scale

Pattern Matrix			
Item	Factor		
	1: Content	2: Child participation	3: Sharing
1	.814	.114	
5	.755	-.140	
6	.653	-.187	
4	.637		.114
2	.433		.313
7		-.896	
8		-.731	.113
3		-.313	.290
11		-.120	.709
12		-.112	.702
13		-.207	.609
10	.300		.562
09	.274	-.148	.443
14			.435
Factor Correlation Matrix			
Factor	1	2	3
1	1.000	-.478	.636
2	-.478	1.000	-.503
3	.636	-.503	1.000

Note: Extraction Method: Principal Axis Factoring.

Rotation Method: Oblique with Kaiser Normalization.

Cronbach's Alpha values were also calculated for each of these dimensions as .843 for content, .79 for child participation, and .863 for sharing. Based on factor loadings and revisions, three factors with the following 14 items were extracted from this scale. Factor and its items are summarized below.

- Content: 1, 2, 4, 5, 6, 10
- Child Participation: 3, 7, 8, 9
- Sharing: 11, 12, 13, 14

3.4.4.3.2. Portfolio norms scale

After ensuring those specific assumptions for this scale, factor analysis with principal axis factoring analysis was conducted on 10 items, using the direct oblimin rotation. The KMO value was found as .789, and Bartlett's Test of Sphericity was also found significant ($\chi^2 = 1380, 45$ and $p = .000$) as verifying the suitability of data for factor analysis. In the correlation matrix, all communality values were reached above .30. Scree plot also indicated two factors as seen in Figure 3.2.

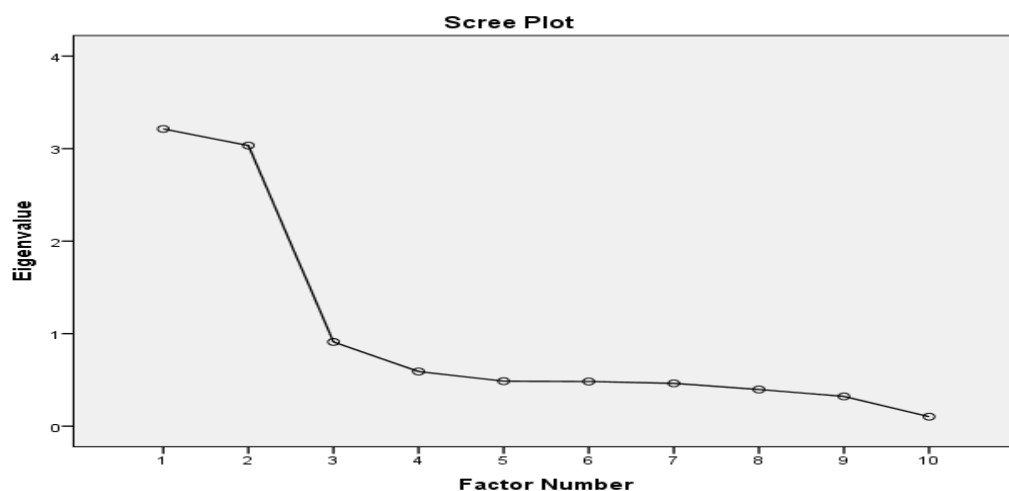


Figure 3.2. Scree plot of Portfolio Norm Scale

Moreover, eigenvalue greater-than-one rule revealed a two-factor structure, explaining a total of 62.460 variance. These two factors were named as personal norms and subjective norms. This structure is consistent with what is proposed at

the beginning. To interpret the EFA results, item factor loadings of portfolio norms scale were examined, and it was seen that all items loaded with the related two components (Table 3.10).

Table 3.10.

Pattern and Factor Correlation Matrix of Portfolio Norm Scale

Pattern Matrix		
Item	Factor	
	1: Personal Norms	2: Subjective Norms
3	.933	.034
2	.906	.058
4	.673	-.078
9	.655	-.021
8	-.197	.780
10	-.181	.734
5	-.003	.725
7	-.052	.662
1	.224	.544
6	.210	.521

Factor Correlation Matrix		
Factor	1	2
1	1.000	.046
2	.046	1.000

Note: Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

Cronbach's Alpha values were also calculated for each of these dimensions as .870 for personal norms and .819 for personal norms. Based on factor loadings, two factors with the following 10 items were extracted from this scale. Factor and its items are summarized below.

- Personal norms: 3, 2, 4, 9
- Subjective norms: 8, 10, 5, 7, 1, 6

3.4.4.3.3. Portfolio related behavioral beliefs scale

After ensuring those specific assumptions for this scale, factor analysis with principal axis factoring analysis was conducted on 15 items. The KMO value was found as .957, and Bartlett's Test of Sphericity was also found significant ($\chi^2 = 7666, 105$ and $p = .000$) as verifying the suitability of data for factor analysis. In the correlation matrix, all communality values were reached above .30. Scree plot also indicated one factor as seen in Figure 3.3.

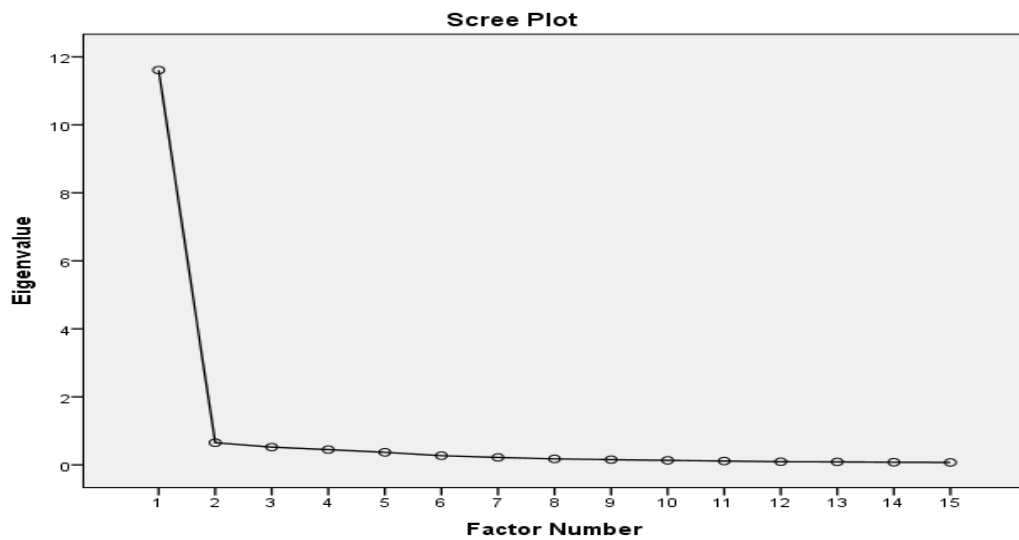


Figure 3.3. Scree plot of Portfolio related Behavioral Beliefs Scale

Moreover, eigenvalue greater-than-one rule revealed one-factor structure, explaining a total of 77.403 variance. This factor was named as behavioral beliefs. This structure is consistent with what is proposed at the beginning. To interpret the EFA results, item factor loadings of behavioral beliefs scale were examined, and it was seen all items loaded with the component (Table 3.11). Cronbach's Alpha value was also calculated as .979. Based on factor loadings, one factor with the 15 items was extracted from this scale.

Table 3.11.

Factor Matrix of Portfolio related Behavioral Beliefs Scale

Factor Matrix	
Item	Factor 1: Behavioral Belief
13	.908
3	.907
7	.901
15	.898
9	.895
12	.890
6	.886
5	.885
10	.878
8	.866
2	.851
1	.844
4	.833
14	.817
11	.793

Note: Extraction Method: Principal Axis Factoring.

3.4.4.3.4. Portfolio related attitude scale

After ensuring those specific assumptions for this scale, factor analysis with principal axis factoring analysis was conducted on 7 items. The KMO value was found as .928, and Bartlett's Test of Sphericity was also found significant ($\chi^2 = 3464, 21$ and $p = .000$) as verifying the suitability of data for factor analysis. In the correlation matrix, all communality values were reached above .30. Scree plot also indicated one factor as seen in Figure 3.4.

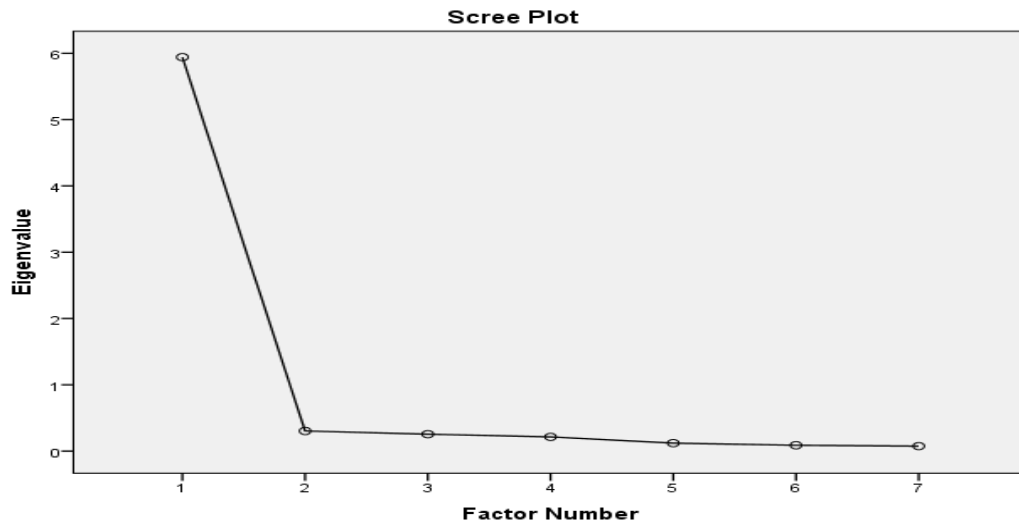


Figure 3.4. Scree plot of Portfolio related Attitude Scale

Moreover, eigenvalue greater-than-one rule revealed one-factor structure, explaining a total of 84.889 variance. This factor was named as attitude. This structure is consistent with what is proposed at the beginning. To interpret the EFA results, item factor loadings of attitude scale were examined, and it was seen all items loaded with the component (Table 3.12). Cronbach's Alpha value was also calculated as .970. Based on factor loadings, one factors with the 7 items was extracted from this scale.

Table 3.12.

Factor Matrix of Portfolio related Attitude Scale

Factor Matrix	
Item	Factor 1: Attitude
2	.946
3	.945
1	.932
6	.930
4	.874
7	.866
5	.858

Note: Extraction Method: Principal Axis Factoring.

3.4.4.3.5. Portfolio related self-efficacy beliefs scale:

After ensuring those specific assumptions for this scale, factor analysis with principal axis factoring analysis was conducted on 14 items. The KMO value was found as .945, and Bartlett's Test of Sphericity was also found significant ($\chi^2 = 5179, 91$ and $p = .000$) as verifying the suitability of data for factor analysis. In the correlation matrix, all communality values were reached above .30. Scree plot also indicated one factor as seen in Figure 3.5.

Moreover, eigenvalue greater-than-one rule revealed one-factor structure, explaining a total of 68.013 variance. This factor was named as self-efficacy beliefs. This structure is consistent with what is proposed at the beginning. To interpret the EFA results, item factor loadings of self-efficacy beliefs scale were examined, and it was seen all items loaded with the component (Table 3.13). Cronbach's Alpha value was also calculated as .963. Based on factor loadings, one factor with the 14 items was extracted from this scale.



Figure 3.5. Scree Plot of Portfolio related Self-Efficacy Beliefs Scale

Table 3.13.

Factor Matrix of Portfolio related Self-Efficacy Beliefs Scale

Factor Matrix	
Item	Factor 1: Self-efficacy beliefs
4	.890
6	.885
7	.870
13	.858
2	.840
10	.831
3	.817
12	.814
1	.800
11	.781
5	.780
14	.728
9	.726
8	.696

Note: Extraction Method: Principal Axis Factoring.

3.4.4.3.6. Portfolio related barrier perceptions scale:

After ensuring those specific assumptions for this scale, factor analysis with maximum likelihood method was conducted on 11 items. The KMO value was found as .795, and Bartlett's Test of Sphericity was also found significant ($\chi^2 = 1782, 55$ and $p = .000$) as verifying the suitability of data for factor analysis. In the correlation matrix, all communality values were reached above .30. Scree plot also indicated one factor as seen in Figure 3.6.

Moreover, eigenvalue greater-than-one rule revealed one-factor structure, explaining a total of 40.967 variance. This factor was named as barrier perceptions. This structure is consistent with what is proposed at the beginning. To interpret the EFA results, item factor loadings of portfolio barrier perceptions scale were examined, and it was seen that all items loaded with the component (Table 3.14). Cronbach's Alpha value was also calculated as .855. Based on factor loadings, one factor with 11 items was extracted from this scale.

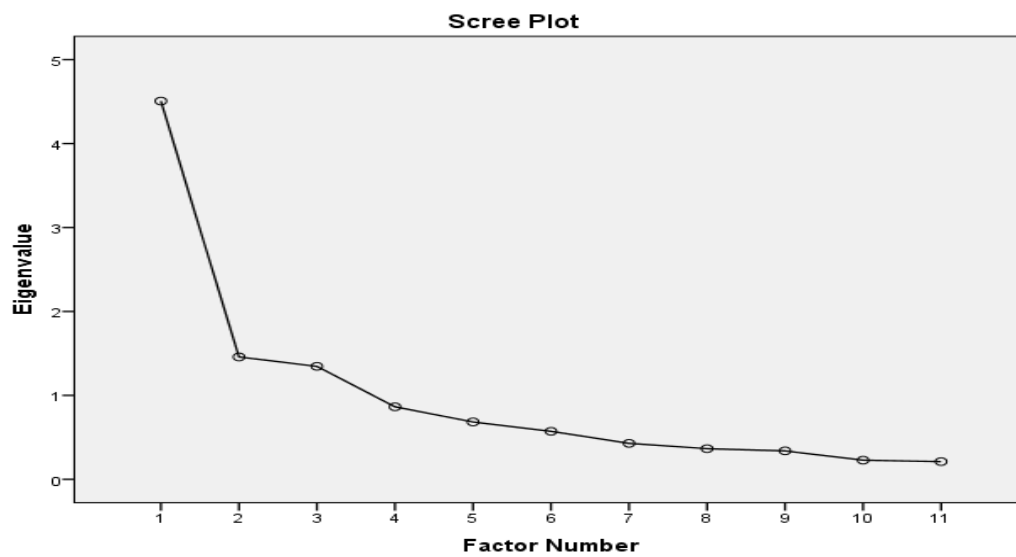


Figure 3.6. Scree Plot of Portfolio related Barrier Perceptions Scale

Table 3.14.

Factor Matrix of Portfolio related Barrier Perceptions Scale

Factor Matrix	
Item	Factor 1: Barrier perceptions
9	.695
11	.690
10	.674
5	.658
6	.632
7	.607
8	.600
2	.519
4	.503
3	.439
1	.419

Note: Extraction Method: Maximum Likelihood.

3.4.4.3.7. Portfolio related intention scale

After ensuring those specific assumptions for this scale, factor analysis with principal axis factoring analysis was conducted on 4 items. The KMO value was found as .835, and Bartlett's Test of Sphericity was also found significant ($\chi^2 = 1004, 6$ and $p = .000$) as verifying the suitability of data for factor analysis. In the correlation matrix, all communality values were reached above .30. Scree plot also indicated one factor as seen in Figure 3.7.

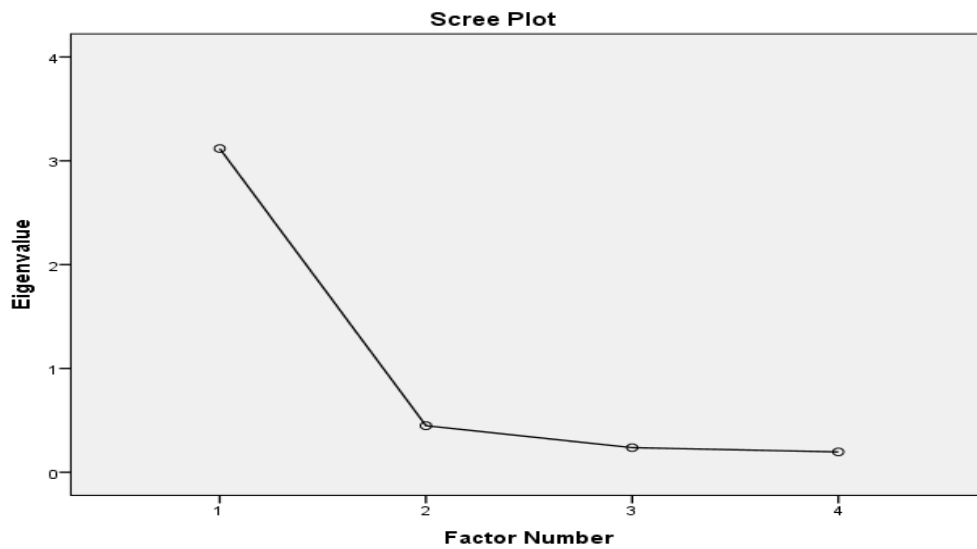


Figure 3.7. Scree Plot of Portfolio related Intention Scale

Moreover, eigenvalue greater-than-one rule revealed one-factor structure, explaining a total of 77.947 variance. This factor was named as intention. This structure is consistent with what is proposed at the beginning. To interpret the EFA results, item factor loadings of intention scale were examined, and it was seen all items loaded with the component (Table 3.15). Cronbach's Alpha value was also calculated as .904. Based on factor loadings, one factor with the 4 items was extracted from this scale.

Table 3.15.

Factor Matrix of Portfolio related Intention Scale

Factor Matrix	
Item	Factor 1: Intention
2	.922
3	.869
1	.853
4	.717

Note: Extraction Method: Principal Axis Factoring.

3.4.4.3.8. Child-teacher centered beliefs scale

After ensuring those specific assumptions for this scale, factor analysis with maximum likelihood method was conducted on 12 items, using the direct oblimin rotation. The KMO value was found as .764, and Bartlett's Test of Sphericity was also found significant ($\chi^2 = 535,66$ and $p = .000$) as verifying the suitability of data for factor analysis. In the correlation matrix, all communality values were reached above .30 except three items. Those were essential items and determined to be retained for examination and revision. Scree plot also indicated two factors as seen in Figure 3.8.

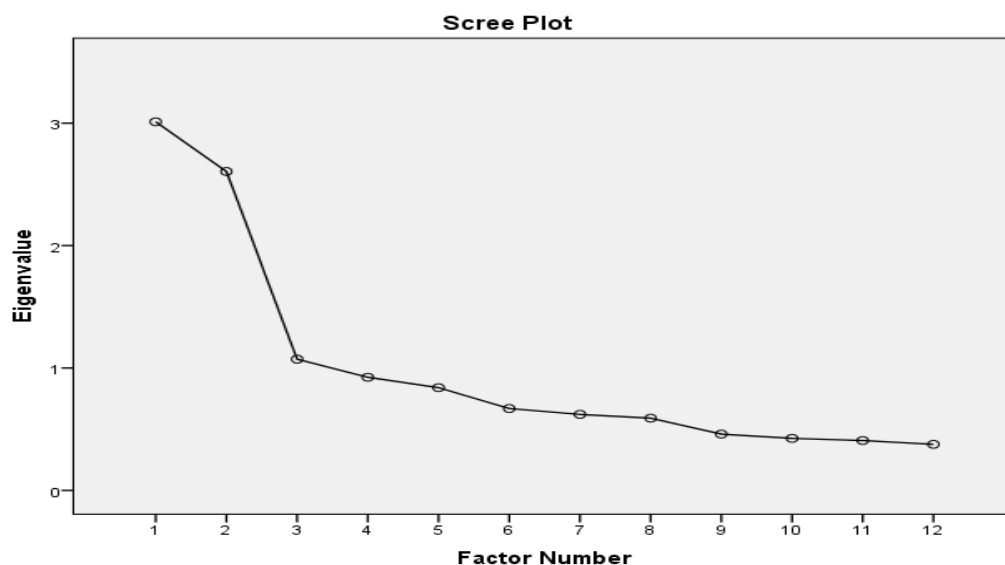


Figure 3.8. Scree Plot of Child-Teacher Centered Beliefs Scale

Moreover, eigenvalue greater-than-one rule revealed a two-factor structure, explaining a total of 46.798 variance. The two factors were named as child-centered beliefs and teacher-centered beliefs. This structure is consistent with what is proposed at the beginning. To interpret the EFA results, item factor loadings of portfolio practice scale were examined, and it was seen that all items loaded with the related two components (Table 3.16).

Table 3.16.

Pattern and Correlation Matrix of Child-Teacher Centered Beliefs Scale

Pattern Matrix		
	Factor	
Item	1	2
9	.727	
7	.725	
11	.693	
5	.631	
3	.567	-.169
10		.640
12	.107	.621
8	-.231	.549
6		.535
2		.461
4		.459
1		.433
Factor Correlation Matrix		
Factor	1	2
1	1.000	-.071
2	-.071	1.000
<i>Note:</i> Extraction Method: Maximum Likelihood.		
<i>Rotation Method:</i> Oblimin with Kaiser Normalization.		

Cronbach's Alpha values were also calculated for each of these dimensions as .792 for child-centered beliefs and .69 for teacher-centered beliefs. Because of slightly low reliability finding for the second factor, corrected item total correlation values were examined and item four was revised for clarification (Teachers should provide educational opportunities that do not give flexibility to children). It was decided to be investigated again in CFA.

Based on factor loadings and revisions, two factors with the following 12 items were extracted from this scale. Factor and its items are summarized below.

- Child-centered beliefs: 9, 7, 11, 5, 3
- Teacher-centered beliefs: 10, 12, 8, 6, 2, 4, 1

3.4.5. Data collection procedure of the study

Prior to data collection, ethical permissions were received from the METU Human Subjects Ethics Committee and Ministry of National Education. After that, schools were visited by the researcher, and permission was received from the school administrator to collect the data from ECE teachers. Data collection tools were administered by the researcher in the preschools. All teachers were informed about the aim and content of the study, and were invited to participate in the study. Instruments were given to volunteer teachers and picked up on a date determined by the researcher because preschool teachers need time to fill scales outside of the classroom. Confidentiality of research data was ensured by collecting questionnaires anonymously. All in all, the completion of the instruments took nearly 30 minutes. The data collection phase lasted almost three months, between October 2019 and December 2019.

3.4.6. Data analysis

Initially, data were entered into the SPSS program, and data cleaning was conducted. For data cleaning, the suggested steps of Tabachnick and Fidell (2019) were as follows: descriptive statistics for accuracy of the data, assessing and dealing with missing data, normality and outlier check, investigation of multi-collinearity

and singularity by investigating correlations, and examining linearity utilizing scatterplots. Overall, 16 missing cases were deleted as the percentage of missing cases is less than 10% (REF). Confirmatory Factor Analysis (CFA) and reliability analysis were used for each scale.

Frequencies were reported for categorical variables, and descriptive statistics such as mean, median, and standard deviation were presented for the continuous variables. To answer research questions, two following analyses were conducted: Multivariate Analysis of Variance (MANOVA) for the research question, “Is there a significant difference between ECE teachers practicing or not practicing portfolio assessment in terms of portfolio-related behavioral beliefs, attitudes, self-efficacy beliefs, barrier perceptions, intention, and child-teacher centered beliefs?” and Hierarchical Multiple Regression for “How well can early childhood teachers’ portfolio practices be predicted by years of teaching experience, portfolio-related intention, and self-efficacy beliefs?”

MANOVA tests the mean differences among groups when there are several dependent variables (Tabachnick & Fidell, 2019). It allows exploration of the relationship between several independent variables and several dependent variables simultaneously (Hair et al., 2010). In this study, MANOVA analysis was performed to explore whether there is a significant difference in portfolio-related behavioral beliefs, attitude, self-efficacy, barrier perceptions, intention, child-centered beliefs, and teacher-centered beliefs between the group of teachers who were practicing and not practicing portfolio assessment. Moreover, Hierarchical Multiple Regression Analysis was conducted to explore how well years of teaching experience, intention, and self-efficacy beliefs predict three dimensions of portfolio practice, namely content, child participation, and sharing. This analysis assesses each independent variable in terms of its contribution to prediction of the dependent variable. Independent variables are entered into equation in an order specified by the researcher (Tabachnick & Fidell, 2019). SPSS 25 and AMOS 25 (Analysis of Moment Structures) statistical program were used to conduct these analyses.

3.4.7. Threats to internal validity of the study

Internal validity means unambiguous observed relationship between variables to ensure not including the something else in this relationship (Fraenkel et al., 2018). For instance, subject characteristics such as age or gender might impact the results. Remaining conscious of this threat, demographic information was collected, and these participant demographics were presented in detail. Since data were collected in different school environments, location might also be an obvious threat. Moreover, the other possible threat is the instrumentation which indicates that the ways instruments are applied may create threats like instrument decay, data collector characteristics, and data collector bias. To control for these threats, data were collected in similar conditions with the same instructions by the same researcher.

3.4.8. External validity

External validity is defined as the range for generalization of the study results (Fraenkel, et al., 2018). To ensure external validity, satisfactory sample size was ensured in this study. However, it is restricted in generalizing results to the in-service early childhood teachers working in the public schools of Ankara in the determined districts. Private school teachers are excluded from this generalization. To provide better evaluation of generalizability in the intended population, a detailed description of sample characteristics was also presented in the related parts.

3.4.9. Limitations of the study

Self-reported data is the limitation for internal validity of the study. Due to socially desirable response bias, subjects might provide desirable responses according to norms or practices (Netemeyer et al., 2003). This might prevent obtaining of sincere responses. To reduce the effect of social desirability in the scope of this study, confidentiality and anonymity were ensured by the researcher during the data collection process. Moreover, although sample size was enough for conducting analysis in this study, study generalization is limited to public preschool teachers

working in the aforementioned districts of Ankara. Increasing sample size might increase the generalizability of the results. Finally, this study indicated relationships, but not causes. There might be different variables affecting teachers' portfolio practices in terms of content, child participation, and sharing. To explore these variables, predictors of teachers' portfolio assessment practices and intentions can be investigated by different research designs and analyzed using advanced statistical methods.



CHAPTER 4

RESULTS

4.1. Results of Study 1

In this part, the aim was to investigate and compare early childhood teachers' portfolio assessment practices and views in selected preschools in both Turkey and the U.S. Data were collected by means of semi-structured individual interviews. These interview findings are explained in detail below, and a summary of findings is also provided at the end.

4.1.1. Early childhood teachers' portfolio assessment practices and views

The aim was to examine the following research questions in a Reggio Emilia-inspired preschool and university preschool in Turkey and the U.S.

1.1. What are the ECE teachers' portfolio assessment practices in the selected preschools in Turkey and the U.S. in terms of content, organization, and parent involvement?

1.2. What are the ECE teachers' views on portfolio assessment in the selected preschools in Turkey and the U.S. in terms of definition and purpose, advantages, challenges, support, and suggestions?

1.3. What are the similarities and differences in ECE teachers' portfolio assessment practices and views between Turkey and the U.S.?

These questions have been explored and presented below in terms of each preschool under the related extracted theme. The extracted themes (content, organization,

parent involvement, definition and purpose, advantages, challenges, support, and suggestions) and related subcategories with frequencies are presented in Tables after explanation of the related theme. Below, *RT* (*Reggio Emilia-inspired preschool*) and *UT* (*university preschool*) are the preschools from Turkey, and *RA* (*Reggio Emilia-inspired preschool*) and *UA* (*university preschool*) are the preschools in the U.S.

4.1.1.1. Content

Reggio Emilia-inspired preschool in Turkey (RT)

In Reggio Emilia-inspired preschool in Turkey (RT), child activities are the most frequently mentioned item in content by all the teachers ($n=6$). Teachers pointed to their activity selection criteria respectively as: giving place to a variety of activities in terms of different activity type, technique or skill ($n=6$), including authentic and open-ended activities ($n=3$), and reflecting talents or interests of kids ($n=1$). In relation to this, one of the teachers commented that “*I include individual activities in portfolio, not group activities*” (Pinar, RT). Another teacher referenced the inclusion activities which bring children’s creativity to the forefront (Beyza, RT), “*not inclusion of worksheets*” (Su, RT). Likewise, another mentioned inclusion of open-ended art activities by justifying the reason as “*showing development clearly to parents*” (Çağla, RT). However, all of these items were commented as storable, such as “*not three dimensional*” (Deniz, RT; Pinar, RT) or “*suitable to store for a long time*” (Su, RT).

Another commonly mentioned item was notes on portfolio activities ($n=6$). These notes were either specific notes on activities about the child ($n=6$), such as verbal expressions of a child during the activity (Beyza, RT), a child’s answers to questions (Özgü, RT; Pinar, RT; Su, RT), the teacher’s different observations about the child (Çağla, RT), support if provided to the child (Deniz, RT; Su, RT), or most often, general notes explaining the activity ($n=6$). The reason for including general activity notes is to inform parents about the activity (Beyza, RT; Özgü, RT; Pinar,

RT; Su, RT). It was also stated that *“These notes help children’s remembering while parents are reading and parents are interested in them too”* (Özgü, RT).

In addition to these, all the teacher mentioned the following in their portfolio content: brainstorming questions ($n=6$), assessment reports of branch teachers about their field ($n=6$), a checklist ($n=6$), development summary report ($n=6$), and specific daily and weekly activities ($n=6$). Children’s answers to brainstorming questions are documented by teachers and included in the portfolio (Beyza, RT). In development summary report, *“child development is assessed from the beginning of semester to the end”* (Deniz, RT). Checklists were also stated as filled with respect to the observation of children by the teacher in activities or in classrooms (Çağla, RT). As an example of specific daily and weekly content, one of the teachers mentioned that they visited a library during library week with children and included that as a special daily or weekly activity (Çağla, RT). Moreover, field trips were also mentioned by a majority of the teachers ($n=4$). Two teachers connected this activity with a child’s drawing about the field trip and included that in the portfolio (Çağla, RT; Su, RT).

In addition, half of these teachers pointed out photos in their portfolio ($n=3$), which they integrate as a part of an activity, for example, photos from the process of a kitchen activity (Beyza, RT). However, one of the teachers emphasized not including more photos in the portfolio by stating, *“Portfolio should be product of the child to see creativity. Photos are helpful in sharing about daily routine with parents online, not in portfolio”* (Beyza, RT).

University preschool in Turkey (UT)

In the university preschool in Turkey (UT), there are specifically planned activities in portfolio guidelines to assess development of children. All teachers underlined that they include this guideline of planned activities in each month in their portfolio content ($n=6$). The reason provided by one of the teachers was, *“These planned activities provide a data to assess child development”* (Şenil, UT). For instance, *“one of these planned activities is drawing of yourself and family. It is not important*

how beautiful drawing is. It is important to see the change in process” (Begüm, UT). Other example activities are *“drawing the similar thing or different thing”* (Beril, UT), or *“telling story with respect to photo”* (Güneş, UT).

In addition to those planned activities, teachers also mentioned both child selected activities ($n=6$) and teacher selected activities ($n=5$) in their portfolio content. They explained that they request that kids select an activity for their portfolio each month. This selection is totally dependent on the child and their selection is generally art activities (Güneş, UT). *“Since children choose activities which they are interested in and express themselves”* (Yeliz, UT), *“they remember well these activities because of their own selection”* (Begüm, UT) and *“explain these activities to their parents”* (Yeliz, UT). The significance of child selected activities was also justified by the other teacher as a *“Child’s selection of an activity and commenting that I will present this to my family is so important. This is a social skill which we would like to see. It does not need to be a visual show. If it is special for that child, it is also special for me to put into portfolio”* (Beril, UT). Moreover, teachers also choose an activity if it reflects the talents or interests of kids ($n=2$) and shows their development ($n=2$). On these activities, they also pointed out their specific notes about the child ($n=2$). For instance, a note is attached to an activity about the child’s development (Yeliz, UT). One teacher illustrated her note with a case *“I had a child who could draw an abstract expression. I wrote a note on the drawing about child’s expression and include in portfolio. This child is now a successful artist. If child has a special talent, it should be included in portfolio”* (Beril, UT).

Furthermore, photos are the other item mentioned as part of portfolio content by all the teachers. They reserve a place for photos that are either a part of an activity ($n=6$) or a memory from the year ($n=2$). Two of the teachers explained that they share all of the photos of children with parents on a CD as a memory (Beril, UT; Nehir, UT). Another teacher highlighted that *“Photos are also helpful for children’s remembering in the conference time”* (Güneş, UT). Moreover, school expert reports ($n=4$) and field trips ($n=3$) were commonly stated in portfolio content. To illustrate the inclusion of field trip, teachers mentioned activities as *“children draw pictures*

before and after the trip related to the issue” (Güneş, UT) or “brainstorming with children before the trip and drawing about emotions after the trip” (Yeliz, UT).

The other items which all teachers pointed out in their portfolio content were: brainstorming questions ($n=6$), tests ($n=6$), assessment reports of branch teachers ($n=6$), checklist report ($n=6$), development (conference) summary report ($n=6$), and a child’s physical information ($n=6$), which is followed and reported by the school nurse. Teachers explained that the purpose in brainstorming questions is to see the change in a child’s approach to questions in process (Begüm, UT). One question is asked to the child each month and the child’s answers are saved for the entire year. One of the teachers exemplified her practice that *“In free time, I call children one by one and ask brainstorming questions. Then, I save their answers”* (Şenil, UT). For the other item, the checklist, rather than directly including it, checklist reports are prepared by considering both checklist result and observations, and then these are included in the portfolio. This report presents both strong and weak sides in different developmental areas to support child development. In addition, branch teachers prepare a one-page assessment about the child, and test results are also reported and included (Yeliz, UT).

In addition to these, as required in their guidelines, all the teachers also prepare portfolio pages in this school to express their observations about the child. Different developmental domains are presented with anecdotal notes ($n=6$) and photos of the child engaged in something related to these notes ($n=6$). Teachers explained that *“Some activities are not concrete to put product in portfolio such as science experiments. We take photos of them and include in portfolio with explanations”* (Yeliz, UT). However, *“Anecdotal notes are not directly put into portfolio. Those are written in an understandable manner for parents”* (Begüm, UT). These notes clearly illustrate child development and become *“a concrete evidence”* while talking with parents (Yeliz, UT). *“In these pages, improvement or children’s interests are especially presented to provide a guide for the parents”* (Yeliz, UT). Content of these pages might be determined by looking at the photos (Begüm, UT); photos are selected from the ones which reflect a developmental domain or several

domains (Şenil, UT). However, it is important to note that positive observations are included in the portfolio. If there is a child with special needs, this child's improvements are reflected. Problematic issues are supported in a face to face meeting with family (Yeliz, UT).

Reggio Emilia-inspired preschool in the U.S. (RA)

Portfolio guidelines in the U.S. Reggio Emilia inspired preschool (RA) were adapted from the work sampling system. Teachers explained that *"We give example specifically for the skill that we are looking for"* (Natalie, RA). *"It is a sampling of a specific domain; it is like a snapshot. What child does most. What child is really proud of? Just a taste"* (Teddy, RA). To this end, teachers prepare portfolio pages in this preschool rather than directly including child activity outputs. On these pages, they include: date ($n=6$), developmental domain and subdomain with explanation ($n=6$), specific developmental milestone and standards ($n=6$), anecdotal notes ($n=6$), and photos of the child engaged in something related to notes ($n=6$). These developmental domain and indicators were determined by school pedagogista after detailed research. One of the teachers commented on the importance of identified domain and indicators, *"They are in the back of our heads when we are observing a child or play happening among children"* (Kathrine, RA). *"If child is doing something consistently, it is included in portfolio with photo and anecdotal note"* (Adriana, RA). Therefore, *"The portfolio pages are the ones that have the picture and narrative. Each one will speak to a certain aspect of a domain"* (Kathrine, RA).

While deciding on what to document on these pages, they assess the content in terms of: reflecting different aspects of developmental domain ($n=6$), important points or interests to highlight for a specific child ($n=2$), inclusion of similar activities for comparison ($n=2$), a child's first time doing or learning a new skill ($n=1$), and demonstration of a child's thinking happening ($n=1$). One mentioned a way to decide is to look at photos and then choose a suitable one for a domain and write personalized text or quotes for each child (Alexandra, RA). The focus is to

“document something that child is capable of doing” (Adriana, RA). It might be the same activity for each child under that domain or it might be different. “Domains are very broad. Examples might be very different” (Alexandra, RA).

Moreover, a majority of the teachers stated that they sometimes plan activities to assess specific issues in different developmental areas. They pointed out documentation of those planned activities in their portfolio pages to assess developmental domain for the whole class ($n=5$). For instance, *“it is planned to assess how children write their names under language and literacy domain for all class. This domain is all very similar for all class in order not to get overwhelmed”* (Sophia, RA). Another example is that *“children’s making mat together was included under the theme of collaboration. It is a part of day, not specially designed for portfolio”* (Natalie, RA). In relation to this, teachers highlighted that *“It really depends on the decision what we choose to track because we can’t keep track of everything”* (Alexandra, RA). *“It is just through the everyday, observing and gathering artifacts from children that inform what we put into portfolio. It is something special or different than the work we do every day”* (Kathrine, RA). On the other hand, despite the similar content, individuality of portfolios was also highlighted by teachers. It was justified as, *“How children express themselves is different. The medium was clay, so they all are doing it in clay, but approaches to the clay is different for each child. That is the richness that we get from each child”* (Sophia, RA). Or even the developmental milestone might change with respect to the developmental level of the child in the same activity. For instance, while gardening might be a sensory experience for younger kids, it might be a science activity which necessitates a deeper level of understanding for the older ages (Natalie, RA). The portfolio is more about the process understanding. It was highlighted that *“You have to really think about which child behavior represents a specific area, how to express it and show growth within those areas, and what child likes and what we noticed about the child”* (Alexandra, RA).

In addition to portfolio pages, all of the teachers also pointed out checklist ($n=6$) and conference summary report ($n=6$) as components of child portfolios. Teachers

mentioned that they initially fill out the checklist and then prepare portfolio pages. The conference summary report is also prepared before conference time by summarizing all necessary parts, and this helps when going through it during conference time, *“It is a good tool to go back for each individual child (Alexandra, RA) as providing overall view and summary of child observation and growth over the course of the semester”* (Kathrine, RA). This summary report presents *“behaviors of the children, specific characteristics, their interest”* (Alexandra, RA), *“where they at, their capabilities, and how we would like to see them grow with the set goals”* (Sophia, RA). To conclude, *“it is kind of a snapshot of who they are”* (Sophia, RA).

Furthermore, some teachers also mentioned portfolio definition page ($n=1$), child activity outputs ($n=3$), and specific notes on these activities about the child ($n=3$). It was stated that *“These activities are placed into portfolio content under the specific related domains such as integrating self-portraits under social domain for each child”* (Alexandra, RA).

University preschool in the U.S. (UA)

In the U.S. university preschool (UA), teachers explained that portfolios were prepared as a story of the year in the past as including much more special events, and it was taking too much time. Now, the focus is just on developmental areas (Lacy, UA). They are preparing portfolio pages with respect to the pre-determined developmental areas in their portfolio guidelines. It is necessary to prepare one or two pages for each developmental domain. This page limitation was explained, *“Portfolio isn’t the only way to communicate with parents; this is just a sample”* (Lara, UA). *“It prevents teachers’ feeling bad because of preparing less number of pages”* (Lacy, UA). *“Otherwise, it becomes a sort of competition”* (Lara, UA). *“Page limitation provides consistency between classrooms since parents might make comparison between teachers when kids attend to a new classroom”* (Karen, UA; Lacy, UA; Lara, UA). Overall, it was underlined that *“Page limitation doesn’t*

consume time, it doesn't consume paper, and it also doesn't cause competition between teachers" (Maggie, UA).

On these pages, all the teachers include the date ($n=6$), developmental domain and subdomain with explanation ($n=6$), specific developmental milestone and standards according to the Wisconsin Model Early Learning Standards ($n=6$), anecdotal notes ($n=6$), a photo of the child engaged in something related to notes ($n=6$), and goals for the child ($n=2$). Developmental milestone and standards are the things which they want kids to be mastering by the end of a certain age (Karla, UA). One of the teachers explained that she selects milestone by *"sometimes just looking at daily pictures to come up with a milestone for the child"* (Lacy, UA). Apart from having suggested subtitles for portfolio page formatting, teachers are free to prepare their portfolios as they want. For instance, one of the teachers stated that she is writing anecdotal notes as if talking to the child (Karen, UA; Maggie, UA). The other teacher stated that *"it is written to the child, but it is written a bit more adult language"* (Lara, UA). In contrast, Sally expressed that *"I just try to describe objective. Some of the pages I have seen other people created kind of writing it to child. I just write up objectively and exactly what I saw"* (Sally, UA). Moreover, teachers also have the autonomy to make additions and changes in their portfolio. One of them mentioned that *"I used to put what is next, just so that parents think about what is next. But, I found that parents try to push their kids to the next milestone. I don't think that it is necessarily appropriate depending on where next step. So for me that was important to take it out because I want them focusing on look at what kid is doing, this is amazing"* (Karen, UA). However, another teacher mentioned including the same point in her portfolio pages and viewing it as advantageous. She reported that *"I broke my pages into what is happened, what you accomplished, and where to go next. What is happened reflects anecdote, indicators are covered in what you accomplished, and the last item also helps parents to see where to go next"* (Karla, UA).

For these prepared portfolio pages, teachers decide upon the content by considering whether it is serving one of the following purposes: reflecting different aspects of

developmental domain ($n=6$), “Aha moment”- achievement of big milestone for the child ($n=4$), child’s first time doing or learning a new skill ($n=4$), an important point or interest to highlight for the specific child ($n=2$), demonstration of child’s thinking going on ($n=2$), including similar activities for comparison ($n=1$), and representing best work ($n=1$). To illustrate, one teacher expressed that *“I scroll pictures, skim over milestones, and decide big accomplishment for child”* (Karen, UA). As another example, *“child had difficulty at the beginning of the school year while parents were dropping off. However, there is an established routine for him at the end of the semester, and this can be an example of the social domain”* (Lacy, UA). Or if it is the *“child’s first time of doing or taking something that they are experimenting with applying it to a new situation, it is worthy”* (Lacy, UA). If an activity covers different milestones at the same time ($n=1$), it might also be a good choice to document for the portfolio, the teacher including a detailed explanation rather than only putting activity output (Sally, UA). In this regard, included content might be similar for all children or it might be specific to the individual child (Lara, UA).

In addition to prepared pages, all of these teachers also include a conference summary report ($n=6$) in their portfolio. This paper summarizes everything about each developmental domain in one or two pages. At the end of this report, three goals are set for the child to work on. These three next steps are *“the things to start working on next”* (Karen, UA). *“This is also the easier place to bring up issues for the child in terms of goals rather than writing concerns”* (Lara, UA). Therefore, it was pointed out that these conference summary reports might be shared with the next teacher of the child (Karen, UA) since these reports allow teachers to *“go into more detail about the areas which children are strong in or need help in, and ties everything together”* (Karla, UA). One of the teachers highlighted the significance of the summary sheet by commenting that *“When start doing the summary sheet, you really know the child very well. We know exactly which stage the child is in”* (Maggie, UA). Portfolio definition page ($n=2$) was also mentioned by two teachers as a portfolio component. It was mentioned as helping new parents to understand the purpose in usage of the portfolio assessment (Sally, UA).

Moreover, although photos are included in prepared portfolio pages, four teachers pointed out that they include extra photos from all year as a memory ($n=4$) besides the ones for assessment purposes. They include those photos on some pages as a little addition to developmental pages (Lacy, UA), and these spark memories for children (Lara, UA). Lastly, child activity outputs were also mentioned by two teachers ($n=2$). They justified the reason for their inclusion as totally child-created (authentic) and open-ended activities ($n=2$) such as self-portraits (Lara, UA). In relation to this, one of the teachers expressed that *“If it is completely 100% their work, I will put it in. It serves a purpose as becoming a nice memory. Having documentation of some authentic work is important here”* (Lara, UA). In contrast, another teacher justified not including child activities by commenting that the *“Focus is individual child in portfolio. Not the activity we did. I still include that activity in their portfolio pages. But I will frame it as you learned how to hold or grab something. So, we won’t be like we will be doing apple sauce today, we will be like you learned how to use knife today”* (Karen, UA).

Table 4.1.

Frequencies of Content Codes

Code	TURKEY			U.S.		
	RT	UT	Total	RA	UA	Total
Child selected activities	0	6	6	0	0	0
Teacher selected activities	6	5	11	3	2	5
Photos	3	6	9	0	4	4
• Photos as a part of the activity	3	6	9	0	0	0
• Photos from all year as a memory	0	2	2	0	4	4
Notes on portfolio activities	6	2	8	3	0	3
• Specific notes on activities about the child	6	2	8	3	0	3
• General activity explanation notes	6	0	6	0	0	0
Planned activities to assess development	0	6	6	5	0	5
Brainstorming questions	6	6	12	0	0	0
Field trips	4	3	7	0	0	0
Tests	0	6	6	0	0	0
School expert reports (psychologist, etc.)	0	4	4	0	0	0
Assessment reports of branch teachers	6	6	12	0	0	0

Table 4.1. (continued)						
Code	TURKEY			U.S.		
	RT	UT	Total	RA	UA	Total
Child physical information (weight, height)	0	6	6	0	0	0
Checklist or checklist report	6	6	12	6	0	6
Development (conference) summary report	6	6	12	6	6	12
Specific day and week activities	6	0	6	0	0	0
Portfolio definition page	0	0	0	1	2	3
Prepared portfolio page content						
• Date	0	0	0	6	6	12
• Developmental domain and subdomain with explanation	0	0	0	6	6	12
• Specific developmental milestone and standards	0	0	0	6	6	12
• Anecdotal notes	0	6	6	6	6	12
• Photo of child engaged in something related to notes	0	6	6	6	6	12
• Goals for child	0	0	0	0	2	2

Note: RT: Reggio Emilia inspired preschool in Turkey, UT: University preschool in Turkey, UA: University preschool in the U.S., RA: Reggio Emilia inspired preschool in the U.S.

4.1.1.2. Organization

Reggio Emilia-inspired preschool in Turkey (RT)

In the Reggio Emilia inspired preschool in Turkey (RT), teachers prepare portfolios from craft paper in A3 size ($n=6$). As a Reggio Emilia inspired preschool, education is based on projects in this school, and all the teachers ($n=6$) highlighted that they organize their portfolios with respect to these projects. These are monthly projects and therefore, there is a related order in placement in the portfolio. Teachers also explained that they put related activities or techniques of the same project together on one page ($n=4$) “to create a harmony in terms of topic” (Su, RT) or they place easy to complex activities within each project ($n=2$). The reason for placing easy to complex was justified by one of the teachers as “showing development to parents in a concrete way” (Beyza, RT). Similarly, another teacher exemplified her easy to complex activities as “in the first semester, child was creating patterns by painting. In the second semester, child was creating patterns by using the real objects” (Çağla, RT).

During the portfolio preparation process, all activities are collected in the folder of each child by all teachers ($n=6$), and portfolio components are organized or placed as they go along ($n=4$). Because of the project-based philosophy, most of the teachers expressed that they place activities into their portfolios each month after projects (Özgü, RT). Otherwise, *“If portfolios are not organized by going, it takes too much time at the end”* (Deniz, RT; Pelin, RT). All the teachers ($n=6$) also stressed that they collect photos and write notes for the portfolio during the semester. In relation to this, two of the teachers specified that they write everything in the same notebook. One of them commented that *“I take notes in the same notebook with dates especially during our conversation with children”* (Deniz, RT). Another component, the summary report, was written at the end of the semester by all teachers ($n=6$), and teachers described their preparation of two different portfolios for two semesters in a year ($n=6$). To explain, they prepare one portfolio for the first semester and send home. A second new portfolio is prepared and shared for the second semester.

University preschool in Turkey (UT)

In the university preschool in Turkey (UT), teachers prepare their portfolios as two folders ($n=6$). One of these folders is an assessment activity folder which includes planned activities to assess development. The other one is an assessment report folder which includes observation, anecdotes, assessment reports or test results. Then these folders and other educational tools e.g., books, three dimensional products, are put into a box ($n=6$). It was stated that a *“Box is a good option to include child activities and three-dimensional child products”* (Begüm, UT).

All teachers mentioned that photos are collected, and notes are written during the semester ($n=6$), and one portfolio is prepared for one year ($n=6$). They pointed out the organization of these portfolios with respect to both school portfolio guidance ($n=6$) and chronological order ($n=6$). The school guidance has a developmental order. To explain, it begins with the child’s hand print on the first day. Child products and other tools are placed with respect to date in the specified place.

Moreover, all the teachers mentioned the collection of all activities in the folder of each child in process ($n=6$) and organizing and placing them in the portfolio as they went along ($n=4$). They explained that activities are collected from the beginning of the semester (Güneş, UT) and placed into the portfolio just after the activity in that month (Nehir, UT). Child selected activities are also placed into a box after the child's selection each month and this also provides chronological order in the portfolio, more spontaneously (Şenil, UT). If there are absent children, teachers stated that they were collecting their activities in a separate folder to compensate (Nehir, UT; Şenil, UT). The significance of organization was expressed by one teacher as *"Organization in process best fits to purpose of portfolio and prevents chaos at the end. Since portfolio is a process to follow child development, it needs to be practiced and followed in each month to see the development month by month"* (Yeliz, UT). In addition, two of the teachers also specified their usage of a checklist as an organization tool to follow portfolio preparation process ($n=2$). One of the them explained that she has an organization checklist to follow, as her to-do list, which helps not to miss any points during organization (Şenil, UT).

Reggio Emilia-inspired preschool in the U.S. (RA)

In the U.S. Reggio Emilia inspired preschool (RA), all teachers prepare their portfolios as a folder ($n=6$), and they organize it with respect to developmental domains ($n=6$). A majority of them also pointed out that they organize their portfolios on an ongoing basis ($n=4$) and use a checklist as an organizational tool to follow the portfolio preparation process ($n=4$). They explained that the *"Checklist helps to see everything in one file and helps organization in process"* (Alexandra, RA). It also helps *"not to lose any child or skill in the process"* (Natalie, RA).

Moreover, all teachers stated that they collected photos and wrote notes during the semester ($n=6$). For instance, one of them stressed that *"It is not something that it comes to the end and we put it together before we are meeting with the parents. We are deciding every day if something needs to be changed to find the right way to help"* (Natalie, RA). In relation to this, they mentioned their practices as: thinking

by domain in collection of documentation ($n=4$), writing notes about photos with the date as a reminder ($n=2$), writing everything in the same notebook ($n=3$), and writing notes for each child even in the same activity ($n=5$). To explain, one of them reported that *“Every day we try to document a part of the conversation. When we are taking picture, we are writing what the kids say, and we save it in notebook”* (Natalie, RA). A variety of photos are also saved in this process to capture the intended moment for the child (Teddy, RA).

Having prepared portfolio pages, these teachers also figure out softcopy organization for themselves. They explained this organization steps as: having a file for each child ($n=5$), sorting photos in the folder of each child by date ($n=5$), using prepared template pages in preparation ($n=6$), writing summary reports at the end ($n=6$), and printing portfolios before conference time when totally finished ($n=4$). It was explained that this organization process saves all photos in one spot (Alexandra, RA). Some teachers print entire portfolios after recording everything and preparing pages for each domain (Alexandra, RA). On the other hand, some mentioned developmental focus by commenting that *“when we finish all gross motor for all the kids, then we print for all the kids and then we will put into file. Now we are concentrating about other skills”* (Natalie, RA). Moreover, one portfolio is also prepared by these teachers for the two semesters in one year ($n=6$). In brief, one of the teachers summarized the entire process as *“We gather observation, take photos, write down dialogues that children have, we reflect on what we noticed about particular children with our colleagues, and then there is a time we create the portfolio”* (Kathrine, RA).

University preschool in the U.S. (UA)

In the university preschool in the U.S. (UA), all teachers prepare their portfolios as a folder ($n=6$). They mentioned two different criteria for organization as chronological order ($n=2$) and developmental domain ($n=4$). In chronological order, content is placed with respect to date. One of the teachers justified the reason for chronological organization as *“I like mine to be in a story format because it seems*

more logical if it is like a journal entry. You write it down as it happens in journal. Likewise, I would rather show the progress through the year as the year happens. So that is why I do mine chronological” (Karla, UA). On the other hand, in the organization by developmental domains, content is organized with respect to developmental domains but there is also chronological order within these domains to see child development in that specific domain (Maggie, UA). This organization was justified by one of the teachers by pointing out the conceptual organization, *“It is just a kind of way for me organizing and thinking about it by domain. Harder domains for me were approaches to learning or cognition and general knowledge because that stuff you do not necessarily see it happening. Just kind a how I organize it in my brain. I got three pages of her physical, I am good at that, let’s move onto the next domain”* (Karen, UA).

Moreover, all the teachers highlighted that they collect photos and write notes during the semester ($n=6$). They mentioned thinking by domain in the collection of documentation ($n=4$) and writing notes about photos with the date as a reminder ($n=3$). This process was explained by one of the teachers as *“I watch the kids, I take notes, and I take pictures. When something really stands out to me as going, I make the note of the day. Then after while I start typing them up”* (Karla, UA). Photos are constantly taken during this process to document the child’s development as it is happening because it was stated that those photos have *“thousands of words to say as a reminder”* (Sally, UA).

Teachers also pointed out that they organize the portfolio as they go ($n=3$) and use a graph as an organizational tool to follow portfolio preparation process ($n=1$). *“In the organization graph, there are the name of kids and all developmental domains to track the process for each child in one document”* (Karla, UA). It was especially highlighted that organizing photos saves so much time (Sally, UA). Moreover, regarding organization of notes, one of the teachers explained that *“What I do is I write down the date and note of “see photos” and I go back by the date and check the photo”* (Sally, UA).

As they have prepared portfolio pages digitally on the computer, these teachers also consider and practice softcopy organization in this school. They explained their organization as; having a file for each child ($n=4$), sorting photos in the folder of each child with date ($n=5$), and using prepared template pages, whether created or adapted, to prepare portfolio pages ($n=6$). These templates were mentioned as prepared in Power Point to manipulate photos and fit everything nicely (Karla, UA). It was also reported as helping to be organized in the process. For instance, one of the teachers stated that *“Basically I do it on PowerPoint, so it will be like two social-emotional, two cognitive, etc. In that way I know I am getting each area”* (Lacy, UA). In this way, *“all photos are sorted in the folder of each child and this presents everything happening with the child”* (Karen, UA).

All the teachers highlighted that they write the summary report at the end and print it before conference time when it is totally finished ($n=6$). The same portfolio is also prepared by teachers in two semesters for the whole year ($n=6$). This process was summarized by one of the teachers as *“I actually sit down and review my notes and photos, and then I look at the different developmental milestones or standards that apply to that certain situation. And then I put it all together in that way”* (Sally, UA).

Table 4.2.

Frequencies of Organization Codes

Code	TURKEY			U.S.		
	RT	UT	Total	RA	UA	Total
Hardcover of portfolio						
• Box	0	6	6	0	0	0
• Folder	0	6	6	6	6	12
• Craft paper	6	0	6	0	0	0
Online platform for softcopy documentation	6	0	6	0	0	0
Organization and placement of portfolio content by						
• School guideline	0	6	6	0	0	0
• Chronological	0	6	6	0	2	2
• Developmental domains	0	0	0	6	4	10
• Monthly projects	6	0	6	0	0	0

Table 4.2. (continued)						
Code	TURKEY			U.S.		
	RT	UT	Total	RA	UA	Total
Organization of preparation process						
• Collecting all activities in the folder of the child in process	6	6	12	0	0	0
• Organizing or placing as they go	4	2	6	4	3	7
• Using an organization tool to follow portfolio preparation process	0	2	2	4	1	5
○ Checklist having children's names and developmental domains	0	2	2	4	0	4
○ A graph having children's names and developmental domains	0	0	0	0	1	1
Collecting photos and writing notes during the semester	6	6	12	6	6	12
• Thinking by domain in collection of documentation	0	0	0	4	4	8
• Writing notes about the photos with date as a reminder	0	0	0	2	3	5
• Writing everything in the same notebook	2	0	2	3	0	3
• Writing notes for each child even in the same activity	0	0	0	5	0	5
Softcopy organization for prepared portfolio pages in process						
• Having a file for each child	0	0	0	5	4	9
• Sorting photos in the folder of the child with date	0	0	0	5	5	10
• Using prepared template pages	0	0	0	6	6	12
• Writing summary report at the end	6	6	12	6	6	12
• Printing before the conference time when totally finished	0	0	0	4	6	10
Preparing the same portfolio for one year	0	6	6	6	6	12
Preparing two different portfolios for two semesters in a year	6	0	6	0	0	0

Note: RT: Reggio Emilia inspired preschool in Turkey, UT: University preschool in Turkey, UA: University preschool in the U.S., RA: Reggio Emilia inspired preschool in the U.S.

4.1.1.3. Parent involvement

Reggio Emilia-inspired preschool in Turkey (RT)

In the Reggio Emilia inspired preschool in Turkey (RT), teachers ($n=3$) mentioned portfolio conferences organized together with children older than four years of age and their parents. These are organized as individual conferences and are held at the end of each semester with flexible time options for each parent. In these conferences, the child presents their portfolio to their own parents, and the teacher becomes a guide for them. In addition, two of the teachers ($n=2$) pointed out inclusion of parent involvement activities in the portfolio.

All the teachers ($n=6$) pointed out that portfolios were sent home at the end of each semester. However, they highlighted communication with parents directly or online during the process ($n=6$). To explain, teachers mentioned that they have an online platform called “Mobil Kreş” which they use to share information about the school day with parents. One of the teachers also mentioned that “*Most of the child activity products are shared with parents as a wall documentation in the process. Therefore, they are familiar with them in the process*” (Özgü, RT).

To ensure parent involvement in the portfolio process, these teachers suggested: open communication and collaboration with parents throughout the process to build and gain trust ($n=3$), integrating parent involvement activities in the portfolio ($n=3$), child portfolio presentation to parents ($n=2$), and maintaining flexible for each parent ($n=1$). For instance, one of the teachers mentioned her experience that, “*I had a parent who is busy and cannot come to portfolio conference. I took video of child while sharing portfolio and shared it with that parent*” (Su, RT).

University preschool in Turkey (UT)

In the university preschool in Turkey (UT), all the teachers mentioned portfolio conferences ($n=6$), which are organized together with children and parents. It is organized at the end of the year for all parents of the school at the same time. In these conferences, children present their portfolios to their own parents, and

teachers become a guide to answer questions. In relation to these conferences, teachers stressed that a written explanation is shared with parents about the portfolio before the conference time ($n=6$). This explanation informs parents *“how to behave in the conference”* (Güneş, UT), *“questions to ask their children”* (Şenil, UT), and *“developmental purpose of portfolio and conference”* (Nehir, UT). At the end of the year, these portfolios were sent home by all the teachers ($n=6$), and parents are advised to continue to examine them in detail at home (Güneş, UT). Moreover, teachers mentioned that they have a place for parent involvement activities in their portfolios ($n=5$) and communicate with parents directly during the process ($n=6$). For instance, one of the teachers mentioned that they are *“sharing their programs on classroom walls to inform and involve the parents in process”* (Nehir, UT).

To facilitate parent involvement in the process, they suggested: open communication and collaboration with parents during the process to build and gain trust ($n=5$), sharing an explanation of the portfolio before the conference time ($n=1$), and taking feedback from parents after the portfolio conference ($n=1$). One of the teachers stated that *“Feedbacks can be taken from parents after the portfolio conference about both their experience and suggestion of portfolio process and their observations about the child development. For instance, it might be explored whether they realized that their child needs to be supported about an issue”* (Nehir, UT). Another teacher justified the importance of parent involvement with the following statement *“We are together with a number of children, and we have limited time to support a child’s weak sides. Therefore, we meet with parents or contact with them in pick up times and give suggestions to support child development at home. All of these are steps for shaping child development in portfolio process”* (Beril, UT).

Reggio Emilia-inspired preschool in the U.S. (RA)

In the Reggio Emilia inspired preschool in the U.S. (RA), all teachers ($n=6$) have portfolio conferences with parents, without including children. They are conducted at the end of each semester, twice a year, individually for each parent. On this day,

the school is closed for the kids. A specific time is arranged to meet with each family. Teachers in this school highlighted the importance of sharing information with parents before this conference, through sharing a written explanation of the portfolio before conference time ($n=3$), like sharing a letter (Kathrine, RA), sharing the portfolio electronically with parents before the conference ($n=2$), and inviting parents to come early to examine the portfolio before the conference time ($n=3$). As a reason for prior sharing, they explained that *"We want them to look at their portfolio before we talked with them to see if they have any questions about what they saw"* (Adriana, RA). In this way, they can have time to think about what they read and develop any questions they might have (Kathrine, RA). *"We present it to the parents and talk about what we have noticed and what they have noticed. Two kinds of cycles of the assessment portfolio"* (Kathrine, RA). *"Otherwise, they spend all their time sitting and reading through it in conference time"* (Teddy, RA).

In this school, portfolios are shared with the child's next teacher if the child continues in the same school ($n=6$). If child is leaving school, portfolios are sent home at the end of the year ($n=6$). Regarding portfolios from the previous year, teachers mentioned that *"I think wonderful way for them to see what their child did in the preschool and what they learned and how they learned"* (Adriana, RA). *"It offers a lot of insight into background of the child"* (Alexandra, RA). *"This is especially important for children with concerns"* (Teddy, RA). *"The second year, sometimes you can really see incredible change on just the way that they think about themselves, and their personal identity changes a lot"* (Alexandra, RA). It is also helpful for new teachers at the very beginning to get to know the children (Alexandra, RA; Kathrine, RA). In these transferred portfolios, a child's current portfolio pages are put on top and the previous are in the back, which presents the developmental journey of the child in the preschool (Kathrine, RA).

In addition to conferences, two teachers also mentioned including parent involvement activities in their portfolio ($n=2$). Moreover, they all highlighted their communication with parents directly or online throughout the whole process ($n=6$). To ensure this, one of the teachers underlined that *"It needs to be work of building*

the trust before sharing portfolio with parents. We invite the parents to come to the class. We write them weekly news and explain, why behind what we are doing. They can start seeing us as an expert of education. If the parents believe that teacher wants the best for his kids, you do not have problem with any parents. If you make it valuable for the parents, they are coming” (Natalie, RA).

To enable parent involvement in the portfolio process, teachers suggested: open communication and collaboration with parents during the process to build and gain trust ($n=4$), exercising flexibility for each parent ($n=4$), sharing an online version of portfolio with parents before the conference ($n=4$), sharing concerns before the conference ($n=3$), and including parent involvement activities in the portfolio ($n=1$). To explain, one of the teachers expressed that *“Different time choices, even different locations would be unusual, but it sometimes might be best”* (Teddy, RA). Therefore, it was pointed out that it is important to learn about each family’s communication style (Kathrine, RA). It was suggested to just let parents know more about the process from the start, to putting these together, by presenting the effort teachers make on it (Adriana, RA). Furthermore, it was suggested to share an online version with parents before the conference. This was justified by one of the teachers as *“We used to send our portfolios home with parents the day before conferences so that they could look over them, and then bring them back to the classroom for the conferences. But we were starting to have trouble in getting all of them back. We are now asking parents to come 10 minutes early to examine portfolio at school. Maybe we can send those files by email to each individual parent”* (Alexandra, RA). It was also stressed that the *“Portfolio conference is not the place to have first conversation with parents about the concerns related to children”* (Kathrine, RA). It was suggested to have a separate special meeting before waiting a long time, or until conference time (Teddy, RA).

University preschool in the U.S. (UA)

In the U.S. university preschool (UA), all the teachers ($n=6$) implement individual portfolio conferences with parents, without including children. Teachers justified

this by commenting that *“We would like to do it without kids so that if there is something sensitive, it doesn’t make them feel self-conscious or they don’t feel bad about themselves. We just want to make sure that they are meeting their potential”* (Karla, UA). In line with this statement, another teacher agreed that they do not want to talk when children are present if there is a concern (Lacy, UA). Therefore, portfolio conferences are *“individual and private”* (Maggie, UA). Teachers explained that these conferences are organized at the end of each semester. They sit down with parents and talk about the child’s developmental level, strengths, and concerns. They review conference form by showing the portfolio content, and they listen if parents have any questions or concerns (Lacy, UA; Karla, UA). The focus is mostly placed on a child’s strengths (Sally, UA). While scheduling this conference time, different time options are provided for parents. However, it was highlighted that it is mostly during children’s nap time to be able to get out of the classroom (Karen, UA).

Two of the teachers mentioned inclusion of parent involvement activities in their child’s portfolio ($n=2$). For instance, observing different development going on with the family interaction and putting that into the portfolio (Karen, UA). Two of the teachers also mentioned sharing a written explanation of the portfolio with parents before the conference time ($n=2$). All these portfolios were sent home at the end of the year by all teachers ($n=6$). Portfolios are not shared with parents before it’s all done. One teacher justified this, saying that *“it is kind a cool to have at the end”* (Lacy, UA). *“Parents will take the portfolio home and they will look at it with the families, with the kids”* (Maggie, UA). Portfolios are not shared with the next teacher of the child. However, one of the teachers explained that *“I encourage kids and parents to share the conference report with their next teacher. So that next teacher knows where this kid is starting. Conference report is a little bit easier to get that snapshot”* (Karla, UA).

Moreover, all the teachers pointed out that they communicate with parents directly or online about the process ($n=6$). Specifically, *“Informal dialogues”* were commonly mentioned as a way to communicate with parents at least once a week

(Karla, UA). One teacher emphasized the importance of this communication in getting parent feedback to analyze the child as a whole. She commented that *“To analyze where is child developmentally, it is important to compare school and home”* (Karen, UA).

For parent involvement in portfolio process, a majority of the teachers suggested being flexible for each parent ($n=4$), maintaining open communication and collaboration with parents during the process to build and gain trust ($n=3$), and sharing concerns before the meeting at conference time ($n=3$). It was agreed that since each family is different, a teacher’s ability to be flexible with each family is important (Karen, UA). Teachers also suggested talking about the areas that needed to be worked on before the conference time, in order to prevent worrying or misunderstanding for parents (Lacy, UA). It was stressed that the *“Portfolio is a positive thing. If there is a concern, it should be in conference form or expressed in the dialogue with the parents”* (Sally, UA). Specifically, *“informal sharing”* and *“making parents feel special and welcome”* is an important issue in ensuring parent involvement (Sally, UA). *“Having open policy is effective in building this atmosphere which parents can come and ask anything, and it is easy to start a conversation together”* (Karla, UA).

Table 4.3.

Frequencies of Parent Involvement Codes

Code	TURKEY			U.S.		
	RT	UT	Total	RA	UA	Total
Portfolio conferences	3	6	9	6	6	12
• Together with both children and parents	3	6	9	0	0	0
• Together with only parents	0	0	0	6	6	12
• At the end of the year	0	6	6	0	0	0
• At the end of the semester	3	0	3	6	6	12
• Meeting as a school at the same time	0	6	6	0	0	0
• Individual	3	0	3	6	6	12
• Sharing written explanation about portfolio before conference time	0	6	6	3	2	5

Table 4.3. (continued)

Code	TURKEY			U.S.		
	RT	UT	Total	RA	UA	Total
• Sending portfolios home at the end of the semester or year	6	6	12	6	6	12
• Sharing portfolio with child's next teacher if in the same school	0	0	0	6	0	6
Including parent involvement activities in portfolio	2	5	7	2	2	4
Communication with parents directly or online during process	6	6	12	6	6	12
Suggestions for parent involvement in portfolio process						
• Open communication and collaboration with parents during the process for trust	3	5	8	4	3	7
• Including parents in activities of portfolio or including input from parents	3	0	3	1	0	1
• Sharing explanation about portfolio before conference	0	1	1	0	0	0
• Sharing online version of portfolio before conference	0	0	0	4	0	4
• Sharing concerns before meeting in conference	0	0	0	3	3	6
• Becoming flexible for each parent	1	0	1	4	4	8
• Taking feedback from parents after portfolio conference	0	1	1	0	0	0
• Child portfolio presentation to parents	2	0	2	0	0	0

Note: RT: Reggio Emilia inspired preschool in Turkey, UT: University preschool in Turkey, UA: University preschool in the U.S., RA: Reggio Emilia inspired preschool in the U.S.

4.1.1.4. Definition and purpose

Reggio Emilia-inspired preschool in Turkey (RT)

Half of the Reggio Emilia inspired preschool teachers in Turkey (RT) emphasized the portfolio's role in concretizing and showing child development to parents ($n=3$). It was viewed as the “*best thing to see development of child by looking the past*” (Deniz, RT) and “*show it to parents*” (Çağla, RT). However, some viewed it as a folder ($n=3$). One of them defined it as an “*activity folder*” (Özgü, RT) and others identified it as a “*presentation folder*” (Pınar, RT) which includes “*children's all*

efforts during the whole semester” (Su, RT). Only two of the teachers pointed out its role in understanding a child individually and holistically (n=2). One of these teachers stated that the “Portfolio is a tool to explore creativity and individual development of each child because of children’s reflection of own self even in the same activity” (Beyza, RT). Moreover, one teacher also described it as documentation of a process (n=1).

University preschool in Turkey (UT)

In the university preschool in Turkey (UT), there is a shared definition that the portfolio is a snapshot reflecting the child developmental journey as a process (n=5). It was identified as a “concrete version of child development” (Beril, UT) and “observation of child development in process” (Yeliz, UT). Teachers agreed on the portfolio’s role in following and describing child development in process since it was viewed as “an archive to observe child development as covering all documents with dates” (Beril, UT).

Similarly, two of the teachers also described the portfolio as an assessment of child development (n=2). One of them described it as an “assessment of steps in child development in one year” (Güneş, UT). In relation to this, another teacher stated its purpose as “seeing strong and weak sides in child development of per child” (Beril, UT). Alternatively, two of the teachers also proposed a different purpose, concretizing and showing child development to parents (n=2). One of them highlighted that “We follow development with different assessment methods. However, we use portfolio as a tool to concretize followed child development and share with the parents” (Şenil, UT). In addition, only one teacher also emphasized the portfolio’s role in understanding a child individually and holistically (n=1).

Reggio Emilia-inspired preschool in the U.S. (RA)

A majority of the Reggio Emilia inspired preschool teachers in the U.S. (n=4) (RA) highlighted the role of portfolios in understanding a child individually and holistically. It was described as “the story of a holistic image of the child by

elaborating that it is not as black and white” (Kathrine, RA). Moreover, half of the teachers also defined the portfolio as a snapshot reflecting a child’s developmental journey in process ($n=3$) by touching upon the points of following and describing child development in process and seeing the developmental journey of the child. It was stated that *“It is used to look at what child is doing at that moment or in the specified time interval”* (Adriana, RA). In relation to this, it was also described as a daily walk by one teacher ($n=1$). This teacher explained that *“It is something that we are reflecting every day. If I know every child where is in the development, what is my expectation for him and putting goal for him and then it will be good portfolio. This is why it is daily walk”* (Natalie, RA). The other definition was also proposed by two teachers ($n=2$) as documentation of process. It was highlighted that the *“Portfolio is the product, but for teachers it is the process of gathering the information. So the portfolio is the end result of that ongoing thinking and the process of recording children’s learning journeys”* (Kathrine, RA).

Having different definitions, different purposes were also mentioned: assessment of child development ($n=1$) and concretizing and showing child development to parents ($n=1$). It was stated that the portfolio is used to communicate areas of learning to parents (Kathrine, RA). *“It is a tool to make sure that the child is developmentally where should be”* (Sophia, RA).

University preschool in the U.S. (UA)

In the university preschool in the U.S. (UA), a majority of teachers agreed upon the purpose of the portfolio as concretizing and showing child development to parents ($n=4$). One of the teachers highlighted this by stating that the *“Portfolio is a good way to communicate with parents about the development that is happening in early childhood by concretizing and explaining”* (Karen, UA). Another one pointed out that *“It is mostly for parents to give them some markers of where their child is growing”* (Lara, UA) since *“it showcases the development of a child over a period of time”* (Sally, UA). Moreover, half of the teachers proposed its purpose had a place in understanding a child individually and holistically ($n=3$). One of the

teachers expressed this by stating that it shows “*how they as an individual grow within them*” (Karla, UA).

Similarly, two teachers defined the portfolio as a snapshot reflecting the child developmental journey as a process ($n=2$) and assessment of child development ($n=2$). It was expressed as a “*snapshot of child at that moment and time*” (Lara, UA) and “*assessment of current development level of children and where they need to go*” (Karen, UA). In addition, only one teacher also viewed it as documentation of a process ($n=1$) and a year project ($n=1$), during which the child is together with the teacher the whole time (Sally, UA).

Table 4.4.

Frequencies of Definition and Purpose Codes

Code	TURKEY			U.S.		
	RT	UT	Total	RA	UA	Total
Snapshot reflecting child developmental journey in process	0	5	5	3	2	5
Assessment of child development	0	2	2	1	2	3
Concretizing and showing child development to parents	3	2	5	1	4	5
Understanding child individually and holistically	2	1	3	4	3	7
Documentation of process	1	0	1	2	1	3
A year project	0	0	0	0	1	1
Daily walk	0	0	0	1	0	1
Folder	3	0	3	0	0	0

Note: RT: Reggio Emilia inspired preschool in Turkey, UT: University preschool in Turkey, UA: University preschool in the U.S., RA: Reggio Emilia inspired preschool in the U.S.

4.1.1.5. Advantages

Advantages for teachers:

Reggio Emilia-inspired preschool in Turkey (RT)

In the Reggio Emilia inspired preschool in Turkey (RT), a majority of the teachers ($n=5$) agreed on the benefit of following and assessing holistic child development in progress by means of the portfolio. They explained the crucial factor on this as it becoming concrete and individualized content to focus on development within a child ($n=5$). To provide this, they highlighted including the same activities in different months to illustrate progress ($n=4$), selecting documentable and storable content ($n=4$), and preparing it as individualized for each child instead of including group activities ($n=4$). It was explained that *“Those will be individual for each child since each child can have a different product even in the same activity”* (Deniz, RT). Therefore, the *“Portfolio helps to see progress for each child from the beginning. Otherwise, it is not possible to remember details for each child”* (Su, RT).

A majority of the teachers also mentioned the benefit of having a comprehensive assessment with the portfolio ($n=4$). For instance, one of the teachers stated that *“I can see activities of different projects together by saving an online copy of portfolios for myself, and brainstorm about how to modify it in the following years”* (Çağla, RT). They also mentioned using a portfolio for children with special needs using adapted and positive content ($n=4$). It was stated that a portfolio shows development clearly for children with special needs (Deniz, RT). *“Since portfolio is a performance assessment, its content can be adapted according to performance of child to show capabilities by writing in a positive style”* (Su, RT). Furthermore, teachers pointed out having effective communication with parents by concretizing points mentioned in the portfolio ($n=3$). It was said that the *“Portfolio might be evidence while talking with the parents”* (Deniz, RT). *“Teachers can present and show children’s effort to families easily by means of integrating them into portfolio content”* (Beyza, RT).

In addition, the other benefits proposed by some teachers in this preschool are: recognizing and understanding each individual child better ($n=2$), planning better while considering child development ($n=1$), motivation and professional satisfaction because of increased respect ($n=1$), and reflection and self-assessment as a teacher ($n=1$). Regarding motivation, one of the teachers explained that *“Parents can see huge effort of teachers upon portfolio and appreciate this, which become a motivation for us”* (Su, RT).

University preschool in Turkey (UT)

All the preschool teachers in the university preschool in Turkey (UT) agreed on the benefit of the portfolio as following and assessing holistic child development in progress ($n=6$), by having concrete and individualized content to focus on development within a child ($n=6$). As contributing factors to this, teachers mentioned the following points: including the same activities in different months to show progress ($n=4$), providing a place for child selected activities for a child's better expression of themselves ($n=4$), having individualized content for each child instead of group activities ($n=3$), and having concrete content to show development ($n=2$). To explain, it was expressed that *“To see the development in portfolio, it is necessary to place before and after activities”* (Güneş, UT). *“Repetition of activities are necessary to show development in process”* (Şenil, UT). *“Since there are 20 children in one classroom, portfolio is so meaningful for teacher to follow development of each child. Otherwise, some points will be missed”* (Beril, UT).

A majority of the teachers highlighted its other advantages, including its adaptability and positive content for children with special needs ($n=5$) and its role in catching missing points and supporting child development ($n=2$). It was stated that improvements of special children are reflected in the portfolio (Yeliz, UT), and assessments are written using positive language, *“needs to be supported in terms of the issue”* rather than writing as a problem (Beril, UT). Moreover, teachers explained that the portfolio is helpful both in recognizing and understanding each individual child better ($n=4$) and allows for planning better by considering child

development (n=3). It was commented that *“Children’s development and creativity are supported with respect to observations in portfolio”* (Nehir, UT).

In terms of their profession, teachers also indicated motivation and professional satisfaction because of increased respect (n=3) and effective communication with parents by concretizing points mentioned in the portfolio (n=1). They elaborated, *“Seeing child development in process provides professional satisfaction as a teacher”* (Yeliz, UT). Contributing to the development of a child provides happiness (Güneş, UT). In relation to this, one of the teachers also indicated that *“Parents appreciate our professions and effort after seeing these portfolio folders and this also becomes a motivation for us”* (Beril, UT). Furthermore, teachers supported the idea that it contributes to reflection and self-assessment as a teacher (n=2) as well as providing a comprehensive assessment (n=2). It was expressed that *“We can see what we have done for one semester and we can do self-evaluation to improve ourselves”* (Güneş, UT).

Reggio Emilia-inspired preschool in the U.S. (RA)

In the Reggio Emilia inspired preschool in the U.S. (RA), all the teachers (n=6) reported the benefit of the portfolio as following and assessing the process of holistic child development by means of its concrete and individualized content for each child (n=6). They emphasized the steps for this as including the same activities in different months to show progress (n=2), individualizing for each child (n=2), and objective writing (n=2). Teachers stated that *“We could see any differences, where the children have grown, and where they have changed. It is really good way to chart their growth”* (Adriana, RA). *“It allows teachers to reflect and think about child development and growth in each developmental area”* (Teddy, RA). *“It becomes a good reminder of how much children have changed because there can be so much going on all the time. It is easy to kind of get caught up in the moment”* (Alexandra, RA). *“Since portfolio covers checklist and all other things together, it becomes a tool to look at everything together with co teachers and make the child as more whole child”* (Adriana, RA). *“It gives a glimpse to where the child is at*

and what the child is capable of” (Sophia, RA). One of the teachers also clearly summarized its benefit by commenting that “I really benefit so much going back and reading through what the children are doing at the beginning of the year, what are goals for them, and then looking at what has changed. When you have 18 children in the classroom, that is easy to forget. It really brings the growth and development back into your mind” (Alexandra, RA).

Moreover, all the teachers agreed on its other benefit, recognizing and understanding each individual child better ($n=6$). In relation to this, they also pointed out that it helps catch missing points and support child development ($n=4$), and facilitates better planning by considering child development ($n=4$). To explain, teachers stated that the *“Portfolio is a learning tool for teachers because it enables better sense of the children” (Kathrine, RA). “It might sometimes indicate to get help to close the gap of delay in development because kids can cover weakness with something else. To be able to know where their strength is and where is their weakness, it is necessary to have a system to follow. And it needs to be objective system. Portfolio is objective and systematic to see every part of child development” (Natalie, RA).*

The portfolio was also mentioned as facilitating effective communication with parents by concretizing mentioned points ($n=4$) and enabling motivation and professional satisfaction because of increased respect ($n=4$). To explain, it was described as a bridge to families (Kathrine, RA) by helping teachers to show parents where their child is (Alexandra, RA). One of the teachers highlighted its significance by stating that *“Everything that we talk with the parents we show them. They see that we really know the kids. Therefore, the portfolio is so important, it gives you the best that you can talk with the parents. You are expert of their kids, you really took the time to learn their kid, you can give them example for any of their concerns” (Natalie, RA).* Therefore, it was reported as a concrete way to show everyone what incredible work is going on, what growth is going on, and what is going on behind (Adriana, RA).

Furthermore, a majority of the teachers indicated the existence of reflection and self-assessment in the portfolio process ($n=4$), and having a comprehensive assessment by means of the portfolio ($n=4$). One of the teachers expressed that *“I think what happens in the classroom is richer and better because of this. Because it causes you to reflect, and it causes you to think about what you are doing each day”* (Adriana, RA). In other words, *“going back to portfolio helps to sit down, reflect, and realize how much the children have grown”* (Alexandra, RA). Another teacher pointed out that *“That could be, maybe I am not offering a child enough opportunity to engage in art activities or maybe I am not watching carefully actually to see what this child is doing with big muscles”* (Teddy, RA). The information gathered from the portfolio was mentioned as helping and forming teaching to strengthen the children and inform the curriculum (Kathrine, RA).

University preschool in the U.S. (UA)

All the teachers in the U.S. University preschool (UA) ($n=6$) highlighted the benefit of following and assessing holistic child development in progress by means of the portfolio. It was viewed as *“a great way to see children’s development level”* (Karen, UA) since it provides a *“record of the child development in process”* (Lacy, UA) and presents *“nice progression of the year”* (Lara, UA). It was also stressed that *“It is nice that it is documented. Because we cannot remember it at all. Easy to see growth in portfolio”* (Lara, UA). However, to focus on the development of a child, teachers emphasized the concrete and individualized content ($n=4$) through individualizing it for each child ($n=2$), objective writing ($n=1$), and including the same activities in different months to show progress ($n=1$). As a probable result of this, the other commonly stated benefit is effective communication with parents by concretizing the points mentioned in portfolio ($n=5$). This was supported by teachers with such comments *“I can show the parents the progress that child has made during the year”* (Lacy, UA). *“Your child is doing this and this. I have the proof; I have the picture to show them”* (Maggie, UA).

Another commonly mentioned advantage is development of a portfolio for children with special needs, using positive and adapted content ($n=5$). It was stated that these children grow and change so much (Sally, UA). One of the teachers highlighted this in her comments that *“Last semester, I finished his pages right away because there were so much happening”* (Sally, UA). Moreover, teachers also referred to the portfolio’s role in recognizing and understanding each individual child better ($n=5$), its contribution to planning better by considering child development ($n=3$) and catching missing points ($n=2$). For instance, one of them expressed that *“Portfolios help me to learn and figure out where do they need to start out growing. It helps me think about what I am gonna put in the classroom”* (Karla, UA). Similarly, another teacher pointed out *“providing activities for children to support them in the needed domains”* (Maggie, UA). This helps to set and guide the goals for each individual child (Sally, UA). In relation to this, teachers stated that *“What I really love about portfolios is it is not a one size fit all. I can take any kid at wherever at and I can show how they progress, how they develop, and how they grow”* (Karla, UA). *“Beauty of portfolio is that wherever that child is at, you are able to document and talk about these standards”* (Sally, UA).

Teachers also stated specific benefits for themselves, as it provides a comprehensive assessment ($n=3$), reflection and self-assessment as a teacher ($n=2$), and motivation and professional satisfaction due to increased respect ($n=3$). They explained that *“Since children develop at their own rate, they might pass some of the indicators. Portfolio helps at this point”* (Karla, UA). It was also viewed as a good reflection tool for teachers because teachers can remember all the wonderful things that they are doing by means of the portfolio (Sally, UA). Moreover, teachers commented on increased respect for not only the teacher but also for the field. One of the teachers clearly expressed this positive, *“One of the biggest things that came out of it for me was parents realize that I am not just glorified babysitter. I understand the child, I understand what is going on developmentally, and the science behind all of it. So, it really broads this level of respect to our profession”* (Karen, UA). Similarly, another teacher pointed out the same issue by stating that

“Parents appreciate of the amount of work and amount of time goes into them” (Lara, UA). “Portfolio shows all different skills. It really helps illustrate the important learning in these early years to anybody” (Sally, UA).

Advantages for children:

Reggio Emilia-inspired preschool in Turkey (RT)

In the Reggio Emilia inspired preschool in Turkey (RT), teachers stated the major benefit for children as having a collection from childhood as a memory ($n=3$). It was seen as easy to store because of its format (Pinar, RT). Teachers also agreed upon the portfolio's contribution as supporting their visual memory for children ($n=2$), feeling valued ($n=2$), increasing their motivation for activities ($n=2$), observing their own development in a concrete way ($n=1$), increasing their self-confidence ($n=1$), and increasing dialogue with their family ($n=1$). To explain, it was stated that *“Young children can remember easily by means of the portfolio”* (Özgü, RT). *“Children think that my teacher gives value to my activities since she collected them for myself”* (Özgü, RT). *“Since children know that their activities will go into their portfolio, they become more motivated in the process”* (Su, RT).

University preschool in Turkey (UT)

In the university preschool in Turkey (UT), a majority of the preschool teachers highlighted the advantages for children as increased self-confidence ($n=4$) and children's expression of themselves ($n=3$). It was explained that since children present for parents during the portfolio conference, this increases their self-confidence and contributes to their feeling of satisfaction (Yeliz, UT, Güneş, UT). *“They express own self by means of the portfolio products. Meanwhile, they also remember the activities, which is supporting their memory”* (Nehir, UT). In line with these, some of the teachers also proposed that portfolios contribute to supporting a child's visual memory ($n=2$), observing their own development in a concrete way ($n=2$), feeling valued ($n=1$), and having a collection from childhood as a memory ($n=1$). It was stated that *“Since children present portfolio to their parents at the end of the semester, they feel pride for own self and recognize own*

self” (Begüm, UT). *“They realize their products and accomplishment by means of the portfolio”* (Beril, UT).

Reggio Emilia-inspired preschool in the U.S. (RA)

In the Reggio Emilia inspired preschool in the U.S. (RA), teachers viewed its advantage for children as increased dialogue with their family ($n=2$). It was stated that *“By means of portfolio, they can remember what they did. They can see what they are learning and doing and share with the parents”* (Adriana, RA). In line with this, teachers also pointed out supporting their visual memory ($n=1$), having a collection from childhood as a memory ($n=1$), and feeling valued ($n=1$) through this process.

University preschool in the U.S. (UA)

Teachers in the university preschool in the U.S. (UA) stated its benefits for children as supporting their visual memory ($n=3$), increasing dialogue with their family ($n=3$), and having a collection from childhood as a memory ($n=3$). They mentioned that *“kids love to looking photos and going back”* (Karen, UA). Portfolios were mentioned as *“helping children to think and remember about what happened in the past. It also creates dialogue with their family on that. They can sit down and reflect about what they have learned”* (Karla, UA). *“They can talk with their parents about what happened by looking through portfolio”* (Sally, UA).

Advantages for parents:

Reggio Emilia-inspired preschool in Turkey (RT)

In the Reggio Emilia inspired preschool in Turkey (RT), a majority of the teachers pointed out benefits for parents as providing an archiving of their child ($n=5$) and helping them to understand child development and education better ($n=4$). To explain, it was stated that *“Portfolio shows development by looking at the change in portfolio folder”* (Su, RT). It provides *“a permanent memory to see child development in process for parents”* (Çağla, RT) since *“Parents can find all*

activities of their child together in the portfolio” (Özgü, RT; Su, RT). “They can be surprised about their child’s capabilities because children can do some of the things in class even though not performing at home” (Pınar, RT). Furthermore, two of the teachers also agreed that parents have increased dialogue with their children by means of the portfolio assessment (n=2).

University Preschool in Turkey (UT)

In the university preschool in Turkey (UT), teachers reported interrelated benefits for parents as: understanding child development and education better (n=3), recognizing and supporting their children better (n=3), having an archive of their child (n=3), and increased dialogue with their children (n=3). In addition, one teacher also mentioned parents’ understanding the expertise of the teachers (n=1). It was explained that the *“Portfolio provides a positive and concrete archive for parents to see child development by comparing the process”* (Yeliz, UT). *“It will be clearer especially for parents whose children are attending to preschool more than 1 year because of comparing portfolios from year to year”* (Nehir, UT). Moreover, *“Parents can have a sharing with their children in the school by means of the portfolio conferences”* (Şenil, UT). *“They can explore interest of their children in portfolio and might support their children in terms of their interests”* (Begüm, UT). *“They might also support the weak sides of their children at home after portfolio”* (Nehir, UT).

Reggio Emilia-inspired preschool in the U.S. (RA)

A majority of the teachers in the Reggio Emilia inspired preschool in the U.S. (RA) indicated that its advantages for parents included understanding child development and education better (n=4) and understanding the expertise of the teachers (n=3). Moreover, they also expressed the portfolio’s role in recognizing and supporting their children better (n=2) and having an archive of their child (n=1). As an explanation, teachers mentioned that it is so important for parents to be able to look at the portfolio. It is not only what children are doing or not doing (Adriana, RA). *“It is a tool for them to keep track of their child’s development”* (Alexandra, RA).

“They can understand what their child is doing” (Teddy, RA). “They can think about something different about their child that they hadn’t realized before. That might tell the fuller picture of their child” (Kathrine, RA). “It is really valuable for them to be able to look back their child’s history and really see how much they have grown” (Alexandra, RA). Furthermore, as a probable result of these, “it helps them understand what we know, and we are experts in our field” (Kathrine, RA).

University preschool in the U.S. (UA)

In the U.S. university preschool (UA), teachers agreed that the major benefit for parents was increased dialogue with their children ($n=3$). It was stated that *“It can help open up dialogue between children and parents when they get to look at it together”* (Sally, UA). They also mentioned their better understanding of child development and education ($n=2$), recognizing and supporting their children better ($n=2$), and understanding the expertise of teachers ($n=1$). To explain, one of the teachers pointed out that *“It communicates the level of care, attention, and focus that their child received in this sort of environment. I think this really helps them to see deeper meaning behind activities that the child is doing. A lot more attention behind it and they take this job seriously”* (Sally, UA). It was also explained that with the comprehensive content of the portfolio, *“parents can understand their children’s current developmental level and where they should be. They can support and create more cohesive learning environment for their child at home after knowing their children better by means of the portfolio and teacher input in it”* (Karla, UA).

Table 4.5.
Frequencies of Advantages Codes

Code	TURKEY			U.S.		
	RT	UT	Total	RA	UA	Total
Advantages for teachers						
• Following and assessing holistic child development in process	5	6	11	6	6	12
○ Concrete and individualized content to focus on development within child	5	6	11	6	4	10
• Catching missing points and supporting child development	0	2	2	4	2	6
• Recognizing and understanding each individual child better	2	4	6	6	5	11
• Planning better while considering child development	1	3	4	4	3	7
• Effective communication with parents by concretizing mentioned points in portfolio	3	1	4	4	5	9
• Motivation and professional satisfaction due to increased respect	1	3	4	4	3	7
• Reflection and self-assessment as a teacher	1	2	3	4	2	6
• Having a comprehensive assessment	4	2	6	2	3	5
• Practice of portfolio for children with special needs with adapted and positive content	4	5	9	2	5	7
Advantages for children						
• Feeling valued	2	1	3	1	0	1
• Observing own development in a concrete way	1	2	3	0	0	0
• Increased self-confidence	1	4	5	0	0	0
• Supported visual memory	2	2	4	1	3	3
• Motivation for activities	2	0	2	0	0	0
• Expression of own self	0	3	3	0	0	0
• Increased dialogue with their family	1	0	1	2	3	5
• Having a collection from childhood as a memory	3	1	4	1	3	4
Advantages for parents						
• Understanding child development and education better	4	3	7	4	2	6
• Recognizing and supporting their children better	0	3	3	2	2	4
• Having an archive of their child	5	3	8	1	0	1
• Dialogue with their children	2	3	5	0	3	3
• Understanding the expertise of teachers	0	1	1	3	1	4

Note: RT: Reggio Emilia inspired preschool in Turkey, UT: University preschool in Turkey, UA: University preschool in the U.S., RA: Reggio Emilia inspired preschool in the U.S.

4.1.1.6. Challenges

Reggio Emilia-inspired preschool in Turkey (RT)

In the Reggio Emilia inspired preschool in Turkey (RT), all the teachers pointed out the challenge of the portfolio becoming time intensive ($n=6$) and preparing it in a visually fancy format in their preschool ($n=6$). Teachers stressed that it is time intensive to prepare such visual portfolios for each individual child (Deniz, RT; Pınar, RT). It was stated that *“It took too much time to prepare this format. Instead of this, I would prefer to allocate that time to my child”* (Çağla, RT; Özgü, RT).

A majority also mentioned workload ($n=5$), making compensations for absent kids ($n=3$), being inexperienced the first time ($n=5$), and a lack of resources and materials ($n=3$). To explain, one of the teachers described their experience that *“It took some time to adapt into portfolio process at the beginning”* (Beyza, RT). *“Because of not becoming familiar with portfolio, I collected everything and prepared it at the end”* (Özgü, RT). In relation to this, it was also pointed out that it is dependent on teacher skills ($n=1$). One of the teachers expressed that *“I try to be creative in preparing integrated activities for children, which cover more than one skill for portfolio. This might be a challenge for me”* (Beyza, RT). The other teacher attracted attention to the selection of documentable and storable content, *“I include activities with similar techniques in different projects to show progress clearly. However, I cannot include much science activity because it is abstract and observable. I do not have a concrete input to put into portfolio”* (Pınar, RT).

University preschool in Turkey (UT)

In the university of preschool in Turkey (UT), a majority of the teachers identified challenges as workload e.g., placing content into folders ($n=3$), making compensations for absent kids ($n=3$), being inexperienced the first times ($n=3$), and documenting at that time while balancing time and attention with children ($n=3$). Teachers commented that *“There is workload in classroom routine for teachers because of practicing activities”* (Nehir, UT) or *“preparing reports for portfolio”*

(Şenil, UT). Moreover, *“It is always necessary to be conscious about absent kids to compensate their missing activities in portfolio”* (Şenil, UT). Another teacher also mentioned the difficulty of getting used to observation and taking anecdotal notes because of being unfamiliar and inexperienced with these methods (Begüm, UT).

Also viewed as a challenge was organization of documentation throughout the process for each child ($n=2$) such as *“organization of photos in computer”* (Yeliz, UT). Furthermore, it was mentioned as dependent on teachers’ skills while preparing different activities for each domain ($n=2$). On the other hand, a smaller number of teachers viewed the following as a challenge: concern about adequately reflecting child development ($n=1$), the process becoming time intensive ($n=1$), preparing as visually fancy ($n=1$), and it becoming technology dependent ($n=1$). In relation to technology, one of the experienced teachers specifically expressed her difficulty regarding usage of technological tools (Güneş, UT). Regarding time, another teacher expressed that *“Time is not an issue because of integrating portfolio into the plan”* (Begüm, UT). Also, one of the experienced teachers commented that *“This is a full-time school. Therefore, it is easy to create time for us. I have created my systematic for portfolio in my mind as an experienced teacher, and I do not have difficulty in process”* (Beril, UT). Only one teacher indicated a time issue because of *“preparing some visualizations for portfolio,”* but not because of the content (Nehir, UT).

Reggio Emilia-inspired preschool in the U.S. (RA)

Teachers in the Reggio Emilia inspired preschool in U.S. (RA) all agreed that the challenge was the portfolio becoming time intensive ($n=6$). *“To have the time to organize it, reflect on it, check what you learned from what you are doing, even to do it”* (Natalie, RA). Moreover, a majority of the teachers mentioned workload ($n=4$) and the process being dependent on teacher skill ($n=4$), like writing objectively ($n=2$) and picking and choosing moments for the portfolio ($n=2$). One of the teachers highlighted this by commenting that *“Teachers that are new to this school have to be very well supported. Because it is not as clear as a checklist. It is*

not just we are looking can they jump to feet, yes. It speaks more to the skill of the teacher” (Kathrine, RA). Moreover, being inexperienced the first times ($n=3$) and documenting at that time ($n=3$) by carrying something with you to document ($n=2$) or balancing time and attention between children while documenting ($n=1$) are the other challenges mentioned by half of teachers. For instance, Teddy (RA) stated that carrying something around with you all the time is a challenge.

The other less frequently mentioned difficulties included organization of recorded documentation for each child ($n=2$), it becoming technology dependent ($n=2$), a lack of resources and materials ($n=1$), sharing concerns with parents ($n=1$), and frustration with uninterested families ($n=1$). To explain, it was mentioned as challenging to find ways to talk with parents about the concerns before the conference (Sophia, RA). Another teacher expressed that *“I feel like we are spending a lot of time working on the portfolio, but parents maybe do not spend very much time reading content. So sometimes, it can be frustrating when we spend hours and hours making a very thorough portfolio. And then the parents will look at it, sometimes just the pictures and say, ‘Ok, looks good’”* (Alexandra, RA). On the other hand, one of the experienced teachers stated that the *“Challenge for me is, this is just me personally, is working with the computer. It might not be a problem for younger people”* (Teddy, RA). In addition, regarding technology, another teacher pointed out that *“There are times that computers are not working, or the printer is not working, so it is very technologically based”* (Kathrine, RA).

University preschool in the U.S. (UA)

All the teachers in the university preschool in the U.S. (UA) agreed that it is time intensive ($n=6$). They stressed that it necessitates *“Time to create them, time to organize them. Time to physically put them together, put all the pages and protectors”* (Sally, UA). Moreover, a majority of teachers pointed out that another difficulty is documenting at that time ($n=4$) because of the necessity of carrying something to document ($n=1$), balancing time and attention between children ($n=1$), or having a challenge in class ($n=1$). In relation to this, teachers reported that *“It is*

hard to stop and write down what they just said or what they just did. So, you have to stop being with the child before forgetting. I think just breaks up moment because I have to write it down what they are doing” (Lacy, UA). Or *“You might see something happening, by the time you get ready to photograph it, the moment is over. Or maybe, you really focus on that moment. But maybe across the room, two kids are fighting over toy. That can be challenging”* (Sally, UA).

It was also stated as dependent on teacher skills ($n=4$) such as while writing objectively ($n=1$) or picking and choosing moments for the portfolio ($n=3$). This was explained that *“It might be hard to pick and choose what goes in and what does not”* (Karla, UA). *“You need to trust your teachers that they have knowledge, and they are gonna see they are going to teach”* (Lara, UA). However, it was also pointed out that *“It takes a little bit of that wonder of the moment to document”* (Sally, UA). Furthermore, teachers mentioned other challenges as workload ($n=3$) and organization of documentations for each child throughout the process ($n=3$), like sorting pictures on the computer (Lara, UA) or organization of notes (Sally, UA). For instance, one of the teachers explained that *“I got notes on a few different spots that can be challenging. I need to work on organization of notes”* (Sally, UA).

Other less commonly indicated challenges include being inexperienced the first times ($n=2$), lack of resources and materials such as a printer ($n=1$), and page limitation ($n=1$). Although some teachers expressed positive comments about the page limitation of portfolios, one teacher viewed it as a challenge because of *“not getting full picture of child”* in the limited number of pages. However, the same teacher also stated the importance of the conference summary report and other additions to compensate for this limitation (Karla, UA). Moreover, regarding inexperience, one teacher expressed her challenge in her first times by commenting that *“When I first started, my biggest challenge was knowing the developmental domains because I wasn’t very familiar with them even though I got my degree in child development. I didn’t quite know how the domains fit to real-life. Then applying to theories, applying it to real life, it was a little bit challenging at first”* (Karen, UA).

Table 4.6.

Frequencies of Challenges Codes

Code	TURKEY			U.S.		
	RT	UT	Total	RA	UA	Total
Time intensive	6	1	7	6	6	12
Workload	5	3	8	4	3	7
• Placing into folders	0	3	3	0	0	0
Being inexperienced in the first times	5	3	8	3	2	5
• Knowing the developmental domains in practice	0	0	0	0	1	1
Concern about adequately reflecting child development	0	1	1	0	0	0
Documenting at that time	0	3	3	3	4	7
• Carrying something to use to document	0	0	0	2	1	3
• Balancing time and attention between children	0	1	1	1	1	2
• Having a challenge in class	0	0	0	0	1	1
Organization of documentation for each child	0	2	2	2	3	5
Making compensations for absent kids	3	3	6	0	0	0
Lack of resources and materials	3	0	3	1	1	2
Dependent on teacher skills	1	2	3	4	4	8
• Writing objectively	0	0	0	2	1	3
• Picking and choosing moments for portfolio	0	0	0	2	3	5
• Preparing different activities for each domain	1	2	3	0	0	0
Preparing as visually fancy	6	1	7	0	0	0
Sharing concerns with parents	0	0	0	1	0	1
Page limitation	0	0	0	0	1	1
Frustration with uninterested families	0	0	0	1	0	1
Technology dependent	0	1	1	2	0	2

Note: RT: Reggio Emilia inspired preschool in Turkey, UT: University preschool in Turkey, UA: University preschool in the U.S., RA: Reggio Emilia inspired preschool in the U.S.

4.1.1.7. Support and suggestions

When participant teachers were asked whether they need any support while practicing portfolio assessment, they initially mentioned the support which is already provided in their preschool. Therefore, both available and desired support regarding portfolio assessment are presented below under two different themes.

Then, teacher suggestions related to portfolio assessment are presented. Table 4.7 summarizes all these findings with frequencies.

Available support

Reggio Emilia-inspired preschool in Turkey (RT)

In the Reggio Emilia inspired preschool in Turkey (RT), teachers pointed out the importance of having both consistent guidelines and flexibility given by their school administration ($n=4$). In relation to this, one of the teachers explained that “*Flexibility enables to bring front both our creativity and our children’s creativity*” (Beyza, RT). Therefore, “*it is important to give autonomy to teachers as well as providing guidance at the same time*” (Su, RT). Moreover, teachers viewed working in collaboration ($n=3$) as support. One of the teachers explained that they have group meetings each week with teachers and administrators in this school, and inexperienced assistant teachers partner with the experienced classroom teachers (Su, RT).

University preschool in Turkey (UT)

All the teachers in the university preschool in Turkey (UT) ($n=6$) highlighted the same point as a support: having both consistent guidelines and flexibility. It was stressed that “*School guideline is helpful in finding the route*” (Şenil, UT). Teachers also stated that having resources and materials ($n=4$) and working in collaboration ($n=3$) were support. To explain, they viewed it as supportive to share workload with their coteachers (Şenil, UT). However, it was also highlighted that that “*If there is a positive communication with coteacher, process goes easy. Otherwise, it will be disadvantage to have a partner*” (Yeliz, UT).

Reggio Emilia-inspired preschool in the U.S. (RA)

Teachers of Reggio Emilia inspired preschool in the U.S. (RA) mentioned a variety of support provided for them. All of them emphasized having planning time ($n=6$), working in collaboration ($n=6$), and the importance of having both consistent

guidelines and flexibility as a support ($n=6$). Education and mentoring were also mentioned by two of the teachers ($n=2$).

To explain, coteacher and pedagogistas were proposed as a support in the documentation process (Adriana, RA; Teddy, RA). One of the teachers highlighted that *“Working together as a team in portfolio is really important instead of working alone. The pictures we have and what they may have seen, I think informs the whole story”* (Adriana, RA). Another teacher also expressed that they are preparing portfolios together with coteacher and she commented that *“We see different things about the kids. It is nice to be able to talk about that”* (Sophia, RA). Even if they are sharing the portfolio preparation, they have reflection time together to read and talk about their conference reports with their coteacher (Teddy, RA). They always go back and read each other’s work if they are not doing it together at the same time (Alexandra, RA). Apart from a coteacher, a school team also supports this process. It was explained that *“Sometimes, we might need to ask the office to have someone else come into classroom. So, one of us can go out. Because we have 4-K children as well. We have to do individual assessment of them”* (Teddy, RA).

University preschool in the U.S. (UA)

In the U.S. university preschool (UA), all the teachers reported having both consistent guidelines and flexibility ($n=6$) in their school. They explained that flexibility allows them to create and use their own personal templates or select what best works for them as far as including the crucial points in the guidance. Therefore, templates and having autonomy were viewed as supportive, and make the process easy (Karla, UA). Since this flexibility allows teachers to *“design their pages as they want”* (Lacy, UA), *“they can make it their own and put unique things which they think as important”* (Sally, UA). In relation to this, one of the teachers also commented that *“Here administrator really trusts the teachers and gives us space and freedom to do it”* (Sally, UA).

All teachers also mentioned having resources and materials ($n=6$). Explanatory resources were viewed as support. One teacher stated that *“I am constantly*

consulting the book to look for those examples when I am not really sure what I should be looking for. I kind a start to watch for specific example” (Karen, UA). In addition, provided *“technological tools”* (Maggie, UA), *“having planning time, and personal computer”* were mentioned as a huge help (Sally, UA). Teachers have planning time every day in this school while children are sleeping after lunch between 1 and 2:30 p.m. This was referred to as a support by many of the teachers in this school ($n=4$). It was the time when they can work on tasks related to the portfolio and other documentation (Maggie, UA). The other point stressed is working in collaboration as a school throughout the portfolio process ($n=3$). In some classrooms, teachers stated that they split up portfolios to prepare with their coteacher. Despite this sharing, they share their observations with each other on each kid in the classroom, and this brings different perspectives together for the child (Karla, UA; Lacy UA). Education and a mentor teacher were also expressed as additional support ($n=1$). One of the teachers stated that she took a class on portfolios in undergraduate years and they made a portfolio for a child. Lots of teachers also mentored her after graduation. Both these were helpful to see what everyone does and what she wants to do (Karen, UA).

Desired support

Reggio Emilia-inspired preschool in Turkey (RT)

Teachers of the Reggio Emilia inspired preschool in Turkey (RT) mostly proposed having a prepared portfolio draft and template provided for them ($n=5$), not being required to prepare in visually fancy format ($n=3$), having extra time ($n=4$), having an assistant teacher ($n=2$), and supply of the required materials ($n=2$) as additional support for them during the portfolio process. To explain, it was stated that if required materials are provided at the right time, the process will be easier (Su, RT). Regarding time, one of the teachers pointed out that *“I prepare portfolios in my resting time or using other times in school when I am not together with children. Time will be the exact support”* (Deniz, RT). Similarly, another teacher also underlined that *“If there is extra time for preparation, it will not be hard. However,*

it is difficult to prepare it in the classroom environment with the children” (Özgü, RT).

University preschool in Turkey (UT)

University preschool teachers in Turkey (UT) pointed out that having an assistant teacher ($n=2$), getting extra time ($n=1$), and having a prepared portfolio draft and template ($n=1$) would be beneficial support. One of the teachers stated that an *“Assistant teacher might be helpful for technological recording while conducting activities”* (Güneş, UT). It was also pointed out that one extra hour might be provided to teachers for portfolio by shifting the teachers and allowing them to work outside of the classroom (Nehir, UT).

Reggio Emilia-inspired preschool in the U.S.(RA)

U.S. Reggio Emilia inspired preschool teachers only indicated extra time ($n=5$) as a beneficial support for them during the portfolio process. It was stressed that *“having a few hours to be out of the class to just work and organize the collected documentation is greater”* (Natalie, RA).

University preschool in the U.S. (UA)

U.S. university preschool teachers (UA) offered the idea of having extra time ($n=4$), having an assistant teacher ($n=1$), and usage of portfolio apps ($n=1$) as possible support for them. An assistant teacher for sorting photos was mentioned as a support (Lara, UA). Having time to be out of the classroom to work on the portfolio was also highlighted (Maggie, UA). To this end, they mentioned that planning time might be increased. They need to spend time outside of their work hours to prepare the portfolio while finalizing it (Karla, UA). One of the teachers also mentioned that *“Sometimes we are given days off to work on portfolios. That has happened a couple times. That was really nice”* (Sally, UA). Another teacher pointed the usage of portfolio apps to save time in practice, *“All you have to do this take the picture, and then you can even just be talking to your iPad or whatever you are using and it makes the anecdote for you. It just puts in it nice little portfolio right there”*

(Karen, UA). However, the same teacher also shared her concerns on this issue due to its high cost and its usage by older staff.

Suggestions

Reggio Emilia-inspired preschool in Turkey (RT)

All the teachers in the Reggio Emilia inspired preschool in Turkey (RT) suggested both online and hardcopy portfolio saving and sharing ($n=6$). It was stated that “*Hardcopy portfolio enables to give value to children’s efforts*” (Beyza, RT). A softcopy of the portfolio can also be saved by the school by taking photos prior to giving it to families (Deniz, RT). Moreover, a majority of teachers suggested planning and scheduling their own system before beginning ($n=4$), such as creating a template and preparing drafts at the beginning of the semester. One of the teachers shared her related practice as a suggestion for teachers that “*I prepare my template in summer school when I have more free time. It makes so easy the portfolio process for me during the semester. I only paste child activities and notes on the template*” (Çağla, RT). Similarly, another teacher also mentioned preparing portfolio templates for each child at the beginning of the semester to focus on individual portfolio pages in semester. These portfolio activities are also determined at the beginning of each month with respect to the monthly plan (Deniz, RT).

A majority of the teachers suggested focusing on whole development rather than fancy stuff ($n=5$). It was stated that “*The most important thing is portfolio content, not the fancy hardcover*” (Çağla, RT). “*Rather than spending time on visual stuff, placing activities in folders are more effective and easier to store for families*” (Özgü, RT). “*It is the most practical way to use folders or prepared template for this purpose rather than big portfolio hardcover*” (Su, RT). In addition to this, the other commonly proposed suggestions are organizing documentation on a regular and ongoing basis ($n=5$), such as preparing portfolio pages each month after conducting activities rather than waiting until the end to collect everything (Beyza, RT; Özgü, RT; Pınar, RT; Su, RT) and sharing the portfolio with each stakeholder in the portfolio process ($n=4$). As an illustration of the sharing of the portfolio with

children, two of the teachers mentioned that *“We sit all together with children at the end of the semester and we talk about their portfolios. Each child shares a different detail even in the same activity”* (Beyza, RT; Su, RT). Another teacher mentioned *“talking with children about their portfolios individually before sending portfolio to home”* (Özgü, RT). This was justified as an important activity to help children remember the moments and points in their portfolios (Çağla, RT; Özgü, RT).

Some of the teachers also suggested concretizing the development with the planned content, notes, photos ($n=1$), receiving education and seeing visual examples ($n=2$), a mentor teacher and collaborative work as support ($n=2$), and internalizing the purpose and importance of usage ($n=1$). It was pointed out that *“It is important to have a mentor at the beginning to explain the process and share own experiences”* (Su, RT). It was also highlighted that *“If teacher internalizes its purpose, child become motivated in portfolio process. If child is motivated, it is also affecting parents. Therefore, teacher is the crucial point in portfolio process”* (Deniz, RT).

University preschool in Turkey (UT)

All the teachers in the university of preschool in Turkey (UT) suggested internalizing the purpose and importance in usage of the portfolio ($n=6$) which enables integration as a part of the curriculum ($n=4$). It was also advised to focus on whole development rather than fancy stuff ($n=3$). One of the teachers explained this by commenting that *“It should not be the visual show of child; it should be a tool to follow the development of child”* (Begüm, UT). *“Process of development in different areas is important in portfolio rather than the product”* (Güneş, UT). *“It should reflect real abilities of child, not more. (Nehir, UT).”* However, it was stated that if they internalize the purpose, they will practice with respect to it (Yeliz, UT). Regarding internalization, one of the teachers highlighted that *“Portfolio is a part of my educational process. I am not doing something special for portfolio. I am doing something and it goes into portfolio. It is not an extra work. It should be integrated into curriculum”* (Güneş, UT). Therefore, it is suggested to integrate the

portfolio into the curriculum schedule and not to spend time preparing it visually for parents (Şenil, UT). Similarly, another teacher mentioned that *“I put portfolio activities into my daily schedule. Therefore, time is not an issue for me. I am also flexible to adapt schedule if that day is too busy. If you are planned, there is time for everything in schedule”* (Yeter, UT).

A majority of teachers also suggested concretizing the development with the planned content, notes, and photos ($n=5$). In relation to this, specific planned activities were viewed as important to see the development of the child. For instance, it was stated that *“The activity of drawing of own self and family in each month reflects child’s view to own self and family”* (Begüm, UT). *“Inclusion of activity repetitions might make development observable”* (Şenil, UT). It was highlighted that *“Writing developmental assessments under photos are also more meaningful and valuable than other tools. These should be integrated into portfolio rather than including only photos”* (Beril, UT). Moreover, teachers also suggested planning and scheduling their own system before beginning ($n=3$). It was stated that the *“Overall portfolio process needs to be planned at the beginning of the semester to serve its purpose”* (Beril, UT) and *“Different developmental domains should be included for holistic development”* (Şenil, UT). One of the teachers highlighted the importance of planning in this process with her comments: *“You need to plan your process in portfolio. If you say that I am busy and I will do this in the next month, it will not fit to the purpose portfolio. The purpose is to follow development in process and therefore, we need to follow it in each month with the planned content”* (Begüm, UT). Planning also plays a crucial role in the busy schedule of the school in managing the process. For instance, placing activities as going into portfolio was mentioned as saving time for teachers. It was also stated that *“A prepared portfolio draft might save time for teachers. It can even be prepared in computer”* (Şenil, UT). In addition, a majority of the teachers also suggested consistently documenting throughout the process ($n=4$), and a mentor teacher and collaborative work for support ($n=3$).

Furthermore, receiving education and seeing visual examples ($n=1$), and being flexible ($n=1$) are the other suggestions offered by a few teachers. It was explained that *“Being flexible in practicing the process is important as well as being planned. It is necessary to give freedom to child to express creativity at the same time”* (Yeliz, UT). Moreover, regarding education, one of the teachers explained that *“Instead of listening, it is more effective to see something to learn and clearly understand. Teachers might visit preschools which are using portfolio. Or workshops can be designed for them about the portfolio assessment. There is not education on this issue right now”* (Beril, UT).

Reggio Emilia-inspired preschool in the U.S. (RA)

All the teachers in the Reggio Emilia inspired preschool in the U.S. (RA) suggested consistently documenting throughout the process ($n=6$). To explain, it was advised to take picture all the time, not wait for last moment (Natalie, RA). It was highlighted that *“Photographs are great way to capture child engaging in the different domains. Otherwise, it might be a lot harder to really reflect on their growth, and also to communicate their growth to parents. You could write down what children are saying, or write down description of what they are doing, put the date down, and you can correlate that to photograph”* (Teddy, RA). It was also suggested to write notes in the same notebook during the process to go back and forth to find something easily (Natalie, RA). *“Using the same notebook with coteacher also helps to put together what you work on”* (Natalie, RA). In addition, it was proposed that a voice recorder might be used for notes although it is not the case in practice right now (Teddy, RA).

Moreover, all teachers ($n=6$) also suggested a mentor teacher and collaborative work for support. It was pointed out that having a mentor teacher would make the process easier (Kathrine, RA). *“Time is necessary to learn how to use this tool, reflect, read, and internalize with the support of someone else”* (Kathrine, RA). In line with this, a majority of the teachers highlighted internalizing the purpose and importance of usage by integrating the portfolio as part of the curriculum ($n=5$).

Furthermore, teachers also suggested sharing portfolios with each stakeholder, including children and the next teacher of the child ($n=4$). Although they are not sharing the portfolio with children, they viewed it as interesting to share with them (Adriana, RA; Alexandra, RA; Kathrine, RA). One of the teachers pointed out *“that would spark a lot of conversation and memories, and it also helps us to remember past activities like we have done or maybe we haven’t done a long time”* (Alexandra, RA).

It was advised to plan and schedule your own system before beginning such as creating a template and preparing drafts at the beginning of the semester ($n=4$), concretizing the development with planned content, notes and photos ($n=3$), organizing documentation on an ongoing basis ($n=3$), and having an organizational tool to track portfolio content for each child ($n=3$). To explain, one teacher responded, *“I will advise to build the system before starting. For example, build the file for the kids, build the checklist that question you want to check, everything will be set up before starting to make the portfolio”* (Natalie, RA). It was also suggested to think about how to approach each developmental domain. It works best to have a plan (Sophia, RA). Furthermore, an organizational checklist was mentioned as so helpful and a time saver. It is important to figure out a way for documenting, organizing, and keeping track of portfolio content and progress. Therefore, it was suggested to set up a system of organization early, to keep each child as an individual section and separate documentation each day (Alexandra, RA).

In addition, the other suggestions mentioned by some of the teachers are: focusing on whole development rather than fancy stuff ($n=2$), receiving education and seeing visual examples ($n=2$), and practicing skills for portfolio creation step by step ($n=2$). It was viewed as necessary to get comfortable with documenting learning and to have an understanding of developmental milestones (Kathrine, RA). In line with this, it was suggested to start with one thing to follow when inexperienced. For instance, concentrating on one thing in the first year and following two things in the second year (Natalie, RA). One of the teachers also mentioned their practice that *“we have professional development days where all school closed and we all*

have an expert come in and talk to us. All of our professional development helps us better, or gives us learning help us do this better” (Kathrine, RA).

University preschool in the U.S. (UA)

Teachers in the U.S. university preschool (UA) all suggested a mentor teacher and collaborative work for support in this process (n=6). Moreover, all of them pointed out internalizing the purpose and importance of usage (n=6). One of them stated that *“If you can focus on the positive aspects of it and how important it is to show all these wonderful things that you are doing and working on, I think will help people to really appreciate what it is they are making” (Sally, UA).*

Teachers also mentioned focusing on whole development rather than fancy stuff (n=2), concretizing the development with planned content, notes and photos (n=2), and being objective (n=2). To explain, regarding the content of the portfolio, it was suggested to *“just focus on what is happening with that particular child and what is meaningful rather than full of things” (Karla, UA).* It was advised *“Just focusing on domain” (Maggie, UA).* *“Just write about the most important things that child is doing and the things she likes, and parents’ sensitivity should also be considered about the content.”* It was also advised to be objective (Maggie, UA). To this end, another teacher suggested *“containing observation and some sort of developmental milestones and standards that show where that child is at and what skills they are working on or growing” (Sally, UA).* On the other hand, half of the teachers also suggested making it both developmental and a story of the year (n=3). To explain, in addition to including the developmental story of child, some teachers also suggested including some fun things by justifying that *“It was just kind of nice way for the parents to have like a record of the year. And the child, when they are grown up, hopefully they will keep the book in” (Lacy, UA).*

All teachers suggested consistently documenting throughout the process (n=6). A majority of the teachers also suggested planning and scheduling their own system before starting, such as creating a template at the beginning of the semester (n=3), organizing documentation on an ongoing basis (n=3), having an organizational tool

to track portfolio content for each child ($n=1$), and both online and hardcopy portfolio saving and sharing ($n=3$). One of them justified the reason for consensus on having a hardcopy portfolio by stating that *“There is sort of a collective feeling that it is still important to have a physical thing that kids can look through whenever they want. Even though this is for parents, it is also for children”* (Lara, UA). Another teacher also expressed that she is saving a softcopy of portfolios for herself after giving a hardcopy of documents to parents (Maggie, UA). Moreover, documentation in the process and organization of both photos and notes throughout were highlighted as suggestions (Sally, UA). Good organization was highlighted as necessary to show growth (Lacy, UA). For instance, one of the teachers suggested having an organizational tool that best works for the purpose. She mentioned that she is using a graph to keep track of where she is and what areas she needs to look at (Karla, UA). Having a notebook was also suggested to keep everything together (Lacy, UA). In addition, recording video and taking anecdotal notes from those were seen as ideal (Lara, UA).

Furthermore, teachers ($n=3$) advised others to share the portfolio with each stakeholder including children and the next teacher of the child. One teacher pointed out and suggested her practice of sharing the portfolio with children as *“Just put pictures on the computer, and I do slide show, and show it to the children”* (Maggie, UA). Similarly, the other teacher commented and suggested that she reviews portfolios quickly with children before sending them to home (Karen, UA). Despite the fact that this is not the case in practice, it was also mentioned as good practice to share the portfolio with the next teacher of the child (Sally, UA). Teachers also suggested allocating time for reflection on the portfolio to see the whole development ($n=3$). Therefore, prior to preparing portfolio pages, it was suggested to wait and see the progression a little bit (Lara, UA). One of the teachers pointed out that *“I would rather have a little bit more to look back on and reflect on and say yes that was a trend and yes that was important”* (Lara, UA). However, it was also highlighted that *“If you wait until the end of it, it is a lot of work”* (Maggie, UA). Another teacher also emphasized the importance of preparing it as

authentically as possible, by stating that “*I would like to say someone who is starting out is to make it authentic, that is not with the child strength survey. For instance, I had a little boy, he was three. He could not write his name. All the other kids were learning to write their names. But I did a page with him where I could show him lifting super heavy rocks outside*” (Lara, UA). Furthermore, as an initial step in the portfolio practice, one of the teachers suggested practicing skills for the portfolio step by step (n=1). She shared, “*I would recommend starting off small and focus on one milestone at a time because it can be daunting to look at it as a whole, where do you begin?*” (Karen, UA).

Table 4.7.
Frequencies of Support and Suggestions Codes

Code	TURKEY			U.S.		
	RT	UT	Total	RA	UA	Total
Available support						
• Having planning time	0	0	0	6	4	10
• Having resources and materials	0	4	4	0	6	6
• Working in collaboration	0	3	3	6	3	9
• Education and mentoring	0	0	0	2	1	3
• Having both consistent guidelines and flexibility	4	6	10	6	6	12
Desired support						
• Time	4	1	5	5	4	9
• Having an assistant teacher	2	2	4	0	1	1
• Supply of materials	2	0	2	0	0	0
• Having a prepared portfolio draft and template	5	1	6	0	0	0
• Portfolio apps	0	0	0	0	1	1
• Not preparing in fancy format	3	0	3	0	0	0
Suggestions						
• Making it both developmental and story of the year	0	0	0	0	3	3
• Planning and scheduling own system before starting	4	3	7	4	3	7
○ Creating a template and preparing drafts at the beginning of the semester	3	0	3	2	3	5
• Concretizing the development with the planned content, notes, and photos	1	5	6	3	2	5

Table 4.7. (continued)

Code	TURKEY			U.S.		
	RT	UT	Total	RA	UA	Total
• Consistently documenting process	0	4	4	6	6	12
• Organizing documentation as going	5	0	5	3	3	6
• Having an organization tool to track portfolio content for each child	0	0	0	3	1	4
• Focusing on whole development rather than fancy stuff	5	3	8	2	2	4
• Internalizing the purpose and importance of usage	1	6	7	5	6	11
◦ Integrating as a part of curriculum	1	4	5	4	0	4
• Allocating time for reflection and assessment	0	0	0	0	3	3
• Taking education and seeing visual examples	2	1	3	2	0	2
• Mentor teacher and collaborative work for support	2	3	5	6	6	12
• Being objective	0	0	0	0	2	2
• Being flexible	0	2	2	0	0	0
• Practicing skills for portfolio step by step	0	0	0	2	1	3
• Supporting to share portfolio with each stakeholder	4	0	4	4	3	7
• Both online and hardcopy portfolio saving and sharing	6	0	6	0	3	3

Note: RT: Reggio Emilia inspired preschool in Turkey, UT: University preschool in Turkey, UA: University preschool in the U.S., RA: Reggio Emilia inspired preschool in the U.S.

4.1.2. Similarities and differences in ECE teachers' portfolio assessment practices and views between Turkey and the U.S.

When we compare findings on the content of child portfolios between two countries, child activity outputs are commonly included in the child portfolios in Turkey. In particular, in the university preschool, children are actively included in the content selection. On the other hand, in the U.S., there are digitally prepared portfolio pages consisting of anecdotal notes, photos, and explanation about the related developmental domain. Despite these differences, the common point among all preschools is the inclusion of developmental (conference) summary reports in

portfolios, which summarizes child development with respect to determined developmental areas in the preschool.

Findings show that teachers mostly prepare their portfolios as folders except the Reggio Emilia-inspired preschool in Turkey (RT). All teachers in both Turkey and the U.S. also meet on the same point of collecting photos and writing notes during the semester. On the other hand, although teachers in both countries agreed on being organized in the process, their organization methods change. To illustrate, while teachers in the U.S. mostly organize their portfolios by developmental domains, teachers are organizing by projects or school guideline in Turkey. Moreover, as including child activity products in the portfolio, teachers collect child activities in the process in Turkey. On the other hand, as placing documentations in their portfolios, U.S. teachers mentioned a variety of documentation strategies to be organized in the process such as thinking by domain in collection of documentation, writing notes about the photos with date as a reminder, and writing notes for each child even in the same activity. Furthermore, a majority of the teachers in the U.S. also mentioned softcopy organization for portfolio assessment such as having a file for each child, sorting photos in the folder of the child with date, and using prepared template pages.

To enable parent involvement in the portfolio assessment process, teachers in both countries mentioned organization of portfolio sharing conferences. While it is organized by integrating children into the conferences in Turkey, it is organized with only parents in the U.S. Another remarkable difference is the sharing portfolio with child's next teacher if in the same school in the Reggio Emilia-inspired preschool in the U.S. (RA). On the other hand, all teachers in both countries agreed on their practice of communication with parents directly or online in the process. A majority of them also mentioned sharing written explanation about portfolio before the conference time. Moreover, to enable parent involvement, a majority of the teachers in both countries suggested open communication and collaboration with parents during the process for trust. In addition, a majority of the U.S. teachers

specifically suggested being flexible for each parent and sharing an online version of the portfolio before the conference time.

There is a shared definition of portfolio assessment in both Turkey and the U.S. that it is a snapshot reflecting child developmental journey in process. In relation to this, teachers in both countries also agreed on concretizing and showing child development to parents. However, a few teachers in both Turkey and the U.S. pointed out assessment of child development. In comparison to Turkey, a majority of the teachers in the U.S. highlighted understanding child individually and holistically. On the other hand, some teachers in the Reggio Emilia-inspired preschool in Turkey (RT) also viewed it as only a folder.

Teachers in both countries proposed a variety of benefits of portfolio assessment for themselves, and there are remarkable commonalities between their points. For instance, they mainly highlighted following and assessing holistic child development in process. A majority of them agreed on practicing portfolio for children with special needs by its adapted and positive content. In comparison to Turkey, a majority of the U.S. teachers also highlighted recognizing and understanding each individual child better, effective communication with parents by concretizing mentioned points in portfolio, and motivation and professional satisfaction due to increased respect.

A majority of the teachers in both Turkey and the U.S. proposed its benefits for children as having a collection from childhood as a memory and supported visual memory. Furthermore, while findings are compared, it is seen that Turkish teachers offered a variety of additional benefits for children in comparison to U.S. teachers such as increased self-confidence, feeling valued, observing own development in a concrete way, and expression of own self. On the other side, in terms of parents, teachers in both countries agreed on the similar benefits including understanding child development and education better, recognizing and supporting their children better, and increased dialogue with their children. In addition, while Turkish

teachers highlighted parents' having an archive of their child, U.S. teachers also mostly reported their understanding the expertise of teachers.

Teachers in both Turkey and the U.S. agreed upon the similar challenges of portfolio assessment as its becoming time intensive, workload, and being inexperienced in the first times. There is an exception that only one teacher in the university preschool in Turkey (UT) viewed it as time intensive. In addition, a majority of the teachers in Turkey pointed out making compensations for absent kids and preparing visually fancy portfolios as challenges of the process. In comparison to Turkey, more U.S teachers also reported documenting at that time, organization of documentation for each child, and being dependent on teacher skills.

Nearly all teachers in both Turkey and the U.S. reported having both consistent guideline and flexibility as a support for them in portfolio assessment process. In addition, U.S. teachers also highlighted the importance of having planning time in their preschools. In line with this, a majority of the teachers in both countries proposed having extra time as a desired support for the process.

Teachers offered a variety of suggestions related to portfolio assessment practices. A majority of the teachers in both countries agreed upon the importance of planning and scheduling own system before starting, and they highlighted internalizing the purpose and importance of usage. They also suggested to share portfolio with each stakeholder in the process. In addition, a majority of the teachers pointed out organizing documentations as going except Reggio Emilia-inspired preschool teachers in Turkey (RT). When findings are compared, Turkish teachers more emphasized focusing on whole development rather than fancy stuff in comparison to U.S. teachers. On the other hand, U.S. teachers more pointed out consistently documenting process, mentor teacher and collaborative work for support than Turkish teachers.

4.1.3. Summary of findings

There are guidelines at each participant preschool regarding **practices** for portfolio assessment. Therefore, there are remarkable commonalities between teachers working in the same preschool, yet, there is also some variety in their portfolio practices. In Turkey, in the Reggio Emilia-inspired preschool (RT), teachers include the following in their portfolio: child activities, notes on portfolio activities, brainstorming questions, assessment reports, checklist, field trips, and specific day and week activities. Similarly, teachers in the university preschool (UT) also mostly agreed upon the following in their portfolio content: planned activities for assessment, child selected and teacher selected child activities, photos, prepared portfolio pages including anecdotal notes and photos, brainstorming questions, assessment reports, a school expert report, a checklist, tests, field trips, and child physical information. On the other side, in both U.S. preschools, portfolio practices are very similar. Teachers create child portfolios by including prepared portfolio pages consisting of anecdotal notes and photos, a conference summary report, a portfolio definition page, child activity outputs, and photos. In addition to these, the Reggio Emilia-inspired preschool (RA) also has a detailed checklist in their child portfolios. As it is presented, portfolio practices overlap on similar points in the same country rather than the same preschool type.

Regarding portfolio **organization**, each school has a specific justification. In Turkey, teachers organize portfolios with respect to projects in Reggio Emilia inspired preschool (RT). It is organized by both school portfolio guidelines and chronological order in the university preschool (UT). In the U.S., teachers organize their child portfolios with respect to both chronological order and developmental domain, and they also have a softcopy organization, preparing their portfolio pages using a computer. When findings are reviewed, the common theme in all preschools is that teachers collect content, documentation, and organize their portfolios throughout the process. Moreover, some teachers in both Turkey and U.S. also use some organization tools for themselves like an organizational checklist to follow during the process.

Portfolio conferences are a common practice to share portfolios with **parents** in each preschool. However, its implementation changes in each. In Turkey, portfolio conferences are mostly organized by including children in the process. However, in both U.S. preschools, teachers organize portfolio conferences individually for each parent without including children. U.S. teachers and teachers in the university preschool in Turkey (UT) highlighted their practice of sharing information with parents before the conference time.

Although some teachers in the Reggio Emilia-inspired preschool in Turkey (RT) **defined** portfolio assessment as concretizing and showing child development to parents, others defined it only as a folder. On the other side, teachers in the university preschool in Turkey (UT) and in both U.S. preschools commonly viewed the portfolio as a snapshot reflecting the child developmental journey in progress. In addition, U.S. teachers also pointed out the importance of understanding the child individually and holistically and concretizing and showing child development to parents by means of the portfolio assessment.

Teachers in both countries agreed upon similar **benefits of the portfolio assessment for the teachers**. Some of these are: following and assessing holistic child development, having a comprehensive assessment, adaptability and positive content for children with special needs, effective communication with parents by concretizing points mentioned in the portfolio, recognizing and understanding each individual child better, planning better, motivation and professional satisfaction due to increased respect, and reflection and self-assessment as a teacher.

As **advantages for children**, teachers in Turkey mentioned a variety of benefits including having a collection from childhood as a memory, feeling valued, increased motivation for activities, supporting visual memory, increased self-confidence, children's expression of themselves, and observation of their own development in a concrete way. Similarly, U.S. teachers also agreed upon supporting visual memory, increased dialogue with their family, and having a collection from childhood as a memory.

As **advantages for parents**, teachers in all preschools mostly agreed that portfolios helped them to understand child development and education better, increased dialogue with their children, and allowed for recognizing and supporting their children better. In addition, specifically, Reggio Emilia-inspired preschool teachers in Turkey (RT) highlighted providing an archive of their child, and U.S. teachers also pointed out its contribution to understanding the expertise of teachers.

As **challenges** of the portfolio process, most of the teachers agreed that the portfolio is becoming time intensive, the workload is a challenge, and that they felt inexperienced the first times. Other challenges are changing with respect to the practices of individual teachers. For instance, making compensations for absent kids was viewed as a challenge in Turkey despite not being mentioned in the U.S. In addition, Reggio Emilia-inspired preschool teachers in Turkey (RT) specifically mentioned the challenge of preparing it with a fancy format. On the other side, university preschool teachers in Turkey (UT) and teachers in the U.S. commonly mentioned the challenges of documenting in the moment, organization of documentation throughout the process for each child, and the portfolio process being dependent on teachers' skills.

As an available **support**, most teachers mentioned having both consistent guidelines and flexibility. They also agreed upon having extra time to support the portfolio process. Moreover, teachers gave a variety of similar **suggestions** for portfolio assessment in each preschool. Some of these are: focusing on whole development rather than fancy stuff; planning and scheduling their own system before beginning; concretizing the development with the planned content, notes, and photos; consistently documenting throughout the process; organizing documentation on an ongoing basis; sharing the portfolio with each stakeholder; working with a mentor teacher and collaborative work for support; taking education and seeing visual examples; internalizing the purpose and importance in usage of the portfolio; and online and hardcopy portfolio saving and sharing. In addition, most of the Reggio Emilia-inspired preschool teachers in the U.S. (RA) also

highlighted having an organizational tool to track portfolio content for each child, and allocating time for reflection and assessment.

4.2. Results of Study 2

In this part of the study, the aim was to investigate and compare child portfolio contents in the selected preschools in both Turkey and the U.S. by means of a developed content checklist and rubric. While presenting results below, initially, results of the content checklist are summarized. After that, portfolios are assessed with respect to rubric categories including content, features of selected products, organization, reflection, and overall evaluation. A summary of results is also provided at the end.

4.2.1. Components of child portfolios

In this part, the aim was to explore the research question, “What are the most frequently included components in child portfolios in the selected preschools in Turkey and the U.S.?” To this end, portfolios were examined by the researcher using a content checklist and then analyzed with descriptive statistics.

Table 4.8 displays frequencies of included components in child portfolios in terms of each preschool and each country. In the results, it was found that the following components are most frequently included in portfolios in Turkey ($f=7$): personal information about the child, checklist, school required forms, worksheets, reading-writing preparation activities, art activities, language activities, and physical activities. On the other hand, the following are not included in any of the examined portfolios: state/curriculum required forms, family information forms, questionnaires, interview notes, notes and photos from family, activities at home, suggestions for families, and suggestions for the next teacher of the child.

In the U.S., it was found that all examined portfolios include ($f=12$): personal information about the child, observation notes or reports, audio/video recordings of in-class and out-of-class activities or photos, school required forms or reports, the teacher’s reflections about the children, art activities, drama activities, language

activities, math/science activities, social activities, and physical activities. On the other hand, none include: child's health records, state required forms and reports, notes from other experts about children, concept maps showing learned concepts, worksheets, family information forms or questionnaires, interview notes, suggestions for the next teacher of the child, and standardized test findings. These findings are presented in Table 4.8 in terms of each preschool in the U.S.

Table 4.8.
Frequencies of Content Checklist

		TURKEY			U.S.		
		RT	UT	Total	RA	UA	Total
1.	Personal information about the child (age, gender, etc.)	6	1	7	6	6	12
2.	Child's health records	0	1	1	0	0	0
3.	Observation notes, reports	0	1	1	6	6	12
4.	Interview notes	0	1	1	6	0	6
5.	Audio / video recordings of in-class activities, photos	0	1	1	6	6	12
6.	Audio / video recordings of out-of-class activities, photos	0	1	1	6	6	12
7.	Assessment criteria (checklist, rating scale, rubric)	6	1	7	6	0	6
8.	State required forms, reports, etc. (development observation form)	0	0	0	0	0	0
9.	School required forms, reports, etc. (development report)	6	1	7	6	6	12
10.	Notes from other experts about the child	0	1	1	0	0	0
11.	The child's own reflections, comments about themselves	2	1	1	6	2	8
12.	The teacher's reflections about the child	4	1	5	6	6	12
13.	Concept maps showing learned concepts	1	1	2	0	0	0
14.	Worksheets	6	1	7	0	0	0
15.	Reading-writing preparation activities	6	1	7	6	5	11
16.	Art activities (coloring, cutting pasting, etc.)	6	1	7	6	6	12
17.	Drama activities	1	1	2	6	6	12
18.	Language activities	6	1	7	6	6	12
19.	Math/Science activities	5	1	6	6	6	12
20.	Social activities	4	1	5	6	6	12
21.	Physical activities	6	0	7	6	6	12

Table 4.8. (continued)						
TURKEY				U.S.		
	RT	UT	Total	RA	UA	Total
22. Family information forms, questionnaires, interview notes	0	0	0	0	0	0
23. Notes and photos from family, activities at home	0	0	0	3	2	5
24. Suggestions for families	0	0	0	0	5	5
25. Suggestions for the next teacher of the child	0	0	0	0	0	0
26. Standard test findings (developmental scanning inventory, etc.)	0	1	1	0	0	0

4.2.2. Content analysis of child portfolios

In this part, portfolio contents were examined with a developed analytic rubric. In an analytic rubric, each element of the ideal is awarded with a point (Haladyna & Rodrigues, 2013). In the current study, the elements or categories of the portfolio rubric were decided as Content, Feature of Selected Products, Organization, Reflection, and Overall Evaluation. Each of these categories were conceptually defined in terms of three options for rating, which are “*Not enough*,” “*Acceptable*,” and “*Exemplary*.” Each portfolio was examined and rated by the researcher in terms of these developed rubric categories. This detailed rubric is presented in Appendix N.

In this section, rubric categories became the theme, and these themes were assessed and explained narratively below in addition to presenting their rated frequencies for each preschool. As explained in the Methodology section, one portfolio was examined from the university preschool in Turkey, and six portfolios were investigated from the other three preschools. Below, each rubric category is explained in detail, in terms of each preschool, under the related subheading. Following these explanations, Table 4.9 and 4.10 also summarize frequencies of rated rubric categories for each preschool.

4.2.2.1. Content

In the Reggio Emilia-inspired preschool in Turkey (RT), “child and family information” was “not enough” in all portfolios ($f=6$). This information is not integrated because it is stored in a separate folder for each child. Inclusion of “assessment methods” (checklist, assessment report, branch teachers’ assessment) was rated as “acceptable” for all of the portfolios ($f=6$). For instance, branch teacher assessment enables parents to see different viewpoints about their children in terms of different areas e.g., drama, English. The assessment report also includes teacher observations and suggestions about the child, taking into consideration one semester in a one-paragraph summary, although not comprehensive. Inclusion of different “activities” (i.e., field trip, science, math, music) was rated as “acceptable” ($f=3$) and “exemplary” ($f=3$) in different portfolios. Portfolios change with respect to this category within the same school because art activity products were commonly included in some portfolios. Activity names were written as a title for the portfolio page, and the activity was also introduced briefly in one sentence. Despite the inclusion of different activities, “variety of the products” was rated as “not enough” in portfolios for all the teachers ($f=6$) since portfolios mostly include hardcopy child products like art activity products, or story of a drama. Photos were only included if it is part of the activity such as including as a part of a photo project or if children were designing a frame and their family photo was presented in it. Since audio and video documents are shared on their online platform, those are not integrated into the portfolio.

In the university preschool in Turkey (UT), “child and family information” was rated as “acceptable” in the examined portfolio ($f=1$). For instance, it includes child physical information, which was reported by the school nurse in different specified months. This information is also presented as a part of an activity, such as a rope showing height of the child at a specified time. However, family information is not included in portfolio since it is stored in a separate folder. “Assessment methods” and “activities” were also rated as “exemplary” ($f=1$). There are two separate folders in the portfolio box, one includes a variety of assessment methods (checklist report,

Frosted standardized test results, branch teachers' assessment, school psychological counseling service assessments, observation notes illustrated with photos). Specifically, the child development report summarizes each child's development in terms of each developmental domain by taking into consideration observations and all other assessment findings. Another folder covers different activity types which are either planned activities or child selected activities. Moreover, "Variety of these products" was also rated as "acceptable" ($f=1$). The portfolio presents both hardcopy child products and child observations with illustrated photos. However, these were limited in number.

In the U.S. Reggio Emilia inspired preschool (RA), "child and family information" was rated as acceptable in portfolio content ($f=6$). For instance, family or child information is presented as a part of an activity, which the child introduces to their own family, but it does not contain detailed information. Detailed information about the child and family is stored in a separate folder. On the other hand, "assessment methods" was rated as "exemplary" ($f=6$), considering the detailed portfolio conference report and checklist about child development. The checklists assess child development in terms of each developmental domain with respect to three criteria, "Not yet, In process and Consistently demonstrates." In portfolio pages, selected points from this checklist are illustrated by explicitly explaining the domain, its specific indicator, related observation notes, and photos. Moreover, the child development report also presents the child's likes, dislikes, goals for the child, and a holistic assessment about child development in one summarized page covering each of the domains. "Activities" and "variety of products" were also rated as "exemplary" ($f=6$). Different activity types are integrated into portfolio contents and include different products such as process photos or photos of child products, observation notes, some child products like child portraits, child drawings, etc. Some extra photo pages are also included by some teachers as a memory for the child.

In the U.S. university preschool (UA), "child and family information" was rated "not enough" in portfolios ($f=6$). Child and family information is stored in a

separate folder by school administration. On the other hand, “assessment methods” were rated as “exemplary” in all portfolios of the school ($f=6$). For instance, they prepare a detailed portfolio conference summary report and include this in the portfolio. This summary report introduces the child and enables assessment of holistic child development in terms of the determined developmental domains, and present goals for the child. As expected in their portfolio guidelines, developmental domain and subdomain are also presented on each portfolio page with the specific indicators. Teacher observation notes on these different developmental domains are included under different subtitles, such as what happened, what was accomplished, or observations. Furthermore, all portfolios were also rated as “exemplary” in terms of the “activities” ($f=6$). Since it is a requirement in the guidelines of this preschool to include activities from each developmental domain, different activity types are placed into portfolios and explained in detail such as science, math, etc. Those are generally similar activities for each child under the same domain but each one looks at the same issue from a different point of view. “Variety of the products” was also rated as “exemplary” in all portfolios ($f=6$). Observation notes are supported with photos, and these photos are centered on the portfolio pages. Additionally, some open-ended activity products or photos are included in the portfolio content. It also includes some extra photo pages as a memory for children in some portfolios.

4.2.2.2. Feature of the selected products

In the Reggio Emilia inspired preschool in Turkey (RT), “feature of these selected products” was rated as “acceptable” in terms of following and showing development ($f=6$). These selected products reflect the child’s development and learning process but not perfectly because of the emphasis on art products and lack of detailed teacher observation notes. Open-ended art activities are generally presented on pages, and closed-ended activities such as worksheets, reading-writing activities etc. are placed into an envelope in the back of the portfolio. However, it still needs to be enriched to follow child development comprehensively.

In the university preschool in Turkey (UT), “feature of these selected products” was rated as “exemplary” ($f=1$). Child development and learning process are fully reflected in the portfolio by means of rich activity and assessment documents. Some of these activities are specifically planned to assess development to serve its purpose, such as completing a story, drawing something the same or similar, etc. Some of them are also implemented in different months to show development of the child, for example the same drawing in November and in April.

Similarly, in the Reggio Emilia inspired preschool in the U.S. (RA), “feature of the selected products” was rated as “exemplary” in portfolios ($f=6$). There are prepared portfolio pages which consist of notes and photos to present child development in each domain. Since there is a page limitation in the portfolio guidelines, content is selected from those representative of child development in that particular developmental area. In other words, a specific indicator is selected and documented from each developmental area. However, if there is a product fully created by the child, this might also be included in portfolio. For instance, in one example, the teacher writes the story which the child created. Then, the child draws a picture about it and those are included in portfolio content under the related domain. Teacher input along with the representative selected content makes the child development visible.

In the university preschool in the U.S. (UA), “feature of these selected products” was rated as “exemplary” ($f=6$). There is a page limitation and important points in child development are selected by the teachers to highlight the development. These present the child’s development and learning process clearly by means of the selected concrete content and notes. On each page the date, observer, and location are also included, in addition to teacher observation notes which are illustrated with photos. Growth or change in the children are explicitly expressed in this way.

4.2.2.3. Organization

In the Reggio Emilia inspired preschool in Turkey (RT), “organization” of all portfolios was rated as “exemplary” ($f=6$). Portfolios are organized with respect to

projects, which are placed chronologically to follow development. Project activities are also placed with respect to their similarities within the same project. This enables viewers to see development in progress through project activities. For instance, if the project is color, all the project activities of that month focus on color to reach the intended objectives, and similar activities such as science activities, math activities or specific daily and weekly activities are placed on the same page. These activities are also introduced in one sentence on the page.

In the university preschool in Turkey (UT), portfolio “organization” was rated as “exemplary” ($f=1$). Assessment reports and assessment activities are organized in separate folders with respect to determined school guidelines and date. The first page includes an introduction of the portfolio for parents, and then there is a specific order within each of these folders. Moreover, there is an organization schedule for portfolio preparation in this preschool. This includes all assessment methods and other requirements for the portfolio and informs who will facilitate those at specified months. For instance, a Frostic standardized assessment report is prepared by the child development expert at a specified time. It is also placed into the specified place in the assessment folder.

In the Reggio Emilia inspired preschool in the U.S. (RA), “organization” of portfolios was rated as “exemplary” ($f=6$). Since there is a requirement in the school guidelines to organize portfolio with respect to developmental domains, the same system of organization is used in all portfolios. Portfolio content is organized by date within each developmental domain, which enables a focus on development within a specific developmental area.

In the U.S. university preschool (UA), “organization” of all portfolios was rated as “exemplary” ($f=6$). Some teachers organize it with respect to developmental domains to focus on development within a specific domain. Other teachers organize with respect to date to focus on whole development simultaneously. In both cases, the portfolio reflects child development in progress, using chronological order, whether in developmental domain or in general organization.

4.2.2.4. Reflection

In the Reggio Emilia inspired preschool in Turkey (RT), “teacher reflections” and “child reflections” were “not enough” in a majority of the portfolios” ($f=5$; $f=4$). It was in the “acceptable” range only in a few portfolios in terms of teacher reflections about the child and child products ($f=1$) and for children’s reflections about themselves and their own products ($f=2$). For instance, in one portfolio, a child’s reflection about their field trip was written as a note on a child’s drawing and included.

In the university preschool in Turkey (UT), teacher reflection was rated as “exemplary” ($f=1$) and child reflection was rated as “acceptable” ($f=1$). Teacher reflections are integrated into assessment documents or attached as a note on the activities. The children’s own reflections about themselves or their activity is also included as an attached note on their activity products, such as their specific comments about the activity, their reflections about the book, or their answers to specific questions. However, these are limited in number.

In the Reggio Emilia inspired preschool in the U.S. (RA), “teacher reflection” was rated as “exemplary” in all portfolios ($f=6$). Teacher reflection notes, evaluation, and suggestions are presented in a portfolio conference summary report or on portfolio pages. For instance, in one example, a teacher wrote her reflections on a paper on which the child wrote her name for the first time and included that in the portfolio. Alternatively, a child’s drawings are included with an attached teacher’s note. Moreover, “child reflections” were also rated as “exemplary” in half of the portfolios ($f=3$) and rated as “acceptable” in the other half ($f=3$). These are generally presented in the portfolio as direct expressions from children such as their comments on an issue. For instance, in one example, the teacher wrote the child’s reflection about their own family and included it in the portfolio by relating it to the social domain. In another, the teacher recorded the child’s reflections during a science experiment and integrated those into the portfolio page. Child-created stories were also written and illustrated with the child’s drawing, or reflections on

their own portrait were written on the activity on another portfolio page. However, frequency and content of these reflections change with respect to each portfolio, rated differently in the specified category of the rubric. It is not in the exemplary range in mostly younger age groups compared to others.

In the university preschool in the U.S. (UA), “teacher reflection” was rated as “exemplary” ($f=6$). Teacher observation notes and suggestions based on reflections are integrated into both portfolio pages and the portfolio conference summary report. For instance, teacher suggestions about children are included in the conference summary report as goals for the child. However, “child reflections” were “not enough” in most of the portfolios ($f=4$). It was rated as “acceptable” only in two portfolios ($f=2$), which had a place for the child’s own expressions as a note on activities.

4.2.2.5. Overall evaluation

In the Reggio Emilia inspired preschool in Turkey (RT), when it is “evaluated overall,” all portfolios were rated as “acceptable” ($f=6$). The portfolios enable viewers to see a child's competencies, skills and learning process up to a certain level. However, comprehensive assessment cannot be made by taking into consideration the entire portfolio in terms of content, feature of the selected products, and reflections. These need greater focus on content rather than fancy preparation.

In the university preschool in Turkey (UT), the portfolio was rated as “exemplary” when it is “evaluated overall” ($f=1$). It serves its purpose well by showing the child's competencies, skills, and learning process in a very good way through rich concrete content, assessment activities, and organization. However, child reflections need to be integrated more to enrich the content.

Likewise, in the Reggio Emilia inspired preschool in the U.S. (RA), portfolios were rated as “exemplary” when “evaluated overall” ($f=6$). They show the child’s competencies, skills, and learning process in a very good way by means of the

comprehensive checklist, teacher observation notes, detailed conference summary report, and consistent organization. Some examined portfolios also include content from the previous year in the school if child was in the same school for more than one year, which presented child development through the years. However, it might be strengthened more in terms of the child's reflections.

U.S. University preschool (UA) portfolios were rated as "exemplary" regarding "overall evaluation" ($f=6$). Content and organization present child competencies, skills, and learning process in a concrete way by explicitly writing the progress both in portfolio pages and in the conference summary report. In some portfolios, teachers also introduce the system of learning standards, objectives, and include a description of the portfolio for parents in one page. However, it needs to be enriched in terms of child reflections.

4.2.3. Example portfolio pages from each preschool

Portfolio pages from each preschool are presented below under the specified subheading. Faces and personal information are hidden in photos to provide anonymity. As seen below, although child activities are included as work samples in child portfolios in Turkey, those are integrated as documentations on digitally prepared portfolio pages in the U.S. Under the first subheading, portfolio pages are presented from the Reggio Emilia-inspired preschool in Turkey (RT). On the cover of the portfolio, project activities, brainstorming questions, and an example teacher observation report are illustrated in the photos. Under the second subheading, portfolio pages are selected from the university preschool in Turkey (UT). Cover page, introduction and informative portfolio pages for parents, the child's height and weight report, hand and footprint, assessment activity examples (drawing the same, completing the story), child observation page, and some assessment reports (branch teacher assessment, psychological counseling service report, child development report) are presented.

Under the third subheading, portfolio pages from the Reggio Emilia-inspired preschool in the U.S. (RA) are presented. These include cover page and prepared

portfolio pages assessing different areas of child development such as language and literacy, social studies, physical development, mathematical thinking, scientific thinking. Moreover, some child products like child portrait, child's first time writing their own name correctly, child drawing with some teacher notes on it, and teacher observation notes about an experiment are also included as an example. Lastly, a child development report is illustrated in the photos. Under the fourth subheading, portfolio pages from the university preschool in the U.S. (UA) are included. These include cover page, portfolio information page, child development report, and portfolio pages which focus on different areas of child development such as cognitive and general development, health and physical development, language development and communication, and social emotional development. In addition, under the final subheading, a teacher's organization checklist is presented as an example.

Table 4.9.
Frequencies of Rated Rubric Categories in Turkey

	RT			UT		
	Not Enough	Acceptable	Exemplary	Not Enough	Acceptable	Exemplary
Child and Family Information	6				1	
Assessment Methods		6				1
Activities		3	3			1
Content						
Variety of products	6				1	
Feature of the Selected Products		6				1
Organization			6			1
Teacher Reflections	5	1				1
Reflection						
Child Reflections	4	2			1	
Overall Evaluation		6				1

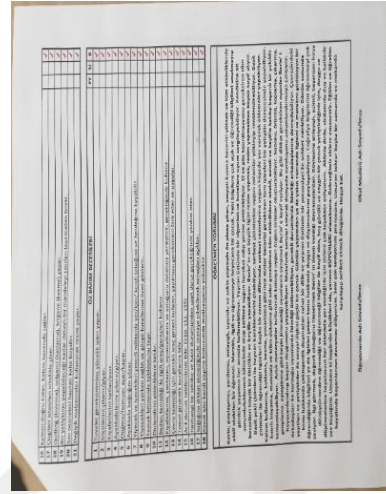
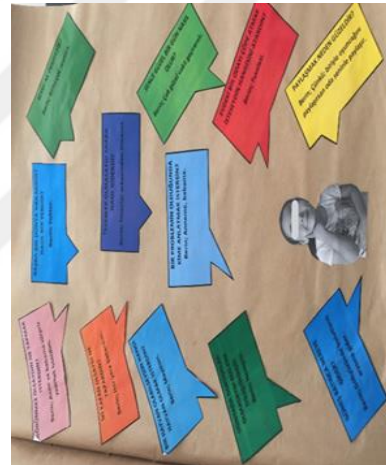
Table 4.10.
Frequencies of Rated Rubric Categories in the U.S.

	RA			UA		
	Not Enough	Acceptable	Exemplary	Not Enough	Acceptable	Exemplary
Child and Family Information		6		6		
Assessment Methods			6			6
Activities			6			6
Content						
Variety of products			6			6
Feature of the Selected Products			6			6
Organization			6			6
Teacher Reflections			6			6
Child Reflections		3	3	4	2	
Overall Evaluation			6			6

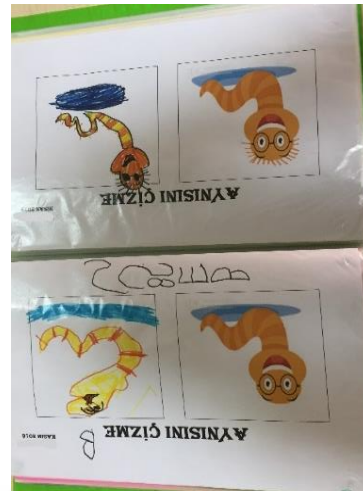
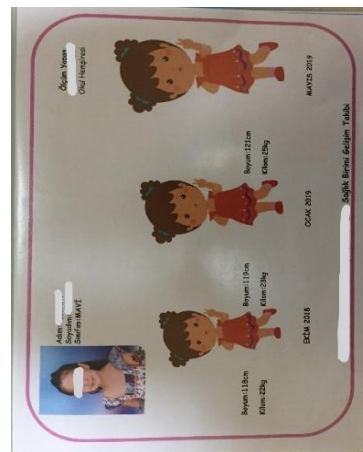
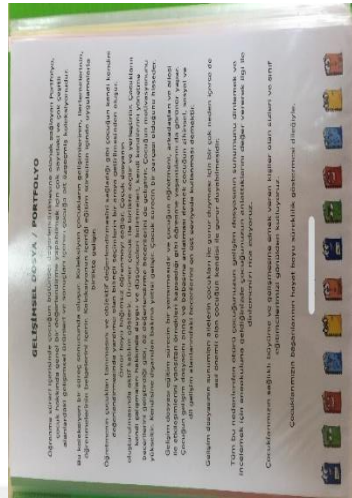
Portfolio Photos from Reggio Emilia-Inspired Preschool in Turkey (RT)



Portfolio Photos from Reggio Emilia-Inspired Preschool in Turkey (RT)



Portfolio Photos from University Preschool in Turkey (UT')





☐ New Behavior

Date: 11/9/2018

275

Date: 12/13/2018

Mathematical Thinking: Mathematics concerns patterns and relationships, and the search for multiple solutions to problems. The focus of this domain is on children's approaches to mathematical thinking and problem solving. The domain emphasizes the ways students acquire and use strategies to perceive, understand, and act on mathematical problems. The content of mathematics (concepts and procedures) is stressed, but within the larger context of understanding and application (knowing and doing).



Date: 12/07/2018

Scientific Thinking: This domain addresses ways of thinking and inquiring about the natural and physical world. It emphasizes the process of scientific investigation, because process skills are embedded in and fundamental to all science instruction and content. The focus of this domain is on children actively investigating, observing, measuring, recording, describing, questioning, forming explanations, and drawing conclusions.



 builds a tower with the small square Magnalies. He then decides he would like a triangle roof for his tower. He attempts many times to get the triangle to stick on the top of the tower. He tries a different color triangle to see if that makes a difference. He played with this challenge for a while longer before moving on to something new.

☐ New Behavior

Date: 9/10/2018

Social Studies: This domain emphasizes the acquisition of social and cultural understanding. Children acquire the understanding from personal experience and by learning about the experiences of others. As children study present day and historical topics, they gain understanding of human interdependence and the relationships between people, people and the environment.



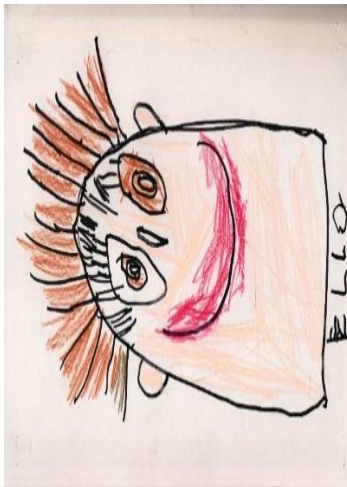
Date: 10/26/2018

Physical Development: The curriculum in this domain is not physical development as an integral part of a child's well-being and ability to make effective use of educational opportunities. The curriculum addresses gross skills, fine motor skills, and personal health and safety. A principal focus is on a children's ability to move in ways that demonstrate control, balance, and coordination. Fine motor skills are socially appropriate and are used to demonstrate competence in understanding and managing the environment. Also included is understanding growing competence in understanding and managing the environment.



[illegible][illegible]

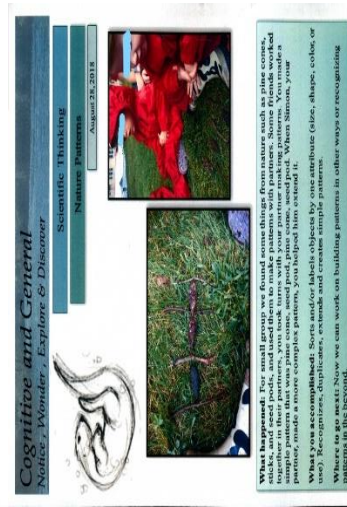
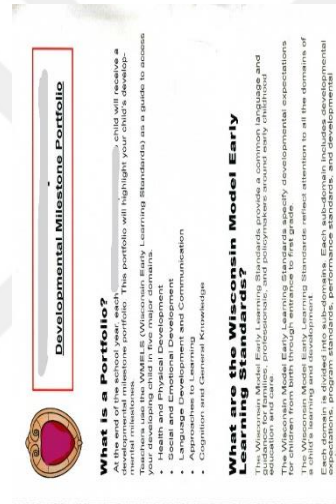
Portfolio Photos from Reggio Emilia-Inspired Preschool in the U.S. (RA)

[illegible]

Sunshine Room, Fall 2018
Teacher: _____
Teacher: _____

[illegible]

Portfolio Photos from University Preschool in the U.S. (UA)



Portfolio Photos from University Preschool in the U.S. (UA)

Cognitive & General Knowledge
—Exploration, Discovery & Problem Solving, Mathematical & Scientific Thinking

17 September 2018
Teacher: [redacted]
Date: Fall Semester 2018
Location: Duck classroom

Observation: The children in the Duck room are engaged in a science activity. They are using a magnifying glass to look at a small object. One child is holding the magnifying glass over a small object, while another child is pointing at it. They are all looking intently at the object.

Notice: [redacted]

Wonder: [redacted]

Explore: [redacted]

Discover: [redacted]

Language Development & Communication
—Listening & Understanding, Speaking & Communicating, Early Literacy

15 September 2019
Teacher: [redacted]
Date: Fall Semester 2019
Location: Duck classroom

Observation: The children are engaged in a language activity. They are sitting at a table and looking at a book. One child is pointing at a word in the book, while another child is looking at the book. They are all looking intently at the book.

Notice: [redacted]

Wonder: [redacted]

Explore: [redacted]

Discover: [redacted]

Developmental Milestones Portfolio Document

Child's Name: [redacted]
Observer: [redacted]
Location: Duck classroom
Date: Fall Semester 2018

Observation: The children are engaged in a social problem-solving activity. They are sitting at a table and looking at a book. One child is pointing at a word in the book, while another child is looking at the book. They are all looking intently at the book.

Notice: [redacted]

Wonder: [redacted]

Explore: [redacted]

Discover: [redacted]

Social and Emotional
Notice: Wonder: Explore: Discover

Self-Concept
Taking Risks

October 10, 2018: 12 Minutes

What happened? At 3:00pm, the children were just right for climbing and jumping off of. You enjoyed taking the risk to jump off and encourage your friends to try it too. You decided to focus on "climbing" your friends on and went off things like "you can do it!" or "you can do it!"

What you accomplished: Exhibits positive self-concept and confidence in his/her abilities as "the climber". You showed your friends that you can help them feel good about their accomplishments.

Developmental Milestones Portfolio Document

Child's Name: [redacted]
Observer: [redacted]
Location: Duck classroom
Date: Fall Semester 2018

Observation: The children are engaged in a social problem-solving activity. They are sitting at a table and looking at a book. One child is pointing at a word in the book, while another child is looking at the book. They are all looking intently at the book.

Notice: [redacted]

Wonder: [redacted]

Explore: [redacted]

Discover: [redacted]

UW CHILD DEVELOPMENT LAB CONFERENCE FORM

Child's Name: [redacted]
Observer: [redacted]
Location: Duck classroom
Date: Fall Semester 2018

Observation: The children are engaged in a social problem-solving activity. They are sitting at a table and looking at a book. One child is pointing at a word in the book, while another child is looking at the book. They are all looking intently at the book.

Notice: [redacted]

Wonder: [redacted]

Explore: [redacted]

Discover: [redacted]

[illegible][illegible]

4.2.4. Similarities and differences in the components and quality of child portfolio contents between Turkey and the U.S.

When findings are compared on content checklist between Turkey and the U.S., it is seen that personal information about the child, school required forms, art activities, language activities, and physical activities are the commonly included components in portfolios in both countries. In contrast, state required forms, family input (questionnaire, form etc.), and suggestions for the child's next teacher are not included in portfolios in either country. On the other hand, there are also differences between portfolio components. Although worksheets are included in both preschools' portfolios in Turkey, they are not integrated into any of the portfolios in the U.S. Moreover, although observation notes, reports, and photos are included in both U.S. preschools and the university preschool in Turkey (UT), those are not integrated into portfolios in the Reggio Emilia inspired preschool in Turkey (RT).

When findings are compared on rated rubric categories, there are both similarities and differences between Turkey and the U.S. One of the common points is that child and family information was rated as not enough or acceptable in both countries because it is stored in a separate folder for each child in the school administration. Similarly, child reflections were also rated as not enough in most portfolios in both Turkey and the U.S. except Reggio Emilia-inspired preschool in the U.S. (RA). In this preschool, child reflections are generally presented as direct expressions from children in the portfolios. The other commonality is that organization was rated as exemplary in both countries. While portfolios are organized with respect to projects and determined school guidelines in Turkey, it is mostly organized by developmental domain to focus on development within a specific developmental area in the U.S. In each cases, the portfolio reflects child development in progress, using chronological order.

There are also differences in rated rubric categories between both countries. In the university preschool in Turkey (UT), although assessment methods, activities, and feature of the selected products were rated as exemplary, variety of products and

teacher reflections were rated as acceptable. In this preschool, there are two separate folders in the portfolio box, which include a variety of assessment methods and activities. Teacher reflections are integrated into assessment documents or attached as notes on the activities. Portfolio also includes both hardcopy child products and child observations with illustrated photos. However, these are in limited number. On the other hand, there is a remarkable difference in the rated categories for the Reggio Emilia-inspired preschool in Turkey (RT). In this preschool, assessment methods and feature of the selected products were rated as acceptable. It includes assessment documents but not comprehensive. Inclusion of different activities was also rated as acceptable and exemplary in different portfolios because art activity products were commonly included in some of them. Moreover, teacher reflections and variety of activities were mostly rated as not enough.

In the categories including assessment methods, activities, variety of products, feature of the selected products, and teacher reflections, portfolios were rated as exemplary in the U.S. They have detailed assessment documents. Different activity types are integrated into portfolio contents and explained in detail. Moreover, there are prepared portfolio page contents which consist of notes and photos to present child development from each developmental area. Teacher reflection notes are also presented in a portfolio conference summary report or on portfolio pages.

When evaluated overall, portfolios were rated as exemplary in the U.S. and in the university preschool in Turkey. Those serve the purpose of assessment by showing the child's development in a very good way through rich content, activities, assessment documents, documentations, and consistent organization. However, those need to be enriched in terms of child reflections. On the other hand, it was rated as acceptable in the Reggio Emilia-inspired preschool in Turkey (RT) because of presenting child development in process up to a certain level. It does not provide a comprehensive assessment.

4.2.5. Summary of findings

In this part of the study, to begin, portfolio contents were examined and compared by means of a content checklist. It was found that personal information about the child, required school forms, and different kinds of child activities are commonly included components in portfolios in both countries. In contrast, state required forms, family input (questionnaire, form etc.), and suggestions for the next teacher of the child are not included in portfolios in either country.

Each portfolio was examined and rated by the researcher in terms of the developed rubric categories including Content, Feature of Selected Products, Organization, Reflection, and Overall Evaluation. It was found that child and family information is not enough or acceptable since those are generally stored in a separate folder by the school administration. On the other hand, assessment methods and activities and variety of activities were rated as exemplary or acceptable in the university preschool in Turkey (UT) and in portfolios in both U.S. preschools. However, those categories were rated as acceptable and not enough in the Reggio Emilia inspired preschool in Turkey (RT) since generally hardcopy child products and art activities were included in portfolios.

Another rubric category, feature of these selected products was rated as acceptable in the Reggio Emilia inspired preschool in Turkey (RT). Portfolios reflect the child's development and learning process but not perfectly because of the emphasis on art products and lack of detailed teacher observation notes. It was exemplary in all other preschools. Child development and learning process are fully reflected in portfolios by means of the rich activity and assessment documents.

Organization of all portfolios was rated as exemplary in all preschools since each preschool has a specific organization method and justification. For instance, some teachers in the university preschool in the U.S. (UT) organize their portfolios with respect to developmental domains, which was justified as enabling viewers to see development clearly within that developmental domain.

Reflection is the part which needs more attention in this study. In the Reggio Emilia inspired preschool in Turkey (RT), teacher reflections and child reflections were not enough in a majority of the portfolios. In the university preschools both in Turkey and the U.S., teacher reflections were exemplary, yet child reflections need to be enriched. In contrast to these preschools, both child and teacher reflections were mostly exemplary or acceptable in the Reggio Emilia inspired preschool in the U.S. (RA).

Finally, when evaluated overall, all portfolios were rated as acceptable in the Reggio Emilia inspired preschool in Turkey (RT) and exemplary in all portfolios in other preschools. However, the common issue among them is that child reflections need to be integrated more to enrich the content of all portfolios.

4.3. Results of Study 3

This part addresses the research questions based on the quantitative analyses of the main study and investigates teacher portfolio practices and views utilizing the developed scales as a part of the present study. Firstly, the findings of Confirmatory Factor Analysis (CFA) and reliability analysis are presented. After that, descriptive results are described in detail. Findings of Multivariate Analysis of Variance (MANOVA) are presented, followed by the findings of Hierarchical Multiple Regression. A summary of results is also provided at the end.

4.3.1. CFA and reliability results for each scale

In this research, CFA was performed through the Analysis of Moment Structures (AMOS 25) program to confirm the factor structure of the scales. There are several goodness-of-fit indices for CFA. Brown (2006) categorized fit indices into three categories, “absolute fit, adjusting model parsimony, and comparative or incremental fit” (p. 82). Since each of these gives different information about the model, including at least one index from each category is recommended. Among those, χ^2 is an example of an absolute fit index. Root-mean-square error of approximation (RMSEA) is an index from parsimony correction. CFI is an example of a comparative

fit index (Brown, 2006). Including these, Chi-square, RMSEA, CFI, and NFI were utilized for interpretation of the models in this study.

Normed fit index (NFI) compares X^2 between the tested model and baseline model assuming that measured variables are totally independent. Models with an NFI of .95 or more are accepted as reasonably well fit. Similarly, CFI assesses model fit between baseline model and independence model. CFI values around .95 are accepted as reasonable model fit (Brown, 2006; Thompson, 2004). RMSEA estimates “*how well the model parameters will do at reproducing the population covariance*” (Thompson, 2004, p. 130). It is accepted that RMSEA values equal to or less than .08 indicate reasonable model fit (Browne & Cudeck, 1993; Fabrigar & Wegener, 2012), and values lower than .05 indicate a close fit (Fabrigar & Wegener, 2012). Moreover, to assess the reliability of each factor, Cronbach’s alpha coefficient was calculated. These findings were presented in the following parts under the related subheadings of scales.

4.3.1.1. Portfolio practice scale

The hypothesized model was a three-factor structure with 14 items as content (items 1, 2, 4, 5, 6, 10), child participation (items 3, 7, 8, 9), and sharing (items 11, 12, 13, 14). Since the initial attempt did not produce an acceptable model fit ($X^2/df = 6.063$, $p = .00$, CFI = .894, NFI = .876, RMSEA = .108), modification indices were checked and high error covariances of five pairs of items were estimated. These items (item5-item6, item7-item8, item1-item2, item1-item4, and item4-item5) were considered to load on the same factor, so the error terms of these indicators were allowed to covary. Following these modifications, all items loaded significantly to the respective factor except item 14 (Sharing portfolio with the next teacher of the child), which loaded with a value of .144. This item was detected as problematic in both exploratory factor analysis and reliability analysis of pilot study data. Still, it was retained to be checked in the main study. As the same problem appeared in the main study, it was decided to exclude it from the scale and report the item information as descriptive statistics. After item deletion, results of the CFA showed that all items in the model loaded

significantly to the respective factors with loadings ranging from .608 to .678 for content, .697 to .795 for child participation, and .775 to .789 for sharing. These factors were also correlated with each other as .869 between content and sharing, .790 between child participation and sharing, and .857 between content and child participation. Figure 4.1. presents the model. The model fit indices indicated a reasonable fit with $\chi^2/df = 3.788$, $p = .00$, CFI = .966, NFI = .952, and RMSEA = .080. To ensure clarity, the standardized estimates are presented in Table 4.11.

Moreover, Cronbach alpha coefficients were estimated for each subscale. These were .838 for content, .840 for child participation, and .823 for sharing. Item total correlations also indicated that items are correlated with the total scale (ranging from .52 to .68 for “content,” from .59 to .74 for “child participation,” and from .65 to .71 for “sharing”) (Table 4.12).

Table 4.11.

Standardized Regression Weights of Portfolio Practice Scale

Item	Factor	Estimate
1	Content	.608
2	Content	.633
4	Content	.693
5	Content	.614
6	Content	.678
10	Content	.675
3	Child Participation	.697
7	Child Participation	.756
8	Child Participation	.710
9	Child Participation	.795
11	Sharing	.785
12	Sharing	.789
13	Sharing	.775

Table 4.12.

Cronbach Alpha Coefficients, Item-total Correlations, and Alpha if Item Deleted Values

	Cronbach Alpha	Cronbach's Alpha if Item Deleted	Corrected Item-Total Correlation
Content	.838		
Item 1		.809	.630
Item 2		.810	.625
Item 4		.814	.603
Item 5		.801	.682
Item 6		.802	.666
Item 10		.835	.519
Child participation	.840		
Item 3		.835	.585
Item 7		.772	.737
Item 8		.792	.691
Item 9		.790	.693
Sharing	.823		
Item 11		.781	.654
Item 12		.727	.711
Item 13		.760	.683

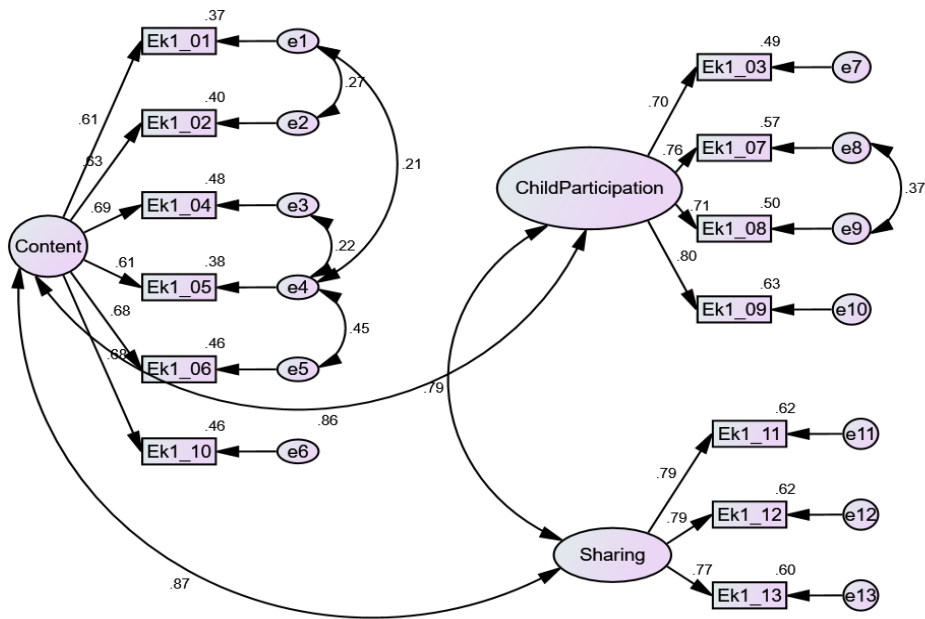


Figure 4.1. Diagram of Portfolio Practice Scale

4.3.1.2. Portfolio norms scale

The hypothesized model was a two-factor structure with ten items as personal norms (items 2, 3, 4, 9) and subjective norms (items 1, 5, 6, 7, 8, 10). Since the initial attempt did not produce an acceptable model fit ($X^2/df = 4.427$, $p = .00$, $CFI = .942$, $NFI = .927$, $RMSEA = .089$), modification indices were checked and high error covariances of two pairs of items were estimated. These items (item4-item9, and item1-item6) were considered to load on the same factor, so the error terms of these indicators were allowed to covary. Following these modifications, all items loaded significantly to respective factors with loadings ranging from .592 to .963 for personal norms and .411 to .880 for subjective norms. The correlation between these factors was also -.355. Figure 4.2 presents the model. The model's fit indices indicated a reasonable fit with $X^2/df = 3.726$, $p = .00$, $CFI = .957$, $NFI = .952$, and $RMSEA = .079$. To ensure clarity, the standardized estimates are presented in Table 4.13.

Moreover, Cronbach alpha coefficients were estimated for each subscale. These were .866 for personal norms and .825 for subjective norms. Item total correlations also indicated that items are correlated with the total scale (from .60 to .83 for “personal norms” and from .42 to .75 for “subjective norms”) (Table 4.14).

Table 4.13.

Standardized Regression Weight of Portfolio Norms Scale

Item	Factor	Estimate
2	Personal	.885
3	Personal	.963
4	Personal	.592
9	Personal	.669
1	Subjective	.508
5	Subjective	.691
6	Subjective	.411
7	Subjective	.736
8	Subjective	.880
10	Subjective	.705

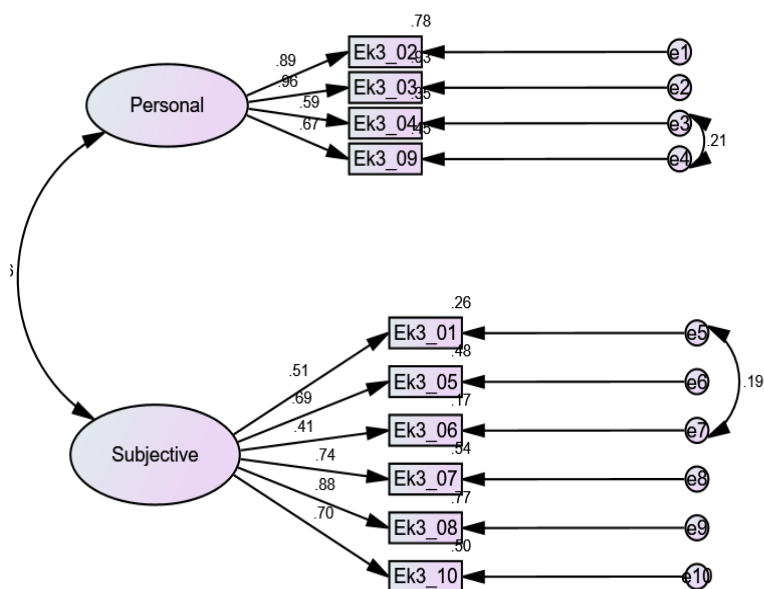


Figure 4.2. Diagram of Portfolio Norms Scale

Table 4.14.

Cronbach Alpha Coefficients, Item-total Correlations, and Alpha if Item Deleted Values

	Cronbach Alpha	Cronbach's Alpha if Item Deleted	Corrected Item-Total Correlation
Personal norms	.866		
Item 2		.804	.774
Item 3		.778	.833
Item 4		.871	.602
Item 9		.850	.664
Subjective norms	.825		
Item 1		.816	.505
Item 5		.788	.653
Item 6		.828	.422
Item 7		.792	.617
Item 8		.761	.754
Item 10		.791	.625

4.3.1.3. Portfolio related behavioral beliefs scale

The hypothesized model was a one-factor structure with 15 items as behavioral beliefs. Since the initial attempt did not produce an acceptable model fit ($X^2/df = 15.256$, $p = .00$, CFI = .831, NFI = .822, RMSEA = .181), modification indices were checked and high error covariances of ten pairs of items (item3-item4, item1-item2, item7-item8, item6-item7, item12-item13, item8-item10, item12-item14, item5-item6, item13-item14, and item9-item13) were estimated. Following these modifications, all items loaded significantly to respective factors with loadings ranging from .721 to .888. Figure 4.3 presents the model. The model's fit indices indicated a reasonable fit with $X^2/df = 5.347$, $p = .00$, CFI = .964, NFI = .955, and RMSEA = .08. To ensure clarity, the standardized estimates are presented in Table 4.15. Moreover, Cronbach alpha coefficient was estimated as .974. Item total correlations also indicated that items are correlated with the total scale (from .74 to .88) (Table 4.16).

Table 4.15.

Standardized Regression Weights of Portfolio related Behavioral Beliefs Scale

Item	Factor	Estimate
1	Behavioral Beliefs	.756
2	Behavioral Beliefs	.824
3	Behavioral Beliefs	.884
4	Behavioral Beliefs	.842
5	Behavioral Beliefs	.853
6	Behavioral Beliefs	.851
7	Behavioral Beliefs	.849
8	Behavioral Beliefs	.821
9	Behavioral Beliefs	.835
10	Behavioral Beliefs	.888
11	Behavioral Beliefs	.721
12	Behavioral Beliefs	.767
13	Behavioral Beliefs	.859
14	Behavioral Beliefs	.757
15	Behavioral Beliefs	.863

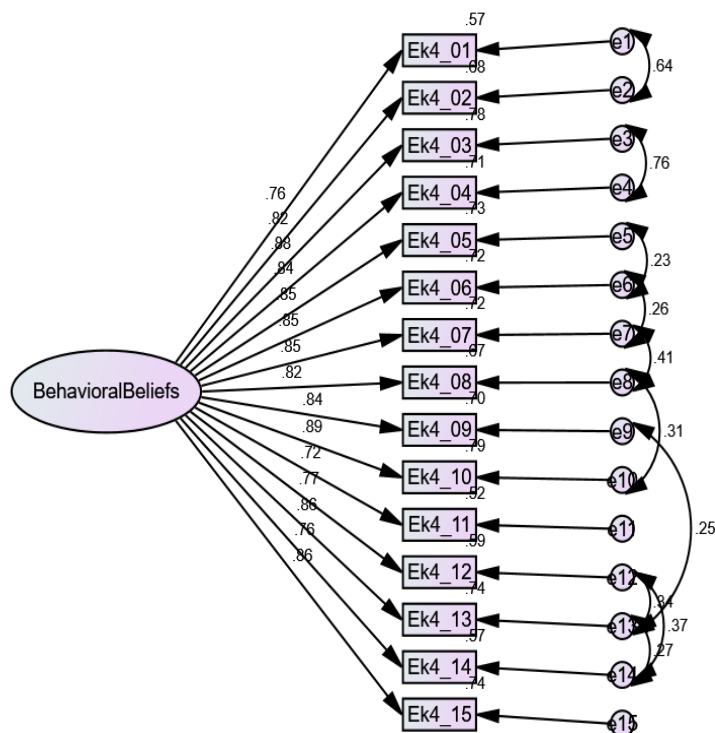


Figure 4.3. Diagram of Portfolio related Behavioral Beliefs Scale

Table 4.16.

Cronbach Alpha Coefficients, Item-total Correlations, and Alpha if Item Deleted Values

	Cronbach Alpha	Cronbach's Alpha if Item Deleted	Corrected Item-Total Correlation
Behavioral beliefs	.974		
Item 1		.973	.786
Item 2		.972	.848
Item 3		.971	.880
Item 4		.972	.835
Item 5		.972	.856
Item 6		.972	.856
Item 7		.972	.855
Item 8		.972	.824
Item 9		.972	.848
Item 10		.971	.871
Item 11		.974	.743
Item 12		.972	.803
Item 13		.971	.869
Item 14		.973	.789
Item 15		.972	.850

4.3.1.4. Portfolio related attitudes scale

The hypothesized model was a one-factor structure with seven items as attitude. Since the initial attempt did not produce an acceptable model fit ($X^2/df = 5.57$, $p = .000$, CFI = .981, NFI = .977, RMSEA = .105), modification indices were checked and high error covariances of two pairs of items (item5-item6 and item1-item2) were estimated. Following these modifications, all items loaded significantly to respective factors with loadings ranging from .829 to .915. Figure 4.4 presents the model. The model fit indices indicated reasonable fit with $X^2/df = 3.244$, $p = .00$, CFI = .992, NFI = .988, and RMSEA = .072. To ensure clarity, the standardized estimates are presented in Table 4.17. Moreover, Cronbach alpha coefficient was estimated as .963. Item total correlations also indicated that items are correlated with the total scale (from .83 to .91) (Table 4.18).

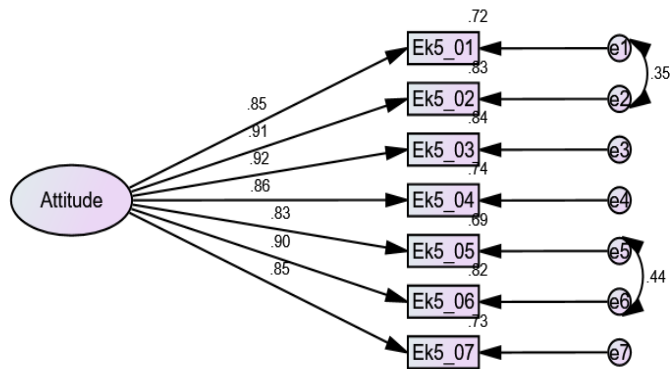


Figure 4.4. Diagram of Portfolio related Attitude Scale

Table 4.17.

Standardized Regression Weight of Portfolio related Attitude Scale

Item	Factor	Estimate
1	Attitude	.846
2	Attitude	.910
3	Attitude	.915
4	Attitude	.859
5	Attitude	.829
6	Attitude	.903
7	Attitude	.854

Table 4.18.

Cronbach Alpha Coefficients, Item-total Correlations, and Alpha if Item Deleted Values

	Cronbach Alpha	Cronbach's Alpha if Item Deleted	Corrected Item-Total Correlation
Attitude	.963		
Item 1		.957	.868
Item 2		.954	.899
Item 3		.955	.884
Item 4		.958	.852
Item 5		.959	.837
Item 6		.953	.910
Item 7		.959	.830

4.3.1.5. Portfolio related self-efficacy beliefs scale

The hypothesized model was a one-factor structure with 14 items as self-efficacy beliefs. Since the initial attempt did not produce an acceptable model fit ($X^2/df = 11.720$, $p = .00$, CFI = .820, NFI = .807, RMSEA = .157), modification indices were checked and high error covariances of eight pairs of items (item9-item11, item1-item2, item3-item6, item5-item12, item2-item3, item7-item13, item11-item12, and item13-item14) were estimated. Following these modifications, all items loaded significantly to respective factors with loadings ranging from .670 to .817. Figure 4.5 presents the model. The model's fit indices indicated reasonable fit with $X^2/df = 3.929$, $p = .00$, CFI = .966, NFI = .962, and RMSEA = .080. To ensure clarity, the standardized estimates are presented in Table 4.19. Moreover, Cronbach alpha coefficient was estimated as .952. Item total correlations also indicated that items are correlated with the total scale (from .68 to .81) (Table 4.20).

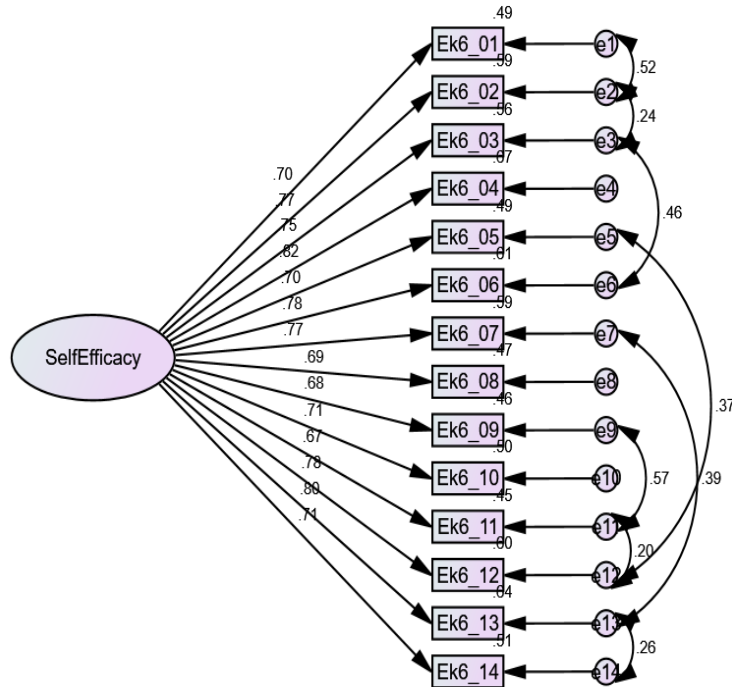


Figure 4.5. Diagram of Portfolio related Self-Efficacy Beliefs Scale

Table 4.19.

Standardized Regression Weight of Portfolio related Self-Efficacy Beliefs Scale

Item	Factor	Estimate
1	Self-Efficacy	.698
2	Self-Efficacy	.766
3	Self-Efficacy	.747
4	Self-Efficacy	.817
5	Self-Efficacy	.699
6	Self-Efficacy	.779
7	Self-Efficacy	.769
8	Self-Efficacy	.688
9	Self-Efficacy	.679
10	Self-Efficacy	.705
11	Self-Efficacy	.670
12	Self-Efficacy	.776
13	Self-Efficacy	.801
14	Self-Efficacy	.714

Table 4.20.

Cronbach Alpha Coefficients, Item-total Correlations, and Alpha if Item Deleted Values

	Cronbach Alpha	Cronbach's Alpha if Item Deleted	Corrected Item-Total Correlation
Self-efficacy	.952		
Item 1		.949	.711
Item 2		.947	.776
Item 3		.947	.771
Item 4		.947	.784
Item 5		.949	.720
Item 6		.947	.783
Item 7		.947	.769
Item 8		.950	.677
Item 9		.949	.711
Item 10		.949	.707
Item 11		.949	.705
Item 12		.946	.810
Item 13		.946	.818
Item 14		.949	.718

4.3.1.6. Portfolio related barrier perceptions scale

The hypothesized model proposed a one-factor structure with 11 items as barrier perceptions. Since the initial attempt did not produce an acceptable model fit ($X^2/df = 21.118$, $p = .00$, CFI = .837, NFI = .829, RMSEA = .115), modification indices were checked and high error covariances of seven pairs of items (item10-item11, item1-item2, item3-item4, item5-item6, item8-item9, item3-item6, and item4-item6) were estimated. Following these modifications, all items loaded significantly to respective factors with loadings ranging from .571 to .773. Figure 4.6 presents the model. The model's fit indices indicated a reasonable fit with $X^2/df = 3.883$, $p = .00$, CFI = .968, NFI = .958, and RMSEA = .080. In addition, to ensure clarity, the standardized estimates are presented in Table 4.21. Moreover, Cronbach alpha coefficient was estimated as .914. Item total correlations also indicated that items are correlated with the total scale (from .59 to .73) (Table 4.22).

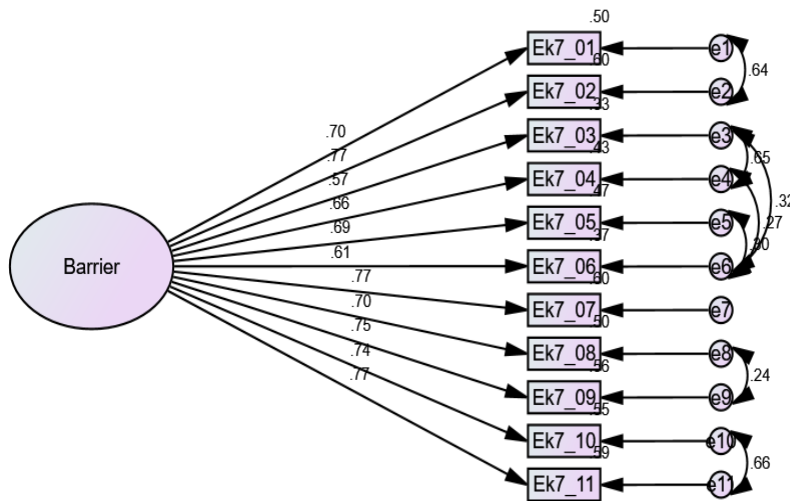


Figure 4.6. Diagram of Portfolio related Barrier Perceptions Scale

Table 4.21.

Standardized Regression Weight of Portfolio related Barrier Perceptions Scale

Item	Factor	Estimate
1	Barrier	.704
2	Barrier	.772
3	Barrier	.571
4	Barrier	.657
5	Barrier	.688
6	Barrier	.607
7	Barrier	.773
8	Barrier	.704
9	Barrier	.748
10	Barrier	.744
11	Barrier	.771

Table 4.22.

Cronbach Alpha Coefficients, Item-total Correlations, and Alpha if Item Deleted Values

	Cronbach Alpha	Cronbach's Alpha if Item Deleted	Corrected Item-Total Correlation
Barrier perception	.914		
Item 1		.907	.656
Item 2		.905	.714
Item 3		.910	.590
Item 4		.907	.657
Item 5		.906	.674
Item 6		.910	.605
Item 7		.906	.678
Item 8		.908	.652
Item 9		.905	.704
Item 10		.904	.714
Item 11		.904	.726

4.3.1.7. Portfolio-related intention scale

The hypothesized model was a one-factor structure with four items as intentions. Since the initial attempt did not produce an acceptable model fit ($X^2/df = 8.504$, $p = .00$, CFI = .983, NFI = .981, RMSEA = .131), modification indices were checked and high error covariance of one pair of items (item1-item4) was estimated. Following this modification, all items loaded significantly to respective factors with loadings ranging from .779 to .846. Figure 4.7 presents the model. The model's fit indices indicated well fit with $X^2/df = .223$, $p = .00$, CFI = 1.000, NFI = 1.000, and RMSEA = .000. In addition, to ensure clarity, the standardized estimates are presented in Table 4.23. Moreover, Cronbach alpha coefficient was estimated as .901. Item total correlations also indicated that items are correlated with the total scale (from .73 to .83) (Table 4.24).

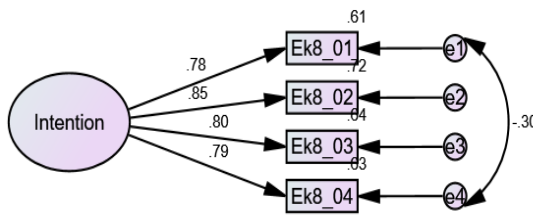


Figure 4.7. Diagram of Portfolio related Intention Scale

Table 4.23.

Standardized Regression Weight of Portfolio related Intention Scale

Item	Factor	Estimate
1	Intention	.779
2	Intention	.846
3	Intention	.802
4	Intention	.792

Table.4.24.

Cronbach Alpha Coefficients, Item-total Correlations, and Alpha if Item Deleted Values

	Cronbach Alpha	Cronbach's Alpha if Item Deleted	Corrected Item-Total Correlation
Intention	.901		
Item 1		.879	.761
Item 2		.856	.828
Item 3		.862	.808
Item 4		.892	.725

4.3.1.8. Child-teacher centered beliefs scale

The hypothesized model was a two-factor structure with 12 items as child-centered beliefs (items 3, 5, 7, 9, 11) and teacher-centered beliefs (items 1, 2, 4, 6, 8, 10, 12). The initial attempt did not produce an acceptable model fit ($X^2/df = 2.843$, $p = .00$, CFI = .865, NFI = .851, RMSEA = .065). Cronbach's alpha was also calculated .68 for the second factor. To investigate the reason for low reliability, reliability output was examined for each item. Item 4's (Teachers should provide educational opportunities that do not give flexibility to children) corrected item-total correlation was found to be low (.201), suggested to reach at least .35 (Netemeyer et al., 2003). Low values indicate that the item is measuring something different from the scale as a whole. If overall reliability is low, it is suggested to consider removing items with low item-total correlations (Pallant, 2007). It was stated that deleting items with low scale correlation will improve the alpha level (McCoach et al., 2013). In this regard, with respect to reliability findings in both pilot and main study, it was decided that item 4 is problematic, and it was excluded from the scale.

Modification indices were also checked and high error covariances of three pairs of items were estimated. These items (item11-item12, item9-item12, and item1-item2) were considered to load on the same factor, so the error terms of these indicators were allowed to covary. Following these modifications, all items loaded significantly to respective factors with loadings ranging from .411 to .776 for child-centered beliefs

and .409 and .586 for teacher-centered beliefs. These factors were also correlated with each other as: -.317. Figure 4.8 presents the model. The model's fit indices indicated reasonable fit with $X^2/df = 2.145$, $p = .00$, CFI = .960, NFI = .957, and RMSEA = .051. In addition, to ensure clarity the standardized estimates were also presented in Table 4.25.

Moreover, Cronbach alpha coefficients were estimated for each subscale. These were .71 for child-centered beliefs, and .70 for teacher-centered beliefs. Item total correlations also indicated that items are correlated with the total scale (from .40 to .60 for “child-centered beliefs,” and from .39 to .48 for “teacher-centered beliefs”) (Table 4.26).

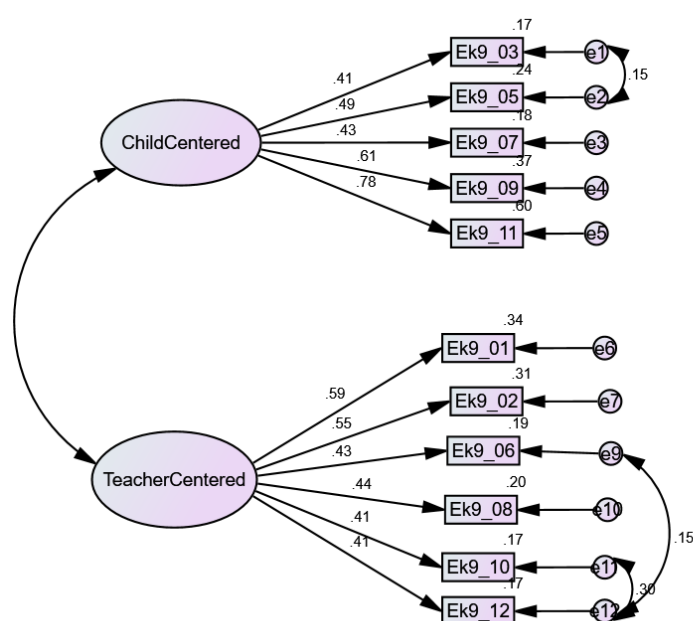


Figure 4.8. Diagram of Child-Teacher Centered Beliefs Scale

Table 4.25.

Standardized Regression Weight of Child-Teacher Centered Beliefs Scale

Item	Factor	Estimate
3	Child Centered	.411
5	Child Centered	.495
7	Child Centered	.429
9	Child Centered	.610
11	Child Centered	.776
1	Teacher Centered	.586
2	Teacher Centered	.553
6	Teacher Centered	.435
8	Teacher Centered	.442
10	Teacher Centered	.409
12	Teacher Centered	.411

Table 4.26.

Cronbach Alpha Coefficients, Item-total Correlations, and Alpha if Item Deleted Values

	Cronbach Alpha	Cronbach's Alpha if Item Deleted	Corrected Item-Total Correlation
Child-centered beliefs	.71		
Item 3		.702	.400
Item 5		.638	.495
Item 7		.669	.444
Item 9		.636	.493
Item 11		.615	.599
Teacher-centered beliefs	.70		
Item 1		.637	.442
Item 2		.652	.399
Item 6		.653	.403
Item 8		.671	.390
Item 10		.635	.449
Item 12		.621	.484

4.3.2. Descriptive statistics on teachers' portfolio related practices, beliefs, perceptions, norms, attitudes, and intention

Table 4.27 and 4.28 summarize descriptive statistics related to three dimensions of portfolio practices (content, child participation, and sharing). The results showed that teachers have approximately similar scores in the construct of content ($M = 3.65$, $SD = .78$), child participation ($M = 3.47$, $SD = .92$) and sharing ($M = 3.54$, $SD = 1.02$). Related to content, they mostly agreed on “Including different products that reflect the development of children in different areas (ex: cognitive, behavioral, social-emotional)” ($M = 3.99$, $SD = .901$). In terms of child participation dimension, they mostly reported, “Enabling children to examine their own portfolio” ($M = 3.81$, $SD = 1.06$). Moreover, regarding sharing, their most frequent practice was “Communicating with parents about the portfolio in matters such as supplying materials, organizing portfolio sharing days” ($M = 3.78$, $SD = 1.13$).

Table 4.27.
Practice Scale Descriptive Statistics

Factor	<i>M</i>	<i>SD</i>	Number of items
Content	3.65	0.78	6
Child participation	3.47	0.92	4
Sharing	3.54	1.02	3

Note: 5-point scale

Table 4.28.
Practice Scale Item Descriptive Statistics

Factor	Item no	Item	<i>M</i>	<i>SD</i>
Content	5	Including different products that reflect the development of children in different areas (ex: cognitive, behavioral, social-emotional)	3.99	.901
Child participation	7	Enabling children to examine their own portfolio	3.81	1.06
Sharing	12	Communicating with parents about the portfolio in matters such as supplying materials, organizing portfolio sharing days	3.78	1.13

Note: 5-point scale

Descriptive statistics about two dimensions of norms scale are presented in Table 4.29 and Table 4.30. Results showed that teachers have higher personal norms ($M = 5.17$, $SD = 1.44$) in comparison to subjective norms ($M = 2.51$, $SD = 1.30$). In terms of personal norms, they mostly agreed on “Use of portfolios enables me to effectively assess the children’s growth and development” ($M = 5.47$, $SD = 1.53$). On the other side, in terms of subjective norms, they mostly reported that “I use portfolios to meet parents’ and families’ expectation of me” ($M = 2.5$, $SD = 1.82$).

Table 4.29.
Norms Scale Descriptive Statistics

Factor	<i>M</i>	<i>SD</i>	Number of items
Personal norms	5.17	1.44	4
Subjective norms	2.51	1.30	6

Note: 7-point scale

Table 4.30.
Norms Scale Item Descriptive Statistics

Factor	Item no	Item	<i>M</i>	<i>SD</i>
Personal norm	4	Use of portfolios enables me to effectively assess the children’s growth and development.	5.47	1.53
Subjective norm	1	I use portfolios to meet parents’ and families’ expectation of me.	2.5	1.82

Note: 7-point scale

Table 4.31 and 4.32 summarize descriptive statistics for all scales which have one dimension. As seen in the table, teachers have high behavioral beliefs ($M = 79.81$, $SD = 19.00$), self-efficacy beliefs ($M = 66.42$, $SD = 14.60$), and positive attitudes ($M = 39.38$, $SD = 10.53$) in practicing portfolio assessment. They mostly agreed on portfolios’ contribution to “follow individual development of children” ($M = 5.70$, $SD = 1.29$), and therefore, they view it “helpful to follow development” ($M = 5.91$, $SD = 1.63$). Moreover, they mostly believe in themselves about “organizing the portfolio content” ($M = 5.11$, $SD = 1.20$), and they intend to practice portfolio creation ($M = 20.26$, $SD = 5.91$). “I will use portfolio next year” obtained the highest mean ($M = 5.28$, $SD = 1.69$). However, it was also found that they have barrier perceptions

related to portfolio assessment practices ($M = 44.77$, $SD = 15.39$), and they mostly reported “class size” as a barrier ($M = 4.87$, $SD = 1.86$).

Table 4.31.
One factor Scales' Descriptive Statistics

Factor	<i>M</i>	<i>SD</i>	Number of items
Behavioral beliefs	79.81	19.00	15
Attitude	39.38	10.53	7
Self-efficacy beliefs	66.42	14.60	14
Barrier perceptions	44.77	15.30	11
Intention	20.26	5.91	4

Note: 7-point scale

Table 4.32.
One Factor Scales' Item Descriptive Statistics

Factor	Item no	Item	<i>M</i>	<i>SD</i>
Behavioral beliefs	8	Follow individual development of children	5.70	1.29
Attitude	7	Helpful to follow development	5.91	1.63
Self-efficacy beliefs	4	How well can you organize the portfolio content?	5.11	1.20
Barrier perceptions	3	Class size	4.87	1.86
Intention	1	I will use portfolio next year	5.28	1.69

Note: 7-point scale

Table 4.33 and 4.34 display the descriptive statistics for the child-teacher centered beliefs scale. Teachers were found to have higher child-centered beliefs ($M = 4.84$, $SD = .37$) in comparison to teacher-centered beliefs ($M = 2.27$, $SD = .83$). In terms of child-centered beliefs, teachers mostly agreed that “The teacher should take into consideration children’s developmental level when planning the educational process” ($M = 4.94$, $SD = .37$). On the other side, in terms of teacher-centered beliefs, they mostly agreed, “Children can only learn by being presented information to them repeatedly” ($M = 2.81$, $SD = 1.44$).

Table 4.33.
Child-Teacher Centered Beliefs Scale Descriptive Statistics

Factor	<i>M</i>	<i>SD</i>	Number of items
Child-centered beliefs	4.84	.37	5
Teacher-centered beliefs	2.27	.83	6

Note: 5-point scale

Table 4.34.
Child-Teacher Centered Beliefs Scale Item Descriptive Statistics

Factor	Item no	Item	<i>M</i>	<i>SD</i>
Child-centered beliefs	7	The teacher should take into consideration children's developmental level when planning the educational process.	4.94	.37
Teacher-centered beliefs	12	Children can only learn by being presented information to them repeatedly.	2.81	1.44

Note: 5-point scale

Table 4.35 displays item descriptive statistics about portfolio content scale. Upon comparison of item mean values, it was found that teachers mostly include “art activities” ($M = 4.52$, $SD = .75$), “reading-writing preparation activities” ($M = 4.39$, $SD = .83$), “worksheets” ($M = 4.33$, $SD = .83$), “personal information about the child” ($M = 4.30$, $SD = .99$), and “math/science activities” ($M = 4.18$, $SD = 1.02$) in their child portfolio. The least frequently included items are “standard test findings” ($M = 2.06$, $SD = 1.23$), “suggestions for the next teacher of the child” ($M = 2.41$, $SD = 1.38$), and “suggestions for families” ($M = 2.98$, $SD = 1.44$).

Table 4.35.
Portfolio Content Scale Descriptive Statistics

	<i>M</i>	<i>SD</i>
1. Personal information about the child	4.30	0.995
2. Child health records	3.34	1.480
3. Observation notes	3.76	1.157
4. Interview notes	3.53	1.263
5. Audio-video recordings of in-class activities, photos	3.51	1.262
6. Audio-video recordings of out-of-class activities, photos	3.31	1.282
7. Assessment criterions like checklist, rating scale, rubric	3.11	1.357
8. Development Observation form	3.87	1.190
9. Development Observation Report	3.95	1.198
10. Notes from other experts about child	3.20	1.446
11. The child's own reflections, comments about own self	3.30	1.234
12. The teacher's reflections about the child	3.51	1.219
13. Concept maps showing learned concepts	3.34	1.329
14. Worksheets	4.33	0.833
15. Reading-Writing Preparation Activities	4.39	0.829
16. Art activities	4.52	0.752
17. Drama activities	3.63	1.333
18. Language activities	3.91	1.214
19. Math/science activities	4.18	1.023
20. Social activities	3.96	1.139
21. Physical activities	3.82	1.249
22. Family information form, questionnaire, interview notes	3.69	1.350
23. Notes and photos from family, activities at home)	3.63	1.319
24. Suggestions for families	2.98	1.441
25. Suggestions for the next teacher of child	2.41	1.378
26. Standard test findings	2.06	1.232

Note: 5-point scale

4.3.3. Examination of teachers' portfolio practices with respect to a variety of variables

As there were teachers who were both practicing and not practicing portfolio assessment, the present study aimed to investigate whether there is a significant difference between these groups of teachers on behavioral beliefs, attitudes, self-efficacy beliefs, barrier perceptions, intention, and child-teacher centered beliefs. MANOVA was performed to check this hypothesis.

Before running MANOVA, required assumptions, i.e., independent observation, univariate and multivariate normality and outliers, homogeneity of population covariance matrix for dependent variables (Tabachnick & Fidell, 2019) were examined. There was no relationship between residuals. Normality was investigated with skewness and kurtosis values and histograms. Histograms showed only slightly skewed distribution, and skewness and kurtosis values were in the suggested range of -3 and +3. Multivariate normality and outliers were also investigated with Mardia's test and Mahalanobis Distances. These are presented in the following section.

4.3.3.1. Examination of teachers' portfolio related behavioral beliefs, attitudes, self-efficacy beliefs, barrier perceptions, intention, and child-teacher centered beliefs with respect to practicing portfolio assessment

One-way MANOVA was conducted to investigate whether behavioral beliefs, attitudes, self-efficacy beliefs, barrier perceptions, intention, child-centered beliefs, and teacher-centered beliefs differ between teachers who were practicing ($n = 430$) and not practicing portfolio assessment ($n = 164$). The maximum value of Mahalanobis distance was found to be 110, but the suggested critical value for seven dependent variables is 24.32 (Pallant, 2007). Eleven multivariate outliers were removed from the data set. Moreover, homogeneity of variance-covariance matrices was seen to be violated in this analysis (Box's $M = 90.30$, $p < .05$). Levene's test also indicated violation of equality of variance assumption for two of the dependent variables (behavioral beliefs and attitude). It is advocated that univariate F is robust to violations when there are at least 20 degrees of freedom for error in a univariate

ANOVA (Tabacnick & Fidell, 2019). By considering these, the multivariate effect was evaluated based on Pillai's trace (Tabachnick & Fidell, 2019). Although significance was assessed at an alpha level of .05 for multivariate tests, significance for the univariate analyses was set with an alpha level of .01 based on Bonferroni correction.

MANOVA resulted in a significant Pillai's Trace Test with $F(7, 586) = 16.837, p = .00, \eta^2 = .167$. After multivariate analysis, univariate statistics were examined. To reduce the probability of Type I error rate, Bonferroni Adjustment was applied in interpretation. Since there were seven dependent variables in this analysis, .05 was divided by seven and the new alpha level was set as .007. Univariate analysis results were checked according to this new alpha level.

Univariate results demonstrated a significant difference for teachers' portfolio practice in *behavioral beliefs*, *attitude*, *self-efficacy beliefs*, *barrier perception*, and *intention*. At the same time, no difference was found in two dependent variables: *child-centered beliefs* and *teacher-centered beliefs*. Follow-up univariate tests showed that teachers who were practicing portfolio assessment had significantly higher scores than teachers who were not practicing it on behavioral beliefs ($M_{user} = 82.07, SD = .87; M_{non-user} = 75.95, SD = .1.41$), attitude ($M_{user} = 41.32, SD = .48; M_{non-user} = 35.67, SD = .77$), self-efficacy beliefs ($M_{user} = 67.86, SD = .69; M_{non-user} = 62.68, SD = 1.11$), and intention ($M_{user} = 21.74, SD = .26; M_{non-user} = 16.87, SD = .42$). On the other hand, it was also found that teachers who were practicing portfolio assessment had significantly lower scores on barrier perceptions ($M = 43.84, SD = .73$) than teachers who were not ($M = 47.40, SD = 1.19$). In contrast, no significant differences existed between the groups of teachers who were practicing and not practicing portfolio assessment on child-centered beliefs ($M_{user} = 24.32, SD = .06; M_{non-user} = 24.45, SD = .10$) and teacher-centered beliefs ($M_{user} = 13.75, SD = .23; M_{non-user} = 12.95, SD = .38$) (Table 4.36 and 4.37).

Table 4.36.

Descriptive Statistics

Dependent Variable	Practicing Portfolio	Mean	Std. Error
Behavioral beliefs	1	82.074	0.870
	2	75.951	1.408
Attitude	1	41.321	0.475
	2	35.665	0.769
Self-efficacy beliefs	1	67.863	0.688
	2	62.677	1.114
Barrier	1	43.835	0.732
	2	47.402	1.185
Intention	1	21.735	0.259
	2	16.872	0.419
Child-centered	1	24.319	0.062
	2	24.445	0.100
Teacher-centered	1	13.747	0.234
	2	12.945	0.378

Table 4.37.

Multivariate Effect

	<i>F</i>	<i>p</i>	η^2
Behavioral Beliefs	13.687	.00	.023
Attitude	39.196	.00	.062
Self-efficacy Beliefs	15.687	.00	.026
Barrier Perceptions	6.566	.01	.011
Intention	97.343	.00	.141
Child-centered beliefs	1.17	.28	.002
Teacher-centered beliefs	3.25	.07	.005

4.3.4. Predictors of teachers' portfolio practices

Three separate Hierarchical Multiple Regression analyses were conducted to investigate whether self-efficacy beliefs and intention predict the portfolio practices in terms of content, child participation, and sharing, after controlling for the influence of teaching experience. To control for inflated Type 1 error, Bonferroni adjustment was applied by dividing the alpha level of .05 by the number of analyses intended (Tabachnick & Fidell, 2019). In this respect, .05 divided by three and a new alpha level of .017 was used in interpretations as a guide.

Assumptions of multiple linear regression for each dependent variable (content, child participation, and sharing) were evaluated based on (1) sample size, (2) normality, linearity, homoscedasticity, and independence of residuals, (3) outliers, and (4) multicollinearity and singularity (Tabachnick & Fidell, 2019). First, the sample size was assessed considering the formulas suggested in Tabachnick and Fidell (2019). It is suggested that the minimum sample size should be $N \geq 50 + 8m$, where m stands for the number of independent variables. There were three independent variables and 405 participants in this study, which seems satisfactory to meet the minimum requirement to conduct Hierarchical Multiple Linear Regression. Secondly, normality, linearity, homoscedasticity, and independence of residuals were assessed by means of examining residuals scatterplots and normal probability plots. Normality plots indicated normality, and scatterplots of standardized residuals also provided a rectangular distribution with concentration of the scores around the center, indicating variance of the residuals and linearity in the data set. Furthermore, for the independence of residuals, it is suggested that if the Durbin-Watson value is closer to 2, it provides evidence for the independence of residuals (Field, 2005). Durbin-Watson values were found as 1.80 for content, 2.03 for child participation, and 1.98 for sharing, meeting the assumption.

Thirdly, possible outliers in the data were examined. Standardized residual values were inspected. Only three values above three were detected for content, child participation, and sharing in casewise diagnostics. Mahalanobis distances did not

indicate an outlier. Moreover, Cook distance was also found to be .055, .049, and .059 for content, child participation, and sharing, respectively, indicating no value above one, as desired. Lastly, multicollinearity was checked by inspecting Tolerance and Variance Inflation Factor (VIF) scores. Field (2005) suggests the cut-off points as being less than .10 for Tolerance value and above 10 for VIF value indicate a problem with multicollinearity. Tolerance value and VIF values were found in the suggested range for teaching experience (Tolerance = .99, VIF = 1.01), self-efficacy (Tolerance = .80, VIF = 1.25), and intention (Tolerance = .80, VIF = 1.24), which indicates no violation of the multicollinearity assumption within this data set. Moreover, there were not any variables correlated with each other in .90 as suggested, with a range from .018 to .471.

4.3.4.1. Regression results

Before investigating the combined impact of the predictor variables on the dependent variables, correlations among them and also their relation to each dependent variable were examined, presented in Table 4.38.

Table 4.38.

Correlation between the Variables

	Self-efficacy beliefs	Intention	Teaching Experience
Content	.471	.412	-.064
Child participation	.421	.332	-.022
Sharing	.412	.335	-.018
Self-efficacy beliefs		.442	-.072
Intention	.442		-.027

When the results of Hierarchical Multiple Regression analysis were examined in order to explore the influence of variables on the implementation of portfolio practices in terms of content, child participation and sharing, in the first step, teaching experience did not predict them. In the second step, self-efficacy beliefs and intention significantly predicted content, child participation, and sharing after controlling for the influence of teaching experience. To investigate the contribution of each independent variable, beta values were reported below. Part correlation statistics were also provided, which indicate the variance explained uniquely by that variable.

- **Content:** In the first step, teaching experience did not predict the content $F(1, 436) = 1.820, p > .05$. In the second step, when intention and self-efficacy beliefs were entered into equation after controlling for the effect of teaching experience, the model was significant, $F(3, 434) = 54.648, p < .05$. This model explained 27% ($R^2 = .274$) of the variance in content. Both self-efficacy beliefs ($\beta = .356, p < .017$) and intention ($\beta = .253, p < .017$) were found as significant predictors (Table 4.39)

Table 4.39.

Coefficients for Hierarchical Multiple Regression on Content

		B	Std. Error	β	t	Sig.	Part
1	(Constant)	22.504	.494		45.573	.000	
	Teaching experience	-.042	.031	-.064	-1.349	.178	-.064
2	(Constant)	9.336	1.120		8.334	.000	
	Teaching experience	-.021	.027	-.032	-.783	.434	-.032
	Self-efficacy	.119	.015	.356	7.796	.000	.319
	Intention	.223	.040	.253	5.559	.000	.227

- **Child participation:** In the first step, teaching experience did not predict the child participation $F(1, 436) = .209, p > .05$. In the second step, when intention and self-efficacy beliefs were entered into equation after controlling for the effect of teaching experience, the model was significant, $F(3, 434) = 37.007, p < .05$. This model explained 20% ($R^2 = .204$) of the variance in child participation. Both self-efficacy beliefs ($\beta = .342, p < .017$) and intention ($\beta = .181, p < .017$) were found as significant predictors (Table 4.40).

Table 4.40.

Coefficients for Hierarchical Multiple Regression on Child Participation

		B	Std. Error	β	t	Sig.	Part
1	(Constant)	14.031	.390		35.949	.000	
	Teaching experience	-.011	.025	-.022	-.457	.648	-.022
2	(Constant)	5.014	.926		5.416	.000	
	Teaching experience	.004	.022	.007	.175	.862	.007
	Self-efficacy	.090	.013	.342	7.140	.000	.306
	Intention	.125	.033	.181	3.783	.000	.162

- **Sharing:** In the first step, teaching experience did not predict the sharing $F(1, 436) = .137, p > .05$. In the second step, when intention and self-efficacy beliefs were entered into equation after controlling for the effect of teaching experience, the model was significant, $F(3, 434) = 35.858, p < .05$. This model explained 20% ($R^2 = .199$) of the variance in sharing. Both self-efficacy beliefs ($\beta = .328, p < .017$) and intention ($\beta = .190, p < .017$) were found as significant predictors (Table 4.41).

Table 4.41.

Coefficients for Hierarchical Multiple Regression on Sharing

		B	Std. Error	β	t	Sig.	Part
1	(Constant)	10.731	.327		32.864	.000	
	Teaching experience	-.008	.021	-.018	-.371	.711	-.018
2	(Constant)	3.275	.777		4.215	.000	
	Teaching experience	.005	.019	.011	.253	.800	.011
	Self-efficacy	.072	.011	.328	6.838	.000	.294
	Intention	.110	.028	.190	3.967	.000	.170

4.3.5. Summary of results

In this study, the CFA and reliability results of each scale were initially explained. After that, each scale was examined in detail with descriptive statistics by reporting mean, standard deviation, minimum, and maximum values. According to these, teachers were found to have similar scores in content, child participation, and sharing in the portfolio process. It was found that different kinds of activities, worksheets, and personal information about the child are the most frequently included components in child portfolios. Moreover, teachers were found to have high scores in internal constructs like personal norms, behavioral beliefs, attitudes, self-efficacy beliefs, intentions, and child-centered beliefs in comparison to subjective norms, teacher-centered beliefs, and barrier perceptions related to portfolio assessment.

To examine the difference between teachers who were practicing portfolio assessment and not practicing it on behavioral beliefs, attitudes, self-efficacy beliefs,

barrier perceptions, intention, child-centered beliefs, and teacher-centered beliefs, one-way MANOVA analysis was conducted. It was found that teachers practicing portfolio assessment were found to have significantly higher behavioral beliefs, attitudes, self-efficacy beliefs, and intention than teachers who were not practicing it. At the same time, their barrier perceptions were also found to be significantly lower than the non-users of portfolios. However, a significant difference was not found in child- and teacher-centered beliefs.

Moreover, three separate Hierarchical Multiple Regression analyses were conducted to investigate whether teaching experience, self-efficacy beliefs, and intention predict portfolio practices in content, child participation, and sharing. Analysis results presented that intention and self-efficacy beliefs are significant predictors of teachers' portfolio practices regarding content, child participation, and sharing. β values also indicated that self-efficacy beliefs make a stronger contribution to explaining these dependent variables than intentions. However, teaching experience was not found to predict teachers' portfolio practices in terms of content, child participation, and sharing.

CHAPTER 5

DISCUSSION

The current study aimed to investigate portfolio assessment in early childhood education using a multi-methods research design, including three parts. In this chapter, major findings of these three parts are discussed, and implications are provided for educational practices and further research.

5.1. Early Childhood Teachers' Practices and Views on Portfolio Assessment

The first part aimed to investigate and compare early childhood teachers' portfolio practices (content, organization, and parent involvement) and views (definition and purpose, advantages, challenges, support, and suggestions) in a Reggio Emilia inspired preschool and university preschool in Turkey and the U.S. Data were collected by means of semi-structured interview questions. The extracted themes are discussed below under the related subtitle.

5.1.1. Early childhood teachers' practices on portfolio assessment

In Turkey, all teachers include a variety of child activities (drawings, art activities, reading-writing preparation activities, etc.) as a component of the child portfolios. In the related literature it is suggested to select some of these activities for portfolio together with the children. It might be necessary to work with students individually for such purpose (Popham, 2014). However, only university preschool teachers in Turkey (UT) mentioned this. As suggested, they work individually with children to select a part of the content. Actually, this is an expectation found in their preschool portfolio guidelines and therefore, all teachers pointed out this practice. However, children are not active in selection in other preschools. This finding is not an

unexpected issue according to related literature. Likewise, it was found in another study that only 5% of teachers determine portfolio content and structure together with child and family (Krnjaja & Pavlović-Breneselović, 2016). Similarly, no child or family voice or contributions were seen in paper-based portfolios in another research study (Hooker, 2017). These might indicate that teachers have a dominant role in the portfolio assessment process, and inclusion of child participation into portfolio guidelines like in the university preschool in Turkey (UT) might contribute to actively engaging them in the process.

In the U.S., portfolio structures are quite similar. All teachers prepare portfolio pages with respect to the predetermined developmental areas in their portfolio guidelines, which outlines the expectation that teachers prepare one or two pages from each developmental domain. As pointed out by teachers, restricting samples in portfolio content to a specific number prevents teachers from becoming overwhelmed by the task, making it more manageable to review and reflect (Helm et al., 2007). However, it is important to clarify that they are not only preparing these pages. Otherwise, it will be like a checklist. This page limitation only makes the preparation process manageable for them. In this way, teachers might focus specifically on assessment of specific standards, but they always document during the process and select representative ones. It is necessary to include representative works rather than a collection of everything for the portfolio (Kingore, 2008). If all student work is collected, it will not be an assessment tool (Butler & McMunn, 2006).

Moreover, all the U.S. teachers reported anecdotal notes and photos as important components of portfolio pages, and they highlighted writing notes and taking photos in the process. They stated that they concretize their assessment with these components. In particular, observation notes were viewed as the most important items in a child portfolio in the related literature (Gronlund & James, 2013). Since both teachers and families can see child personality, strengths, and interests with individualized documentation (Gronlund, 2016), photos and anecdotal notes collected in the process might constitute baseline of this individualized documentation. However, photos and anecdotal notes are not included in any of the

child portfolios in the Reggio Emilia-inspired preschool in Turkey (RT). Teachers have an online platform to which they upload their photos and notes to share with families. Therefore, they are not including this documentation in their portfolios. This is one of the significant missing points in their child portfolios. Consistent with their self-reports in interviews, content analysis of their portfolios also presented this lack of points and indicated the necessity of enriching their portfolio content with documentation.

Documentation is more integrated into the child portfolios in the U.S. in comparison to Turkey. Cultural difference might be one of the reasons of this difference. Documentation is not only a technical tool. It is a cultural attitude, which provides more democratic culture of learning. To use it in an intended way, a movement is necessary for changing the culture of education. If it is only used in school and not connected with social values and needs, it will not support overall change (Turner & Wilson, 2010). In line with this, since documentation is a part of the U.S. culture, teachers might integrate it to their classroom in both preschools. On the other hand, in Turkey, teachers confirmed a number of barriers for documentation especially in the Reggio Emilia-inspired preschool (RT). In fact, documentation is a part of Reggio Emilia preschools, and they use it to illustrate learning and share with children, families, and teachers (Project Zero & Reggio Children, 2001). Therefore, barriers related to documentation might be closely related to this institution's own culture in Turkey (Henry, 2016). Creating a documentation culture might be necessary to use it as a tool for understanding children's learning and reflect with the colleagues (Given et al., 2010).

In addition to anecdotal notes and photos, child work samples also provide rich documentation of child learning (Hills, 1993) and are suggested to be included as a major component of the portfolio (Dichtelmiller et al., 2001). Teachers agreed that children's drawings especially are the main products in the portfolio in addition photos and other child activity products (Krnjaja & Pavlović-Breneselović, 2016). Confirming this, most of the university preschool teachers in Turkey (UT) highlighted collecting children's drawings at certain times and stressed the

importance of seeing the child developmental progress. However, only some teachers mentioned inclusion of child work samples in the U.S., which was also confirmed in the content analysis of their child portfolios. In fact, collecting work samples and taking anecdotal records together might give a snapshot of child development at a particular point in time (MacDonald, 1997). Therefore, child portfolio content in the U.S. might be enriched with child selected work samples. This would provide an opportunity to integrate children into the portfolio process actively. Since portfolio is a performance assessment, it will enable teachers to assess children through their works in process. Therefore, integrating features of both U.S. and Turkey portfolios might present more qualified content for portfolio assessment.

Furthermore, there is a variety of other reported components in child portfolios as suggested in the related literature, and each component serves a different purpose. For instance, a narrative child developmental report is one of the components. While it is written as a child development report in Turkey, it is called a conference summary report in the U.S. Both versions have a similar focus in content. These narrative reports necessitate that teachers think about what to report and write before the conference (Wortham, 1995) and support the portfolio content. Those also report a child's progress and growth to parents in a meaningful way (Wortham & Hardin, 2016). In addition to this report, teachers also commonly reported a checklist as a component, except the university preschool in the U.S. (UA). Inclusion of such classroom assessments are necessary to make sure portfolios are presenting progress in a variety of domains (McAfee et al., 2016).

Regarding portfolio content, it is supported in the related literature that examples from various classroom and curriculum contexts should be included and collected from a school year, including beginning, middle, and end (Gullo, 2006). This necessitates a process to be able to collect portfolio components. As is suitable for the nature of portfolio assessment, all teachers focused on following development in process in this study, yet they mentioned different methods for doing this. Therefore, according to reports of teachers in interviews and content analysis of their child portfolios, there are both commonalities and differences in portfolio contents. When

teacher reports on portfolio content are inspected, one commonality is that there is a guideline and determined developmental domains or areas in each preschool. In relation to this, it is supported in the related literature that teachers must establish a portfolio process before beginning (Kingore, 2008; Wortham & Hardin, 2016). Since a portfolio focuses on development, it is necessary to be purposeful and systematic. School portfolio guidelines might be helpful for establishing this policy. Guidelines might also help teachers integrate portfolio work into their daily schedule and not think about it as an addition. Supporting this, a majority of the teachers viewed having portfolio guidelines as a support for themselves in this study. They shape their portfolio practices with respect to these guidelines. In addition to guidelines, a variety of factors might also affect this decision on portfolio content. For instance, portfolio type was not investigated in interview questions and content analysis, but it might be a possible factor for content of child portfolios. Moreover, purpose of portfolio is also another determinant factor on portfolio content since items in portfolio content are selected to serve its purpose (Nitko & Brookhart, 2007).

There are different organization criteria (e.g. projects, chronological organization, developmental domain) for portfolios in each preschool. To explain, teachers in the university preschool in Turkey (RT) organize their portfolios with respect to projects because they have a project-based approach. On the other hand, in the U.S. Reggio Emilia-inspired preschool (RA), teachers reported portfolio organization with respect to developmental areas. Whatever the criteria, there is a chronological organization within it to show progress. Similarly, it was also found in the related literature that examined portfolios are mostly organized in chronological order (Knauf, 2017b). However, there is no best way to select and organize portfolio content (McAfee et al., 2016). It might also be organized with respect to content area, goals, themes, or chronological order of the works (Losardo & Notari-Syverson, 2001; Wortham & Hardin, 2016). For ease of reference, it is suggested that portfolios should be organized with respect to category and time sequence (Grace & Shores, 1992) as is practiced in most of the portfolios in the U.S. A majority of the U.S. teachers are organizing their portfolios with respect to developmental domain, and they justified

that this helps them to focus on development in a particular domain. Moreover, since most teachers highlighted understanding holistic child development and concretizing it for parents as a purpose, organizing with respect to developmental domains best fits this purpose as presenting child development clearly for each developmental domain.

Despite differences in their organization style, there is a common point that preschool teachers collect content for portfolio during the semester and organize it throughout the process. This mostly refers to organization of child work samples in Turkey and organization of documentation in the U.S. Since portfolios are individual folders for each child, there is an organizational structure for each individual child in this process. This might be one of the crucial points to be able to see progress and manage the portfolio process. It was highlighted that being organized in terms of collecting content, organizing components, and preparing portfolios in the process without waiting until the end saves time for the teachers. To this end, two teachers in the university preschool of Turkey (UT) and a majority of the teachers in the U.S. specified their usage of a checklist or graph as an organization tool to follow the portfolio preparation process. This checklist is viewed as helpful in reviewing the taken steps in portfolio assessment (Wortham & Hardin, 2016), which might help teachers be organized in the process and systemize their collection. Systematic collection is necessary to reach intended objectives of portfolio assessment (Kingore, 2008).

To be systematic in the process, it was found that teachers develop their own method to take notes, photos and combine their documentations (Knauf, 2019). In line with this, giving importance to documentations in their portfolios, specifically, U.S. teachers developed different organizational methods for their documentations during the process. For instance, nearly half of the U.S. teachers mentioned writing notes about photos with a date as a reminder. Since their portfolio pages include both photos and anecdotal notes, this organization saves a great deal of time for them while preparing portfolio pages and also enables them to follow development in process. Reggio Emilia-inspired preschool teachers (RA), especially, highlighted writing

notes for each child even in the same activity. This enables them to hear the voice of each child in the process and also contributes to child reflections in their portfolios. Confirming this, content analysis findings demonstrated more child reflections for these preschool portfolios in comparison to others. Furthermore, U.S. teachers highlighted their softcopy organization in the process. To explain, they have a file for each child on a computer, and they sort photos in the folder of each child by date, which enables them to follow development for each individual child in the process, a practice suitable for the nature of portfolio assessment. All these findings indicate the importance of having organization for each individual child in process to be able to follow their individual development. This portfolio organization also enables teachers to collect items from each developmental domain for each child during the process (Helm et al., 2007). This might be one of the positive aspects of the portfolio, that teachers can develop their own system to be organized. They can individualize the documents and adapt them according to the needs of children (Jones & Shelton, 2006; Shores & Grace, 1998).

When findings are reviewed on parent involvement in the portfolio process, all the teachers in both the U.S. and Turkey highlighted the importance of open communication to enable parent involvement in this process. In the related literature, it is supported that communication is a critical factor in providing parent-teacher and family-school partnership (Swick, 2003). Respectful and reciprocal relationships support family involvement in their children's education (Morrison, 2014). Portfolios improve this communication between child, teacher and parents by providing observable products and understandable or concrete evidence of child performance (Chen & Cheng, 2011; Kingore, 2008; Stiggins, 2005). Therefore, it is a reciprocal process. A portfolio both contributes to partnership by providing evidence of child development, and it necessitates communication to bring parents into the process. To this end, portfolio conferences are organized two times a year in each preschool in this study except the university preschool of Turkey (UT), which organizes them once a year. It is suggested in the related literature that portfolios should be discussed with parents at least two times a year (Gelfer & Perkins, 1996). This might contribute to

parents seeing child progress more clearly by showing comparison in the process. These conference times can also be accommodated to fit with parents' schedules (Montgomery, 2005) as suggested by all teachers in this study.

In relation to conferences, it is suggested by U.S. teachers and university preschool teachers in Turkey (UT) to place importance on informing parents about portfolios before the conference. This might be one of the crucial factors that enables parent involvement in the portfolio process of participant teachers. When schools inform parents about the assessment and have consistent informal communication with them throughout the process, parents' reactions to performance assessment can be positive (Meisels et al., 2001). Thus, to create partnership with parents in the portfolio process, it is suggested that parent trainings be organized, including purpose, content selection, format design, and evaluation of the portfolio assessment (Seitz & Bartholomew, 2008), and it is also suggested to communicate with families during the process (Chen & Cheng, 2011). Both informing parents about this system and having communication with them might contribute to parent involvement in the process. Since parents know about the portfolio, conference time does not become a surprise. It becomes an opportunity to have a meaningful conversation rather than a situation of teacher dominance. To this end, some U.S. teachers and all university preschool teachers in Turkey share a written explanation about the portfolio before conference time. Moreover, as a portfolio component, three teachers in the U.S. include a portfolio definition page in their child portfolios for parents. Most of the Reggio Emilia-inspired preschool teachers in the U.S. (RA) also suggested sharing an online version of the portfolio with parents to allow them to become familiar with it before the conference and then have more meaningful conversations with them during the conference. All these highlight the importance of informing parents about the portfolio before meeting with them. If parents are prepared for the portfolio in such ways, they will appreciate the effort and work put into the portfolio (Wortham & Hardin, 2016).

Findings revealed that although children are mostly included in portfolio conferences in Turkey, they are organized only with parents in the U.S. In the related literature, it

is suggested to include children in portfolio conferences by offering its variety of benefits for children. For instance, a portfolio can be a tool for a child to reflect on progress (Smith, 2000). Their input is important while discussing their education. In this way, they have responsibility for their own learning (MacDonald, 1997), and portfolio conferences improve students' self-evaluation abilities (Popham, 2014). Families also confirmed that children gain pride and a positive sense of identity when documentation is shared with them (Reynolds & Duff, 2016). Therefore, it is suggested to review portfolio content periodically with child, parent, and teacher to determine child progress and plan for further growth and development (Wortham & Hardin, 2016). In the present study, all teachers in Turkey agreed upon the importance of integrating children into portfolio conferences. In contrast, U.S. teachers highlighted the importance of talking with parents individually without children to talk about a child's development and concerns that they may have. This might also be an important point, especially in the case of talking about some concerns without children present. Alternatively, as also pointed out by teachers in the present study, portfolio conferences should not be the first place to bring up concerns about a child. Concerns might be better integrated into other parent-teacher meetings, and portfolio conferences might be organized with the inclusion of children to reach its proposed benefits.

Both preschool types give importance to parent involvement in their educational philosophies and in the portfolio assessment process in this study. Although teachers in the present study practice portfolio conferences in different ways, all of them view parent involvement as necessary and beneficial. Supporting this, another study revealed that teachers have positive views regarding parent involvement in the assessment process to better understand their child's learning (Özkan Yıldız & Yılmaz, 2020). It was also explained that parents appreciate when they get detailed information about their child's performance and progress by means of a work sampling summary report and portfolio. In particular, if parents participate in the portfolio conference, they highly rated the benefits of the portfolio (Meisels et al., 2001). Likewise, Hou and Hsieh (2019) conducted a qualitative study to examine the

process of parent-teacher portfolio sharing conferences. After the conference, parents developed more understanding of the child's emergent writing and acknowledged the benefits of one-to-one portfolio sharing. Portfolio sharing also contributed to rapport between parent and teacher (Özkan Yıldız & Yılmaz, 2020). In light of these findings, it might be concluded that portfolio conferences are an important part of the portfolio assessment process as they have specific benefits for both teachers, children, and parents.

Overall, there are both similarities and differences in teachers' portfolio assessment practices and views. There might be a variety of affective factors creating this difference. For instance, when we compare teachers' demographics between Turkey and the U.S., more U.S. teachers have graduate degree and all graduated from ECE department in comparison to Turkish teachers. This might be one of the factors creating a difference on their practices. Taking education on portfolio assessment as a part of their degree might have an impact on teachers' knowledge and beliefs and support them in their practices. As supporting this, in the related literature, a significant difference was found on teachers' assessment practices and beliefs with respect to the education level (Buldu & Tantekin-Erden, 2017). Education level of teachers is also positively related to quality of early childhood education and care (Manning et al., 2019). High level of experience and training might help teachers to bridge the gap between their beliefs and practices and enable them to practice their knowledge and beliefs (Wen et al., 2011).

5.1.2. Early childhood teachers' views on portfolio assessment

When findings are compared on definition and purpose, it is seen that the portfolio was viewed as only a folder by half of the teachers in the Reggio Emilia-inspired preschool in Turkey (RT). Similarly, it was found in another study that teachers mainly describe the portfolio as a folder in Turkey (Alaçam & Olgan, 2016). The probable reason for this is that teachers have a misconception that a portfolio is a container of the student's works (Tangdhanakanond & Archwamety, 2019). A portfolio was mostly seen as showcasing efforts rather than understanding the child.

A child's works are included in the portfolio but the child is not actively integrated into the portfolio process (Knauf, 2017b). A probable reason for this, insufficiently explained portfolio purpose was found as one of the common problems of the portfolio process in another study. In some cases, children and family only provide material and collect information for the portfolio (Krnjaja & Pavlović- Breneselović, 2016). On the other hand, although children's inclusion in portfolio conferences was mentioned and suggested in this study, there are no other suggestions about children's active involvement in the portfolio process. This might be interpreted as the teacher having a dominant role in the portfolio process, as confirmed in the related literature (e.g. Knauf, 2017; 2017b).

In the U.S., teachers commonly pointed out the purpose as understanding the child individually and holistically by means of portfolio assessment. In line with this purpose, their portfolio content focuses on developmental domains and presents holistic development of each individual child. Consistently, as an advantage, most U.S. teachers mentioned the portfolio's contribution to understanding an individual child better. All these findings indicate the importance of purpose in shaping practices and reaching offered benefits of portfolio assessment. In other words, the purpose of assessment determines how the assessment is conducted (Shepard, et al., 1998). Similar to this study's findings, it was found in another study that Reggio Emilia-inspired kindergarten teachers use documentation to understand children's learning experiences in school (Whetstone, 2013). In particular, a portfolio provides a holistic view of changes in student performance for student, teacher, and parents (Cizek, 1997) by including a variety of documentation as supported in the related literature (Helm et al., 2007; Laski, 2013). By presenting rich and personalized documentation of one's learning journey in a purposefully organized way, it clearly demonstrates growth over time (Jones & Shelton, 2006). All these points help to understand each individual child better.

Regarding portfolio purpose, one common point in all preschools is concretizing child development in process. In particular, U.S. teachers highlighted concretizing child development to parents as a purpose. To this end, they share portfolios only

with parents in conferences. However, actually, the intent of an ideal portfolio is guiding instruction and giving feedback to students as an element of formative evaluation (Haladyna, 1997). Concretizing development is one purpose of portfolio assessment, but a portfolio should not be prepared as a performance or show for parents. It is important to make this distinction because teachers in the Reggio Emilia-inspired preschool in Turkey (RT) commonly agreed that one challenge is preparing visually fancy portfolios for parents. It is important to integrate parents into the assessment process as a partner. Including parent voices in documentation will also strengthen the relationship between home and school (Lee-Hammond & Bjervas, 2020). However, it was found that only 5% of the teachers include parent and child participation while developing portfolio structure (Krnjaja & Pavlović-Breneselović, 2016). In the examined child portfolios of present study, parent and child involvement during development of the portfolio structure was one of the least commonly found metrics.

Moreover, only two teachers in Turkey and three teachers in the U.S. pointed out assessment as a definition or purpose of the portfolio, nor did they mention improving instruction. Similarly, it was confirmed in the another study that only 9% of teachers use portfolios for the curriculum development and learning process (Krnjaja & Pavlović-Breneselović, 2016). However, assessment is not useful if the results are not taken into action (Nitko & Brookhart, 2007). These findings indicate that although main purpose of portfolio is reflecting child development over time (Piker & Jewskes, 2013), teachers might not use it with respect to the intended purpose. One of the possible reason might be their lack of knowledge about this assessment, which source of lack of education on assessment methods (Anıl & Acar, 2008). Therefore, it is suggested to provide a clear definition and purpose of the portfolio in the curriculum (Krnjaja & Pavlović-Breneselović, 2016) since meeting program requirements was found as an important factor in teachers' assessment purposes (Keengwe, 2020). If teachers can better clarify and internalize portfolio definition and purpose, this might guide their practices. They might see the portfolio as more than a folder.

Portfolio assessment has a different purpose in Turkey and the U.S. Early childhood education system is centralized, and it is expected that teachers prepare a portfolio folder (developmental folder) for each child in Turkey. It includes activities selected together with children, documents from families, child development forms, and child development reports (MoNE, 2013). On the other hand, there is not a central early childhood education program in the U.S. There is an emphasis on academic learning in preschools. Preschool educators show program effectiveness using a child's attainment of specific skills. Therefore, child assessment is the main issue when looking at young children and their learning, and a portfolio is used for developmentally appropriate assessment (McKenna, 2005). In this study, findings meet on similar points in the same country. In other words, teachers' portfolio practices reflect the purpose of portfolio assessment in their country. For instance, teachers integrate activities and child assessment documents in their portfolios to follow child development in process in Turkey. However, in the U.S., teachers present the children's attainment of specific skills by their documentations on the portfolio pages. Therefore, role of portfolio assessment in these two countries might be the main determinant of changes in their portfolio structure. However, it is important to highlight that these preschools are two cases from each country and cannot be generalized.

On the other hand, despite a lack of agreement in definition or purpose regarding improving instruction, in advantages, a majority of the teachers in the U.S. and from the university preschool in Turkey (UT) mentioned portfolios' contribution to better planning through consideration of child development. A majority of the teachers in both countries also agreed upon comprehensive assessment with portfolios as well as catching missing points and supporting child development. The probable reason for this is that since portfolios can reveal the quality of early childhood program or shortcomings of it (MacDonald, 1997), this might provide insight to teachers for improving their practices and planning better, considering an observed lack or missing point. Because a portfolio can present effectiveness of their instruction (Pergola, 2015), it can be used to plan instruction (Morrison, 2014) and determine

effective instructional accommodations (Kingore, 2008). In other words, as pointed out by participant teachers, it helps teachers to carry out self-assessment and see the weaknesses of their program.

Despite the differences in their definitions or practices, all teachers viewed portfolio assessment as advantageous. This indicates that portfolios can be beneficial in different formats. There is not a strict method for it, and it can be adapted to fit specific needs for specific purposes (Jones & Shelton, 2006). To explain, a variety of advantages of portfolio assessment in terms of teachers were reported in this study in line with the related literature. Mainly, its role in assessing child development and improving instruction was emphasized by teachers in each preschool. It is supported that a portfolio demonstrates child growth and development in a variety of ways (Wortham & Hardin, 2016), and enables policy makers, teachers, and students to examine student work by relating it to curriculum (Banta, 2003). This is specifically the case in U.S. portfolios due to the space given to learning indicators on portfolio pages. Similar to teachers' agreement on being able to make comprehensive assessment with a portfolio, it is also justified in the literature that a portfolio is the most comprehensive method for including a variety of documentation (Wortham & Hardin, 2016). It enables teachers to focus on what a child can do rather than cannot do (MacDonald, 1997). Specifically, it focuses on child strengths. Moreover, it is also flexible and adaptable (McAfee et al., 2016). The teacher has flexibility in how to document child progress (Wortham & Hardin, 2016). This enables teachers to focus on change in development and achievement over time (Gullo, 2006). Because of these reasons, it also works well for children with special needs, as agreed upon by present study teachers and proposed in the literature (e.g. MacDonald, 1997).

Teachers in each of the preschools also offered a variety of advantages of portfolio assessment for children. However, when findings are reviewed, it is seen that offered child benefits in Turkey are greater than in the U.S. A probable reason is that children are involved in portfolio conferences in Turkey, and specifically in the university preschool in Turkey (UT), children participate in content selection. On the other hand, there is no child participation in portfolio conferences or content selection in

the U.S. Related literature supports the benefits of portfolios for children as enabling their active participation and encouraging learners to be active in the assessment and evaluation process (Johnson et al., 2006). To explain, students' self-evaluation, self-reflection, and personal ownership were mentioned as important benefits of portfolio assessment (Popham, 2014; Seitz & Bartholomew, 2008). When students select their work samples and justify their choices, this contributes to their self-assessment skills (Belgrad, et al., 2008) and metacognitive skills (Laski, 2013). Selection of work samples enables students to think critically about their learning and work in relation to standards (Klenowski, 2002). In this way, they take responsibility for their own learning (Jones & Shelton, 2006; Klenowski, 2002; McAfee et al., 2016) and take ownership for assessing their learning (Montgomery, 2005). This also increases pride in their work and extends their motivation to learn (Kingore, 2008) as mentioned by participant teachers. Moreover, they also become motivated when they see satisfaction and pride upon achievement from stakeholders (Belgrad et al., 2008). In particular, portfolio conferences might be an opportunity for this sharing with stakeholders and also improve students' self-evaluation abilities (Popham, 2014). In light of these findings, this study confirms the importance of children's active involvement in the portfolio process by reporting a variety of benefits for children in Turkey.

Parents are the other stakeholder that benefits from portfolio assessment in the views of the teachers. Nearly all teachers agreed that portfolios play a role in parents' understanding and facilitate their better support of child development. This is justified in the related literature because a portfolio provides concrete and meaningful information for presenting to parents; actual examples help them to better understand their child's development and the curriculum (Garcia, 2004; Gullo, 2006). Since the portfolio provides apparent and meaningful evidence of child progress (Laski, 2003), it helps them see how their child progresses towards expected goals (Pergola, 2015). Moreover, actual products provide rich information about their children's learning and thinking (Kingore, 2008), so most teachers also agreed that it contributes to effective communication. A portfolio provides meaningful and concrete information

for sharing among parents, teachers, administrators, and other members (Gullo, 1997). This also fosters reflection among all these members of the society. In this way, the teacher can provide examples of child growth rather than checking off accomplishments and can show how play and developmentally appropriate practices help children's learning (Harris, 2009).

Furthermore, it was found in the related literature that parents also viewed it important to communicate with teachers about their child's progress and development. As teachers use portfolio assessment, children's progress is made visible to them. Parents realize that it takes a long time for teachers to collect evidence along with the child's learning process, and it is difficult work for them (Pekis & Gourgiotou, 2017). They might better understand child development and appreciate the work of teachers in their contribution to this development. This consciousness also increases respect to the field and contributes to teacher motivation in the process, as agreed upon by most of the teachers. This might also be the main reason for the teachers' comments related to parents' understanding the expertise of teachers. This benefit was not mentioned by Reggio Emilia-inspired preschool teachers in Turkey (RT). The probable reason for this is that they mostly include child activities rather than documentation (e.g. anecdotal notes, photos). Documentation might be the element which provides this awareness to parents. It shows the importance of early childhood education to parents and facilitates interaction between each stakeholder in the process (Hostyn et al., 2020). In this way, they see that assessment is comprehensive and carefully organized (Pekis & Gourgiotou, 2017). Overall, a portfolio has many benefits for each stakeholder despite being practiced in different forms. These benefits might change depending on the preschools with respect to their practices.

On the other hand, teachers also reported a variety of challenges faced in the portfolio assessment process, and these change with respect to portfolio practices in the preschool. To explain, in Turkey, since Reggio Emilia-inspired preschool teachers (RT) prepare portfolios in a visually fancy format, this creates the biggest challenge for them. On the other hand, since university preschool teachers (UT) make

documentations, their challenges are mostly concerning this step. Making compensations for absent children was also seen as a challenge in Turkey, but not in the U.S. preschools. In this case, it is most likely that teachers are planning some activities for children's portfolios in Turkey. Therefore, it might be difficult for them to repeat that activity for absent children. On the other hand, since documentation constitutes the basis of U.S. portfolios, their challenges are mostly related to documentation and allocating time for it. Overall, workload is one of the common difficulties faced by nearly all teachers. Portfolio assessment necessitates an ongoing process in order to serve its purpose. Teachers have crucial work in this process to follow development and collect components of the portfolios. In related investigation, although workload is verified as one common challenge in the related literature, it is offered that systemizing documentation can reduce teacher workload in the process (Chen and Cheng, 2011).

Time and inexperience the first times are the other commonly reported challenges. It was confirmed in the related literature that portfolio evaluation might be difficult for novice teachers or teachers with weak content knowledge (Alexander & Winne, 2008). Time was also confirmed as a common challenge in effective portfolio implementation process in different research studies (Alaçam & Olgan, 2016; Cadlwell, 2007; Kim & Yazdian, 2014). To explain, portfolios necessitate considerable time for planning and development (Jones & Shelton, 2006). It takes a significant amount of time and effort for collecting student works, selecting key items, and reviewing them in certain periods together with children (Belgrad et al., 2008). Furthermore, portfolio organization also takes time (Alaçam & Olgan, 2016). When teachers are newly learning how to document, it is especially time consuming. When they systemize their process, time is lessened (Lewin-Benham, 2011). However, it still necessitates a large time commitment for reflection, discussion, and recording. Committed and dedicated teachers can reach its potential (McKenna, 2005). This might also be reached by internalization and integrating the portfolio process into the curriculum as suggested by teachers in the present study. Supporting this, time was not stated as a significant problem by university preschool teachers in

Turkey (UT) since they integrated portfolio assessment into their curriculum. They plan their portfolio process and integrate into their daily plan. In this way, they do not view it as extra work or time. They focus on the process as being suitable for the nature of portfolio assessment. Therefore, it is helpful to develop a plan to integrate assessment into classroom activities. To this end, it is also suggested to integrate specific documentation activities into lesson plans (Kang & Walsh, 2018). In planning for assessment, it is suggested to consider purpose, developmental domain, what to assess, when to assess, recording procedure (McAfee et al., 2016) and documentation strategies (Knauf, 2019).

Moreover, a challenge stated by a majority of the teachers in the U.S. and three teachers in Turkey (UT) was that the process was dependent on teacher skills. To explain, portfolio assessment relies on teachers to make informed decisions and judgements about child progress and achievements (Goolsby, 1995). It is necessary for teachers to have a strong background in child development, understand benchmarks to evaluate child work samples, and develop specific guidelines and expectations to evaluate child works (Losardo & Notari-Syverson, 2001). Observation and documentation skills also have a crucial role in the portfolio process and need to be considered for successful portfolio assessment. In addition, the process is becoming technologically dependent in nature, also indicated as a problem by three teachers in the U.S. because of preparation on a computer. In other words, it is necessary to have technological equipment and the knowledge and ability to use these tools and equipment (Seitz & Bartholomew, 2008). Overall, teachers might need support in the portfolio assessment process to obtain and put knowledge and skills into practice. It is necessary to provide systematic support for teachers for the purpose of understanding the purpose of the portfolio and developing it (Krnjaja & Pavlović-Breneselović, 2016).

In the current study only one teacher was concerned about adequately reflecting child development in the portfolio. However, it is confirmed in the literature that validity might an issue (Wortham, 1995) since it can be a challenge to minimize evaluator bias and inconsistency (Johnson et al., 2006). In the present study, school portfolio

guidelines might be an important support for participant teachers to overcome their concerns about validity. On the other hand, picking and choosing moments for the portfolio was still stated as a challenge by five teachers in the U.S. The most probable reason is that they have page limitation for the portfolio. Knowing how many samples will be represented or which samples will represent child potential and capabilities might be a challenge in the portfolio process (Gullo, 2006). It might also be difficult to decide what kind of materials to collect and know how to evaluate them (Chen & McNamee, 2007).

All these stated challenges might result from teachers' lack of knowledge and skills to assess children systematically and meaningfully (McNair et al., 2003). As a probable source of this, teachers stated inadequate available training and support for this issue (Harris & Curran, 1998), which they see as a challenge in the portfolio process (Hidayat et al., 2021). They need support and professional development through training (Krnjaja & Pavlović-Breneselović, 2016) to carry out portfolio assessment effectively. It is a waste of time to put only some student documents into a folder as a portfolio assessment (Popham, 2014). To this end, both workshops and trainings were suggested by teachers in this study. Workshops enable teachers to see that change in assessment practices positively affects students' learning (Butler & McMunn, 2006). Trainings were also suggested to include strategies to deal with distractions during the assessment process (Banerjee & Luckner, 2013). Trainings based upon experienced teachers' suggestions and strategies might become a guide and make the process easier. Moreover, seeing visual examples was also suggested by a few teachers in both countries. To this end, experts and educators can be invited from outside of the school. Collaborative assessment conferences can be organized to examine children's works and portfolios (Seidel et al., 1997). Overall, staff development and ongoing dialogue regarding evaluation need to be part of the portfolio evaluation process (Johnson et al., 2006). These educations might create a culture to utilize documentation as a tool of learning in the preschools (Given et al., 2010). According to dynamic paradigm, culture is result of interactions between agents (Langstedt, 2018). These educations might be helpful in creating those

interactions and provide a supportive environment to create a documentation culture in the preschools.

Despite challenges, teachers also expressed different points as support for them in the portfolio assessment process. For instance, they viewed having both consistent guidelines and flexibility as a support. Portfolio assessment necessitates development of specific guidelines and expectations to evaluate child works (Losardo & Notari-Syverson, 2001). However, it is also important that a teacher has flexibility in how to document child progress (Wortham & Hardin, 2016). Moreover, a majority of the teachers viewed working in collaboration as a support since collaboration enables teachers to benefit from diverse perspectives and expertise (Seidel et al., 1997). In line with this, mentor teachers and collaborative work were also suggested by a majority of the teachers in Turkey and all teachers in the U.S. Mentoring can contribute to teacher effectiveness by enabling a supportive environment to develop professionally (Bowles & Pearman, 2017). Furthermore, it was found that mentoring provided considerable improvement on assessment practices (Pang & Leung, 2011). In this regard, mentoring might provide support for teachers in overcoming challenges and better managing the portfolio assessment process. Having a prepared portfolio template to save time was also proposed as a support by half of the teachers in Turkey. Similarly, it is also suggested in the literature to use a template for recording, organizing, analyzing, and displaying documentation (Kang & Walsh, 2018). In the U.S., teachers create their own templates which work for them in the process, and they suggested the same practice for other teachers. It might be important to present examples and give opportunities to teachers in Turkey to improve themselves in relation to this issue. For instance, since it was viewed as beneficial for teachers to review example student portfolios (Rolheiser et al., 2000), they can share their observations and experiences with each other. It might be helpful for them to explore which strategy works for them and create their own template based upon it.

In this study, teachers also gave a variety of suggestions for portfolio assessment practices, and these suggestions generally meet on the similar points. For instance,

all teachers in both countries highlighted the planning of the portfolio process at the beginning. Since a portfolio shows development in process, this process needs to be planned to be able to manage the process. Developing a plan will prevent teachers from feeling overwhelmed in the portfolio process (Wortham et al., 1998). A majority of the teachers in the U.S. and university preschool in Turkey (UT) also suggested to concretize development with planned content. They carry this out in different ways such as photos, notes, or regular activities. Supporting this, for instance, it is suggested in the related literature to choose specific activities and do these for all children. In other words, it is suggested to compare child performance on the same type of behavior at two or more points in time to determine the progress over time (McAfee et al., 2016). Assessing the same thing at certain time periods enables teachers to see whether there is a change (Hanson & Gilkerson, 1999). However, it is important to be organized in this process to follow development as planned and intended. To be effective, it needs to be organized and current (Wortham & Hardin, 2016). Therefore, systemizing the process is important to reach intended purposes.

Moreover, in the related literature it is suggested to observe and document the ongoing process, not to wait until the end (Gronlund & James, 2013). Likewise, when including documentation in portfolios, all teachers in the U.S. and a majority of the teachers in the university preschool in Turkey (UT) suggested consistently documenting throughout the process to be able to follow development. For organization of assessment practices, it is also suggested to schedule activities and make assessment a part of classroom routine. To this end, having an organization tool to track portfolio content for each child was suggested by four U.S. teachers. This is justified in the related literature; a checklist can help to follow completion of required tasks and steps in the procedure (Jones & Shelton, 2006; Wortham & Hardin, 2016). To this end, class lists, simple grids or charts can also be used to make sure to have information about each child (MacDonald, 1997; McAfee, et al., 2016). This might help to overcome time issues in a busy schedule.

Half of the university preschool teachers in the U.S. (UA) also suggested preparing the portfolio as developmental and story of the year, giving more space for child work

samples. Since their preschool documents child development with anecdotal notes and photos on portfolio pages, they do not frequently include child work samples in a portfolio. In support of their suggestion, Dichtelmiller et al. (2001) agreed that actual child work samples should be included as a major component of the portfolio. Those become evidence for teachers' judgements about child development. They are also helpful to share insights with parents and other teachers (Grace & Shores, 1992). In particular, when developmental checklists are systematically accompanied with anecdotal records and a child's work samples, they enable teachers to reliably identify important learning goals (Helm et al., 2007). However, it is important that there are enough samples to represent, samples are representative, and samples are from different methods or contexts (Hanson & Gilkerson, 1999).

A majority of the teachers in the U.S. and Reggio Emilia-inspired preschool in Turkey (RT) suggested sharing portfolios with each stakeholder in the process. For instance, it was supported that a preschool to primary school portfolio can provide continuity in teaching and learning (Kankaaranta, 1996). It improves children's learning in transition to school (Peters et al., 2009). To explain, portfolios enable teachers to document child growth over time, reflect on progress, and establish future education goals. Therefore, it helps to develop comprehensive instruction and program assessment (Weldin & Tumarkin, 1998). In this respect, the next teacher of the child might benefit from learning about and knowing the children in order to be able to develop the program with respect to their needs. Reggio Emilia inspired preschool teachers in the U.S. (RA) share portfolios with the child's next teacher, and they especially endorsed the benefits of this portfolio transferring and suggested the same practice. However, it was found that none of the teachers transfer the portfolio to first grade in Turkey. Despite this, most of teachers agreed that a transferred portfolio can demonstrate how children are prepared for the first grade (Alaçam & Olgan, 2016).

It was also suggested by a majority of present study teachers to initially internalize the portfolio assessment. Then, U.S. teachers in particular also highlighted practicing it step by step. Starting small with one subject or focus is key while changing

assessment practices to be able to manage the process (Rolheiser et al., 2000; Seidel et al., 1997) and see documentation as a part of good teaching. If a portfolio process is a mandatory system, it becomes an “add-on” to classroom requirements. It is necessary to convince and educate teachers about the usefulness of portfolio (Nitko & Brookhart, 2007) and enable their internalization of the portfolio process to reach its purpose (McAfee et al., 2016). In support of this, teachers were found to have higher scores in internal constructs (e.g. behavioral beliefs, attitude, personal norms compared to subjective norms), and internal factors namely intention and self-efficacy beliefs were also found as significant predictors of teachers’ portfolio practices in the quantitative part of this study.

Moreover, it was viewed as effective by some teachers to use electronic media such as tape recordings, videotapes, and photographs to document child learning. Similarly, teachers highlighted the importance of digital tools in documentation in another research study (Knauf, 2019). Technologies can improve assessment and record keeping practices in early childhood setting (Boardman, 2007) and enable both teachers and children to revisit and reflect on their learning (Helm et al., 2007). All teachers in the Reggio Emilia-inspired preschool in Turkey (RT) and half of the teachers in the university preschool in the U.S. (UA) suggested preparing both online and hardcopy portfolios. Similarly, e-portfolios were supported in the related literature as strengthening formative assessment by including more voices of teachers, parents, and children. However, it was also highlighted that an online platform can only be effective if it is thoughtfully and meaningfully constructed using a theoretical base (Hooker, 2017). For e-portfolios, it is also important to think about students’ technological ability (Belgrad et al., 2008), as it might be difficult for early childhood children to reach an e-portfolio independently. However, technology might be used as a tool for reflection of younger children.

Portfolio can also become a reflective tool for both teachers and children. When we compare the findings between Turkey and the U.S., more teachers in the U.S. pointed out its advantage of reflection and self-assessment as a teacher and suggested allocating time for reflection and assessment. Documentation might be one of the

points which enables U.S. teachers' reflection through analyzing, discussing, and guiding the teaching process by communicating with other professionals (Helm et al., 2007). Moreover, U.S. teachers have planning time in their schedule which they reflect about the day with their colleagues. This might also be an encouraging point for teacher reflection. On the other hand, child reflections are mostly seen in the portfolios of Reggio Emilia-inspired preschool in the U.S. The probable reason is the documentation of teachers for each child in each activity. Children can remember their past experiences with documentation, and it allows reflection and self-assessment (Thornton & Brunton, 2015). Those also help families, teachers, and students to connect learning objectives with the items over time (Kingore, 2008). In this way, portfolio practices provide opportunities to create a context for improving assessment as learning in early childhood education (Yılmaz, et al., 2021).

5.2. Examination of Child Portfolio Contents

In this part of the study, it was aimed to investigate and compare the portfolio contents in the Reggio Emilia-inspired preschool and university preschool in both Turkey and the U.S. by means of a developed content checklist and rubric. Obtaining teachers' self-reported views and practices in the first part of study, in this part the aim was to investigate actual portfolio contents. To begin, results of the content checklist are discussed below. After that, portfolio content analysis findings are discussed with respect to rubric categories including content, features of selected products, organization, reflection, and overall evaluation.

5.2.1. Components of child portfolios

Portfolio contents were examined and compared by the researcher with a content checklist to present the components of the child portfolios in both Turkey and the U.S. When findings are inspected, it is seen that inclusion of varied activities is one of the commonly included components in portfolios in both countries. These activities were included as work samples in Turkey while they were documented by photos and anecdotal notes in the U.S., as explained by teachers in the interviews. As a probable result of this difference, results also showed that U.S. preschools include

a greater variety of activities in their portfolio content through documentation of the activities, in comparison to Turkish preschools. For instance, it is seen that drama is included only in one portfolio in the Reggio Emilia-inspired preschool in Turkey (RT). The probable reason might be that there is normally not an activity product to integrate into the portfolio after the drama. In interviews, one of the teachers also verified the difficulty of including products after certain activity types (e.g. drama, science experiments). On the other hand, U.S. teachers can integrate a variety of activities by documenting the process. Similarly, child activities are also confirmed as a common portfolio component in the related literature (e.g., Krnjaja & Pavlović-Breneselović, 2016). Specifically, portfolios with these student work samples and narrative reports allow teachers to describe child development (Wortham & Hardin, 2016). As suggested, moreover, these reports, whether called a developmental observation report in Turkey or conference summary form in the U.S., are also included in all preschool portfolios. In fact, this is a requirement in portfolio guidelines. By means of these reports, teachers have the opportunity to think about each child, what is going on in the classroom, goals, and needed modifications (McAfee et al., 2016).

Moreover, when it is examined in terms of each preschool, observation notes are included in all portfolios except the Reggio Emilia inspired preschool in Turkey. In fact, teacher observation notes and child products together enable concretization of child development in process as pointed out by teachers in interviews of the present study and as also supported in the related literature (e.g. Kingore, 2008). Therefore, this is an important missing component. This might be the main reason for this preschool's portfolios not being rated as exemplary regarding overall evaluation in the rubric. In fact, observation was found as one of the most frequently used unstandardized tools in many research studies in the related literature (e.g. Banerjee and Luckner, 2013; Elden, 2019; Hanes, 2009; Rethza and Jamaluddin, 2010). Teachers also verified their practice of observation in process in interviews. Also supporting their self-reported comments, there is a checklist and developmental report in child portfolios in this preschool. These necessitate observation by the

teachers during the process. Therefore, one possible reason for this missing component is that although teachers practice observation, they might not systematically document their observations in their classroom and do not include in the portfolio. Alternatively, they might have a summative focus and reflect on their observations only in the checklist or developmental report. This was exemplified in the related literature that teachers practice observation and portfolio assessment for summative rather than formative purposes and need support to assess children systematically (McNair et al., 2003).

Checklists are also included in all portfolios in the Reggio Emilia-inspired preschools in both Turkey and the U.S. In fact, assessment is integrated into all activities in these preschools (Lewin-Benham, 2011). To illustrate, portfolio practices are adapted from Work Sampling System in the Reggio Emilia-inspired preschool in the U.S. (RA). In this system, a checklist provides a comprehensive picture of child development in all domains of growth and learning (Helm, et al., 2007). Portfolio items represent these domains from the checklist (Wortham & Hardin, 2016), and checklists and summary reports together enable teachers to see a child's development and learning in multiple ways (Pekis & Gourgiotou, 2017). Similarly, teachers exemplify some items from their checklist on portfolio pages with anecdotal notes and photos in the Reggio Emilia-inspired preschool in the U.S. (RA). Furthermore, teachers present their observation with a checklist and development report in the Reggio Emilia-inspired preschool in Turkey (RT). Therefore, assessment is important in the Reggio-Emilia philosophy, as pointed out by teachers, and the checklist is an important assessment tool to serve this purpose in both participant Reggio Emilia-inspired preschools.

Another noteworthy point to mention is that child reflections and interview notes are seen in all child portfolios in the Reggio Emilia-inspired preschool in the U.S. (RA). The possible contributing factor is that children are viewed as capable in this preschool as highlighted by teachers while mentioning their preschool philosophy and as emphasized in the Reggio Emilia approach (Bredekamp, 1993). Teachers make documentation for each individual child even in the same activity in this preschool. These might be the occasions that enable child reflection. Documentation

might help children to remember and reflect. For instance, documentation using electronic media (e.g. videotapes, photos) enables children to revisit and reflect on their learning (Helm et al., 2007). By means of these moments of reflection, children can actively participate in assessment in the portfolio development process (Kingore, 2008). In this light, it is not unexpected to find that child reflections are more likely to be seen in Reggio Emilia-inspired preschool in the U.S. (RA). Teachers in this preschool document and organize documentation for each individual child in the process. They all also include their documentations including observation notes and interview notes into their portfolio. Supporting the findings of the present study, it was also concluded in the related literature that centers which are advanced in their documentation practices enable children's participation in documentation. Otherwise, it is seen as extra work for the teachers (Knauf, 2017b).

On the other hand, although worksheets are included in both preschools' portfolios in Turkey, they are not integrated into any of the portfolios in the U.S. The probable reason for this is that teachers do not include objectives and indicators in portfolio pages in Turkey, and they might try to assess and demonstrate attainment using worksheets. In contrast, in the U.S., teachers present objectives and indicators on portfolio pages and document them using photos and anecdotal notes for each child. They assess with respect to documentation rather than using worksheets for such purpose. This is advocated in the related literature that connecting portfolio content with local and state standards contributes to evidence of teacher and student accountability (Belgrad et al., 2008). Actually, accountability is a considerable issue for U.S. teachers. Because of accountability demands and program evaluation, quality is measured by assessing children's performance in achieving specific outcomes in the U.S. (McKenna, 2005). This might be one possible reason for differences between the two countries and indicates the importance of policies on assessment practices. Another possible underlying reason for this difference might be the crowded classrooms in Turkey. According to demographics, it is seen that there is a higher teacher-to-children ratio in Turkey compared to the U.S. This was stated as a challenge in interviews and was found in the quantitative results too. Therefore,

teachers might focus on development of the entire class and use worksheets for this purpose rather than focusing on specific objectives for each child. Supporting this, Wang and Hou (2021) showed the restrictive impact of crowded classroom on teachers' assessment practices in China in their research study.

Furthermore, standardized test findings are also only seen in the examined portfolio of the university preschool in Turkey (UT) since it is expected to assess children with respect to some determined standardized tests and thus included in the portfolio in this preschool. It is not mentioned as a portfolio component in interviews in other preschools and also not seen in their portfolios. This indicates common usage of informal assessments in these preschools in comparison to standardized tests, as found in the related literature (Rethza & Jamaluddin, 2010). Another possible reason is that they might use but not integrate this into portfolio assessment. In addition, some family contributions (notes and photos from family, activities at home) are only seen in some U.S. portfolios. This also demonstrates that they integrate parents into the portfolios, as they pointed out in interviews. However, this is not included in other preschools, as described in the related literature as a missing element in printed child portfolios (Hooker, 2017). All these findings reflect preschool guidelines and indicate their importance in teachers' portfolio practices. Cultural differences between countries and preschools might also be a considerable factor upon their practices. According to determinist view, culture is a determinant of the actions (Langstedt, 2018).

Findings show that portfolios can be prepared in different forms. However, one important point is that information from a variety of sources or curriculum contexts should be included in portfolios, and those should be collected systematically over time (Grace & Shore, 1992; Gullo, 2006). For instance, multiple assessments provide a full and accurate picture of student achievement. Therefore, enriching portfolio content is important to reach a comprehensive assessment (Butler & McMunn, 2006). As it includes different assessment methods (e.g. checklist, reports), a portfolio is described as a comprehensive assessment by most of the participant teachers in interviews in this study. However, although portfolios include a variety of documents

as suggested, at the same time they also lacked some elements in their content. For instance, state required forms, family input (questionnaire, form etc.), and suggestions for the next teacher of the child were not included. Teacher explained in interviews that stated required forms are not included because these are shared on different platforms. Family input is also stored in a different folder by school administration and not included in portfolios. The probable reason is that since portfolios are stored in a place reachable to children and families anytime, detailed child and family information might not be included because of privacy issues. Supporting this, it is suggested in the related literature that if portfolio consists of work products, it might be on an open shelf. However, if portfolios contain private information, it is necessary to keep them private (McAfee et al., 2016). Moreover, since teachers do not share portfolios with the next teachers of the children except Reggio Emilia-inspired preschool in the U.S. (RA), they might not include suggestions for the next teacher of the child in the portfolio. They also did not mention a purpose related to this in interviews. However, they highlighted its benefits. In fact, inclusion of suggestions for the next teacher of the child might be a point that encourages sharing of the portfolio with the child's next teacher. This can guide instructional planning for the next teacher of the child (Kingore, 2008).

Overall, as confirmed in interview findings and as seen in the content checklist, teachers prepare portfolio content with respect to preschool guidelines. However, in addition to these guidelines, there might be different factors affecting the portfolio contents. For instance, portfolio content can change with respect to purpose. Purpose and type are also closely related (Jones & Shelton, 2006). Although portfolio types were not a focus as a part of this study, it might be an important factor related to portfolio contents. Moreover, materials can change with respect to age of children since as children grow, portfolio content becomes more complex (Helm et al. 2007). Therefore, different factors should be considered while considering portfolio contents, e.g. program goal, curriculum, type, purpose of portfolio, and teacher preference (McAfee et al., 2016; Wortham et al., 1998; Wortham & Hardin, 2016).

5.2.2. Content analysis of child portfolios

Portfolio contents were examined and compared with respect to rubric categories, which are Content, Feature of Selected Products, Organization, Reflection, and Overall Evaluation, and rated in terms of three options: “Not enough,” “Acceptable” and “Exemplary.”

Under the content category, child and family information, assessment methods, activities, and variety of products were examined. It was found that child and family information is not enough in the majority of the examined portfolios. In fact, child personal information was mentioned as a portfolio component in the content checklist and in content scale in the quantitative part as including basic personal information about the child (e.g. name, age, class). However, it was rated as not enough here based on the deficiencies with respect to this rubric category (e.g. informative child forms, records, family information documents) (Appendix N). Since portfolios are stored in a place reachable to children and families, this information might be kept private by the school administration. On the other hand, activities were rated as exemplary in most portfolios, as including different types. Moreover, assessment methods and variety of products were also rated as exemplary in all preschools except the Reggio Emilia-inspired preschool in Turkey (RT). Variety of products might serve different purposes and enrich the portfolio assessment. For instance, photographs highlight processes and represent three-dimensional products (Kingore, 2008). However, photos were not included in the Reggio Emilia-inspired preschool in Turkey (RT). Since child activity products are only included, specifically, variety of products is weak in that preschool.

Another category, feature of these selected products was rated as acceptable to exemplary in terms of reflecting child development in the process. To explain, in the university preschool of Turkey (UT) portfolios, there are specifically planned activities to assess development to serve its purpose. On the other hand, in the U.S., there is a page limitation and important points in child development are selected by the teachers to clarify the development and learning process by means of the selected

concrete content and notes. Regarding this, in the related literature, it is suggested to collect representative works rather than including a collection of everything. These are not best works. This is the systematic documentation of achieved skills in relation to learning standards over time. To illustrate, repeated tasks are a valuable assessment method to show achievement (Kingore, 2008). Supporting this, in the university preschool of Turkey (UT), it is clear to see development through repeated tasks. In line with this, U.S. portfolios also present growth clearly by presenting related standards and documentation. In this regard, it might be concluded that the portfolio review of this study confirms the importance of systematic documentation to be able to observe development, as suggested in the literature. However, showcasing only art products can present this development up to a certain level, as is seen in the portfolios of the Reggio Emilia-inspired preschool in Turkey (RT). Therefore, it is suggested to complement and supplement the portfolio with other documentation (McAfee et al., 2016).

In all preschools, “organization” of portfolios was rated as exemplary. Portfolios were organized with respect to projects, developmental domains, or chronology, and those have a specific order within themselves to reflect child development. In relation to this, it is supported in the literature that there is no best way to select and organize the portfolio content (McAfee et al., 2016). Since each preschool has a different philosophy or each teacher has different practices, it is inevitable to see differences. However, it is important to create an organization system which enables teachers to see development. In this study, each of the reviewed portfolios had its own organizational structure for presenting development. In particular, portfolios which are organized with respect to developmental area enable viewers to see development clearly within a particular domain. Portfolio contents are organized by date within each developmental domain to focus on development within a specific developmental area.

Teacher and child reflections are the portfolio component which needs more attention in this study. For example, portfolios do not have enough child and teacher reflections in the Reggio Emilia inspired preschool of Turkey (RT). In other preschools this

component was rated as not enough, acceptable, or exemplary. Similarly, child reflections were confirmed as a missing component of portfolios in the related literature (Knauf, 2017). A portfolio is not complete without reflections. It is one of the defining characteristics of a portfolio. It provides insight into learning and personal/professional development (Jones & Shelton, 2006). It helps families, teachers, and students to connect learning objectives with the items over time. It provides awareness on child perspective, learning, and disposition (Kingore, 2008). Moreover, portfolio reflection also helps learners to think critically about classroom assignments and the relationship of assessment to those performances. Therefore, reflection pieces are vital in the learning process. This being said, for instructors, reflection is missed or an underestimated part of the portfolio process (Fernsten & Fernsten, 2005). Teachers were also found to have medium scores in terms of selecting, reflecting, revising, and evaluating products (Tangdhanakanond & Archwamety, 2019). There might be different factors causing this deficiency or lack of reflection in the portfolio process. For instance, children's developmental level might be one restricting factor for teachers since children's language development might create an obstacle for their reflection. It might be necessary to find creative ways to include child reflections, especially for younger age groups. To this end, as suggested by teachers in interviews, using technological tools might serve as a tool for their purpose, as a reminder for children. These can help them to remember and reflect (Helm et al., 2007). Alternatively, a portfolio center can be organized in the classroom, where children can file their items and reflect on them (Kingore, 2008).

When it is evaluated overall, child portfolios in the Reggio Emilia-inspired preschool in Turkey (RT) were rated as acceptable, not exemplary. These portfolios enable viewers to see a child's competencies, skills, and learning process up to a certain level but not comprehensively. The main factor upon which this rating was based is the content of child portfolios in this preschool. Some assessment documents (e.g. development report, checklist) are included but not comprehensive, and selected products also do not reflect child development comprehensively. Furthermore, the variety in products is not enough because there are child products and some

assessment documents in printed forms, not supported by different types of documentation (e.g. photo, audio, etc.). In relation to this, teachers explained in interviews that they document with photos and videos but share them in an online platform with parents. However, since those are not included in portfolios, it leaves an important element missing. When all these are combined together, it provides information about the child at a limited level. Effective assessment cannot be carried out. This finding indicates the importance of portfolio content in serving its assessment purpose rather than physically fancy preparation. Interview findings from this preschool show that preparing fancy portfolios creates a challenge for teachers in the portfolio process. Instead of visualizations, portfolio contents need to be enriched in this preschool. In particular, documentation needs to be included for reflection and understanding about how classroom practices affect children's learning (Lee-Hammond & Bjervas, 2020). Furthermore, it is necessary to determine the content before the portfolio process to be able to reach offered benefits (Martin-Kniep, 2000).

On the other hand, in all other preschools, examined portfolios were rated as exemplary when evaluated overall. In the university preschool of Turkey (UT), it serves its purpose well by showing the child's competencies, skills, and learning process in a very good way through rich concrete content, assessment activities, and organization. University preschool of U.S. (UA) portfolio content and organization also present child competencies, skills and learning process in a concrete way by explicitly illustrating progress both in portfolio pages and in conference summary report. Likewise, in the Reggio Emilia inspired preschool of U.S. (RA), portfolios show children's competencies, skills, and learning process in a very good way by means of the comprehensive checklist, teacher observation notes, detailed conference summary report, and consistent organization. However, these portfolios need to be enriched in terms of reflection. In addition, children's work samples can also be included more in U.S. portfolios, and documentation can be increased in Turkish portfolios. Despite such deficiencies, these portfolios serve their purpose in terms of assessment and enable viewers to see child development in determined areas. In the

related literature, the focus of a portfolio was stated as understanding holistic child development (Martin, 2014). Therefore, it is important to present holistic child development in a portfolio to serve its assessment purpose, which is the case in most of the portfolios in these preschools.

In brief, to reach the benefits of portfolio assessment, it is important to prepare comprehensively, purposefully, and systematically prepared portfolios. Although reviewed portfolios are practiced in a different way, they serve the purpose of assessment because of having their own system for the portfolio assessment process. This confirms that there is no one best way for portfolio assessment (Fenwick & Parsons, 1999). However, rated rubric categories reflect the expectations in their portfolio guidelines and verify the importance of these guidelines on teachers' portfolio assessment practices. Therefore, it is necessary to have well-prepared guidelines for teachers in order for a portfolio to serve its assessment purpose.

5.3. Examination of Teachers' Portfolio Practices in terms of a Variety of Variables

In this part, it was aimed to investigate early childhood teachers' portfolio practices, views, and related predictors by means of scales developed as a part of this study. Data were collected from 605 early childhood teachers who were working in public preschools in the capital of Turkey and analyzed by descriptive statistics, MANOVA, and Hierarchical Multiple Regression analysis. These results are discussed below under the related subtitles.

5.3.1. Examination of teachers' portfolio related behavioral beliefs, attitudes, self-efficacy beliefs, barrier perceptions, intention, and child-teacher centered beliefs with respect to practicing portfolio assessment

It was found that teachers mostly include different kinds of activities, worksheets, and personal information about the child in their child portfolios. This confirms that child activities are one common component in child portfolios in three different parts of this dissertation. In the related literature, specifically, actual child work samples

were suggested to be included as a major item of the portfolio (Dichtelmiller et al., 2001; Meisels and Steele, 1991). If a portfolio provides examples of pedagogical activities in the classroom, this might enable student, teacher, parent, and community to reflect on practices and progress of preschool. It might also help them to understand methods and pedagogy in early childhood education (McKenna, 2005). On the other hand, suggestions for the next teacher of the child is the one of less frequent components, which was also observed in the analyzed portfolio contents. The most probable reason is that teachers are not sharing portfolios with the next teacher of the child as explained in the interviews and as confirmed in the literature (e.g. Alacam & Olgan, 2016).

Moreover, results demonstrated that teachers have high scores in personal norms, behavioral beliefs, self-efficacy beliefs, attitudes, and intention in practicing portfolio assessment in comparison to subjective norms. According to TPB, people have the intention to perform a behavior when they see it positively, when they have social pressure to perform it, and when they have opportunities to do it. Only one or two of these might be necessary to explain intention in some instances (Ajzen, 2005). Therefore, it is not surprising that teachers have high scores in internal constructs and intention at the same time in this study. After getting initial idea with these descriptive results, in order to investigate whether there is a significant difference between teachers who are practicing and not practicing portfolio assessment on behavioral beliefs, attitudes, self-efficacy beliefs, barrier perceptions, intention, and child-teacher centered beliefs, one-way MANOVA analysis was performed in this study. It was found that teachers who are practicing portfolio assessment have significantly higher behavioral beliefs, attitude, self-efficacy beliefs, intention and lower barrier perceptions than teachers who are not practicing it. In contrast, no significant difference was reached on child-teacher centered beliefs. These results indicate consistency with the related literature. These variables were supported as predictors of intention in TPB or in different research studies in the literature (e.g. Armitage & Conner, 2001). Since practicing teachers have higher scores in these internal

constructs (behavioral beliefs, attitude, self-efficacy beliefs), these might contribute to their intention in practicing portfolio assessment.

There are inconsistent findings in the literature on congruence between beliefs and practices of teachers. Although some studies showed that preschool and kindergarten teachers teach with respect to their beliefs, other studies reached contradictions between beliefs and practices as the age of children increases (Saracho & Spodek, 2003). For instance, a significant negative relationship was found between teachers' assessment practices and beliefs. The reason is that a large number of teachers are at risk because of occupational stress like accountability issues (Brewer, 2006). In contrast, teacher portfolio related beliefs and practices were found in similar ranges in the present study. As expected, teachers who are practicing portfolio assessment were found to have higher scores in internal constructs related to portfolio assessment and they were found to have lower barrier perceptions. Supporting this consistency, Fang (1996) suggests that teacher beliefs guide their interactions and activities in the classroom. Similarly, it is supported in several findings that there is a relationship between teacher's beliefs and classroom practice (Scott-Little et al., 2006), and teaching beliefs and philosophies have an important role in their teaching practices and classroom decisions (McMullen, 1999; McMullen et al., 2006; Pajares, 1992; Smith, 1993; Wang et al., 2008). In particular, a strong relationship was found between early childhood teachers' assessment related self-reported beliefs and practices. High level beliefs were associated with high level of practices (Buldu & Tanteekin-Erden, 2017). It was justified that teacher beliefs about the assessment processes have an impact on their processes of assessment practices and guide their instructional practices in the classroom (Barnes et al., 2017). These might be the reasons which lead to consistent findings between portfolio assessment related beliefs and practices in the present study.

Furthermore, teachers who are practicing portfolio assessment were found to have lower barrier perceptions and higher self-efficacy beliefs than others who are not practicing portfolio assessment. This indicates that teachers practicing portfolio assessment have some challenges, but they believe in themselves to overcome those.

It was supported in the related literature that teachers with high self-efficacy believe in themselves and their students. They work harder and persist longer when faced with difficulties (Woolfolk, 1998). In line with this, a strong positive correlation between teachers' self-efficacy and use of formative assessment practices were reported in the literature (Hartley, 2016). Similarly, in this study, Hierarchical Multiple Regression analysis results also supported that self-efficacy beliefs are a significant predictor of teachers' portfolio assessment practices. Therefore, their self-efficacy beliefs might be the significant factor upon their practices and lower barrier perceptions in this study. However, barrier perceptions might be an inhibitive factor for teachers who have lower self-efficacy beliefs, and in turn this might result in not practicing portfolio assessment. To explain, there might be different factors creating teachers' barrier perceptions related to portfolio assessment, such as lack of in-service training. In the literature, a significant relationship was found between teachers' in-service training on portfolios and their implementation of portfolios in classroom. It is suggested that teachers should be informed about portfolio assessment in undergraduate years, and more information should be provided to teachers during in-service training (Zelyurt & Karakaş, 2018). These trainings might help teachers to overcome their barrier perceptions.

In addition, teachers were also found to have high child-centered beliefs and low teacher-centered beliefs in this study. To explain, a portfolio is a child-centered method of documentation and assessment which brings out children's ideas and opinions (Kankaraanta, 1996). It provides a powerful method and tool to engage students (Jones & Shelton, 2006). Constructivism supports alternative assessment practices (Anderson, 1998), and in particular, portfolios serve as a tool for assessment as learning (Yılmaz et al., 2021). However, portfolios are overwhelming for teachers who have teacher-centered classrooms. (Barton & Collins, 1997). In light of these findings, it was in the expected range that teachers have higher child-centered beliefs in comparison to teacher-centered beliefs in this study. It was also expected that child centered beliefs change with respect to teachers' portfolio practicing. Yet, a significant difference cannot be found in MANOVA analysis. A probable reason for

this might be that although teachers have high child-centered beliefs, they have a dominant role in the portfolio process as found in interview findings of the present study and supported in the literature (Knauf, 2017; 2017b). In other words, their child-centered beliefs actually cannot be reflected onto their portfolio practices.

There might be different factors which explain why child-centered beliefs cannot be reflected on portfolio practices. In other words, different factors might inhibit them from practicing their child-centered beliefs in portfolio practice. To explain, it was confirmed in this study that teachers have barrier perceptions about portfolio assessment, and these might be a factor. Similarly, in the related literature, a discrepancy between beliefs and practices is also attributed to barriers such as physical conditions, limited resources, crowded classrooms, lack of partnership between parents and teachers, and low status of the profession (Erdiller & McMullen, 2004). For instance, crowded classrooms is one of the found barriers in this study, which was also confirmed as a constraint in teachers' assessment views in the related literature (Wang & Hou, 2021). Furthermore, discrepancies might also be because of teaching setting (Stipek & Byler, 1997), age of children, local or state requirements or school culture (Vartuli, 1999). To illustrate, teachers might not put their child-centered beliefs into practice because of accountability issues and school or parental expectations. Supporting this, Hidayat et al. (2021) identified parental expectations on teaching (e.g. writing, counting) as a constraint in the assessment process. Moreover, the related literature also indicated teacher misconceptions about portfolio assessment (Tangdhanakanond & Archwamety, 2019), and these might also be other possible factors impacting their practices.

In light of all these findings, since practicing teachers have high levels of beliefs and intentions regarding portfolio assessment, their portfolio related practices might be improved easily with training or support. They can learn strategies for how to deal with challenges in the process and put their knowledge into practice easily, having self-efficacy beliefs.

5.3.2. Predictors of teachers' portfolio practices

According to Hierarchical Multiple Regression analysis results, both portfolio-related self-efficacy beliefs and intentions were found as significant predictors of teachers' portfolio related practices in terms of content, child participation, and sharing. This finding is in line with the literature and the TPB. To explain, intention and perceived behavioral control were identified as predictors of the behavior according to TPB. This is supported with evidence that intentions in particular are close antecedents of overt actions (Ajzen, 2005) and identified as the best and immediate predictor of a person's behavior (Fishbein & Ajzen, 1975). Another construct, perceived behavioral control, is also closely related to self-efficacy (Ajzen, 2005) since both are concerned with the perceived ability to perform a behavior (Ajzen, 2002). Self-efficacy was investigated in this study rather than perceived behavioral control since it is supported that one of the predictors of teacher behavior is their beliefs in their own capabilities (Bandura, 1997; Tschannen-Moran et al., 1998). Teacher efficacy judgements have an impact on their goals, their efforts for reaching these goals, and their persistence when faced with difficulties (Tschannen-Moran et al., 1998). Self-efficacy especially is more predictive when it is specifically defined (Pajares, 1992). Therefore, teachers' portfolio related self-efficacy beliefs were integrated in this study, and found as a significant predictor of portfolio related practices. It is justified in the literature that teachers are more likely to practice assessment when and if they feel confident with that assessment method (Guo et al., 2014; Yan & Cheng, 2015). If people do not believe that they can produce desired performances, they have little incentive to do it (Bandura, 2000). Therefore, efficacy beliefs can have a direct impact on performance, or it can affect performance by influencing intentions (Bandura, 1997). In line with this, a strong positive correlation was reported between teachers' self-efficacy and use of formative assessment practices in the classroom (Hartley, 2016). Similar to current study results, intention and self-efficacy beliefs were also found to impact teachers' formative assessment practices in the related literature (Yan & Cheng, 2015). Based upon these justifications, these two variables are related as shown in this study and create a significant difference on portfolio practices.

Moreover, the results of analyses also showed that there is not a statistically significant difference on portfolio practices with respect to teaching experience. This finding might be supported by several studies in the related literature. For instance, it was confirmed that teachers' years of experience did not significantly affect their assessment views (Nassif, 2007). No relationship was found between teaching experience and perceptions or usage of formative assessment (Johnson et al., 2019). Moreover, teaching experience was also found as a non-significant predictor of teacher sense of efficacy, teacher self-efficacy towards measurement and evaluation, and frequency of using traditional and alternative tools (Ceylandağ, 2009).

On the other hand, in another study a significant difference was found in teachers' assessment beliefs with respect to teaching experience in favor of the experienced teachers (Buldu & Tantekin-Erden, 2017). Similarly, primary school teachers with less than five years of experience were less likely to agree on the factors related to formative assessment practices than teachers with more than 16 years of experience (Alotaibi, 2019). As teachers gain experience, they value assessment more and implement self-created assessments rather than readily available ones. Beginning teachers do not feel comfortable developing their own assessments (Unal & Unal, 2019). In other words, confidence level of teachers increases with more experience (Sach, 2012). In this light, teachers' portfolio related experiences might be important to create this confidence in them in comparison to teaching experience. Although teachers might be experienced, they might not practice portfolio assessment. Therefore, teaching experience might not create a significant difference in their portfolio practices. In the qualitative part of this study, a majority of the participant teachers highlighted that being inexperienced was a challenge in the portfolio process. A majority of them pointed out the importance of getting support from experienced mentor teachers regarding portfolio assessment. These findings point to complementary explanations for this result and indicate the importance of portfolio related experiences. Supporting this, in the literature, it was also found that there is a relationship between teachers' familiarity and usage of portfolios (Nick, 1995), and familiarity with traditional assessment was also seen as a challenge of authentic

assessment process (Hidayat et al., 2021). By considering findings in the present study and related literature, although teaching experience was not creating a significant difference, teachers' portfolio related experiences might be a considerable factor upon their portfolio practices.

This study analyzed three predictors of portfolio practices: teaching experience, intention, and self-efficacy beliefs. In the related literature, a number of variables were also identified as predictors of intentions such as attitude, subjective norm, personal norm, perceived behavioral control (Ajzen, 2005; Bamberg et al., 2007; Roos and Hahn, 2019). It was especially supported that teacher intention to practice formative assessment is dependent on internal factors rather than external ones (Yan & Cheng, 2015). These different variables were presented descriptively in this research but their predictive impact on intention were not analyzed. However, it was seen in descriptive results and one-way MANOVA analysis that teachers have significantly higher scores on these variables (e.g. attitudes, behavioral beliefs) than the others who are not practicing it. Therefore, these might be the possible factors contributing their intention and also impacting portfolio practices indirectly in this way.

5.4. Overall Findings and Discussion

There are three different studies to investigate portfolio assessment in this dissertation, and their findings complement or speak to each other in different ways. To begin, it was found that although there are differences in the practices according to reports of teachers' in interviews, portfolios serve the purpose of assessment when evaluated overall in the document analysis. Survey items also enable to generalize similar practices to related population. These overall findings indicate the adaptability and flexibility of portfolio assessment to different contexts and curriculum. It confirms that there is no one best way for portfolios (Fenwick & Parsons, 1999).

When findings of all studies are examined together, the common point is the impact of portfolio guidelines or curriculum on teachers' portfolio practices. Portfolio

practices meet on more similar points in the same country rather than the same preschool type. In interviews, teachers highlighted the importance of expectations in their portfolio guidelines on their portfolio practices. Portfolio content analysis also confirmed the reflection of those guidelines into their portfolio contents. In line with these, quantitative part supports the existence of subjective norms for teachers. These guideline expectations or teachers' subjective norms might provide overlapping on their portfolio practices in the same country. Similarly, related literature supports that meeting program requirements is one of the reasons of teachers' data collection for assessment (Keengwe, 2020). Therefore, clear definition of the portfolio is necessary within preschool curriculum framework (Krnjaja & Pavlović- Breneselović, 2016). Since a portfolio focuses on development, it is necessary to be purposeful and systematic. School portfolio guidelines or curriculum might be helpful for establishing this policy (Nitko & Brookhart, 2007). However, it is necessary that these guidelines are adapted with respect to the culture of the related setting. If it is not connected with social values and needs, it will not support overall change (Turner & Wilson, 2010).

In both interviews and document analysis, teachers' portfolio practices were examined in terms of content, and it was found that child activities are one of the common components of child portfolios in each country. However, the way of their inclusion is different. Although those were integrated as child work samples in Turkey, those were reflected on digitally prepared portfolio pages by anecdotal notes, photos, and explanation about the related developmental domain in the U.S. Similarly, in Study 3, content is one of the dimensions of portfolio practice survey, and teachers agreed on the inclusion of different products to reflect child development in different areas. Content survey in this study and content checklist in the Study 2 also meet on the similar points, and child activities and worksheets were seen as common components of portfolios in Turkey. Overall, findings of these three studies support each other and demonstrate that child activities are one of the common components to reflect child development. Since portfolio is a performance assessment, child activities enable teachers to assess children through their works in

process. In relation to this, it is supported in the related literature that portfolios with student work samples and narrative reports allow teachers to describe child activities (Wortham & Hardin, 2016). Therefore, child portfolio content in the U.S. might be enriched with child selected work samples, and documentation can also be increased in the portfolios in Turkey. Integrating features of both U.S. and Turkey portfolios might present more qualified portfolio content to serve its assessment purpose.

When we compare the findings of interview and document analysis, those provide complementary explanations for each other in terms of different sides. For instance, child-reflections are mostly seen in the child portfolios in the Reggio Emilia-inspired preschool in the U.S. In interviews, teachers reported their documentation for each individual child in each activity in this preschool. These are reflected into their portfolio contents as child reflections. In other words, documentation contributes to reflection and self-assessment of children (Thornton & Brunton, 2015). Moreover, in interviews, teachers highlighted concretizing child development by documentations in the U.S. or with some repeated activities in the university preschool in Turkey (UT). Document analysis findings confirmed that these features are contributing to presenting child development in a concrete way. On the other hand, since documentations are not included, portfolios do not provide a comprehensive assessment in the Reggio Emilia-inspired preschool in Turkey (RT). Preparing fancy portfolios was seen as a challenge, and those did not reflect the child development comprehensively in this preschool as expressed in interviews and seen in document analysis. The focus of portfolio is understanding holistic child development in process (Martin, 2014). Therefore, it is highlighted in overall findings that presenting holistic child development systematically in process is important in portfolios rather than preparing them as a visual show of children. To reach such intended objectives of portfolio assessment, systematic collection is necessary (Kingore, 2008).

Organization is another key term referred in three studies of the dissertation as a crucial part of portfolio practices. Portfolio organization enables teachers to collect items from each domain to present holistic development as desired (Helm et al., 2007). It was confirmed in each study that teachers have different organization

criteria, and each serves for their purpose. For instance, document analysis findings demonstrated that organizing by developmental domains enables U.S. teachers to see child development clearly within related developmental domain as justified by them in interviews. On the other hand, in the practice survey, teachers agreed upon the item of using some organization tools to follow the process similar to the teachers' comments on this point in interviews. All these findings indicate the importance of having a systematic for portfolio organization and also confirm the adaptability of portfolio organization with respect to teachers. To be systematic in the process, it was found that teachers develop their own method to take notes, photos and combine their documentations (Knauf, 2019). This systematic collection of children's work enables them to document growth over time. For instance, as having softcopy organization for their digitally prepared portfolio pages, U.S. teachers especially indicated the importance of having an organization for each individual child in process. This portfolio organization enables teachers to collect items from each developmental domain for each child during the process (Helm et al., 2007).

Parent involvement is also an important component of examined portfolio practices in this dissertation. To share portfolio with parents, in interviews, teachers mentioned organizing portfolio conferences and highlighted the role of communication with parents in the process. Similarly, teachers agreed on the items of organizing portfolio sharing conferences and communicating with parents in the process in the portfolio practice survey. However, in document analysis, it was seen that family input is less likely to be included in portfolios. These overall findings indicate that parents are viewed as audiences to share portfolio assessment rather than integrating them actively into the portfolio content or process. In line with this, related literature also found less family voice or family contributions in the portfolio content (Hooker, 2017; Krnjaja & Pavlović-Breneselović, 2016). However, it is important to integrate parents into the assessment process as a partner. To enable their active integration into the process, parent involvement might be integrated into portfolio guidelines.

On the other hand, in interviews, it was found that only Reggio Emilia-inspired preschool teachers in the U.S. (RA) share portfolio with child's next teacher if in the

same preschool. Similarly, in portfolio practice survey, most teachers confirmed that portfolios are not shared with the next teacher of the child in Turkey. In content analysis, suggestions for the next teacher of the child was also found as one of the lack components in both countries. These overall findings of this dissertation indicate that sharing portfolio with the next teacher of the child is one of the ignored sides of the portfolio assessment in practice. However, these portfolios can help children's learning in transition to school (Peters et al., 2009) and demonstrate how children are prepared for the first grade (Alaçam & Olgan, 2016). Therefore, suggestions for the next teacher of the child can be integrated into portfolio content, and teachers can be supported for this portfolio transferring.

Furthermore, three studies of this dissertation also meet on the same point that child participation in portfolio process is not enough and needs more attention. According to interviews findings, while children are included in the portfolio conferences in Turkey, it is organized with only parents in the U.S. Children participate in the content selection only in the university preschool in Turkey (UT). In line with these, document analysis findings demonstrated that child reflection is one of the deficient sides of the majority of the portfolios. Moreover, in portfolio practice survey, child participation scores were found as lower in comparison to other constructs. MANOVA analysis results also showed that teachers' child-teacher centered beliefs do not change with respect to practicing portfolio assessment. All these findings meet on the similar point that child participation in portfolio assessment process is not in desired level. Similarly, child participation was found as one of the lack components in child portfolio structures in the related literature (Krnjaja & Pavlović-Breneselović, 2016). It was seen as extra work for teachers in addition to their childcare (Knauf, 2017b). However, there are a variety of benefits of portfolios for children as enabling their active participation and encouraging them to be active in the assessment and evaluation process (Johnson et al., 2006). For instance, interviews findings confirm the importance of children's active involvement in portfolio conferences by reporting a variety of benefits for children in Turkey in comparison to the U.S. Therefore, it needs more attention in the portfolio assessment process to

enable children's active participation. Inclusion of child participation into portfolio guidelines like in the university preschool in Turkey (UT) might contribute to actively engage them into the process.

In this dissertation, teachers were found to believe the benefits of portfolio assessment according to both qualitative and quantitative study results in line with the related literature (e.g. Chen & Cheng, 2011). They were found to have high behavioral beliefs in the related scale, and they detailed a variety of advantages of portfolio assessment for teachers, children, and parents in the interviews. On the other hand, results in different studies also confirmed challenges of them in the portfolio assessment process. For instance, its time intensive nature was commonly agreed as a challenge in both interviews and in the related scale. Similarly, time was also found as a common challenge of portfolio assessment process in the related literature (Alaçam & Olgan, 2016; Kim & Yazdian, 2014). It takes a significant amount of time and effort to implement the process (Belgrad et al., 2008). However, interview findings also demonstrated that participant teachers developed some organization strategies for themselves to save time in the process. In addition to time issue, scale results confirmed the lack of support from school administrations as a challenge, and interview findings also indicated the necessity of support to handle the process. Therefore, it is necessary to provide systematic support for teachers in the portfolio assessment process (Krnjaja & Pavlović- Breneselović, 2016; Piker & Jewkes, 2013). Teachers who have district support and extensive experience are more likely to implement portfolio assessment in their classroom (Walcavich, 1995).

Moreover, both qualitative and quantitative results of this dissertation meet on the same point and highlight the importance of internalization in portfolio process. In interviews, majority of the teachers in both Turkey and the U.S. suggested internalizing the purpose and its benefits for usage of portfolio assessment. Similarly, results of quantitative analysis showed that internal factors (self-efficacy beliefs and intention) make a strong contribution to explaining portfolio practices. Teachers practicing portfolio assessment were found to have significantly higher scores in internal constructs (behavioral beliefs, attitudes, self-efficacy beliefs, and intention)

than teachers who are not practicing it. Furthermore, practicing teachers were also found to have higher personal norms in comparison to subjective norms. Personal norms reflect commitment to internalized values (Schwartz, 1977). If internalization can be achieved, this might enable teachers to put their personal norms into practice and use portfolio assessment in an intended way. Therefore, internalization is necessary to reach the intended purposes of portfolio assessment process (McAfee et al., 2016).

Quantitative results also demonstrated that teaching experience does not predict portfolio practices. In contrast, in interviews, a majority of the teachers highlighted that being inexperienced is a challenge in the portfolio process. However, they attracted attention to the importance of portfolio-related experiences rather than teaching experience. Related literature also supports this point by stating that there is a relationship between teachers' familiarity and usage of portfolios (Nick, 1995). To this end, in interviews, teachers suggested taking education, seeing visual examples, mentor teacher, and collaborative work for support. All these suggestions might serve as tools for internalization and provide support when inexperienced, which might contribute to portfolio practices in turn.

5.5. Educational Implications

Portfolio assessment was investigated comprehensively in three different parts in this dissertation. In the first qualitative part, early childhood teachers' portfolio related practices (content, organization, and parent involvement) and views (definition and purpose, advantages, challenges, support and suggestions) were examined and compared in detail for participants from two types of preschools in Turkey and the U.S. In the second study, portfolio content analysis was conducted in the same preschools by means of content checklist and rubric. Finally, in the third study, early childhood teachers' portfolio related practices, views, and predictors were investigated in a quantitative design. Interpretation of all these studies together provide a comprehensive picture of portfolio assessment and provide implications about portfolio practices.

Findings in different parts of this research indicate the importance of internalization upon portfolio practices. To explain, in the first part, most of the teachers emphasized internalization of portfolio assessment in their suggestions. Similarly, quantitative results showed that teachers practicing portfolio assessment have higher scores in internal constructs (e.g. behavioral beliefs, attitude, personal norms) related to portfolio assessment than other teachers not practicing it. Intention and self-efficacy beliefs were also found as significant predictors of teachers' portfolio practices. The most probable reason is that assessment related beliefs might be a guide in teachers' actions and decisions in classroom practices (Barnes et al., 2017). Therefore, to improve portfolio practices, it is necessary to first work on teacher beliefs rather than external factors. It is necessary to slowly develop mindset to see documentation as a part of good teaching (Kang & Walsh, 2018). To this end, it is important to provide time and opportunities to teachers since it is necessary for them to understand purpose, importance, and value of a new assessment system (Goldstein & Flake, 2016). In particular, systematic support is necessary for understanding the purpose of portfolios and development through training and professional literature (Krnjaja & Pavlović- Breneselović, 2016). In response to this need, it is suggested that more professional development programs and support should be provided for teachers to improve their assessment for learning literacy and assessment skills (Gullo, 2013; Pang and Leung, 2011). Current study teachers especially recommended organizing practical based in-service trainings such as workshop on portfolio assessment. This in-service education can be organized by experts about alternative assessment methods (Anil & Acar, 2008). Or teachers can share their experiences with other teachers since it was seen in interview findings that some of the offered suggestions are already being practiced by teachers in the same preschool. This indicates that teachers are not aware of the practices of other teachers even in the same preschool. Therefore, working in collaboration might be an important element of support for portfolio assessment, as pointed out by the teachers.

Both qualitative and quantitative parts demonstrated that teachers have challenges in portfolio assessment process (e.g. documentation, class size). On the other hand, in

the quantitative part they were also found to have self-efficacy beliefs about portfolio assessment. Therefore, teachers might overcome these challenges easily with training and support. To respond to this need, it was suggested that knowledge and skills should be integrated into teacher training programs to support teachers' practices (Yan & Cheng, 2015). Moreover, integrating coaching into the formative assessment process can enhance teaching practices (Dudek et al., 2019). In line with these suggestions, interview findings of the present study suggested mentor teachers for portfolio assessment. It is suggested for teachers to see portfolio examples and benefit from an experienced mentor teacher during the portfolio process. Early childhood teachers learn how to use developmentally appropriate assessment to assess young children and make decisions by having opportunities to participate in research-based assessment process (Calo, 2021). Mentor teachers can be a guide for teachers to learn portfolio assessment in this type of research-based assessment process. Mentoring can contribute to teacher effectiveness by enabling a supportive environment in which to develop professionally (Bowles & Pearman, 2017).

Interview findings also highlighted that organization is one of the key points to reach the intended purposes and benefits of portfolio assessment. For organization, teachers developed different methods for themselves. For instance, they developed some organization tools such as an organizational checklist or graph to follow each individual child in the process, and they suggested that other teachers use such types of organization tools. Since a portfolio is individualized documentation, these types of organization tools are necessary to be able to follow the process for each child. These tools might also help to review the steps taken in portfolio assessment (Wortham & Hardin, 2016) and so as not to miss anything for each child.

Regarding organization, it is also suggested to observe, document, organize, and prepare portfolios throughout the process to be able to see child development. In other words, it is mainly suggested for teachers to be process-oriented and integrate portfolio assessment into daily routine in the classroom. Integrating portfolio assessment into daily processes was proposed as saving time by the majority of teachers in this study. It should not be seen as an addition in this way (Berry, 2008;

Ebbeck et al., 2014). However, this might be difficult for teachers, and they might need support regarding handling the process. To illustrate, having both consistent guidelines and flexibility was seen as a support in portfolio assessment by the majority of teachers in both countries. Therefore, comprehensive and well prepared guidelines can be prepared for teachers. Time can be created for teachers to work on portfolios by organizing planning time for teachers during the day, which is already practiced and worked in the U.S. Shifting teachers for hours might work for this purpose. Alternatively, a special professional development day can be allocated specifically for portfolio preparation, another practice which was also used and favored by teachers in the U.S. in the past.

This study also suggests for teachers to be organized in terms of documentation. It is suggested to develop documentation strategies for integrating documentation into the day, as supported in the literature (e.g. Knauf, 2019). Systemizing documentation can reduce the teacher workload (Chen & Cheng, 2011) and save time as highlighted by the participant teachers. For instance, the following strategies were mentioned by the Reggio Emilia-inspired preschool teachers in the U.S. (RA) and these can become a guide to systematize the documentation process for teachers: writing notes about photos with a date as a reminder, writing notes for each child even in the same activity, writing notes in the same notebook, and sorting photos by date in children's individual folders. Similarly, it is suggested in the related literature to take notes in a notebook while photographing (Shores & Grace, 1998). It is also advocated that chronological organization best serves the purpose to show progress in developmental domains (Wortham & Hardin, 2016). Therefore, sorting photos in chronological order might present the development process clearly for teachers. These mentioned points together can also provide organization for documentation for each individual child and enable teachers to follow their development throughout the process. Therefore, having such a system for documentation best fits the nature of portfolio assessment to reach its offered benefits.

Findings of both interviews and content analysis in this study suggest that teachers concretize child development with planned components in a systematic way. For

instance, teachers in the university preschool of Turkey use repeated activities for this purpose. On the other hand, U.S. teachers place anecdotal notes, photos, and milestones on portfolio pages to make development observable. It was found that this presents child development clearly and helps parents to understand the scientific background of the process. In line with these strategies, it is suggested for teachers to document their observations and include them in the portfolio by relating to developmental indicators. Comparing assessment results with the expected outcomes, goals, objectives, or standards will help to understand them (McAfee et al., 2016). Moreover, to be able to get these concrete snapshots, it is suggested to plan the portfolio process at the beginning. It is suggested to plan when, how, how often, and for which purpose to assess children (Piker & Jewkes, 2013). Developing a plan will prevent teachers from feeling overwhelmed in the portfolio process (Wortham et al., 1998). However, flexibility is also necessary as suggested by some teachers, to make adaptations in the moment with respect to observations (Gronlund, 2016). Overall, it is suggested to be planned and implement this plan as an ongoing process, in addition to documenting consistently. It should not be a folder in which to store all documents (Heritage, 2007). It was strongly suggested by Reggio Emilia-inspired preschool teachers in Turkey (RT) not to prepare portfolios in a visually fancy format. This is one of the challenges of the portfolio process in their preschool; however, it is important to focus on content of portfolio folders to serve its purpose rather than fancy preparation. Moreover, including only certain activity types cannot provide comprehensive assessment, as observed in the content analysis findings in this preschool. It is suggested to prepare portfolio comprehensively by including a variety of documentation, child activities, and assessments.

Similarly, portfolio content analysis results confirmed that integrating other assessment methods like a checklist and developmental report enriches the content of the portfolio. It is difficult to plan and incorporate all required information into the portfolio when it is the only documentation (McAfee et al., 2016). Therefore, portfolio assessment should not be the single assessment method, and it is suggested that it be enriched with other assessment methods. Using other assessment methods

with a portfolio will provide more reliable information about students (Birgin & Baki, 2007). For instance, as suggested by present study teachers, narrative reports might be prepared for portfolios including concerns in a positive tone as a goal and giving recommendations about these (McAfee et al., 2016). This will help teachers to think about each child and support the portfolio content. Moreover, content analysis findings also showed that while documentation constitutes the main components of U.S. portfolios, child work samples are the core components of portfolios in Turkey. It is suggested that integrating both of them might provide comprehensive portfolio content. Collecting work samples and taking anecdotal records together gives a snapshot of child development at a particular point in time (MacDonald, 1997). Systematically prepared developmental checklists, anecdotal records and child's work samples also enable teachers to reliably identify important learning goals (Helm et al., 2007). Therefore, it is suggested to include both documentation and child work samples together in the portfolio in a systematic way to observe child development comprehensively in process.

Furthermore, in the content analysis, it was also found that there were not enough reflections in the majority of the examined portfolios. Similarly, in the literature, reflection was identified as a missed or underestimated part of the portfolio process by instructors. In fact, reflection is crucial in the learning process. It is the responsibility of the instructor to create and encourage effective reflection (Fernsten & Fernsten, 2005). Therefore, it is important to strengthen that aspect of child portfolios, and it is suggested for teachers to explore ways to integrate more reflection into the portfolio. For instance, photos might serve as a tool for reflection. Teachers can use photo documentation for reflection and improving the practice (Alvestad & Sheridan, 2015). Electronic media can also enable both teachers and children to revisit and reflect on their learning (Helm et al., 2007). In relation to this, it was confirmed that technology allows for easier participation (Knauf & Lepold, 2021). Moreover, a portfolio center might also be organized in the classroom. A portfolio can be reachable, and children can carry out reflection in this center (Kingore, 2008).

In relation to these suggestions, having both an online and hardcopy portfolio was also suggested by teachers in the Reggio Emilia-inspired preschool in Turkey (RT) and university preschool in the U.S. (UA). Teachers agreed upon having a hardcopy portfolio for children because children cannot reach an online version independently. Having an online portfolio was suggested as an addition especially for families. Regarding online portfolios, similarly, in the related literature it is supported that these increase communications with families, but it is suggested to think about accessibility for each stakeholder in the process in terms of availability and usage of technological tools. If children, teachers, and families do not have continuous access to them, they cannot replace the hardcopy portfolios (Hooker, 2017; 2019). Because of these reasons, it is suggested to prepare hardcopy child portfolios. Online versions might also be prepared as an addition and shared with parents to inform them prior to a conference as suggested in the Reggio Emilia-inspired preschool in the U.S. (RA).

Furthermore, in portfolios of the Reggio Emilia-inspired preschool in the U.S. (RA), it was found that content from previous years contribute to clearly seeing child development through the years, and it is suggested for teachers to share child portfolios with the next teacher. This might be helpful in transition between early childhood and primary school (Peters et al., 2009). A progress monitoring portfolio can be beneficial for teachers to support transition of children with special needs into kindergarten (Stokall et al., 2014). Therefore, sharing these children's portfolios in particular might provide significant outcomes.

Parents are the other suggested stakeholder to integrate into portfolio assessment process. It is supported in the related literature that it is necessary to inform parents about assessment methods to get support from them (Meisels et al., 2001). Similarly, interviews findings of the present study highlighted and suggested informing families about portfolio assessment to get their support in the process. To this end, for instance, as suggested by Reggio Emilia-inspired preschool teachers in the U.S. (RA), an online version of portfolios might be shared with parents to familiarize them with the portfolio before the conference time and allow for more meaningful conversations

in the conference time. Moreover, a portfolio definition page can also be included as a component like in some U.S. portfolios. Although a title page, which explains the portfolio and introduces the content, was suggested in the literature (Wortham & Hardin, 2016), a portfolio definition page was not pointed out. However, this might be an important component to explain scientific background of portfolios to parents in an understandable way. When family members see that the teacher knows their child and is supporting learning and development, they appreciate the program (Dodge et al., 2004). These types of informative documents might be a support to serve this purpose.

Furthermore, by considering the reported benefits between preschools, it is suggested to include children in portfolio conferences and enable them to be active participants in the portfolio process. It was found that there are a variety of benefits of including children in portfolio conferences in Turkey in comparison to the U.S. These child-parent conferences enable children to use portfolios to communicate achievement, interest, and potential with their families. It contributes to effectiveness of communication by providing observable and understandable evidence related to child's performance (Kingore, 2008). Moreover, in addition to conferences, it is also advised to actively include children in content selection for the portfolio as suggested and practiced by university preschool teachers in Turkey (UT). Child selection provides more value and ownership of the portfolio by the child, and it provides variety in each child's portfolio (Kingore, 2008). Therefore, a portfolio should not be a teacher manufactured document. Both parent and child voice should be included in it (Hanson & Gilkerson, 1999). However, in content analysis, it was found that child reflections are one of the lacking points in portfolios in each preschool except Reggio Emilia-inspired preschool in the U.S. (RA). Similarly, in the quantitative part, it was confirmed that teachers do not have high of scores in the construct of child participation in the portfolio process. Their child-centered beliefs also did not change with respect to their practicing or not practicing portfolio assessment. As explained, overall findings of this dissertation indicate the necessity of children's active engagement in the portfolio process. Similarly, it was also found in the related

literature that only a few centers enable children's involvement in documentation, which are advanced in documentation procedure (Knauf, 2017b). In fact, assessment practices should enable children's voices to be heard (Braund & DeLuca, 2018). To this end, child and family participation might be integrated into the portfolio guidelines like in the university preschool in Turkey (UT). It was seen in content analysis that portfolio contents and practices reflect the portfolio guidelines of preschools, which are explained by teachers in the interviews. This might be an encouraging point to enable child participation into the portfolio process. Moreover, documentation practices might be enriched and systemized by considering each individual child. It was confirmed that these contribute to child reflection as seen in the Reggio Emilia-inspired preschool in the U.S.(RA).

Overall, qualitative research data in two parts of this dissertation were collected in two different types of preschools in Turkey and the U.S. When findings are reviewed, it is seen that portfolio practices meet on more similar points in the same country rather than the same preschool type. The main underlying reason is that preschools have portfolio guidelines and those show similarities in the U.S. On the other side, MoNE curriculum requirement might have an effect on teachers' reported assessment choices in Turkey. These findings indicate the importance of guidelines or curriculum on teachers' portfolio practices. Verifying this, it was found in the related literature that meeting program requirements is one of the reasons for teachers' data collection for assessment purpose. In addition, frequency of teachers' collections of information was also dependent on program requirements (Keengwe, 2020). Therefore, it is suggested to provide a clear definition of a portfolio in the curriculum for teachers (Krnjaja & Pavlović-Breneselović, 2016). Similarly, this study also suggests providing well-prepared guidelines or giving considerable importance to portfolio assessment in the curriculum for preschool teachers. In addition, it is advised that some handbooks on portfolio assessment might also be prepared in addition to supporting teachers in the process. Teachers with district support and extensive experience are more likely to implement portfolio assessment in their classroom (Walcavich, 1995).

5.5.1. Implications for portfolio practices and education policy in Turkey

Several suggestions emerge from this dissertation for improving quality of portfolio practices to enhance child development and learning in Turkey. These suggestions are provided below based upon the similarities and differences in portfolio practices between Turkey and the U.S.

- When we compare findings on content of child portfolios between two countries, the remarkable difference is the lack of documentations in Turkey in comparison to the U.S. It is suggested to increase documentations in child portfolios to concretize child development and enrich the content.
- It is advised to prepare comprehensive portfolios by enriching with assessment documents and a variety of activities to present child development clearly as illustrated in the document analysis.
- Teachers in both Turkey and the U.S. highlighted developmental focus of portfolio assessment rather than allocating time to prepare it in a fancy way. Therefore, it is suggested to use folders as portfolio containers to save time for teachers. Rather than focusing child activity contents, it is also advised to highlight the child development in that activity as seen in the U.S. portfolios. For instance, it is suggested for teachers to relate their observation notes with developmental indicators as seen in child portfolios in the U.S.
- Its time intensive nature is one of the common challenges of the portfolio assessment. However, U.S. teachers developed different strategies in the process to save time for themselves. These strategies might also become a guide for teachers in Turkey. For instance, they are preparing digital portfolio templates at the beginning of the semester for each child, and they have also a softcopy copy organization for each of them. This helps them to just focus on content during the semester rather than allocating time to these stuff. These digital templates might be adapted for Turkish teachers. Presented portfolio example pages in this dissertation might be used as a source to create these templates. Moreover, teachers have planning time to work on portfolio during the day in the U.S. Such

opportunities might be created for teachers in Turkey by shifting teachers or scheduling special time for them.

- Organization is one of the key constructs to be able to reach the intended purposes of portfolio assessment in process. As agreed by majority of the teachers, planning the process and being organized with respect to it might be one of the main suggestions for Turkish teachers. To this end, organization tools (e.g. checklist) might be used to follow the process for each child as strongly suggested by the U.S. teachers. Teachers are also organizing portfolios with respect to developmental domains in the U.S. Since the main purpose of portfolio assessment is to follow holistic child development in process, this organization might best serve the purpose of observing child development in each developmental area. Therefore, it is suggested to have a developmental focus in both documentation and organization of portfolios.
- U.S. teachers mentioned a variety of documentation strategies, and these might become a guide for Turkish teachers while developing their own documentation system. It is suggested to share these suggestions with Turkish teachers by means of trainings, handouts, or online platforms. Some of these suggestions are thinking by domain in collection of documentation, writing notes about the photos with date as a reminder, and writing notes for each child even in the same activity.
- By considering a variety of advantages of portfolios assessment for children in Turkey in comparison to the U.S., it is suggested to integrate children into portfolio sharing conferences and enable their active participation in the content selection process. To this end, child participation can be integrated into portfolio guidelines like in the university preschool in Turkey (UT).
- Child reflection is one of the lack points in the majority of the portfolios. It is suggested to find ways to increase child reflections in portfolios in Turkey. Documentations and technological tools might serve as tools for this purpose like practiced and worked in the U.S.
- To enable active participation of parents and get support from them in the portfolio process, it is suggested to inform them about portfolio assessment and have communication with them in the process. For instance, as suggested by U.S.

teachers, online portfolios can be prepared and shared prior to conference day to make them familiar with the portfolio content.

- According to reported benefits by Reggio Emilia-inspired preschool teachers in the U.S. (RA), it is suggested to share portfolios with next teachers of the child. To this end, suggestions for the next teacher of the child might be integrated into portfolio contents. Policy requirements might be enriched to encourage this portfolio transferring.
- It is suggested to allocate time for reflection and assessment as pointed out by U.S. teachers. It has crucial importance to allocate time on reflecting and deciding on how to use portfolio assessment to improve instruction and enhance children's learning and development.
- It is a requirement in the MoNE (2013) curriculum to practice portfolio assessment. However, it is needed to provide clear definition and detailed explanation about the portfolio assessment. For instance, according to agreement by teachers in both countries, it is strongly recommended to provide portfolio guidelines to teachers in Turkey, which they can adapt with respect to their opportunities. It is also suggested to give flexibility and provide systematic support to teachers in process regarding portfolio assessment.

Some of the indicators of effectiveness of assessment are that it is used for intended purposes, and it is used to understand and improve learning (NAEYC & NAECS/SDE, 2004). All abovementioned suggestions might contribute to effectiveness of teachers' portfolio practices in Turkey by enabling them to use it in an intended way and also increase quality of portfolios to enhance child development and learning.

In this dissertation, both interviews and document analysis findings demonstrated that portfolio practices are similar in the same country rather than the same preschool type. This indicates to importance of curriculum or policy on teachers' portfolio practices. In other words, teachers' knowledge and beliefs are influenced by state and national policies in the larger context (Alexander & Winne, 2008). To reach generalizations about teachers' portfolio practices and predictors in Turkey,

quantitative part of this dissertation was conducted in the capital city of Turkey. Results provided a reflection of current policies as well as providing implications to enhance policies to benefit children's learning and development in early childhood period.

Quantitative analysis results mainly highlighted the crucial role of internalization on portfolio practices and therefore, it is strongly suggested to enable teachers' internalization of the purpose and benefits of the portfolio assessment. For instance, intention has an impact on motivational factors, and stronger intention is more likely to provide performance (Ajzen, 1991). Teacher beliefs about the assessment processes have also an impact on their processes of assessment practices and guide their instructional practices in the classroom (Barnes et al., 2017). To enable teachers' intention and beliefs on portfolio assessment, initially, it might be necessary for them to understand its importance. This consciousness can also be achieved by education and opportunities. Therefore, knowledge and skills should be integrated into teacher educations in pre-service period, and practical experiences can also be provided for teacher candidates. Experience with schooling and instruction might be the most important source of teacher beliefs (Raths & McAninch, 2003). In addition to this, there are also two other major sources of teacher beliefs: personal experience and experience with formal knowledge (Richardson, 1996). To contribute to the formal knowledge, trainings can be organized for in-service teachers on a variety of topics such as portfolio assessment, documentation, and child development. Practical in-service trainings (e.g. workshops) especially can be organized, and experts can be invited for them. In these trainings, example portfolios can be presented to teachers. Teachers can share their portfolio experiences with each other. Qualitative findings of this dissertation can also constitute a baseline or resource for these educations.

Self-efficacy beliefs were found as the most significant predictor of portfolio practices in this study. Several studies showed the relationship between self-efficacy beliefs and behavior (Bandura, 1997). Bandura (1986;1997) identified four sources of self-efficacy including enactive mastery experience, vicarious experience, social persuasion, and physiological and affective state. To contribute to teachers' self-

efficacy beliefs with respect to these sources, practical experiences can be integrated into pre-service years. It was supported that preservice teachers' self-efficacy increase after practicum (Berg & Smith, 2018; Carter, 2006). Practical trainings such as workshops can also be organized for in-service teachers. Moreover, teachers can get verbal persuasion as a form of feedback or encouragement from a mentor teacher or school administrator to convince them that they can successfully practice the portfolio assessment. As vicarious experience, when an observer sees a successful teaching exchange, they are more likely to think that teaching task is manageable (Tschannen-Moran & McMaster, 2009). To this end, they can visit preschools to see portfolio examples.

Intention was also found as another significant predictor of portfolio practices in this study. However, success in reaching goals depends on different factors including internal factors such as skills, abilities, emotions, and external factors such as opportunities, resources, and dependence on (Ajzen, 2005). Therefore, it might be important to create opportunities for teachers to put their intentions and beliefs into practice. For instance, by considering lack of documentation experiences in Turkey, systematic support can be provided for teachers to create a documentation culture in the preschools. To this end, ongoing trainings can be organized to increase teacher effectiveness in documentation and portfolio practices. Moreover, experienced teachers' suggestions can be presented as organization tips for the teachers. Portfolio can be emphasized as a tool to follow development rather than visual show of the child. It is important to create this consciousness in their intentions.

Results also showed that teachers have barrier perceptions related to portfolio assessment and therefore, it might be important to prepare teachers for dealing with them. To this end, teacher education and trainings can offer suggestions for possible challenges of the portfolio process. Those should encourage especially child participation in the portfolio process since teachers' child-teacher centered beliefs were not found to be changing with respect to practicing or not practicing portfolio assessment. Main factor for the discrepancy between teacher beliefs and practices is teacher education and professional development. It is important to improve teacher

education for understanding, internalization, practice, and reflection of teacher beliefs (Chan, 2016). A high level of experience and professional training might help teachers to bridge the gap between their beliefs and practices, and practice their knowledge and beliefs (Wen et al., 2011). On the other hand, teachers of the twenty-first century need to assess their teaching and improve their instruction by analyzing and reflecting on their teaching (Darling-Hammond, 2005). Documentations and portfolio might also be utilized as tools for this reflection as stated by U.S. teachers in the interviews.

Although portfolio assessment is a requirement in early childhood education in Turkey, results showed that all teachers do not use it to follow development of children. It might also be questionable whether all practicing teachers are using it in an intended way. All these indicate to importance of teacher education and preparation on portfolio assessment. Education Faculties play a role in preparing teacher candidates in undergraduate years in Turkey. Based upon overall dissertation findings and implications of this dissertation, it is suggested for Education Faculties to provide both theoretical and practical knowledge on documentation and portfolio assessment together. Developmental focus of portfolio assessment can especially be highlighted, and common misconceptions, possible challenges, and solutions can be discussed together with teacher candidates. Suggestions to use portfolio assessment efficiently might be provided with some organization tips as presented in this dissertation. To this end, a specific course can be provided on documentation and portfolio assessment, and practical experiences can be integrated into the course. For instance, student teachers can prepare a child portfolio under the guidance of a mentor teacher for a semester to observe the child development. This mastery experience can contribute to their self-efficacy beliefs to practice portfolio assessment (Bandura, 1997). Experts or experienced teachers can also be invited to the classroom to share their experiences with teacher candidates. Furthermore, portfolio assessment might be integrated into different courses, and example portfolios can be presented for teacher candidates.

In addition to teacher educations, it is also suggested for MoNE to prepare portfolio guidelines as a support for the teachers. Guiding principles are needed to change assessment practices in schools since these will enable teachers to adapt practices to their classroom (Broadfoot et al., 1996). However, it needs time and continuous support from practitioners and researchers (Black & William, 1998). Authentic relationships with university researchers especially might contribute to research knowledge and professional development initiatives (Burnaford, 2007). For instance, this dissertation can be helpful to create a guideline by presenting portfolio practices or portfolio folder examples. Therefore, research studies related to this topic might be encouraged, and research results can be shared with teachers to support them. To this end, it is important to create a connection between universities and policy makers.

Moreover, it is also suggested for MoNE to create and integrate documentation culture into the early childhood education curriculum. If documentation is only used in school and not connected with social values and needs, it will not support change at all (Turner & Wilson, 2010). Cultural barrier can only be overcome by shifting culture through organizational change (Henry, 2016). Therefore, it might be necessary to integrate documentation not only into portfolio assessment but also in overall early childhood education curriculum. On the other hand, it was also stated by a teacher that *“Unless we collect some evidence, there is no way we can influence policy”* (Burnaford, 2007, p.39). While making policy decisions, it is necessary to hear all voices that each person brings (McKenna, 2005). In response to this need, documentation contributes to development of shared local knowledge (Given et al., 2010). Therefore, documentation and portfolio assessment might provide evidence and implications for policy to enhance child development and learning. To this end, it is necessary to create this consciousness on teachers and enable them to use it in an intended way by clearly defining the purpose of portfolio assessment in the curriculum and supporting them in the process.

Moreover, by enabling to discuss activities with parents, assessment can provide a broader conception of quality than quantifiable measures (McKenna, 2005). Therefore, it is suggested for MoNE to place an importance on active family

participation in portfolio assessment process. Furthermore, it was found that there are no suggestions for next teachers of the child in the portfolios in Turkey. By considering its reported benefits, this component can be integrated into child portfolios, and it can also be integrated into the policy to encourage teachers for transferring child portfolios to next teacher of the child.

5.6. Recommendations for Future Research

There is little research on portfolio assessment in the literature (Pickens, 2018). This comprehensive dissertation investigated portfolio assessment in a multi-method design. However, more research studies are needed in this field to support and enrich this study's findings with different research methodologies. To explain, there are a few attempts to understand teachers' attitudes, intentions, and practices related to formative assessment in the literature. There is also limited information about the factors which have an impact on teachers' intention to practice formative assessment (Yan & Cheng, 2015). Covering most of these constructs, this study focuses on portfolio assessment. For data collection, a number of scales were developed and their validity and reliability were ensured with required analysis as a part of this study. These scales might be adapted and used for different grade levels, and findings might be compared in future studies. Predictive impact of these variables on teachers' portfolio practices might be investigated by hypothesizing models and testing them with advanced statistical methods. They might also be enriched in future studies by adding different constructs or including different assessment methods. Identifying relationships and examining factors affecting teachers' portfolio practices might help to understand teacher participation in the portfolio process and help teachers to successfully practice portfolio assessment process (Kiser, 2008).

Moreover, findings indicate that teachers' portfolio related experiences might create a significant difference in their portfolio practices, and this might be investigated in further studies. Data might also be collected from nationwide samples to reach generalizations. In addition, the underlying reason for teachers' preference on portfolio assessment might be investigated more deeply. There is a lack of studies on teachers' selection of assessment system and method (Greene, 2014). More research

is also needed to investigate how authentic assessment affects teachers' planning in early childhood education and how it affects child outcomes (Hallam et al., 2007). To explore such issues by specifically focusing on portfolio assessment, the portfolio assessment process can be examined with different methodologies or research designs in longitudinal research. For instance, the portfolio assessment process can be observed for a semester, or the impact of portfolio assessment or other authentic assessment methods can be investigated with an experimental research design, and impact of portfolio assessment can be presented clearly by comparing different portfolio practices in experimental or design research. In addition to these suggestions, portfolio assessment can also be examined for children with special needs. It can be determined whether portfolio assessment is beneficial for students among minority groups (Sonnier, 1999). Furthermore, as an important stakeholder in the portfolio process, children's and families' feedback about portfolios can also be investigated in future studies.

It is necessary to understand how teacher preparation programs or professional development programs are preparing teachers to practice formative assessment (Johnson et al., 2019). To this end, teacher education programs might be investigated in terms of giving place to alternative assessment or specifically portfolio assessment. Moreover, more research is also needed about effective professional development systems for teachers (Couse & Recchia, 2006). A professional development system might be developed for portfolio assessment for teachers based upon research findings in this study, and its impact might be investigated in future studies.

In the qualitative parts of present study, portfolios were examined in two different types of schools in Turkey and the U.S. This might be investigated in different types of schools or grade levels in future studies to extend generalizations, and findings might be compared. The number of included portfolios can be increased. Portfolio types can also be examined. Moreover, focus group interviews might be conducted with teachers in different preschools to discuss issues and get suggestions for challenges faced. In addition to portfolios, teachers' other assessment and documentation methods can also be examined in detail to uncover implications for

improving them. A portfolio is complementary with different assessment methods, and it can provide rich information when it is combined with different assessments. Multiple assessments provide a full and accurate picture of student achievement (Butler & McMunn, 2006). Therefore, investigating assessment methods might provide implications about how to improve the overall assessment system.

5.7. Conclusion

The findings of this study showed that government or school policy or guidelines have a determinant role on teachers' portfolio assessment practices. However, there are no perfect guidelines to follow in portfolio implementation. Therefore, teachers have an important role in this process. In the present study, teachers' practices and views related to portfolio assessment were presented and compared between Turkey and the U.S. In the first qualitative part, it was found that teachers have different purposes and practices but favorable views about portfolio assessment. The main difference between these two countries is related to children's involvement in portfolio sharing conferences in Turkey, but with only parents in the U.S. Regarding this difference, it was concluded that there are variety of benefits of children's active participation in the portfolio process. Another remarkable difference is inclusion of documentation (anecdotal notes and photos) as a main component of portfolios in the U.S, while child work samples were the common component in Turkey. It was highlighted to integrate both of these components into portfolios as a suggestion. When findings are reviewed, portfolio practices overlap on similar points in the same country rather than the same preschool type. Although teachers stated some challenges related to the portfolio assessment process, the benefits outweigh them. It was concluded that portfolio assessment has a variety of benefits for each stakeholder in early childhood education including the child, teacher, and parent.

In the second study, portfolio content analysis was conducted and compared between Turkey and the U.S., and quality of examined portfolio contents were mostly found in the acceptable features in terms of content, organization, feature of the selected products, and overall evaluation. However, it was concluded that portfolios lack child

reflections in particular. Finally, the third part, the quantitative part of the current study also showed that intention and self-efficacy beliefs are significant predictors of teacher portfolio practices, while teaching experience was not creating a significant difference upon teachers' portfolio related practices. Teachers practicing portfolio assessment were also found to have high scores in internal constructs (e.g. personal norms, behavioral beliefs, attitudes). In light of these, it was concluded that teachers have the crucial role in portfolio assessment, and internal factors play a significant role in teachers' effectiveness in portfolio assessment. Therefore, it is necessary to invest in teachers to help their internalization and obtain necessary skills and knowledge by means of professional support.

Overall, having three different methodologies in this study enabled investigation of the topic comprehensively, and it also provided validation by presenting similar information in different parts. For instance, portfolio content scale was completed by teachers in the quantitative part, and it was also examined by the researcher as a part of content analysis. These provided similar results, and child activities were found to be the common component. Internalization was confirmed as an important factor on teachers' portfolio practices in both qualitative and quantitative studies. Child participation was also found as not enough in three studies of the dissertation. Furthermore, the content analysis part presents portfolio examples by assessing them with respect to different features. This analysis also provides support for teacher interviews and illustrates their explanations. In other words, actual portfolio contents were found to reflect teachers' self-reported comments in interviews. Moreover, specifically, the qualitative part enabled investigation of teacher views and suggestions in detail. It was seen that some of the offered suggestions are in fact being practiced by some teachers. For instance, in Turkey, teachers suggested use of a template, already the case in U.S. portfolios. Or some of the teachers stated that they are e-mailing portfolios to parents before the conference in the U.S. However, other teachers in the same preschool mentioned planning to try this idea because of their problems in taking back hardcopy portfolios from parents. This shows that teachers are not aware of the practices of other teachers. These findings indicate that if teachers

share their experiences with each other or see good examples, this might make the process easier for them. Furthermore, findings showed that since portfolio process takes time, participant teachers developed some strategies for themselves to save time in the process. For instance, they are using some organizational tools in the process. All these suggestions were presented in this present study. The suggestions and findings of the current study together with portfolio examples can become a guide or source for portfolio practices.

In brief, this multi-method research study on portfolio assessment provides comprehensive information about portfolio assessment, and this might be an important source for teachers, policy makers, and researchers to explore alternative portfolio practices and develop their own system which works best for them. Improving portfolio practices can make the expertise of teachers visible for parents and community by concretizing child development in process and provide required respect to the field, as pointed out by the teachers. Because assessment is an important part of the teaching-learning process, it can also in turn contribute to quality of early childhood education.

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APPENDICES

APPENDIX A: SAMPLE ITEMS FOR PORTFOLIO PRACTICE SCALE

		Hiç-1	Nadiren-2	Bazen-3	Sıklıkla-4	Daima-5
1.	Farklı alanlardaki (fiziksel, sosyal, vb.) gelişimi değerlendirmek	1	2	3	4	5
3.	Portfolyoya nelerin dâhil edileceğine çocuklarla birlikte karar vermek	1	2	3	4	5
4.	Portfolyoyu farklı türde içerik (fotoğraf, video, vb.) ile zenginleştirmek	1	2	3	4	5
5.	Portfolyoda çocukların farklı alanlarda gelişimini yansıtacak farklı ürünlere yer vermek	1	2	3	4	5
7.	Çocukların kendi portfolyolarını incelemelerini sağlamak	1	2	3	4	5
9.	Portfolyoya koyulan ürünler ile ilgili çocukların görüşlerine yer vermek	1	2	3	4	5
11.	Diğer çocuklar ve aileler ile portfolyolarını paylaşırken çocuklara destek olmak	1	2	3	4	5
13.	Portfolyo paylaşım günleri düzenlemek	1	2	3	4	5

APPENDIX B: SAMPLE ITEMS FOR PORTFOLIO CONTENT SCALE

	Hiç-1	Nadiren-2	Bazen-3	Sıklıkla-4	Daima-5
1. Çocuk hakkında kişisel bilgiler (yaş, cinsiyet, vb.)	1	2	3	4	5
3. Gözlem notları	1	2	3	4	5
5. Sınıf içi etkinliklerin ses/video kayıtları, fotoğrafları	1	2	3	4	5
7. Değerlendirme ölçütleri (kontrol listesi, derecelendirme ölçekleri, rubrik)	1	2	3	4	5
9. Gelişim gözlem raporu	1	2	3	4	5
12. Öğretmenin çocuk hakkında notları (yansımaları)	1	2	3	4	5
13. Öğrenilen kavramları gösteren kavram haritaları	1	2	3	4	5
14. Çalışma sayfaları	1	2	3	4	5
15. Okuma-yazmaya hazırlık etkinlikleri	1	2	3	4	5
16. Sanat etkinlikleri (boyama, yırtma-yapıştırma vb.)	1	2	3	4	5
22. Aile bilgi formları, anketleri, görüşme notları	1	2	3	4	5
25. Çocuğun bir sonraki öğretmene öneriler	1	2	3	4	5

APPENDIX C: SAMPLE ITEMS FOR PORTFOLIO NORMS SCALE

		Kesinlikle katılmıyorum-1	Katılmıyorum-2	Biraz Katılmıyorum-3	Ne katılıyorum, ne katılmıyorum-4	Biraz Katılıyorum-5	Katılıyorum-6	Kesinlikle katılıyorum-7
1.	Ailelerin portfolyo kullanılması konusunda beklentilerini karşılamak amacıyla portfolyo kullanıyorum.	1	2	3	4	5	6	7
2.	Kendimi değerlendirme fırsatı bulduğum için portfolyo kullanıyorum.	1	2	3	4	5	6	7
5.	Meslektaşlarım portfolyo kullandığı için portfolyo uygulamam konusunda baskı hissediyorum.	1	2	3	4	5	6	7
9.	Çalışma motivasyonumu artırdığı için portfolyo kullanıyorum.	1	2	3	4	5	6	7
10.	Okul idaresi kullanmamı istediği için portfolyo kullanıyorum.	1	2	3	4	5	6	7

**APPENDIX D: SAMPLE ITEMS FOR PORTFOLIO RELATED
BEHAVIORAL BELIEFS SCALE**

		Hiç-1	Çok az-2	Biraz-3	Orta derecede-4	Büyük ölçüde-5	Çok-6	Tamamen -7
2.	Çocukların eğitim sürecine aktif katılımını sağlamak	1	2	3	4	5	6	7
4.	Çocukların zayıf yönlerini belirlemek	1	2	3	4	5	6	7
5.	Çocukların bireysel farklılıklarına saygı duyulmasını sağlamak	1	2	3	4	5	6	7
7.	Gelişim ve öğrenme süreçlerini bir arada değerlendirmek	1	2	3	4	5	6	7
13.	Çocukların kendilerini daha iyi ifade edebilmelerini sağlamak	1	2	3	4	5	6	7

APPENDIX E: SAMPLE ITEMS FOR PORTFOLIO RELATED ATTITUDE SCALE

	1	2	3	4	5	6	7	
1. Gereksiz	O	O	O	O	O	O	O	Gerekli
4. Bilgi verici değil	O	O	O	O	O	O	O	Bilgi verici
5. Zaman kaybı	O	O	O	O	O	O	O	Zaman kaybı değil
7. Gelişimsel izlemeye yardımcı değil	O	O	O	O	O	O	O	Gelişimsel izlemeye yardımcı

APPENDIX F: SAMPLE ITEMS FOR PORTFOLIO RELATED SELF-EFFICACY BELIEFS SCALE

		Hiç-1	Çok az-2	Biraz-3	Orta derecede-4	Büyük ölçüde-5	Çok-6	Tamamen-7
1.	Portfolyo hazırlama sürecinde çocukların aktif katılımını ne ölçüde sağlayabilirsiniz?	1	2	3	4	5	6	7
4.	Portfolyo içeriğini ne kadar iyi organize edebilirsiniz?	1	2	3	4	5	6	7
7.	Portfolyo kullanarak farklı gelişim alanlarını ne kadar iyi değerlendirebilirsiniz?	1	2	3	4	5	6	7
8.	Portfolyoyu kalabalık sınıflarda ne kadar etkili kullanabilirsiniz?	1	2	3	4	5	6	7
11.	Özel gereksinimi olan çocukları portfolyo “paylaşım” sürecine ne ölçüde dâhil edebilirsiniz?	1	2	3	4	5	6	7
12.	Aileler ile portfolyo paylaşım sürecini ne ölçüde yönetebilirsiniz?	1	2	3	4	5	6	7
14.	Portfolyo sürecinde meslektaşlarınız ve okul yönetimi ile işbirliğini ne kadar iyi sağlayabilirsiniz?	1	2	3	4	5	6	7

APPENDIX G: SAMPLE ITEMS FOR PORTFOLIO RELATED BARRIER PERCEPTIONS SCALE

		Hiç-1	Çok az-2	Biraz-3	Orta derecede-4	Büyük ölçüde-5	Çok-6	Kesinlikle-7
1.	Ürün seçmek	1	2	3	4	5	6	7
3.	Sınıf mevcudu	1	2	3	4	5	6	7
4.	Zaman kullanımı	1	2	3	4	5	6	7
6.	Depolamak	1	2	3	4	5	6	7
10.	Portfolyo paylaşım günlerine aile katılımı	1	2	3	4	5	6	7

**APPENDIX H: SAMPLE ITEMS FOR PORTFOLIO RELATED
INTENTION SCALE**

	Kesinlikle katılmıyorum-1	Katılmıyorum-2	Biraz katılmıyorum-3	Ne katılıyorum, ne katılmıyorum-4	Biraz katılıyorum-5	Katılıyorum-6	Kesinlikle katılıyorum-7
1. Önümüzdeki sene portfolyo kullanacağım.	1	2	3	4	5	6	7
3. Önümüzdeki sene sonunda portfolyo paylaşım günleri gerçekleştireceğim.	1	2	3	4	5	6	7
4. Önümüzdeki sene içerisinde portfolyo ile ilgili eğitim ve seminerlere katılacağım.	1	2	3	4	5	6	7

**APPENDIX I: SAMPLE ITEMS FOR CHILD-TEACHER CENTERED
BELIEFS SCALE**

		Kesinlikle katılmıyorum-1	Biraz katılmıyorum-2	Ne katılıyorum, ne katılmıyorum -3	Biraz katılıyorum-4	Kesinlikle katılıyorum-5
1.	Çocuklar her zaman öğretmene itaat etmelidir.	1	2	3	4	5
3.	Çocukların öğretmenlerinden farklı düşünmelerine izin verilmelidir.	1	2	3	4	5
5.	Eğitim süreci, çocukların ilgileri doğrultusunda şekillenmelidir.	1	2	3	4	5
8.	Çocuklara öğretilecek en önemli şey, otoriteye mutlak itaattir.	1	2	3	4	5
9.	Çocuklar en iyi kendileri yaparak öğrenirler.	1	2	3	4	5
11.	Çocukların kendi bakış açılarını ifade etmelerine izin verilmelidir.	1	2	3	4	5

APPENDIX J: DEMOGRAPHIC INFORMATION FORM

YÖNERGE: Lütfen, aşağıda belirtilen sorulara cevap veriniz.

1. **Cinsiyetiniz :** ☐ Kadın ☐ Erkek
2. **Yaşınız:**
3. **En son aldığınız eğitim dereceniz:**
 - ☐ Ön Lisans
 - ☐ Açık Üniversite (4 yıllık)
 - ☐ Lisans
 - ☐ Yüksek Lisans
 - ☐ Doktora
4. **Eğitim alanınız:**
 - ☐ Okul Öncesi Öğretmenliği Bölümü
 - ☐ Çocuk Gelişimi ve Eğitimi Bölümü
 - ☐ Diğer:
5. **Kaç yıldır öğretmenlik yapıyorsunuz?**
6. **Şu anda çalıştığınız il /ilçe :**
7. **Şu anda çalıştığınız okul**
 - ☐ Devlet bağımsız anaokulu
 - ☐ Devlet anasınıfı
8. **Sınıfınızdaki çocuk sayısı**
9. **Sınıfınızdaki çocukların ay aralığı nedir?**
 - ☐ 36-48
 - ☐ 48-60
 - ☐ 60-72
 - ☐ Karma (belirtiniz):
10. **Sınıfınızda yardımcı var mı (yardımcı öğretmen, yardımcı personel vb.)?**
 - ☐ Evet
 - ☐ Hayır
11. **Eğitiminiz süresince çocuğu tanıma ve değerlendirme dersi aldınız mı?**
 - ☐ Evet
 - ☐ Hayır
12. **Portfolyo ile ilgili hizmet içi eğitimler (hizmet içi kurs, seminer vb.) aldınız mı?**
 - ☐ Evet
 - ☐ Hayır

APPENDIX K: INTERVIEW QUESTIONS IN TURKISH

- Okulunuzdan bahseder misiniz? (müfredat, felsefe, vb.)
- 1. Portfolyo değerlendirmesini nasıl tanımlarsınız?
- 2. Portfolyo değerlendirmesini sınıfınızda nasıl kullanıyorsunuz?
 - a. Portfolyoya neler dâhil edileceğine nasıl karar veriyorsunuz?
 - b. Portfolyoyu nasıl organize ediyorsunuz? Nedeni açıklayınız.
- 3. Portfolyo sürecinde aileler ile nasıl iletişim kuruyorsunuz ve aileleri nasıl dâhil ediyorsunuz?
 - a. Portfolyo sürecinde aileler ile daha iyi iletişim kurmak ve portfolyoyu daha etkili paylaşmak için size ne yardımcı olabilir?
- 4. Portfolyoyu değerlendirme amaçlı kullanmanın avantajlarından ve dezavantajlarından bahseder misiniz?
- 5. Portfolyoyu değerlendirme amaçlı kullanırken karşılaştığınız zorluklar nelerdir?
 - a. Ne tür bir destek portfolyoyu sınıfınızda daha iyi kullanmanıza yardımcı olur?
- 6. Portfolyoyu etkili bir değerlendirme, iletişim ve dokümantasyon aracı olarak kullanmak için öğretmenlere ne tavsiye edersiniz?
- 7. Portfolyo ile ilgili eklemek istedikleriniz var mıdır?

APPENDIX L: INTERVIEW QUESTIONS IN ENGLISH

- Tell me about your preschool? (philosophy, curriculum)
- 1. How do you define the portfolio assessment?
- 2. How do you use portfolios in your classroom?
 - How do you select items for portfolio?
 - How do you organize the portfolio? Explain the reason.
- 3. How are families involved in the portfolio process and how do you communicate with the families about it?
 - What would better help you communicate and share portfolio process with families?
- 4. Tell me about the advantages and disadvantages of using portfolios as an assessment tool.
- 5. Tell me about the challenges you face when using your portfolio for assessment.
 - What kind of support would better enable you to use portfolio in your classroom?
- 6. What suggestion would you give to another teacher to make portfolio assessment more effective as an assessment practice? as a communication process? as a documentation practice?
- 7. Are there any other things you want to share with me about portfolio?

APPENDIX M: CONTENT CHECKLIST

	Evet	Hayır
1. Çocuk hakkında kişisel bilgiler (yaş, cinsiyet, vb.) 2. Çocuğun sağlık kayıtları 3. Gözlem notları 4. Görüşme notları 5. Sınıf içi etkinliklerin ses/video kayıtları, fotoğrafları 6. Sınıf dışı etkinliklerin ses/video kayıtları, fotoğrafları 7. Değerlendirme ölçütleri (kontrol listesi, derecelendirme ölçekleri, rubrik) 8. Gelişim gözlem formları 9. Gelişim gözlem raporu 10. Çocukla ilgili diğer uzmanlarından edinilen notlar (Rehberlik ve Araştırma Merkezi raporları, vb.) 11. Çocuğun kendisine yönelik yorumları 12. Öğretmenin çocuk hakkında notları (yansımaları) 13. Öğrenilen kavramları gösteren kavram haritaları 14. Çalışma sayfaları 15. Okuma-yazmaya hazırlık etkinlikleri 16. Sanat etkinlikleri (boyama, yırtma-yapıştırma vb.) 17. Drama etkinlikleri 18. Dil etkinlikleri 19. Matematik/Fen etkinlikleri 20. Sosyal etkinlikler 21. Fiziksel etkinlikler 22. Aile bilgi formları, anketleri, görüşme notları 23. Ailelerden gelen notlar, fotoğraflar, evde yapılan etkinlikler 24. Ailelere öneriler 25. Çocuğun bir sonraki öğretmene öneriler 26. Uygulanmış standart testlerin bulguları (Gelişim tarama envanteri, Gelişim ölçeği, vb.)		

APPENDIX N: RUBRIC

		Not Enough	Acceptable	Exemplary
Content	Child and Family Information	It includes only one or two types of the products (informative forms, records about the child, information about the family), which give information about the child. The products are very few and offer very little information about child and family.	It includes nearly half of the products (informative forms, records about the child, information about the family), which give information about the child. The products contain information about the child and family, but not enough.	It includes all of the products (informative forms, records about the child, information about the family), which give information about the child. Detailed information about the child and family can be obtained from various sources.
	Assessment Methods	It includes only one or two types of the different assessment methods (assessment report, checklist, rating scale, rubric). These few methods include very limited information about the child. No recommendations have been made about how development can be supported.	It includes nearly half of the different assessment methods (assessment report, checklist, rating scale, rubric). The included assessment methods provide information about the child, but not enough. Different areas of development cannot be assessed in a comprehensive way. No recommendations have been made about how	It includes all of the different assessment methods (assessment report, checklist, rating scale, rubric). Through these methods, a comprehensive assessment of the child's development in all areas can be made. In addition to identifying the strengths and weaknesses of the child, suggestions are provided to

		Not Enough	Acceptable	Exemplary
			development can be supported.	support development.
	Activities	It includes only one or two types of the different activity kinds (art, language, math/science, social, physical, parent involvement). The products included are of similar quality and do not reflect the activity process.	It includes nearly half of the different activity kinds (art, language, math/science, social, physical, parent involvement). Since only certain types of activities are included, it offers limited information about the learning process and the products do not exactly reflect the activity process.	It includes all of the different activity kinds (art, language, math/science, social, physical, parent involvement). It provides detailed information with different products about the different type of activities child participates in. It enables to make a conclusion about the learning process of child and get implications about how to improve the learning process.
	Variety of products	Only child products and assessment methods in printed form are included. It is not supported by different types of documentation such as photo, audio, video recording that reflects the child's	In addition to the children's products and assessment methods in the printed form, they contain documentation in different formats (photo, audio, video recording, etc.). However, this variety is not	There is a balanced product range in the portfolio. Many different types of products (printed products, photo, audio, video recordings,

		Not Enough	Acceptable	Exemplary
		development and learning process. Explanatory notes are not included.	at a sufficient level and it is only included for certain types of activities. Necessary explanatory notes about the content of the documentations are not enough or not included.	etc.) are included for a variety of activities. Detailed and informative descriptions about the content of the products in different formats are added.
Feature of the Selected Products		Selected products do not reflect the child's development and learning process. The products are similar and limited in a number.	Selected products a little reflect the child's development and learning process. Different products have been tried to be included but not enough. With the selected products, it is difficult to follow the development and learning process of the child sufficiently.	Selected products fully reflect the child's development and learning process. Through numerous and various products, it presents detailed information on both the development in different areas and the learning process.
Organization		Not placed regularly (date, content, developmental domain). It is very difficult to find something, which is sought. It does not show progress in the process.	Partly regularly placed (date, content, developmental domain). There is a date order, but it is a difficult to find something because of not having any other criterion. It is	Completely regularly placed (date, content, developmental domain). It is easy to find something, which is sought. Child's development in

		Not Enough	Acceptable	Exemplary
			difficult to follow the development of the child in the process.	the process can easily be seen.
Reflection	Teacher Reflections	Teacher's notes about child and child products are included one or two times. These notes are not descriptive and objective. No recommendations have been made about how development can be supported.	Teacher's notes about child and child products are included in a few times but these notes are not descriptive and objective enough. No recommendations have been made about how development can be supported.	Teacher's notes about child and child products are fully included. In addition to detailed descriptive and objective notes, suggestions on how to support child development are also included.
	Child Reflections	Notes about child's reflection on own self or own products are included one or two times but these notes are not clear. The child's suggestions about own self are not included.	Notes about child's reflection on own self or own products are included in a few times. The notes focus on the deficient sides of the child and are not clear enough. The child's suggestions about own self are not included.	Notes about child's reflection on own self or own products are fully included and notes are explained in detail. Suggestions of the child about own self are also given.
Overall Evaluation		The portfolio does not show the child's competencies, skills and learning process. It contains very few products, the product variety is	Portfolio shows part of the child's competencies, skills and learning process. Product diversity and assessment results provide information about	The portfolio shows the child's competencies, skills and learning process in a very good way. The diverse and

	Not Enough	Acceptable	Exemplary
	low, and the products are not carefully selected. It does not show any improvement in the process and it is very difficult to find the product, which is sought. Reflective notes are included only one or two times.	the child, but at a limited level. Effective assessment cannot be made. Because of being partly organized, it is difficult to see the development in process and find the something, which is being sought. A limited number of reflective notes are included.	rich content provides detailed information and assessment on the child. Because of being regularly organized, it is very easy to see the progress in the process and find the something, which is being sought. Reflective notes are frequently included.

APPENDIX O: ETHICS APPROVAL OF RESEARCH BY MoNE FOR PILOT STUDY



T.C.
ANKARA VALİLİĞİ
Milli Eğitim Müdürlüğü

8103

Sayı : 14588481-605.99-E.8498383
Konu : Araştırma İzni

27.04.2018

ORTA DOĞU TEKNİK ÜNİVERSİTESİNE
(Öğrenci İşleri Daire Başkanlığı)

İlgi: a) MEB Yenilik ve Eğitim Teknolojileri Genel Müdürlüğünün 2017/25 nolu Genelgesi.
b) 20/04/2018 Tarihli ve 54850036-300-2096 sayılı yazınız.

Üniversiteniz Temel Eğitim Anabilim Dalı, Okul Öncesi Eğitimi Doktora Programı öğrencisi Nur ALAÇAM'ın "**Okul Öncesi Öğretmenlerinin Portfolyaya İlişkin Uygulamalarının ve İnançlarının İncelenmesi**" konulu tez çalışması kapsamında uygulama talebi Müdürlüğümüzce uygun görülmüş ve uygulamanın yapılacağı İlçe Milli Eğitim Müdürlüğüne bilgi verilmiştir.

Görüşme formunun (14 sayfa) araştırmacı tarafından uygulama yapılacak sayıda çoğaltılması ve çalışmanın bitiminde bir örneğinin (cd ortamında) Müdürlüğümüz Strateji Geliştirme (1) Şubesine gönderilmesini rica ederim.

Vefa BARDAKCI
Vali a.
Milli Eğitim Müdürü

03.05.2018 8522

Konya yolu Başkent Öğretmen Evi arkası Beşevler ANKARA
e-posta: istatistik06@meb.gov.tr

Ayrıntılı bilgi için
Tel: (0 312) 221 02 17/135-134

Bu evrak güvenli elektronik imza ile imzalanmıştır. <https://evraksorgu.meb.gov.tr> adresinden 8c53-2ffa-3c80-891d-1f2c kodu ile teyit edilebilir.

APPENDIX P: ETHICS APPROVAL OF RESEARCH BY MoNE FOR MAIN STUDY



T.C.
ANKARA VALİLİĞİ
Milli Eğitim Müdürlüğü

Sayı : 14588481-605.99-E.15175874
Konu : Araştırma İzni

22.08.2019

ORTA DOĞU ÜNİVERSİTESİ REKTÖRLÜĞÜNE
(Öğrenci İşleri Daire Başkanlığı)

İlgi: a)16.07.2019 tarihli ve 141 sayılı yazınız.

b)MEB Yenilik ve Eğitim Teknolojileri Genel Müdürlüğü'nün 2017/25 nolu Genelgesi.

Üniversiteniz Temel Eğitim Bölümü Okul Öncesi Eğitimi Anabilim Dalı doktora programı öğrencisi Nur ALAÇAM'ın "**Okul Öncesi Öğretmenlerinin Portfolyaya İlişkin Uygulamalarının ve İnançlarının İncelenmesi**" konulu çalışması kapsamında ekli listedeki okullarda uygulama talebi ilgi (b) Genelge çerçevesinde incelenmiştir.

Yapılan inceleme sonucunda, söz konusu araştırmanın Müdürlüğümüzde muhafaza edilen ölçme araçlarının; Türkiye Cumhuriyeti Anayasası, Milli Eğitim Temel Kanunu ile Türk Milli Eğitiminin genel amaçlarına uygun olarak, ilgili yasal düzenlemelerde belirtilen ilke, esas ve amaçlara aykırılık teşkil etmeyecek, eğitim-öğretim faaliyetlerini aksatmayacak şekilde okul ve kurum yöneticilerinin sorumluluğunda gönüllülük esasına göre uygulanması Müdürlüğümüzce uygun görülmüştür.

Bilgilerinizi ve gereğini rica ederim.

Turan AKPINAR
Vali a.
Milli Eğitim Müdürü

Dağıtım:

Gereği:

Orta Doğu Teknik Üniversitesi

Bilgi:

Akyurt, Altındağ, Çankaya, Etimesgut, Gölbaşı,
Keçiören, Mamak, Pursaklar, Sincan,
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Adres: Emniyet Mah. Alparslan Türkeş Cad. 4/A
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Tel: 0 (312) 212 36 00
Faks: 0 (312) 221 02 16

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APPENDIX R: APPROVAL OF METU HUMAN SUBJECTS ETHICS COMMITTEE

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER



ORTA DOĞU TEKNİK ÜNİVERSİTESİ
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05 NİSAN 2018

Konu: Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Doç.Dr. Refika OLGAN

Danışmanlığını yaptığınız doktora öğrencisi Nur ALAÇAM'ın "Okul Öncesi Öğretmenlerinin Portfolyaya İlişkin Uygulamalarının ve İnançlarının İncelenmesi" başlıklı araştırması İnsan Araştırmaları Etik Kurulu tarafından uygun görülerek gerekli onay **2018-EGT-036** protokol numarası ile **06.04.2018 - 30.09.2020** tarihleri arasında geçerli olmak üzere verilmiştir.

Bilgilerinize saygılarımla sunarım.

Prof. Dr. Ş. Halil TURAN
Başkan V

Prof. Dr. Ayhan SOL
Üye

Prof. Dr. Ayhan Gürbüz DEMİR
Üye

Doç. Dr. Yaşar KONDAKÇI
Üye

Doç. Dr. Zana ÇITAK
Üye

Doç. Dr. Emre SELÇUK
Üye

Dr. Öğr. Üyesi Pınar KAYGAN
Üye

APPENDIX S: ETHICS APPROVAL OF RESEARCH BY UW-MADISON



Education and Social/Behavioral Science IRB 11/19/2018

Submission ID number: [2018-1358](#)
Title: Portfolio Assessment in Early Childhood Education: Beliefs and Practices of Teachers
Principal Investigator: MARY ELIZABETH GRAUE
Point-of-contact: NUR ALACAM
IRB Staff Reviewer: STEPHANIE WILSON

The ED/SBS IRB conducted a review of the above referenced initial application. The study was determined to qualify for exemption under campus policy, because:

The research is not federally supported, does not fall under VA regulations, and is not FDA-regulated. In addition, the research falls within the following category(ies) of exempt research outlined under campus policy:

Category 2: Research involving the use of educational tests, surveys, interviews [NOTE: If children are involved in the research it can only be determined to be exempt under this category if the research is limited to educational tests or observation of public behavior, the investigator(s) cannot participate in the activities being observed, and the identities of the subjects either cannot be readily ascertained or the disclosure of the subjects' responses would not put them at risk.]

NOTE: If the research under this exemption application becomes federally supported or changes such that it becomes subject to VA or FDA regulations, the exemption status no longer applies.

To access the materials the IRB reviewed and accepted as part of the exemption determination, please log in to your ARROW account and view the documents tab in the submission's workspace.

Although the human subjects research described in the ARROW application referenced above was determined to meet the federal criteria for exemption and thus does not require continuing review, please be aware of your responsibilities related to the conduct of the research and when additional IRB review is required. Prior to starting research activities, please review the Investigator Responsibilities for Exempt Human Subjects Research guidance (https://kb.wisc.edu/images/group99/shared/BSIR_Exempt.pdf) which includes a description of the types of changes that must be submitted to ensure the research continues to comply with the conditions of the exemption and/or category(ies) of exemption.

APPENDIX T: CURRICULUM VITAE

NUR ALACAM

EDUCATION

M.S.: Early Childhood Education, Middle East Technical University, Ankara, Turkey (2012-2015) (Course Performance Award)

B.S.: Early Childhood Education, Middle East Technical University, Ankara, Turkey (2007-2012) (Best ranked student at the Department of Early Childhood Education)

INTERNATIONAL EDUCATIONAL EXPERIENCE

Fulbright Visiting Student Researcher: Curriculum & Instruction, University of Wisconsin-Madison, Wisconsin, the USA (2018-2019)

WORK EXPERIENCE

Research Assistant, Department of Early Childhood Education, Ondokuz Mayıs University, Samsun, Turkey (2019-present)

Research Assistant, Department of Early Childhood Education, Middle East Technical University, Ankara, Turkey (2012-2018)

RESEARCH INTERESTS

Early Childhood Education, Teacher Education, Assessment, Family Involvement

SELECTED WORK

Alaçam, N. & Olgan, R. (2015). Portfolio assessment: does it really give the benefits that it purports to offer? Views of early childhood and first-grade teachers. *Early Child Development and Care*. doi: 10.1080/03004430.2015.1108970

Alaçam, N. & Olgan, R. (2017). Pre-service early childhood teachers' self-efficacy beliefs towards parent involvement. *Teaching Education*. doi:10.1080/10476210.2017.1324843

Alaçam, N. & Olgan, R. (2021). Pedagogical documentation in early childhood education: A systematic review of the literature. *Elementary Education Online*. doi: 10.17051/ilkonline.2021.01.021

Alaçam, N., Olgan, R., Çapa-Aydın, Y., & McCleary, K. (2021). *Early childhood teachers' practices and views on portfolio assessment: Findings between Turkey and the United States*. Paper presented at NAEYC Annual Conference.

Alaçam, N., Olgan, R., & Çapa-Aydın, Y. (2021). *Content analysis of child portfolios in the U.S. and Turkey*. Paper presented at 30th EECERA Annual Conference.



APPENDIX U: TURKISH SUMMARY (TÜRKÇE ÖZET)

Giriş

Nitelikli okul öncesi programlarının özelliklerinden biri gelişime uygun müfredat ve değerlendirmedir (Couchenour ve Chrisman, 2000). Bu nedenle okul öncesi dönemde çocukların sistematik bir şekilde değerlendirilmesi, okul öncesi programının başarısı açısından önem arz etmektedir (Abbott ve Crane, 1977). Değerlendirme denilince genellikle birçok insan tarafından testler akla gelmektedir (Russell ve Airasian, 2012). Fakat okul öncesi dönemde çocuklar okuma yazma bilmediklerinden ve farklı hızda ve şekillerde öğrendikleri için değerlendirmenin onlara göre adapte edilmesi gerekmektedir (Shepard ve diğerleri, 1998; Wortham ve Hardin, 2016). Bu bağlamda okul öncesinde değerlendirme çocuklarla ilgili bilgilerin çeşitli kaynaklardan toplanması, organize edilmesi ve yorumlanması olarak tanımlanmaktadır (McAfee ve diğerleri, 2004).

Değerlendirme ile ilgili bilgiler yıllar içinde oldukça değişmiştir (Hall ve Burke, 2004). Özellikle 1990'larda performans değerlendirmesine yönelik bir eğilim başlamıştır (Damiani, 2004). Çocuklar aktif olarak değerlendirme sürecine katılmaktadır. Öğretmenler, bilgiyi değerlendirmekten çocukların problem çözme becerilerini değerlendirmeye geçmektedir (Wortham ve Hardin, 2016). Çocuğun performansı daha önceki performansı ile karşılaştırılmaktadır (Lewin-Benham, 2011). Bu nedenle özellikle performans değerlendirmesi çocukların öğrendiklerini göstermelerini sağlamaktadır (Wortham ve diğerleri, 1998).

Portfolyo çocuğun gelişimini değerlendiren alternatif değerlendirme yöntemlerinden bir tanesidir (Gelfer ve Perkins, 1996). Geleneksel değerlendirme yöntemleri ile entegre edilerek de kullanılabilir (Johnson ve diğerleri, 2006). Çocuğun performansı ile ilgili bilgi portfolyoda depolanmakta ve yorumlanmaktadır (Morrison, 2014). Amacına uygun kullanıldığında çocuk gelişimini, çabasını ve başarısını belgelemek için kullanılabilir en kapsamlı araçtır (Martin-Kniep, 2000). Çocuk, aile ve öğretmen açısından birçok faydası bulunmaktadır (Harris, 2009). Öğretmenlerin çocuk gelişimini değerlendirip, müfredatı ona göre revize etmesine

yardımcı olmaktadır (Gronlund, 2016). Çocuk gelişimini aile ve diğer paydaş ile paylaşmak için de etkili bir araçtır çünkü çocuk gelişimi ile ilgili somut delil sunmaktadır (Wortham ve diğerleri, 1998; Wortham ve Hardin, 2016). Çocuk açısından ise kendilerini ifade etmesini ve diğerleri ile iletişimini kolaylaştırmaktadır (Klenowski, 2002; Montgomery, 2005). Fakat süreç içerisindeki gelişimi değerlendirdiğinden planlama ve değerlendirme için zaman ve çaba gerektirmektedir (Banta, 2003). Özellikle zaman gerektirmesi en çok bahsedilen zorluklardan bir tanesidir (Alacam ve Olgan, 2016; Kim ve Yazdian, 2014). Bu nedenle planlanması ve sistematik hale getirilmesi süreci kolaylaştıracaktır (Lambdin ve Walker, 1994).

Portfolyo için belli bir formül ya da doğru yol bulunmamaktadır (Banta, 2003; Wortham ve diğerleri, 1998). Birçok amacı ve formatı bulunmaktadır. Örneğin, dosya, kutu, çanta ve raf gibi birçok farklı şekilde depolanabilmektedir (Farr ve Tone, 1998). En yaygın olarak iki farklı türde kullanılmaktadır. Çocuğun en iyi ürünlerini içeren ya da çocuğun gelişimini gösterecek ürünleri içeren portfolyo (Rolheiser ve diğerleri, 2000). Bu noktada portfolyo içeriğine karar vermek önemlidir. Özellikle çocuğun yeteneğini gösteren ürünler portfolyoya dâhil edilmelidir (Morrison, 2014). Ayrıca çocuğun seçtiği ürünler de hem portfolyo içeriğini çeşitlendirmekte hem de çocuğun portfolyoyu sahiplenmesini sağlamaktadır (Kingore, 2008). Portfolyo genellikle iki temel şekilde organize edilmektedir: gelişimsel alanlar (bilişsel, vb.) ve konu (okuma, yazma, vb.) (Wortham ve diğerleri, 1998). Alan yazında portfolyonun hem kronolojik hem de belirlenen kategoriye göre organize edilmesi (Grace ve Shore, 1992) ve ayrıca yazılı özet raporları ile zenginleştirilmesi tavsiye edilmektedir (Wortham ve Hardin, 2016).

Davranışları anlamak için onların yordayıcılarını da anlamak gerekmektedir (Ajzen, 1988). Bu çalışmada okul öncesi öğretmenlerinin portfolyo uygulamalarının yanında yordayıcılarını da incelemek amaçlanmıştır. Portfolyo ile amaçlanan hedeflere ve faydalara ulaşabilmede öğretmenler önemli bir role sahiptirler (Yan ve Cheng, 2015). Öğretmenlerin değerlendirme ile ilgili inançları, onların uygulamaları üzerinde önemli bir etken olabilmektedir (Greene, 2014). Bu bağlamda öğretmenlerin portfolyo uygulamaları üzerindeki faktörleri incelemek, öğretmenlerin

uygulamalarını anlamaya yardımcı olabilecektir (Kiser, 2008). Planlanmış davranış teorisi, davranışların uygulama eğilimlerini incelemektedir. Birçok araştırma bu teoriyi desteklemektedir (Ajzen, 2005). Açıklamak gerekirse teoriye göre insanlar güçlü bir niyete sahipse büyük olasılıkla hedeflenen davranışı uygularlar (Ajzen, 1996). Bir diğer değişken, algılanan davranış kontrolü ve öz yeterlik inançları teorik olarak benzerdir. Her ikisi de belli bir davranış için algılanan yeterlilik anlamına gelmektedir (Fishbein ve Ajzen, 2010). Etkili bir uygulama için hem beceri hem öz yeterlik inançları gereklidir (Bandura, 1997). Özellikle öğretmenlerin alternatif değerlendirme araçlarına yönelik öz yeterlik inançları, onların bu değerlendirme yöntemlerini uygulamalarına katkıda bulunmaktadır (Buldur ve Tatar, 2011). Öğretmenlik tecrübesi de portfolyo uygulamaları üzerinde bir diğer etkili faktör olarak bulunmuştur (Walravich, 1995). Bu çalışmada alan yazınla paralel olarak öğretmenlerin portfolyoya yönelik öz yeterlik inançları, niyetleri ve öğretmenlik tecrübesi portfolyo uygulamalarının yordayıcısı olarak odaklanılmıştır. Ayrıca hem teori de hem de ilgili alan yazında birçok farklı değişken öğretmen davranışlarının yordayıcısı olarak bulunmuştur. Önerilen bu değişkenler de çalışma kapsamında incelenerek portfolyo uygulamalarını yorumlamak için kapsamlı bir çerçeve sunulmaktadır.

Portfolyo birçok ülkede yaygın olarak kullanılmaktadır fakat her ülkenin müfredatı ya da eğitim sistemi farklı olduğu için farklı şekillerde uygulanabilmektedir. Bu nedenle değerlendirme de çevresel ya da kültüre etkenlerin de düşünülmesi gerekmektedir (Losardo ve Notari-Syverson, 2001). Bu araştırmanın nitel bölümleri Türkiye ve ABD’de Reggio Emilia felsefesinden ilham alan bir anaokulunda ve bir üniversite anaokulunda gerçekleştirilmiştir. Açıklamak gerekirse, Türkiye’de merkezi bir okul öncesi eğitim sistemi vardır ve müfredatta öğretmenlerden her çocuk için bir portfolyo dosyası hazırlaması beklenmektedir. Portfolyoya çocuğun gelişimi yansıtacak etkinlikler ve değerlendirme dokümanlarının dâhil edilmesi beklenmektedir (MoNE, 2013). ABD’de ise merkezi bir eğitim sistemi bulunmamaktadır. Fakat öğretmenler uyguladıkları okul öncesi programının etkinliğini çocukların belli hedefleri kazandığını belgeleyerek ortaya koymaktadır.

Portfolyo dosyasına da bunlar yansıtılmaktadır (McKenna, 2005). Araştırma sonuçlarının Türkiye ve ABD'deki farklı iki eğitim sisteminde portfolyonun kullanımı ile ilgili bilgi sunması ve belirlenen iki ayrı okul türünde etkili portfolyo kullanımını örneklendirmesi beklenmektedir. Bu okullar portfolyo uygulamasını etkili kullandıkları için amaçlı örneklem yöntemi ile seçilmiştir. Reggio Emilia felsefesinde dokümantasyon çocukların ve öğretmenlerin öğrenme ve öğretme süreçlerine entegre edilmiş durumdadır (Rinaldi, 2012). Benzer şekilde üniversite anaokulunda da çocuk merkezli bir eğitim felsefesi vardır ve bireysel portfolyo dosyaları çocukları tanımak, değerlendirmek ve sürece aktif olarak katmak için bir araç olarak kullanılmaktadır (Jones ve Shelton, 2006). Bu çalışmanın portfolyoyu müfredatlarına entegre etmiş katılımcı okullardaki öğretmenler tarafından amaçlarına hizmet için nasıl kullandıklarını göstermesi beklenmektedir ve etkili portfolyo kullanımı ile ilgili alan yazına öneriler sunması beklenmektedir. Bu okullardaki portfolyo içerik incelemelerinin ayrıca portfolyoların güçlü ve zayıf yönleri ile ilgili örnekler sunması da beklenmektedir.

Portfolyo yaygın olarak kullanılmasına rağmen bu konuda az sayıda çalışma bulunmaktadır. Bu çalışmalar belirli portfolyo türlerine odaklanmaktadır (Appl ve diğerleri, 2014; Barton ve Collins, 1997; Gilkerson ve Hanson, 2000; Pickens, 2018) ya da bu araştırmalarda genellikle öğretmenler tarafından portfolyonun birçok avantajından bahsedilmektedir (Alaçam ve Olgan, 2016; Chen ve Cheng, 2011). Portfolyonun sınıf ortamında nasıl kullanıldığı ile ilgili sınırlı sayıda araştırma bulunmaktadır (Barton ve Collins, 1997; Pickens, 2018). Bu doktora tezi kapsamında öğretmenlerin portfolyo ile ilgili uygulamalarını, görüşlerini incelemek ve portfolyo uygulamalarının yordayıcılarını araştırmak amaçlanmaktadır. Nicel ve nitel araştırma metodlarının birlikte incelenmesinin çalışmanın güvenilirliğine katkı sağlaması beklenmektedir. Ayrıca farklı iki ülkedeki portfolyo uygulamaları arasındaki benzer ve farklılıkları incelemenin hem uygulamaya yönelik öneriler sunulması hem de alan yazına katkıda bulunulması beklenmektedir. Portfolyo için tek bir doğru yöntem olmadığından farklı uygulamaları görmenin öğretmenler için örnek teşkil etmesi ve öğretmenlerin kendi yöntemlerini geliştirmelerine yardımcı olması beklenmektedir.

Tüm sonuçların Türkiye’deki eğitim politikaları için de öneriler sunması beklenmektedir. İyi hazırlanmış portfolyo, okul öncesi eğitimin önemini görülebilir hale getirerek alana gereken değeri sağlayabilir. Bu sebeple değerlendirme uygulamalarını geliştirmek tüm okul öncesi eğitim uygulamaları üzerinde olumlu bir etkiye sahip olabilir.

Yöntem

Çalışmanın amacı ve metodu

Bu doktora tezi çoklu metot olarak tasarlanmıştır ve üç ayrı çalışmadan oluşmaktadır. İlk çalışma nitel desende planlanmıştır ve Türkiye ve ABD’de belirlenen okullardaki okul öncesi öğretmenlerinin portfolyo ile ilgili uygulamalarını ve görüşlerini incelemek amaçlanmıştır. İkinci çalışma, doküman analizi olarak belirlenmiştir ve görüşme yapılan öğretmenlerin portfolyolarının içerik analizinin yapılması hedeflenmiştir. Son çalışma ise nicel veriye odaklanmıştır ve öğretmenlerin portfolyo uygulamalarının yordayıcıları belirlenmeye çalışılmıştır. Bu çalışmada veri toplamak için portfolyo ile ilgili belirlenen değişkenler dâhilinde ölçekler geliştirmek ve Ankara’dan veri toplamak amaçlanmıştır. Her çalışmanın yöntemi aşağıda ayrı alt başlıklar altında detaylı olarak açıklanmıştır.

Çalışma 1

Çalışma nitel yöntemle tasarlanmıştır. Bu bölümde Türkiye’de ve ABD’de Reggio Emilia felsefesinden ilham alan bir anaokulu ve bir üniversite anaokulundaki okul öncesi öğretmenlerinin portfolyo ile ilgili uygulamalarını ve görüşlerini incelemek amaçlanmıştır. Bu amaçlar ile aşağıdaki araştırma soruları yanıtlanmaya çalışılmıştır:

- 1.1. Türkiye ve ABD’deki katılımcı anaokullarındaki öğretmenlerin içerik, organizasyon ve aile katılımı açısından portfolyo ile ilgili uygulamaları nelerdir?

1.2. Türkiye ve ABD’deki katılımcı anaokullarındaki öğretmenlerin portfolyo değerlendirmesinin tanımı, amacı, faydaları, zorlukları ve uygulama süreci için destek ve önerileri ile ilgili görüşleri nelerdir?

1.3. Türkiye ve ABD’deki okul öncesi öğretmenlerinin portfolyo değerlendirmesi ile ilgili uygulama ve görüşleri arasında benzerlik ve farklılıklar nelerdir?

Katılımcılar amaçlı örneklemle seçilmiştir. Türkiye ve ABD’den iki tür okul çalışmaya katılmıştır: Reggio Emilia felsefesinden ilham alan bir anaokulu ve bir üniversite anaokulu. Her okuldan gönüllü 6 öğretmen çalışmaya katılmıştır ve Türkiye ve ABD’den toplam 24 öğretmenden çalışma verileri toplanmıştır. Örneklem genişliği ile ilgili kategorilerdeki tekrarların belirleyici olabileceği önerilmiştir (Lincoln ve Guba, 1985). Katılımcı örneklemle bu doyuma ulaşılmıştır. Katılımcıların büyük çoğunluğu kadın ($n=23$) ve okul öncesi öğretmenliği lisans mezunudur ($n=15$). Çoğunlukla çocuğu değerlendirme dersini almışlar ($n=21$) ve portfolyo ile ilgili eğitime katılmışlardır ($n=17$).

Çalışma verileri yarı yapılandırılmış bireysel görüşmeler aracılığı ile toplanmıştır. Görüşme soruları araştırmacı tarafından geliştirilmiş ve Türkiye ve ABD’de uzman görüşleri alınmıştır. Aynı sorular her iki ülkede de kullanılmıştır. Uzman görüşü alındıktan sonra Türkiye’den bir okul öncesi öğretmeni ve ABD’den bir okul öncesi öğretmeni ile pilot çalışma olarak görüşmeler gerçekleştirilmiştir. Ayrıca, öğretmenler ile ilgili demografik bilgiler de demografik form aracılığı ile toplanmıştır.

ABD ve Türkiye’de üniversite etik kurullarından ve sonrasında katılımcı okul yönetimlerinden gerekli izinler alınmıştır. Data toplama süreci ilk olarak ABD’de başlamıştır ve paralel şekilde Türkiye’de devam etmiştir. Çalışma verileri ABD’de 2018-2019 bahar döneminde ve Türkiye’de ise 2019-2020 güz döneminde toplanmıştır. Her bir görüşme 40-60 dakika zaman aralığında tamamlanmıştır. Demografik form katılımcılara görüşme esnasında verilmiştir ve öğretmenler doldurduktan sonra belirlenen tarihte toplanmıştır.

Tüm görüşmeler öğretmenlerin izni ile kaydedilmiştir ve araştırmacı tarafından görüşmenin yapıldığı dilde, İngilizce veya Türkçe olarak transkript edilmiştir. MAXQDA programı veri analizinde kullanılmıştır. Bu süreçte Lichtman (2013)'ın önerdiği adımlar takip edilmiştir: ön kodlama, kodları inceleme, kategorileri oluşturma, kodları ve kategorileri tekrar inceleme ve kategorilerden temalar oluşturma. Çalışmanın geçerliği ve güvenilirliği için alan yazında önerilen yöntemler takip edilmiştir. Örneğin, araştırmacı tüm görüşmeleri dinleyip gerek duyulan noktalarda öğretmenler ile iletişime geçmiştir. Çalışma verileri ikinci bir araştırmacı tarafından kodlanmıştır. Data toplama ve analiz süreçleri detaylı bir şekilde açıklanmıştır. Araştırmacı kaynaklı önyargı vb. durumlara yönelik olarak da araştırmacı ile ilgili bilgi ayrı bir alt başlıkta açıklanmıştır.

Çalışma 2

Bu çalışma doküman analizi olarak tasarlanmıştır. Bu bölümde Türkiye ve ABD'deki çocuk portfolyo içeriklerinin değerlendirme amacına ne derece hizmet ettiklerini değerlendirilmek amaçlanmıştır. Ayrıca öğretmenlerin görüşmelerde ifade ettikleri uygulamalarını portfolyolarına ne derece yansıttıklarını görmek de hedeflenmiştir. Bu amaçlar ile aşağıdaki sorular yanıtlanmaya çalışılmıştır:

- 2.1. Türkiye ve ABD'deki katılımcı anaokullarında çocuk portfolyolarına en sıklıkla dâhil edilen bileşenler hangileridir?
- 2.2. Türkiye ve ABD'deki katılımcı anaokullarında çocuk portfolyolarının içeriğinin niteliği ne düzeydedir?
- 2.3. Türkiye ve ABD'deki çocuk portfolyolarının bileşenleri ve nitelikleri arasındaki benzerlik ve farklılıklar nelerdir?

Portfolyoların fotoğrafları araştırmacı tarafından çekilmiştir ve portfolyo analizleri bu dokümanlar üzerinden yapılmıştır. Bu bölümde birinci çalışmaya katılan her bir öğretmenden bir portfolyo incelemek amaçlanmıştır. Hedeflendiği gibi ABD'de 12 portfolyo incelenmiştir. Fakat Türkiye'den toplam 7 portfolyo çalışmaya dâhil edilmiştir. Okulların Covid-19 nedeni ile kapanmasından dolayı üniversite

anaokulundan 1 portfolyo incelenebilmiştir. Bu okulun portfolyo rehberine ve örnek portfolyo dokümanlarına ulaşarak veri zenginleştirilmiştir.

Portfolyolar “Henüz yeterli değil” “Kabul edilebilir” ve “Örnek olacak şekilde” seçenekleri ile “içerik”, “seçilen ürünlerin özelliği”, “organizasyon”, “yansıma” ve “genel değerlendirme” rubrik kategorilerine göre değerlendirilmiştir. Ayrıca araştırmacı tarafından içerik kontrol listesi doldurularak portfolyo içerikleri belirlenmiştir. Rubrik ve içerik kontrol listesinin Türkçe ve İngilizce versiyonları için hem Türkiye’den hem ABD’den uzman görüşü alınmıştır. Pilot çalışma olarak da Türkiye ve ABD’den bir portfolyo geliştirilen rubrik ve içerik kontrol listesi ile incelenmiştir. Etik izinler alındıktan sonra çalışma verileri ABD’de 2018-2019 bahar döneminde, Türkiye’de ise 2019-2020 güz döneminde toplanmıştır. Sonuçlar hem rubrik kategorilerinin sıklıklarını rapor ederek hem de detaylı açıklamalar ile sunulmuştur. Rubrik kategorileri tema olarak kabul edilmiş ve ilgili temanın altında tüm okul portfolyoları detaylı açıklamalar ile analiz edilmiştir. İçerik kontrol listesi sonuçları ise betimsel istatistiksel analizleri ile özetlenmiştir. Çalışmanın geçerliği ve güvenilirliği ise hem uzman görüşleri alınarak hem ikinci bir araştırmacıyı sürece dâhil ederek sağlanmıştır.

Çalışma 3

Bu bölümde okul öncesi öğretmenlerinin portfolyo uygulamalarını ve uygulamalarının yordayıcılarını nicel bir çalışma desende incelemek amaçlanmaktadır. Bu bağlamda aşağıdaki sorular yanıtlanmaya çalışılmıştır:

3.1. Portfolyo uygulayan ve uygulamayan okul öncesi öğretmenlerinin portfolyo ile ilgili davranışsal inançları, tutumları, özyeterlik inançları, bariyer algıları, niyetleri ve çocuk-öğretmen merkezli inançları arasında anlamlı bir fark var mıdır?

3.2. Okul öncesi öğretmenlerinin portfolyo uygulamaları öğretmenlik tecrübesi, niyet ve özyeterlik inançları ile ne derece yordanabilir?

Çalışmanın amaçlanan popülasyonu, Ankara’da devlet okullarında çalışan okul öncesi öğretmenleri olarak tanımlanmıştır. Ankara’nın farklı sosyal-ekonomik özelliklere sahip 9 merkezi bölgesi ise ulaşılabilir popülasyon olarak belirlenmiştir (Pursaklar, Altındağ, Mamak, Keçiören, Sincan, Gölbaşı, Çankaya, Etimesgut ve Yenimahalle). Bu bölgeden rastgele okullar seçilmiştir ve veri okullarda gönüllü olan 605 okul öncesi öğretmeninden toplanmıştır.

Katılımcıların %99 ($n=601$) u kadın ve %83 ($n=503$)’ü okul öncesi öğretmenliği lisans mezunudur. Bağımsız anaokullarında (%52.2, $n=316$) ya da ilköğretim okulları bünyesindeki anasınıflarında (%47.8, $n=289$) çalışmaktadırlar. Öğretmenlik tecrübeleri 14 yıl civarındadır ($SS=7.1$) ve sınıflarında ortalama 20 ($SS=3.9$) çocuk bulunmaktadır. %79 ($n=478$)’u çocuğu değerlendirme dersi almış olmasına rağmen sadece %17 ($n=101$)’si portfolyo ile ilgili eğitim almış durumdadır. Ayrıca öğretmenlerin %72 ($n=438$)’si portfolyo kullanmakta fakat büyük çoğunluğu portfolyoyu çocuğun bir sonraki öğretmeni ile paylaşmamaktadır ($Ort=1.58$, $SS=94$).

Veri toplamak için araştırma kapsamında ölçekler geliştirilmiştir. Bunlar: portfolyo ile ilgili uygulama, norm, davranışsal inançlar, tutum, öz yeterlik, bariyer, niyet ve çocuk-öğretmen merkezli inançlar ölçeği. Tüm ölçekler için alan yazın tarayarak madde havuzu oluşturulmuş ve uygun maddeler içerisinden ölçek maddeleri seçilmiştir. Sadece çocuk-öğretmen merkezli inançlar ölçeği Pianta ve diğerleri (2005)’den izin alınarak uyarlanmıştır. Tüm ölçekler için yedi öğretim üyesinden uzman görüşü alınmış ve onların tavsiyeleri doğrultusunda ölçeklere son hali verilmiştir. Uzman görüşünden sonra, portfolyo kullanan ve kullanmayan bir okul öncesi öğretmeni ile bilişsel görüşmeler gerçekleştirilmiştir. Bu görüşmeler sonrasında bazı küçük değişiklikler yapılarak ölçeklere son hali verilmiştir. Daha sonra, pilot çalışma verileri Ankara’da devlet okullarında çalışan 371 okul öncesi öğretmeninden toplanmıştır. Pilot verinin analizinde her bir ölçek için geçerliğini ve güvenilirliğini test etmek amacıyla açımlayıcı faktör analizi ve Cronbach’s Alpha hesaplanmıştır. Portfolyo uygulama ölçeği içerik, çocuk katılımı ve paylaşım olarak üç faktör olarak bulunmuştur. Norm ölçeği ise öznel ve kişisel normlar olarak iki

faktörden oluşmaktadır. Çocuk ve öğretmen merkezli inançlar ölçeği de yine iki faktörden oluşmaktadır. Bunlar dışındaki tüm ölçekler için tek faktöre ulaşılmıştır.

Çalışma için önce ODTÜ Etik Kurulundan ve sonrasında Milli Eğitim Bakanlığı (MEB)'dan gerekli izinler alınmıştır. Veriler araştırmacı tarafından 2019-2020 güz döneminde toplanmıştır ve gönüllü öğretmenler çalışmaya dâhil edilmiştir. Veriler toplandıktan sonra doğrulayıcı faktör analizi ile faktör yapısı doğrulanmıştır ve güvenilirlikleri de yine Cronbach's Alpha ile teyit edilmiştir. Portfolyo kullanan ve kullanmayan öğretmenlerin farklı ölçeklere yanıtları arasında anlamlı bir fark olup olmadığı MANOVA ile incelenmiştir. Öğretmenlik tecrübesi, niyet ve özyeterlik inançlarının portfolyo uygulamalarını ne derece yordadığı ise Hiyerarşik Çoklu Regresyon ile analiz edilmiştir.

Bulgular

Çalışma 1

Portfolyo ile ilgili her okulun belirlenmiş bir rehberi bulunmaktadır. Bu nedenle aynı okul içerisindeki uygulamalar ve *içerik* benzerlik göstermektedir. Örneğin çocuk tarafından seçilmiş etkinlikler sadece Türkiye'deki üniversite anaokulunda dâhil edilmektedir. Öğretmen tarafından seçilmiş çocuk ürünleri, notlar, beyin fırtınası soruları, alan gezileri ve testler Türkiye'deki her iki okulda da dâhil edilen içeriklerdendir. Farklı isimlendirilse de gelişim gözlem raporu ya da konferans özet raporu da her iki ülkedeki tüm portfolyoların bir parçasıdır. Öğretmenler ayrıca kontrol listesi gibi kullandıkları diğer değerlendirmeleri de portfolyoya dâhil etmektedirler. ABD'de Türkiye'den farklı olarak öğretmenler bilgisayarda dijital olarak portfolyo sayfaları hazırlamaktadırlar. Bu sayfalar tarih, gelişimsel alan, amaçlanan gelişimsel standartlar, gözlem notları, fotoğraflar ve çocuk için belirlenen amaçlardan oluşmaktadır.

Portfolyolar, hem ABD'de hem de Türkiye'de çoğunlukla dosya olarak hazırlanmaktadır. Sadece Türkiye'de ki Reggio Emilia felsefesinden ilham alan anaokulunda görsel olarak kraft kâğıtlarından hazırlanmış bir formatı vardır. Ayrıca

portfolyolar Türkiye’de projeye göre ya da okul tarafından belirlenen rehberlere göre düzenlenmektedir. ABD’de ise portfolyoların büyük bir çoğunluğunda gelişimsel alana göre düzenleme görülmektedir. Tüm öğretmenler portfolyo içeriğini süreç içerisinde düzenli olarak topladıklarını ya da süreçte düzenli olarak dokümantasyon yaptıklarını belirtmişlerdir. ABD’de portfolyolar dijital olarak hazırlandığından, öğretmenler ayrıca online bir *organizasyondan* bahsetmişlerdir. Her çocuk için bilgisayarda ayrı bir klasör oluşturup, o çocukla ilgili tüm bilgileri o klasörde kronolojik olarak düzenleyerek arşivlemektedirler. Tüm okullarda aynı portfolyo bir sene boyunca hazırlanmaktadır. Sadece Türkiye’deki Reggio Emilia felsefesinden ilham alan anaokulunda portfolyolar her dönem sonunda eve gönderilmekte ve diğer dönem yeni bir portfolyo hazırlanmaktadır.

Aile katılımı olarak tüm öğretmenler tarafından konferanslar organize edilmektedir fakat farklı şekillerde uygulanmaktadır. ABD’de portfolyo konferansları öğretmen ve ailenin katılımı ile gerçekleşmektedir. Türkiye’de ise çocuklar da konferanslara dâhil edilmektedir. Hem Türkiye’den hem de ABD’den öğretmenler konferanslar öncesinde aileler ile portfolyo ile ilgili bilgi paylaşımı yapmanın önemini vurgulamışlardır. Tüm öğretmenlerin aileleri bu sürece dâhil etmek için en çok vurguladıkları öneriler ise aileler ile süreç içerisinde iletişim halinde olunması ve ailelerin ihtiyaçlarına göre esnek olunmasıdır.

Türkiye’de birçok öğretmen portfolyoyu çocuğun gelişimini gösteren bir araç olarak *tanımlamıştır*. Ayrıca gelişimi somutlaştırmak ve aileye göstermek de bahsedilen diğer noktalardır. Diğer taraftan ABD’deki öğretmenler ise portfolyonun amacını çocuğu anlamak olarak vurgulanmıştır. Benzer olarak çocuğun gelişimini görmek ve ailelere göstermek de diğer sıklıkla bahsedilen noktalardır.

Tüm öğretmenler tarafından çocuk, aile ve öğretmen için portfolyonun birçok *avantajından* bahsedilmiştir ve benzer noktalara değinilmiştir. Öğretmenler açısından en çok bahsedilen faydası çocuk gelişimini takip edebilmek ve değerlendirmektir. Çocukları daha iyi anlamak, özel gereksinimi olan çocukların değerlendirilmesi ve aileler ile etkili iletişim kurabilmek de öğretmenler tarafından

sıklıkla vurgulanmıştır. Çocuklar açısından bulgular karşılaştırıldığında ise Türkiye'deki öğretmenler daha fazla avantajlardan bahsetmişlerdir. Örneğin, çocuğun kendine güveninin artması, görsel hafızasının desteklenmesi ve çocukluktan bir hatıra kalması en çok bahsedilen faydalar arasındadır. Aileler açısından her iki ülkede de en çok vurgulanan faydalar ise ailelerin çocuk gelişimini ve eğitimini daha iyi anlaması, çocukların ihtiyaçlarını fark edip desteklemesi ve çocukları ile olan diyalogun artmasıdır. Bunlara ek olarak ABD'deki öğretmenler tarafından ailenin okul öncesi öğretmenlerinin bir uzman olduğunu anlaması da vurgulanmıştır.

Öğretmenler portfolyonun içselleştirilirse hiçbir dezavantajı olmadığını savunmuşlardır. Fakat zaman ve iş yükü öğretmenlerin büyük çoğunluğu tarafından portfolyo sürecinin *zorlukları* olarak tanımlanmıştır. Ayrıca ilk zamanlarda tecrübesiz olmak, sınıfta anında dokümantasyon yapabilmek ve öğretmen becerilerine bağlı olması da diğer sıklıkla bahsedilen noktalardır.

Tüm öğretmenler okullarının portfolyo ile ilgili bir rehberinin olmasını kendileri için bir *destek* olarak görmektedirler. Kendileri için verilecek bir diğer en önemli desteğin ise zaman olduğunu ifade etmişlerdir. *Öneri* olarak ise öğretmenlerin büyük çoğunluğu portfolyonun amacını ve önemini içselleştirmek olarak belirtmişlerdir. Diğer en çok bahsedilen öneriler ise portfolyo sürecini planlamak ve gelişimi takip edebilmek için süreç içerisinde dokümantasyon yapmak ve düzenli olmaktır. Ayrıca portfolyo sürecinde çocukların bütün gelişim alanlarına odaklanmayı ve portfolyoyu tüm paydaşlar ile paylaşmayı tavsiye etmişlerdir.

Çalışma 2

Araştırmacı tarafından doldurulan içerik kontrol listesine göre her iki ülkedeki tüm çocuk portfolyoları çocuk hakkında kişisel bilgiler, okul tarafından gereken formlar, sanat etkinlikleri, dil etkinlikleri ve fiziksel etkinlikleri içermektedir. Fakat devlet/müfredat tarafından gereken formlar ve çocuğun bir sonraki öğretmeni için öneriler hiçbir çocuk portfolyosunda görülmemiştir. Her bir okul için sonuçlar karşılaştırıldığında ise gözlem notları ve fotoğraflar ABD'de ve Türkiye'deki

üniversite anaokulunda görülmektedir. Çalışma sayfaları ise Türkiye'deki portfolyolarda yer verilmesine rağmen ABD'deki portfolyolara dâhil edilmemiştir.

Portfolyolar rubrik kategorilerine göre de incelenmiştir. Buna göre hem Türkiye'de hem de ABD'de çocuk ve aile bilgileri yeterli değil ve kabul edilebilir düzeyleri arasında değişmektedir. Bu bilgiler detaylı olarak okul idaresinde bir dosyada saklanmaktadır. Portfolyo organizasyonları ise örnek olacak niteliktedir. Her okulun kendi içinde bir organizasyon düzeni vardır. Diğer rubrik kategorileri açısından karşılaştırıldığında benzerlik yanında ülkeler arasında farklılıklar da görülmektedir. Türkiye'de değerlendirme metotları, etkinlikler ve seçilen içeriğin gelişimi yansıtması kabul edilebilir ve örnek olacak nitelikte arasında değişmektedir. Ürün çeşitliği sadece çocuk ürünleri dâhil edildiği için Reggio Emilia felsefesinden ilham olan anaokulunda yeterli değil iken üniversite anaokulunda kabul edilebilir düzeydedir. Benzer olarak çocuk ve öğretmen yansımaları da üniversite anaokulunda kabul edilebilir düzeyde iken Reggio Emilia felsefesinden ilham alan anaokulunda yeterli düzeyde değildir.

ABD'deki portfolyolarda değerlendirme yöntemleri, etkinlikler ve içerik çeşidi örnek olacak niteliktedir. Farklı gelişim alanlarını fotoğraf ve gözlem notları ile portfolyo sayfalarında doküment etmişlerdir. Portfolyo içeriği için seçilen ürünler çocuğun gelişimini yansıtmaktadır. Gelişim alanları içerisinde kronolojik bir düzenleme yaparak ilgili alan içerisindeki gelişimi göstermeye odaklanmışlardır. Diğer taraftan öğretmen yansımalarına yer verilmesine rağmen çocuk yansımaları portfolyoların çoğunda yeterli değil ya da kabul edilebilir düzeydedir ve geliştirilmeye ihtiyaç duyulmaktadır.

Bir bütün olarak değerlendirildiğinde ise Türkiye'deki Reggio Emilia felsefesinden ilham alan okuldaki anaokulu portfolyoları kabul edilebilir düzeydedir ve geliştirilmeye ihtiyaç duymaktadır. Diğer tüm okul portfolyoları örnek olacak niteliktedir. Fakat çocuk yansımaları açısından geliştirilmesi tavsiye edilmektedir.

Çalışma 3

Doğrulamalı Faktör Analizi ve Cronbach Alpha sonuçlarına göre tüm ölçekler için beklenen faktör yapısı ve güvenilirlik değerlerine ulaşılmıştır. Portfolyo içerik ölçeği sonuçlarına göre öğretmenler en çok sanat etkinlikleri, okuma-yazmaya hazırlık etkinlikleri, çalışma sayfaları, çocuk hakkında kişisel bilgiler ve matematik/fen etkinliklerini portfolyoya dâhil etmektedir. Ez sıklıkla dâhil edilenler ise standart test sonuçları, çocuğun bir sonraki öğretmeni için öneriler ve aileler için öneriler.

Betimsel istatistik analizi sonuçlarına göre öğretmenlerin içerik ($Ort. = 3.65$, $SS = .78$), çocuk katılımı ($Ort. = 3.47$, $SS = .92$) ve paylaşım ($Ort. = 3.54$, $SS = 1.02$) açısından benzer puanlara sahip oldukları görülmüştür. Ayrıca sonuçlar, öğretmenlerin kişisel normlarının ($Ort. = 5.17$, $SS = 1.44$) öznel normlarından ($Ort. = 2.51$, $SS = 1.30$) daha yüksek olduğunu göstermiştir. Çocuk merkezli inançları da ($Ort. = 4.84$, $SS = .37$) öğretmen merkezli inançlarına ($Ort. = 2.27$, $SS = .83$) göre daha yüksek düzeyde bulunmuştur. Tek faktörlü ölçeklerde ise yüksek davranışsal inançlara ($Ort. = 79.81$, $SS = 19.00$), özyeterlik inançlarına ($Ort. = 66.42$, $SS = 14.60$) ve tutumlara ($Ort. = 39.38$, $SS = 10.53$) sahip oldukları görülmüştür. Diğer taraftan portfolyo uygulama için niyetleri ($Ort. = 20.26$, $SS = 5.91$) olmasına rağmen bariyer algıları ($Ort. = 44.77$, $SS = 15.39$) olduğu da gözlenmiştir.

MANOVA analizi sonucunda portfolyo uygulayan ve uygulamayan öğretmenlerin belirlenen ölçeklerdeki yanıtları arasında anlamlı bir farka ulaşılmıştır. $F(7,586) = 16.837$, $p=.000$; Pillai's Trace = .167; partial eta squared=.167. Sonuçlar her bir ölçek için ayrı ayrı incelendiğinde çocuk-öğretmen merkezli inançlar hariç tüm diğer değişkenlerde gruplar arası anlamlı bir fark olduğunu göstermiştir. Portfolyo uygulayan öğretmenlerin davranışsal inançlar ($Ort_{uygulayan} = 82.07$, $SS = .87$; $Ort_{uygulamayan} = 75.95$, $SS = .141$), tutum ($Ort_{uygulayan} = 41.32$, $SS = .48$; $Ort_{uygulamayan} = 35.67$, $SS = .77$), özyeterlik inançları ($Ort_{uygulayan} = 67.86$, $SS = .69$; $Ort_{uygulamayan} = 62.68$, $SS = 1.11$) ve niyet ($Ort_{uygulayan} = 21.74$, $SS = .26$; $Ort_{uygulamayan} = 16.87$, $SS = .42$) üzerinde kullanmayanlara göre daha yüksek ortalamalara sahip oldukları bulunmuştur. Diğer taraftan portfolyo uygulayanların ($Ort. = 43.84$, $SS = .73$) bariyer

algılarının uygulamayanlara göre ($Ort. = 47.40$, $SS = 1.19$) daha düşük olduğu da görülmüştür. Etki büyüklükleri davranışsal inançlar, özyeterlik inançları ve bariyer algıları için küçük, tutum için orta ve niyet için ise büyük düzeyde bulunmuştur

Öğretmenlik tecrübesi, niyet ve özyeterlik inançlarının içerik, çocuk katılımı ve paylaşım boyutlarında yordayıcı etkisini incelemek için üç ayrı Hiyerarşik Regresyon Analizi yapılmıştır. Öğretmenlik tecrübesinin her üç boyut için de önemli bir fark yaratmadığı bulunmuştur. Özyeterlik inançları ve inanç ise her üç boyutta da önemli bir yordayıcı olarak ulaşılmıştır. Detaylı açıklamak gerekirse içerik boyutunda model %27 ($R^2 = .274$) varyans açıklıyor olarak bulunmuştur. Hem özyeterlik inançları ($\beta = .356$, $p < .017$) hem de niyet ($\beta = .253$, $p < .017$) önemli yordayıcılar olarak bulunmuştur. Çocuk katılımı boyutunda ise modelin %20 ($R^2 = .204$) varyans açıkladığı görülmüştür. Özyeterlik inançlarının ($\beta = .342$, $p < .017$) ve niyetin ($\beta = .181$, $p < .017$) önemli yordayıcılar olduğu doğrulanmıştır. Son olarak paylaşım boyutunda da model %20 ($R^2 = .199$) varyans açıklıyor olarak ulaşılmıştır. Benzer olarak özyeterlik inançları ($\beta = .328$, $p < .017$) ve niyet ($\beta = .190$, $p < .017$) paylaşım üzerinde de önemli yordayıcılar olarak doğrulanmıştır.

Tartışma

Portfolyo değerlendirmesi Türkiye ve ABD’de farklı amaçlar ile kullanılmaktadır. Sonuçlar incelendiğinde bu farklılıklar ülkeler arasında farklı portfolyo uygulamaları olarak yansımaktadır. Örneğin, Türkiye’de çocukların süreç içerisindeki gelişimi müfredatta beklenildiği gibi portfolyo dosyalarındaki etkinlikler ve değerlendirme raporları ile değerlendirilmektedir. ABD’de ise çocukların belirlenen kazanımlara ulaşp ulaşmadığı doküment edilmekte ve portfolyo sayfalarına yansıtılmaktadır. Özellikle ABD’de portfolyoların yapısı birbiri ile benzerlikler göstermektedir ve öğretmenler için sayfa sınırlaması vardır. Bu sınırlama alan yazında da öğretmenler için süreci daha kontrol edilebilir bir duruma getirdiği için desteklenmektedir (Helm ve diğerleri, 2007). Çocuğun gelişimini gösterecek ürünlerin portfolyoya dâhil edilmesi gerekmektedir. Tüm ürünlerin toplanması değerlendirme amacına hizmet etmeyecektir (Butler ve McMunn, 2006; Kingore, 2008).

Farklılıklara rağmen tüm portfolyolarda ortak olan bir nokta ise değerlendirme raporlarıdır. Bu raporlar alan yazında özellikle çocuğun gelişimini ailelere aktarmak için tavsiye edilmektedir (Wortham ve Hardin, 2016). Bu doktora tezi kapsamında her üç çalışmanın da ortak olarak birleştikleri noktalardan bir diğeri de çocuk etkinliklerinin portfolyolara dâhil edilmesidir. Alan yazında bu etkinliklerin öğretmenler ve çocuklar tarafından birlikte seçilmesi tavsiye edilmiştir (Gullo, 2006; Popham, 2014). Fakat sadece Türkiye'deki üniversite anaokulu öğretmenleri çocukları bu sürece dâhil etmektedir. Bu durum öğretmenlerin süreçte baskın bir rolü olduğuna işaret etmektedir.

Gözlem notları portfolyodaki önemli içeriklerden biri olarak görülmektedir (Gronlund ve James, 2013). Her iki ülkede de yer verilmesine rağmen özellikle ABD'deki portfolyo sayfalarının en önemli öğelerinden biridir Dokümantasyonun ABD'deki portfolyolarda daha çok görülme nedenlerinden biri kültürel farklılıklar olabilir şeklinde yorumlanmıştır. Çocukların öğrenmesini yansıtmak için okulda dokümantasyon kültürü yaratmak gerekmektedir (Given ve diğerleri, 2010). Bu şekilde zenginleştirilen portfolyolar hem çocuklar hem öğretmenler için yansıma aracı olarak kullanılabilir. Diğer taraftan ABD'de sadece bazı öğretmenler örnek olarak çocuk ürün çıktılarına yer vermektedir. Çocukların aktif katılımını sağlamak için portfolyoların bu yönden geliştirilmesine ihtiyaç duyulmaktadır.

Bu çalışma sonuçları portfolyo için tek bir doğru yöntem olmadığını doğrulamaktadır. Örneğin, portfolyo farklı şekillerde organize edilebilmektedir. Özellikle ABD'de gelişimsel alana göre organizasyonu benimseyen öğretmenler, bu şekilde belli bir alandaki gelişimi daha iyi görebildiklerini ifade etmişlerdir. Ayrıca portfolyo sürecinde organizasyon için kontrol listesi kullandıklarından bahsetmişlerdir. Bu listeler portfolyo sürecindeki adımları takip edebilmeyi sağladığı için alan yazında da öğretmenler için önerilmektedir (Wortham ve Hardin, 2016). Farklılıklara rağmen tüm öğretmenler tarafından özellikle vurgulanan nokta alan yazın ile de paralel olarak portfolyo sürecinin baştan planlanması yönündedir. Portfolyo gelişimi göstermeye odaklandığı için amaçlı ve sistematik bir şekilde hazırlanması önemlidir. Bu nedenle de öğretmenlerin portfolyo sistemini baştan

planlaması tavsiye edilmektedir (Kingore, 2008; Wortham ve Hardin, 2016). Bu çalışmada her okulun bir portfolyo rehberi vardır ve planlama sürecindeki önemli faktörlerden biri bu rehberlerdir. Okul portfolyo rehberleri sürecin amacına uygun şekilde ilerlemesinde yardımcı olmaktadır. Ayrıca portfolyonun amacına hizmet edebilmesi için içeriğin süreç içerisinde sistematik olarak toplanması ve sistematik olarak dokümantasyon yapılması gerekmektedir. Süreçte sistematik olabilmek için de öğretmenlerin planlı olmasının yanında kendi dokümantasyon yöntemlerini geliştirdikleri de bulunmuştur (Kingore, 2008; Knauf, 2019).

Aile katılımı portfolyo sürecinin önemli bileşenlerinden biridir. Bu çalışmada öğretmenler aileleri sürece katabilmek için portfolyo hakkında bilgilendirilmeleri gerektiğini vurgulamışlardır. Alan yazında da portfolyo ile ilgili aileleri bilgilendirip süreç içerisinde iletişim halinde olunursa ailelerin dönütlerinin pozitif olacağına dikkat çekilmektedir (Meisels ve diğerleri, 2001). Özellikle çocuk, aile ve öğretmen olarak portfolyo konferansları düzenlemenin birçok avantajı sıralanmıştır (Popham, 2014; Reynolds ve Duff, 2016). Bu nedenle ABD'deki portfolyo konferanslarının çocuk katılımı ile düzenlenmesinin önerilen faydalara ulaşmayı sağlayabileceği önerilmektedir. Fakat özellikle Türkiye'deki öğretmenler tarafından portfolyoların ailelere yönelik bir gösteri şeklinde hazırlanmaması gerektiğine de dikkat çekilmiştir.

Bu çalışmadaki öğretmenler portfolyo aracılığı ile çocuk gelişimini somutlaştırmaktan bahsetmişlerdir. Fakat amaçlarında nadiren değerlendirmeye yer vermişlerdir ve öğretimi iyileştirmekten bahsetmemişlerdir. Bu durum onların portfolyo amaçlarını netleştirip içselleştirmeleri gerektiğine işaret etmektedir. Örneğin, sonuçlar karşılaştırıldığında Türkiye'de Reggio Emilia felsefesinden ilham alan anaokulundaki bazı öğretmenler tarafından portfolyo sadece dosya olarak görülmüştür. Bu durum alan yazında da portfolyo ile ilgili yanlış kanılardan biri olarak bulunmuştur (Tangdhanakanond ve Archwamety, 2019). Sebebi portfolyonun çocuğu anlamaktan çok çocuk ürünlerinin sergilenmesi olarak görülmesi olabilir şeklinde yorumlanmaktadır. Önemli olan kapsamlı, sistematik ve amacına hizmet eden portfolyolar hazırlanmasıdır (Martin, 2014).

Farklı şekillerde uygulanmasına rağmen tüm öğretmenler tarafından portfolyonun birçok avantajından bahsedilmiştir. Bu durum portfolyonun farklı formatlarda da faydalı olabileceğini ve farklı amaçlar için adapte edilebilirliğini göstermektedir (Jones ve Shelton, 2006). Örneğin öğretmenler tarafından vurgulandığı gibi özel gereksinimi olan çocuklar için kullanılabilir (MacDonald, 1997). Esnek ve adapte edilebilir olması bu duruma katkıda bulunmaktadır (McAfee ve diğerleri, 2016). Öğretmenler ayrıca portfolyo sayesinde daha iyi planlama yapılabileceğinden bahsetmişlerdir. Portfolyonun programın eksiklerini görmeyi sağlıyor olması bu duruma katkıda bulunmaktadır (MacDonald, 1997). Öğretmenlerin bir diğer vurguladıkları nokta ise portfolyo çocuk gelişimi ile ilgili somut örnek sunduğu için hem aileler ile iletişimi güçlendirmekte hem de alana olan saygıyı artırmaktadır. Literatürde de anlamlı ve somut bilgi sunduğundan portfolyonun aile, öğretmen, yönetici arasındaki iletişime katkı sağladığı savunulmaktadır (Gullo, 1997; Stiggins, 2005).

Çocuklar aktif olarak konferanslara katıldığı için özellikle de Türkiye'deki öğretmenler portfolyonun çocuklar için birçok avantajından bahsetmişlerdir. Alan yazında da çocukların portfolyo sürecine aktif olarak katılmasının olumlu sonuçları vurgulanmıştır (Johnson ve diğerleri, 2006). Örneğin, çocuklar portfolyo için ürün seçtiğinde bu durum onların öz-değerlendirme becerilerine katkıda bulunmakta (Belgrad ve diğerleri, 2008) ve onların öğrenmeye olan motivasyonunu artırmaktadır (Kingore, 2008). Aileler açısından faydası olarak da öğretmenler tarafından ailelerin çocuk gelişimini ve öğretmenlerin uzmanlığını anlaması vurgulanmıştır. Çocuk ürünleri ailelerin çocuk gelişimini ve müfredatı daha iyi anlamalarına yardımcı olmaktadır (Gullo, 2006). Aileler portfolyo hazırlama sürecindeki öğretmenin zaman ve emeğini fark etmektedirler (Pekis ve Gourgiotou, 2017). Bu farkındalık da birçok öğretmenin belirttiği gibi alana olan saygıyı artırmakta ve öğretmen motivasyonuna katkıda bulunmaktadır. Ayrıca aile ve öğretmenler arasındaki iletişimi de kolaylaştırmaktadır.

Zaman, iş yükü ve ilk zamanlarda tecrübesiz olmak, öğretmenler tarafından portfolyo sürecinde en çok karşılaşılan zorluklar olarak ifade edilmiştir. Alan yazında da

portfolyonun özellikle tecrübesiz öğretmenler için zor olabileceği savunulmakta (Alexander ve Winne, 2008) ve birçok çalışmada zaman portfolyo sürecinin zorluğu olarak ifade edilmektedir (Alaçam ve Olgan, 2016; Kim ve Yazdian, 2014). Portfolyo süreci içeriğin toplanması, seçilmesi ve çocuklar ile incelenmesi açısından oldukça zaman almaktadır (Belgrad ve diğerleri, 2008). Öğretmenler süreci sistematik halde getirdiklerinde zaman sıkıntısı azalmaktadır (Lewin-Benham, 2011). Bunlar ile ilişki olarak portfolyonun öğretmen becerilerine bağlı olması da öğretmenler tarafından bir diğer zorluk olarak tanımlanmıştır. Öğretmenler portfolyo değerlendirme sürecinde çocuk gelişimi ile ilgili önemli kararları verip değerlendirmeleri yapmaktadırlar (Goolsby, 1995). Bu nedenle öğretmenlerin zorluklarının asıl sebebi çocuk değerlendirmesi ile ilgili bilgi ve beceri eksiliğinden kaynaklanabilmektedir (McNair ve diğerleri, 2003). Profesyonel eğitime ihtiyaç duymaktadırlar (Krnjaja ve Pavlović-Breneselović, 2016).

Portfolyo değerlendirmesi için öğretmenler benzer ve alan yazın ile paralel öneriler sunmuşlardır. Örneğin, süreç içerisinde doküment etmeyi önermişlerdir (Gronlund ve James, 2013). Tüm öğretmenler portfolyo sürecinin en baştan planlanmasını tavsiye etmiştir. Planlı olmak öğretmenlerin süreci yönetebilmelerine yardımcı olacaktır (Wortham ve diğerleri, 1998). Ayrıca portfolyoyu tüm paydaşlar ile paylaşmayı tavsiye etmişlerdir. Örneğin, portfolyoyu çocuklar ile incelemenin önemi vurgulanmıştır (Rolheiser ve diğerleri, 2000). ABD’deki Reggio Emilia felsefesinden ilham alan anaokulu öğretmenleri portfolyoyu okul içerisindeki çocuğun bir sonraki öğretmeni ile paylaşmaktadır ve aynı uygulamayı tavsiye etmişlerdir. Alan yazında da portfolyo paylaşımının geçişi kolaylaştırabileceği ve süreklilik sağlayacağı savunulmaktadır (McAfee ve diğerleri 2016, ; Peters ve diğerleri, 2009). Ayrıca mentor öğretmen de önerilmiştir ve özellikle yeni başlayan öğretmenler için önemi vurgulanmıştır. Mentor öğretmenler destekleyici bir ortam sunarak öğretmenlerin etkili portfolyo uygulamalarına katkıda bulunabilecektir (Bowles ve Pearman, 2017). Bu iş birliği ayrıca öğretmenlerin farklı uygulamaları görmelerini de sağlayacaktır.

Doküman analizinde incelenen portfolyo içeriklerine göre ürün çeşitliliği ABD’de örnek olacak nitelikte iken Türkiye’de yeterli değil ve kabul edilebilir düzeyleri

arasındadır. İçerik çeşitliliği portfolyoda farklı amaçlara hizmet ettiği için önemlidir. Örneğin fotoğraflar süreci somutlaştırmaktadır (Kingore, 2008). Ayrıca bu çalışmadaki portfolyoların hepsinde farklı organizasyon metotları olmasına rağmen hepsinin amaca hizmet ettiği görülmüştür. Özellikle gelişimsel alanlara göre ve kronolojik olarak organize edilen portfolyolar belirlenen alan içerisinde gelişimi görmeyi sağlamaktadır.

Diğer taraftan, çocuk ve öğretmen yansımalarının portfolyolarda yeterli düzeyde olmadığı bulunmuştur. Fakat yansımalar portfolyo sürecinin önemli bir parçasıdır (Fernsten ve Fernsten, 2005) ve portfolyoların bu konuda zenginleştirilmesi gerekmektedir. Örneğin, çocuk yansımaları ABD'deki Reggio Emilia felsefesinden ilham alan anaokulundaki tüm portfolyolarda görülmüştür. Bu okulda öğretmenler her etkinlikte her bir çocuk için dokümantasyon yaptıklarını ifade etmişlerdir ve bu durumun çocuk yansımaları sağladığı şeklinde yorumlanmıştır. Dokümantasyon çocukların hatırlamalarına ve yansımalarına yardımcı olmaktadır (Helm ve diğerleri, 2007). Çalışma sayfaları ise Türkiye'de tüm portfolyolarda görülmesine rağmen ABD'deki portfolyolarda yer almamaktadır. Bu farklılık ABD'de gözlem notları ve fotoğraflar ile çocukların kazandığı becerilerin portfolyo sayfalarında sunulması şeklinde yorumlanmıştır. Ayrıca alan yazında da vurgulandığı gibi Türkiye'deki sınıf mevcudunun fazla olmasının da değerlendirme yöntemleri üzerinde sınırlandırıcı etkisi olabileceği (Wang ve Hou, 2021) ve öğretmenleri bireysel dokümantasyon yerine tüm sınıfa yönelik çalışma sayfalarına yönlendirebileceği şeklinde yorumlanmıştır.

Temel olarak alan yazında portfolyoların bütüncül olarak gelişimi anlamaya yardımcı olduğu savunulmaktadır (Martin-Kniep, 2000). Bir bütün olarak değerlendirildiğinde Türkiye'deki Reggio Emilia felsefesinden ilham alan anaokulu portfolyoları kabul edilebilir düzeyde iken diğer incelenen portfolyolar bu amaca iyi derecede hizmet etmektedir. Bu durum portfolyoları hazırlamak için katı bir kural olmadığını ve öğretmenlerin kendi imkânlarına göre geliştirdikleri portfolyoların amaca hizmet edebileceğini göstermektedir.

Nicel bölüm sonuçlarında ise niyet ve özyeterlik inançları portfolyo uygulamalarının yordayıcısı olarak bulunmuştur. Bununla ilişkili alan yazında olarak niyet uygulamanın yordayıcısı olarak tanımlanmaktadır (Ajzen, 2005) ve öğretmenlerin değerlendirme metodu ile ilgili kendilerine güvenirlerse o metodu uygulayacağı savunulmaktadır (Yan ve Cheng, 2015). Öğretmenlerin öz yeterlik inançları, onların amaçları ve zorluklarla baş etmeleri üzerinde etkili olmaktadır (Tschannen-Moran ve diğerleri, 1998). Diğer taraftan, öğretmenlik tecrübesi portfolyo uygulamalarının anlamlı bir yordayıcısı olarak bulunmamıştır ve bu durum öğretmenlik tecrübesi değil, portfolyo ile ilgili tecrübenin öneminden kaynaklanabileceği şeklinde yorumlanmıştır. Alan yazında da öğretmenlerin portfolyoya olan aşinalığı ile portfolyo uygulamaları arasında ilişki olduğu savunulmaktadır (Nick, 1995).

MANOVA analizinde portfolyo uygulayan öğretmenlerin içsel faktörler ile ilgili değişkenlerde uygulamayanlara göre anlamlı derecede daha yüksek puanlar aldıkları görülmüştür. Bu değişkenler Planlanmış Davranış Teorisi kapsamında veya farklı araştırmaların sonucunda niyetin yordayıcıları olarak belirlenmiştir (Armitage ve Conner, 2001). Bu bağlamda öğretmenlerin niyeti üzerinde de etkili olabilir ve bu nedenle uygulayan öğretmenlerde anlamlı bir farka sebep oluyor şeklinde yorumlanmıştır. Paralel olarak alan yazında da içsel faktörlerin diğer faktörlerden daha etkili olduğu savunulmaktadır (Yan ve Cheng, 2015). Öğretmenlerin değerlendirme ile ilgili inançları onların uygulamalarını yönlendirebilmektedir (Barnes ve diğerleri, 2017). Diğer taraftan çocuk merkezli inançlara göre gruplar arası anlamlı bir fark olmaması da farklı faktörlerin etkisi olarak yorumlanmıştır. Örneğin: kalabalık sınıflar, aile beklentileri, yanlış kanılar.

Genel Sonuçlar ve Tartışma

Bu tez kapsamında portfolyo değerlendirmesi üç ayrı çalışma ile incelenmiştir ve üç çalışmanın sonuçları farklı açılardan birbirini tamamlamaktadır. Örneğin, görüşmeler öğretmenlerin farklı portfolyo uygulamaları olduğunu göstermesine rağmen doküman analizi farklı portfolyoların değerlendirme amacına hizmet ettiğini göstermiştir. Nicel bölümdeki ölçek sonuçları da farklı uygulamaları popülasyona genelleylebilmeyi sağlamaktadır. Bu sonuçlar portfolyo değerlendirmesinin farklı

ortamlara ve müfredatlara adapte edilebildiğini ve esnekliğini göstermektedir (Fenwick ve Parsons, 1999).

Bütün çalışmalar karşılaştırıldığında ortak olan noktalardan bir diğeri ise portfolyo rehberinin ya da müfredattaki beklentilerin öğretmenlerin portfolyo uygulamaları üzerindeki etkisidir. Portfolyo uygulamaları aynı okuldan çok aynı ülkede benzerlik göstermektedir. Çalışmanın nicel sonuçları da öznel normların varlığını doğrulamaktadır. Program gerekliliklerini karşılamak öğretmenlerin değerlendirme amacıyla veri toplama amaçlarından bir tanesidir (Keengwe, 2020). Bu nedenle müfredatta portfolyo ile ilgili net bir tanımlama verilmesine ihtiyaç duyulmaktadır (Krnjaja ve Pavlović- Breneselović, 2016). Portfolyo gelişime odaklandığı için amaçlı ve sistematik olması önemlidir. Okul portfolyo rehberleri bu noktada yardımcı olabilmektedir (Nitko ve Brookhart, 2007). Fakat bu rehberlerin kültüre göre adapte edilmesi de önemlidir. Eğer kültür ile ilişkilendirilmezse tam olarak değişimi desteklemeyecektir (Turner ve Wilson, 2010).

Görüşme ve doküman analizi sonuçları karşılaştırıldığında çocuk etkinlikleri her iki ülkede de ortak bir bileşen olarak bulunmuştur. Fakat farklı şekillerde dâhil edilmektedir. Türkiye’de ürün örnekleri olarak dâhil edilmesine rağmen ABD’de not ve fotoğraflar ile dijital portfolyo sayfaları olarak hazırlanmaktadır. Nicel bölümde de yine etkinlikler ve çalışma sayfaları yaygın içerikler olarak doğrulanmıştır. Fakat özellikle ABD’deki portfolyoların çocuk ürünleri ile zenginleştirilmesi, Türkiye’deki portfolyolarda ise dokümantasyonların artırılması tavsiye edilmektedir. Portfolyo çocuğun bütünsel gelişimine odaklanmalıdır (Martin, 2014). Görsel portfolyolar hazırlamak yerine çocuğun bütünsel gelişimini yansıtmak hem görüşmelerde hem de doküman analizinde vurgulanmaktadır. Bu amaçlara ulaşmak için de süreç için de sistematik olarak içerik toplanması önem teşkil etmektedir (Kingore, 2008).

Çalışmanın her üç bölümünün de vurguladığı bir diğer önemli nokta da organizasyon olarak bulunmuştur. Organizasyon her alandan içerik dâhil edilmesini sağlayarak bütünsel gelişimi görmeyi sağlamaktadır (Helm ve diğerleri, 2007). Görüşmelerde ve doküman analizinde öğretmenlerin farklı organizasyon yöntemleri olduğu

görülmüştür. Tüm yöntemlerin kendi içerisinde sistematik olması gelişimi görmeyi sağlamaktadır. Süreçte sistematik olabilmek için de öğretmenlerin alan yazın ile paralel olarak kendilerine yöntemler geliştirdikleri bulunmuştur (Knauf, 2019). Örneğin, ABD'deki öğretmenler dijital bir organizasyon yöntemi geliştirmişlerdir. Her çocuk için ayrı bir dosya oluşturmaktadırlar. Bu tip organizasyonlar her gelişim alanı ile ilgili süreç içerisinde içerik toplamayı sağlamaktadır (Helm ve diğerleri, 2007).

Üç çalışmanın sonuçları da çocuk katılımının yeterli düzeyde olmadığını göstermektedir. Örneğin, ABD'de çocuklar konferanslara dâhil edilmemektedir. İçerik analizi sonuçlarına göre çocuk yansımalarına birçok portfolyoda yer verilmemektedir. Nicel bölümde de portfolyo uygulayan ve uygulamayan gruplar arasında çocuk merkezli inançlar üzerinde anlamlı bir fark bulunamamıştır. Bu sonuçlara paralel olarak alan yazında çocuk katılımı portfolyo sürecindeki eksik olan yanlardan biri olarak tanımlanmıştır (Krnjaja ve Pavlović-Breneselović, 2016). Fakat çocuk katılımının birçok faydası rapor edilmiştir ve geliştirilmesi tavsiye edilmektedir (Johnson ve diğerleri, 2006). Ayrıca çalışmanın her üç bölümü de portfolyonun çocuğun bir sonraki öğretmeni ile genellikle paylaşılmadığını doğrulamaktadır. Portfolyo içeriğine bir sonraki öğretmen için öneriler eklenerek bir sonraki öğretmen ile paylaşılması tavsiye edilmektedir.

Hem nitel hem nicel bölüm sonuçları öğretmenlerin portfolyo değerlendirmesinin faydalı olduğuna inandığını göstermektedir. Fakat aynı zamanda zorlandıkları da birçok nokta olduğunu doğrulamaktadır. Öğretmenler süreç içerisinde kendilerine organizasyon yöntemleri geliştirerek bu zorlukları aştıklarını belirtmişlerdir. Bu nedenle portfolyo sürecinde öğretmenlere destek sağlamak önem teşkil etmektedir (Krnjaja ve Pavlović- Breneselović, 2016; Piker ve Jewkes, 2013). Bu destek öğretmenlerin portfolyo değerlendirmesinin amacını ve faydalarını içselleştirmelerinde de rol oynayacaktır. Bu noktaya çalışmanın her üç bölümünde de değinilmektedir. Nitel bölümde öğretmenler tavsiye olarak içselleştirmeye vurgu yapmışlardır. Nicel bölümde kişisel normların öznel normlardan daha yüksek olduğu bulunmuştur. Kişisel normlar içselleştirilmiş değerlere adanmışlık anlamına

gelmektedir (Schwartz, 1977). Bu nedenle içselleştirme portfolyonun hedeflenen amaçlara ulaşabilmesi için de önemlidir (McAfee ve diğerleri, 2016). Ayrıca hem nicel hem de nitel bölümdeki sonuçlar öğretmenlik tecrübesinin değil portfolyo ile ilgili tecrübelerin önemli olduğuna işaret etmektedir. Bu nedenle eğitim almak, portfolyo örnekleri görmek ve mentor öğretmen ile işbirliği içerisinde çalışmak tavsiye edilmektedir. Bu tavsiyeler içselleştirmeye de yardımcı olarak öğretmenlere destek sağlayacaktır.

Özetlemek gerekirse, görüşme sonuçlarına göre öğretmenlerin farklı uygulama ve görüşleri olmasına rağmen portfolyoyu faydalı olarak görmüşlerdir. İki ülke arasındaki ana fark Türkiye’de çocuklar portfolyo paylaşım konferanslarına katılırken, ABD’de sadece aile ve öğretmen arasında yürütülmektedir. Bir diğer en dikkate değer fark ise ABD’de dokümantasyonlar portfolyoların ana bileşeni iken Türkiye’de çocuk etkinliklerinin ana içerik olarak dâhil edilmesidir. Her ikisinin de entegre edilerek portfolyoya dahil edilmesi tavsiye edilmektedir. Bir diğer çalışma, içerik analizi sonuçları, portfolyo içeriklerinin kabul edilebilir düzeyde olduğunu ama çocuk yansımalarının eksik olduğunu göstermiştir. Nicel çalışmada ise niyet ve özyeterlik inançları portfolyo uygulamalarının yordayıcıları olarak bulunmuştur. Ayrıca portfolyo uygulayanların içsel değişkenlerde uygulamayanlara göre daha yüksek puanlar aldıkları görülmüştür. Sonuç olarak bu çalışmada öğretmenlerin portfolyo sürecinde önemli bir rolü olduğu ve özellikle de portfolyoyu içselleştirmeleri gerektiği vurgulanmaktadır. Bu nedenle portfolyo sürecinde öğretmenlere destek sağlanmasının önem teşkil ettiği savunulmaktadır. Portfolyo uygulamalarını geliştirmenin öğretmenlerin uzmanlığını görülebilir hale getireceği, alana olan saygıyı artıracığı ve çocukların öğrenmesini destekleyerek eğitimin kalitesine de katkıda bulunacağı savunulmaktadır.

Öneriler

Çalışmanın hem nicel hem de nitel sonuçları içselleştirmenin önemini vurgulamaktadır. Portfolyo sürecinin içselleştirmesi için öncelikle öğretmenler tarafından portfolyonun amacının ve öneminin anlaşılması gerekmektedir. Bu konuda öğretmenleri desteklemek için de bilgi ve beceriler öğretmen eğitimi

programlarına entegre edilmelidir (Yan ve Cheng, 2015). Eğitim fakülteleri Türkiye’de öğretmenlerin portfolyo uygulamaları için hazırlanmasında rol oynamaktadır. Öğretmen adayları için hem portfolyo hem de dokümantasyon ile ilgili teorik ve uygulamalı eğitimler verilmelidir. Gelişimsel amacına vurgu yapılmalıdır. Portfolyo ile ilgili yanlış kanılar, zorluklar ve çözümler öğretmen adayları ile tartışılmalıdır. Örneğin, portfolyo ve dokümantasyon ile ilgili bir ders açılıp pratik uygulamalar bu derse dâhil edilebilir. Öğretmen adayları mentor öğretmen rehberliğinde portfolyo hazırlayabilirler. Bu deneyim özyeterliklerini artırmalarına da yardımcı olacaktır. Bu çalışmada öğretmenlerin özyeterlik inançları portfolyo uygulamalarının önemli bir yordayıcısı olarak bulunmuştur. Bandura öz-yeterlik inançları için dört kaynak öne sürmüştür: deneyim, gözlemleme, ikna ve fizyolojik ve duygusal durum (Bandura, 1986;1997). Bu bağlamda uygulamalı eğitimler verilebilir. Hem öğretmen eğitiminde hem de hizmet içi eğitimde alternatif değerlendirme yöntemlerine ağırlık verilebilir (İzci ve diğerleri, 2014; Smith, 1997). Ayrıca mentor öğretmen ya da okul idaresi ikna konusunda destek olabilir. İyi örnekleri gözlemleyebilirler. Özyeterlik yanında portfolyo uygulamalarının bir diğer önemli yordayıcısı ise niyet olarak bulunmuştur. Fakat niyetlerin uygulamaya geçirilmesi için de öğretmenlere destek olunmalıdır. Örneğin, okulda dokümantasyon kültürü oluşturulabilir. Tecrübeli öğretmenlerin önerileri paylaşılabilir. Portfolyonun görsel şovdan çok gelişimsel amacına vurgu yapılabilir. Özetlemek gerekirse öğretmenlerin değerlendirme ile ilgili bilgi düzeylerini artırmak için hizmet için eğitimler ve destek sağlanmalıdır (Pang ve Leung, 2011). Ayrıca öğretmenlerin profesyonel destek ile portfolyo değerlendirmesini içselleştirebilmeleri için zaman ve fırsat sağlamak da önemlidir (Goldstein ve Flake, 2016).

Portfolyo içerik incelemesi sonuçlarına göre portfolyoya farklı değerlendirme yöntemlerini dâhil etmek sonuçları zenginleştirmektedir. Bu sebeple portfolyonun farklı değerlendirme yöntemleri ile birlikte kullanılması, dokümantasyonlara ve çocuk ürünlerine yer verilmesi tavsiyesi edilmektedir. Sistematik hazırlanan kontrol listeleri, görüşme notları ve çocuk ürün örnekleri çocukların ilgili amaçlara ulaştığının görülmesini sağlamaktadır (Helm ve diğerleri, 2007). Ayrıca öğretmen ve

çocuk yansımalarına yer verilmesi de önerilmektedir. Yansımalara yer vermek öğretmenin sorumluluklarından bir tanesidir (Fernsten ve Fernsten, 2005). Çocuk yansımalarını artırmak için teknolojik araçlar kullanılabilir (Helm ve diğerleri, 2007) veya sınıfta portfolyo merkezi organize edilebilir (Kingore, 2008).

Bahsedilen faydalar göz önüne alındığında çocukların portfolyo sürecine aktif olarak katılmaları tavsiye edilmektedir. Örneğin, çocuklar içerik seçiminde aktif olarak yer alabilirler. Bu durum onların sahiplik hissetmesini sağlayacağı gibi portfolyo için çeşitlilik de sağlayacaktır (Kingore, 2008). Bu amaca hizmet edebilecek bir diğer öneri ise Türkiye’deki üniversite anaokulunda olduğu gibi çocuk katılımının okulun portfolyo rehberine entegre edilmesidir. Ayrıca portfolyoların çocuğun bir sonraki öğretmeni ile paylaşılması da tavsiye edilmektedir. Bu durum alan yazında geçişi kolaylaştırdığı şeklinde savunulmaktadır (Peters ve diğerleri 2009).

Portfolyonun önceden planlanması ve var olan müfredata entegre edilmesi de tavsiyeler arasındadır. Bu şekilde sınıftaki düzenin bir parçası olacak ve ekstra bir iş olarak görülmeyecektir (Berry, 2008; Ebbeck ve diğerleri, 2014). Ayrıca alan yazına paralel olarak öğretmenler dokümantasyonu sistematik hale getirmenin öğretmenin iş yükünü azaltacağı ve zaman kazandıracağını savunmaktadırlar (Chen ve Cheng, 2011). Süreç içerisinde doküment etmeyi tavsiye etmektedirler (Gronlund ve James, 2013). Sadece sanat etkinlikleri gelişimi belli bir düzeye kadar gösterebilmektedir. Farklı dokümantasyonlar ile zenginleştirilmesi tavsiye edilmektedir (McAfee ve diğerleri, 2016). Özellikle ABD’de Reggio Emilia felsefesinden ilham alan anaokulundaki öğretmenler dokümantasyon stratejileri geliştirmişlerdir ve bu yöntemlerin örnek olarak öğretmenler ile paylaşılması tavsiye edilmektedir.

Hem görüşme hem de içerik analizi sonuçları öğretmenlerin gelişimi planlanmış içerikler ile somutlaştırmalarını tavsiye etmektedir. Örneğin, değerlendirme sonuçlarının amaç veya hedefler ile karşılaştırılmalı verilmesi bu amaca hizmet edebilir (McAfee ve diğerleri, 2016). Ayrıca sonuçlar portfolyo rehberi ve müfredatın portfolyo uygulamaları üzerindeki etkisine işaret etmektedir. İlgili alan yazında da program gerekliliklerini karşılamak öğretmenlerin değerlendirme amacıyla veri

toplamalarının bir nedeni olarak bulunmuştur (Keengwe, 2020). Bu nedenle müfredatta portfolyonun tanımının net bir şekilde verilmesi tavsiye edilmektedir (Krnjaja ve Pavlović-Breneselović, 2016). Ayrıca Milli Eğitim Bakanlığı (MEB) için kapsamlı ve iyi hazırlanmış portfolyo rehberlerinin hazırlanması önerilmektedir. Öğretmenler portfolyo sürecinde desteğe ihtiyaç duymaktadırlar ve bu rehberler öğretmen tarafından destek olarak görülmektedir. Fakat sadece portfolyo için değil okul öncesi müfredatına dokümantasyon kültürünün entegre edilmesi tavsiye edilmektedir.

Bu çalışmada portfolyo değerlendirmesi ve yordayıcıları kapsamlı bir şekilde incelemektedir. İlerideki çalışmalarda farklı değişkenler de dâhil edilerek ya da farklı metotlar ile sonuçlar zenginleştirilebilir. Çalışma kapsamında geliştirilen ölçekler farklı düzeyler için uyarlanabilir ve sonuçlar karşılaştırılabilir. Ülke genelinden veri toplanarak genellemeler yapılabilir. Portfolyo ile ilgili bir profesyonel gelişim programı geliştirip deneysel olarak onun etkisi incelenebilir. Portfolyolar farklı türde okullardan incelenebilir. İncelenen portfolyoların sayısı artırılabilir. Özel gereksinimi olan çocuklar için portfolyo kullanımı incelenebilir.

APPENDIX V: THESIS PERMISSION FORM / TEZ İZİN FORMU

ENSTİTÜ / INSTITUTE

- Fen Bilimleri Enstitüsü / Graduate School of Natural and Applied Sciences** ☐
- Sosyal Bilimler Enstitüsü / Graduate School of Social Sciences** ☒
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- Deniz Bilimleri Enstitüsü / Graduate School of Marine Sciences** ☐

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TEZİN ADI / TITLE OF THE THESIS (İngilizce / English): A Comparative Investigation of Early Childhood Teachers' Portfolio Practices: Cases from Turkey and the United States

TEZİN TÜRÜ / DEGREE: **Yüksek Lisans / Master** ☐ **Doktora / PhD** ☒

1. **Tezin tamamı dünya çapında erişime açılacaktır. / Release the entire work immediately for access worldwide.** ☐
2. **Tez iki yıl süreyle erişime kapalı olacaktır. / Secure the entire work for patent and/or proprietary purposes for a period of two years. *** ☐
3. **Tez altı ay süreyle erişime kapalı olacaktır. / Secure the entire work for period of six months. *** ☒

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