Changes in Early Childhood Teachers' Assessment Practices: Positioning Pedagogical Documentation [*]

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Abstract

Collecting traces of children's learning story through pedagogical documentation (PD) has increasingly been acknowledged in early childhood education because it helps to make decisions about development of child-centered curriculum. However, there is still a lack of attention on creating child-centered assessment practices in different educational contexts. This study, therefore, aimed to investigate how PD implications were changed in Turkish early childhood teachers' assessment practices after participating in a series of PD training. To this end, a case study research was conducted with two early childhood teachers, as a part of larger project. The data were collected through video-based observations, interviews, and in-class activity photographs, which lasted two semesters. The findings revealed that both teachers' assessment practices changed after they implemented PD practices. More specifically, they started to employ different forms of PD tools including panels, portfolios, and monthly bulletins. Correspondingly, they provided an environment where children shared and discussed their learning process with their peers through sharing times. The potential importance of implementing PD as an assessment tool in early childhood education was addressed in discussion as well as implications.

Introduction

Today, it is widely assumed that assessment is an important tool for informing and supporting teacher's learning instruction to discover better learning opportunities. Hence, to support children's learning and development, growing attention has been paid to improving teachers' assessment practices to achieve significant changes in their teaching (Basford & Bath, 2014; DeLuca & Johnson, 2017; Sato, Chung, & Darling-Hammond, 2008). Contrary to traditional or standardized assessment understanding, the notion of assessment in early childhood education has undergone a considerable growth and change over time (Alt, 2015; Basford & Bath, 2014; Stacey, 2015). With this idea, PD is held in high regard in various countries such as United Kingdom, Norway, Sweden, Australia, Finland etc. (Emilson & Pramling-Samuelsson, 2014; Rintacorpi & Reunamo, 2016; Suarez, 2017; Wien, Guyevskey,

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& Berdoussis, 2011) by investigating PD in their national early childhood curricula in an attempt to recognize the process of documentation better (Basford & Bath, 2014; Bowne, Cutler, DeBates, Gilkerson, & Stremmel, 2010; Hall, 2013). In this regard, scrutinizing PD in Turkish early childhood context has also been a growing need to enhance teachers' assessment practices, and therefore the current study aimed to investigate two Turkish early childhood teachers' PD implementation after a series of training on it.

Pedagogical documentation is one of important principles of Reggio Emilia Approach, and it is assumed as a teaching, learning and assessment tool in children's learning process. In Reggio Emilia Approach, two teachers in the learning environments constantly document children's learning stories through PD (Basford & Bath, 2014). Pedagogical documentation is described as "*visible records*" through photos, videos, audio recordings, and children's work, and it allows teachers, parents, and children to discuss, interpret, and reflect on what is happening during the learning process and to make choices about the best way to progress (Gandini, 2002; Malaguzzi, 1998; Rinaldi, 1998). The process of documentation involves gathering children's learning evidence from a variety of sources i.e, observational techniques, developmental scales, portfolios, panels and interpreting them to share with children and parents (Rintacorpi & Reunamo, 2016). In the recent literature, PD is assumed to be a strong assessment tool in early childhood education, which is closely linked to teachers' everyday teaching instructions (Pastore, Manuti, & Scardigno, 2019). The documentation process basically focuses on children's achievements and documenting it within a cyclical process such as planning, observing, collecting, interpreting, and decision-making (Buldu, Şahin, & Yılmaz, 2018; Emilson & Pramling-Sammuelsson, 2014; Project Zero and Reggio Children, 2011). While documenting children's learning outcomes, teachers document the children's selected good photos during activities and concentrate on the learning manner by means of deepening children's know-how in their work, which makes their learning visible (Rinaldi, 2005). Furthermore, teachers need to collect information drawn from children's conversations, observations, and products to make informed decisions that help them move toward the desired outcomes (Nelson, Demers, & Christ, 2014). The stages of "*making interpretation*" of collected data belong to a child or a group of children distinguish PD from traditional assessment strategies (Stacey, 2015). In this concept, teachers cater to children with active learning opportunities by making observations of their actions and creating a rich teaching process, which will also be developmentally appropriate for them. However, the most important point to be considered while implementing PD is seeing it an opportunity to reframe teachers' pedagogy on teaching and assessment. Rinaldi (1998) explains the main purpose of PD as a way of listening to children so that the process helps teachers learn about children during their learning experiences. Otherwise, the implementation of PD process can turn into a "quality vs quantity dilemma" by losing some of its functions and into document routines of classroom by increasing teachers' paperwork (Fleet, Patterson, & Robertson, 2017; Yılmaz et al., 2020).

The relevant literature on PD predominantly shows that the implications of using PD as an assessment tool influence the teachers' pedagogical interpretations and construct child-led practices (Fleet et al., 2017; Vallberg-Roth, 2012). In the literature, several attempts have been made to investigate the concepts of PD in early childhood education (Alvestad & Sheridan, 2015; Buldu, 2010; Knauf, 2015; Pettersson, 2015; Rintacorpi & Reunamo, 2016). The information collected through PD practices extends a learner's prior understanding and shapes curricula to meet children's needs (Falk & Darling-Hammond, 2009). It is important to investigate PD as an assessment tool because it may help teachers understand children's perspectives related to everyday life at school (Paananen & Lipponen, 2018). The research indicates that PD has a dual role in building a participatory and an equal early childhood education. However, the quality of education is inextricably related to PD, and the "*documentation*" is not yet fully exploited by educators or made the most of its potential (Knauf, 2015; Rintacorpi &

Reunamo, 2016). This is exactly what is missing in the current research on this topic. At this point, country-positioning studies can be useful to explain some of the cultural contexts and how teachers in their teaching process position PD practices.

The Issue of Pedagogical Documentation in a Turkish Context

In contrast to all these benefits of and growing interest in PD, a limited number of studies has been conducted to investigate PD in early childhood learning environments (Emilson & Pramling-Sammuelsson, 2014). Especially in the Turkish early childhood education context, there have been very few notable exceptions (Aydemir-Özalp & İnan, 2020; Buldu et al., 2018; Yılmaz et al., 2020). The main reason behind this is that the term PD in the Turkish early childhood context is relatively new. Nonetheless a few studies conducted in the implementation of PD have shed light on Turkish context. A study conducted by Aydemir-Özalp and İnan (2020) shows that the participant teachers regularly document children's learning to reveal children's interaction, interest, and play preferences. Furthermore, Yılmaz et al. (2020) investigating teachers' challenges in implementing PD in Turkish early childhood context reveal that teachers' challenges are related to contextual elements and adaptation of PD to learning process. In light of this, when examining the national curriculum suggestions in terms of the forms of assessment practices, The MoNE's (Ministry of National Education) Preschool Education Curriculum (MoNE, 2013) reflects some principles of PD which are already in its nature. The curriculum focuses on children's learning process rather than on the products, recommending that teachers assess children through multiple forms of data collection methods such as developmental portfolios, observation, checklists, rubrics, interviews, and video-recordings. Using this variety of assessment strategies certainly enhances children's development and promotes their skills desirably as long as they are integrated into the learning process and interpreted for future learning experiences (Pastore et al., 2019). Implementing PD effectively requires teachers to have an elaborate understanding of assessment. Therefore, PD can be seen as an important assessment tool providing an opportunity for Turkish early childhood teachers to develop a deeper understanding of the nature of assessment.

Before pointing out the purpose of the current study, it will be useful to explain Turkey's early childhood education system. Early childhood education in Turkey has a split system where the institutions are under the administration of the MoNE and Ministry of Family and Social Services (MoFSS) (Gol-Guven, 2017). The MoNE administers both public and private institutions and appoints teachers to institutions to educate children aged 3–5. Private institutions regulated by the MoFSS and MoNE serve children 3–5 years of age. While private institutions provide a full-day service, public institutions offer morning or afternoon sessions offered in half-day service. However, if there are not enough children to open morning and afternoon groups for half-day education, full-day education can be done in public schools.

In this regard, the current study deals with the consequences of PD embedded into the whole teaching process in early childhood institutions as an overall assessment system. Therefore, the current study mainly aimed to investigate the changes in the classroom assessment strategies and instructions of two Turkish early childhood teachers in their specific environments due to their engagement in PD training courses that were extended over a period of time. To explore their PD implementation; the panels, portfolios, easel, and bulletins created by the teachers and children were examined. In light of the aforementioned information, the article sought to respond to the question as to how implementing PD change the early childhood teachers' assessment practices after receiving a series of training.

Method

This study investigated two Turkish early childhood teachers' classroom assessment strategies and instructions in their classroom settings after taking part in a series of professional development training courses on PD over a year. Two teachers from different school settings participated in the current study as part of a larger research project. To this end, a qualitative multiple case study was chosen to be an appropriate research design. According to Merriam (1998), a case study is one of the qualitative research methods which empirically investigates a contemporary issue within its real-life context (Yin, 2006), and it takes a variety of forms (Bogdan & Biklen, 2006). The case study paradigm recognizes the subjective human creation of meaning. Therefore, the case study investigates phenomena from constructivist perspectives. In a case study, researchers investigate a program, event, process or individuals deeply (Creswell, 2007). Therefore, responding to the change process of participating teachers' assessment practices thanks to PD training and practices, the case study design was preferred to answer "how" and "why" questions (Yin, 2006) and understand the process rather than the outcomes (Merriam, 1998). In the current study, the analysis of cases was not applied to compare participants with each other as a cross-case manner. Because the intervention process related to their PD implementation to achieve a similar procedure, the current study's main focus was to define the participants' changing on their practices before and after PD training. Thus, a within-case comparison was thought as an appropriate design for analysis. As Stake (2006) suggests, multiple case studies are not always designed to compare cases while analyzing the data. As Stake (2006) mentioned, researchers analyze and report each case as case, knowing attributes for comparison in the discussion. Hence, instead of "between case" comparison (Creswell, 2007), the current study aimed to provide a detailed case by case description in the analysis part by making comparisons "within cases" to reveal their own changing assessment practices.

The Role of Researcher

It is important to note that the researcher should be aware of his/her role in both collecting and interpreting the data during the study (Patton, 2015). The current study was a part of a more comprehensive research project. The participants' selection was based on their willingness to be part of the study and the researchers were not familiar with the participating teachers before starting the study. The participants first met with the project's principal investigator and they were informed about the study. The principal investigator clearly explained all the essential information about the study, including duration, workload, video recordings, feedback, and the participants' rights to withdraw from the study whenever they want. The first author of the current study participated in the project as a researcher, while the second author led the currents study's research process. In other words, the current study reports the first author's doctoral study under the second author's academic supervision. Therefore, the present study's data was collected by adding a new aspect and designing a new research study, while the main study process was going on. Additionally, all necessary permissions were obtained from and confirmed by the main research project's principal investigator.

The Participants and Research Context

To represent the implementation of PD process in early childhood classrooms, a typical case sampling, which is purposive sampling method, was utilized. A typical sampling method is used when interested in cases' typicality to represent investigated topics (Patton, 2015). Two participant teachers were selected among a group of teachers who attended the project related to PD and professional development. While selecting the teachers, it was aimed to have similar profiles (age, year in profession, graduation, etc.) and to have diversity in their contextual profile (school, program, number of students, classroom environment ... etc.).

The cases of the current study were the experiences of two early childhood teachers, one from a public school and the other from a private school, so as to depict the variations within their assessment practices. Therefore, these two teachers were independent cases in the study since they had different backgrounds and personal situations. While one participant teacher teaching in a private school worked with a partner, the other participant teacher teaching in a public school worked alone. The bounded system of the current study was participant teachers' PD practices. This system had certain features; for example, both teachers applied PD for the first time in their teaching careers and participant teachers had not been involved in any other scientific research before. Therefore, PD was a new assessment practice for both.

Buse: Buse was 33 years old female possessing a bachelor's degree in Early Childhood Teacher Education. She had been working for four and a half years as a preschool teacher. The teacher also held a master's degree in early childhood education. There were nine children whose ages varied between 4 and 5 years in her classroom. Buse worked in a private school which offers a bilingual and full-day education program and implements the 2013 Turkish Preschool Education Curriculum. The school was using the assessment system called K12, which is a messaging system. In this system, teachers are required to communicate with parents, the school administrator and other teachers. The system's main purpose was to inform parents about children's progress and communicate with other teachers. Turkish and international teachers work together in the classrooms to conduct bilingual education. Activities were implemented in both Turkish and English languages by these two teachers. The classroom in which teacher Buse worked is 45 m2 and there were nine children. In this classroom, there were four girls and five boys. There were learning centers within the classroom, including science, books, music, art, blocks and dramatical materials, and these centers were separated from each other.

Leyla: Leyla was 31 years old female holding a bachelor's degree in Early Childhood Teacher Education. She had been working for six years as a preschool teacher, and there were 23 4-year-old children in her classroom. Leyla worked in a public school which provided a half-day education program. In the school, there was a total of 12 teachers and 240 students. Leyla's school also followed the MoNE's Preschool Education Curriculum therefore, she collected children's works, made observations, and prepared portfolios as suggested in the program book. The classroom in which Leyla worked was approximately 50 m^2, and there were 23 children, including 11 girls and 12 boys. There were several large windows, and thus the classroom was airy. The class size and number of materials were adequate for each child.

The Intervention Process

Because this study was conducted as part of a larger research project, training sessions were not planned independently from the project process. The content of the training was shaped based on the participants' needs related to PD. To support the teachers' professional development in the assessment process, they received two semesters long weekend and in-class training, 26 hours in total. These weekend seminar sessions mainly focused on information about implementing PD. The most important point that distinguished PD training from others was that the teachers received individual feedbacks from trainers via their own videos (Yılmaz et al., 2020). The training sessions were carried out in three stages:

The first training: The first training aimed to get the project team members and the participating teachers familiar with each other. After the introduction, the principal investigator introduced the project and its aims, briefly expressed the pedagogical documentation and its stages of preparation and implementation. The main themes of the first training were as follows;

- The need for PD in early childhood education, and why it should be used
- Introducing assessment techniques and PD tools to integrate them

After the introductory presentation, each teacher also received a file that included education handouts, notebooks, pens and a flash disk. The education handouts included some issues related to the teaching and learning environment.

The second training: The second training session was developed to provide more detail about PD by considering the necessary steps in implementation. The pedagogical documentation cycle covered in the presentation included planning, observing and collecting data, interpreting, sharing, and making decisions. The main themes of the second training were as follows;

- The importance of taking notes and making observations regularly
- Using the materials (panels, portfolio files etc.) in PD process
- Selecting the photos and videos and interpreting them for children's learning
- Making appropriate decisions for future learning opportunities by using information collected from PD.

Moreover, at the final part of the second training, questions posed by the participants were answered.

The third training: The aim of the third training was;

- Helping teachers to overview their documentation experiences and their progress in documentation practices throughout the two semesters.

They watched a video of their classroom recordings. The principal investigator asked teachers' opinions about the project and received their suggestions for implementing pedagogical documentation.

In-class Feedback: Throughout the project, participant teachers received in-class feedback from project researchers on their classroom implementations and teaching processes. The feedback process progressed on a weekly basis and based on the reviews of the recorded videos. These videos were recorded by scholars in participant teachers' learning environment as part of the video-based observation. After each video recording, the recorded videos were shared with the teachers so that they could watch and review their own practices for the sake of self-evaluation. Both scholars and researchers also reviewed these recorded videos to provide comments about teachers' documentation practices. During those feedback sessions, excerpts from recorded videos were used and commented on the researchers provided specific examples using excerpts from the teachers' own practices.

The Data Collection Procedure and Instruments

In the current study, different data-collection methods were used to examine the consistency of the findings. For this purpose, video-based observations, pre-and post-semi-structured interviews, and document analyses through visual data were utilized. Because a case study is a method of obtaining in-depth information on a person to provide descriptions of specific cases, it commonly uses techniques such as personal interviews, direct observation, psychometric tests, and archival records to gather information (Stake, 1995; Yin, 2006). Based on this information, observation, interviews and document analysis were determined for depicting cases in-depth and providing data triangulation. Moreover, the instruments' main purpose was to interrogate the teachers' existing assessment practices during both the first and second semesters. Therefore, each instrument was implemented in its natural settings throughout the study. First of all, to conduct the project at the schools, permission obtained from both one of the universities' ethical council and MoNE. After that, the project team met with the school administrators to inform them about the research project's details and data collection instruments. Then, a voluntary participation form was filled out by the teachers. Furthermore, although data was not directly collected from children, informed consent forms were also handled to parents. The aim was to inform parents about the research project.

In line with the PD training sessions, ten video-based observations for participant teachers were conducted throughout the academic year. The first five video recordings were gathered when the teachers started to implement PD before training during the first semester while the next five video recordings were collected after the training during the second semester. Each of these observations took two or three hours on average.

The study initially began with a pre-observations and interviews to depict what they had done up to that point in time in terms of teaching and assessment practices. Then, it was aimed to determine how PD implications were changed in Turkish early childhood teachers' assessment practices after participating in a series of PD training by conducting post-observations and interviews. These semi-structured pre- and post-interviews were conducted with the teachers at the beginning and at end of the school year. The interview questions were developed based on the pre-observations and the existing literature in this field (Gandini, 2002; Malaguzzi, 1998; Rinaldi, 1998). Before conducting interviews, expert opinions were taken from experts specialized in early childhood education and assessment in the early years. The pre-interviews, which lasted between 40 and 45 minutes, were held a week before starting the video-based classroom observations. The pre-interview questions mainly dwelt on the teachers' practices in daily planning, observation, data collection, and interaction with the parents and children. On the other hand, post-interview protocol was implemented at the end of the semester and lasted over an hour. The questions mainly concentrated on how the teachers' assessment practices changed in terms of the cycle of PD. Moreover, document analyses were conducted using the photographs taken. These visual data functioned as one of the main data sources for this study. These photographs were taken during classroom observations at each stage of the learning process.

The current study has some limitations about PD implementation materials and the possibilities of participant teachers' educational context. Researchers provided the materials, and the teachers often had difficulty in using such materials as easels, video recorders, and printers. Moreover, unlike other teachers in their schools, they integrated PD into the flow of teaching and learning process, so it inevitably increased their workload. To overcome their workload problem because of participating in PD research, they sometimes cooperated with intern students in their classrooms. Moreover, materials for documenting children's information were provided individually. Thus, the teachers could get the printouts in their classrooms without wasting their time and effort.

Data Analysis

Employing the inductive method of constant-comparative data analysis strategy (Marshall & Rossman, 1999), codes, categories, and main theme were explored in order to investigate the participant teachers' PD implementations as distinct cases before and after a series of training. First, the analysis process started after multiple reading of the transcribed data to develop the codes. After cross-checking the codes and categories with the second coder, the total list of categories was reduced and finalized for both cases. Accordingly, the main theme was determined as "*Making learning visible in the learning environment before and after PD training*". The teachers' assessment practices were analyzed according to the cycle of the PD process (i.e., planning the learning process, observing and collecting data, interpretation of children's information, sharing time, decision making for the future). Also, this coding scheme was developed for both cases, and all the categories were presented for both cases. As seen in the Table 1, the categories and codes under them were identified *vis-à-vis* the cycle of PD under the main theme, that is, making learning visible in learning environment before and after PD training.

Table 1. Categories and codes based on the main theme - making learning visible in learning environment before and after PD training

Theme	Categories	Sample codes
Making children's learning visible before & after pedagogical documentation training	• Planning the learning process • Observing and collecting data • Interpretation of children' information • Sharing time • Decision making for future	• Providing instruction to the learning groups • Diversifying teaching activities • Diversifying teaching strategies • Arranging the learning environment • Selection of strategies for assessing children • Data collection tools • Preparation for data collection • Organization of the collected data • Selecting learning outcomes etc.

Five categories (i.e., planning the learning process, observing and collecting data, interpretation of children's information, sharing time, decision making for future) were developed under the main theme (making children's learning visible before & after pedagogical documentation training) for both before and after PD training. These categories and codes were developed based on the teachers', Buse's and Leyla's, practices on the cycle of assessment to reflect their implementation throughout the study.

The validity of the study was provided through the triangulation of data. Interviews, observations, and document analyses through in-class photographs were used for the triangulation process in the study (Bogdan & Biklen, 2006). In qualitative studies, the reliability and validity of data are highly critical for the trustworthiness of the study (Fraenkel, Hyun, & Wallen, 2012). After the audio recorded interview data were transcribed, the text was given to the participant teachers for a member check to provide accuracy and consistency between their statements and views (Creswell, 2007). Moreover, prolonged involvement was ensured through two semesters for providing trustworthiness. Another important process for providing reliability is inter-coder agreement. Both the interview and observation data were cross-checked by two different researchers in the field of early childhood education. Moreover, 30% of the interview transcripts were also checked by the other researcher. After cross-checking the codes and categories with the second coder and receiving an expert opinion, the total list of categories was composed and finalized. The calculated interrater agreement of the coded data between the researcher and the second coder reached an agreement of 94.2%.

Results

The current study involved two independent cases focusing on two teachers who started to implement PD after undergoing a series of training courses. Thus, the current study used a multiple case study since the teachers had unique experiences during the implementation of PD process. The findings consisted of two main parts: The first part presented the data collected from the teacher Buse while the other part displayed the data obtained from the other participant teacher, Leyla. Presenting teachers' data case by case was beneficial for providing in-depth information about their PD practices derived from different data collection tools.

Case Buse - Making Children's Learning Visible Before & After Pedagogical Documentation Training

Throughout the first semester, the researchers did not give in-class feedback, nor did they intervene with Buse while observing her existent teaching practices. However, during the second semester, Buse received both training and in-class feedback about the implementation of PD and how she could integrate the children's information into the learning process.

Planning the learning process

In the pre-interview, Buse explained how she planned the children's learning process in their learning environment. Buse stated that she usually designed the activities based on pre-planned monthly programs, and a day always started with circle time. Besides, a daily concept was presented to the children in an integrated manner, and the teacher predominantly implemented art activities. Furthermore, Buse explained that she preferred to utilize whole-group instruction most of the time. She explained that she rarely preferred individual or small-group activities. Video-based observations supported these explanations. In addition to that, in her responses to pre-interview questions, she alluded to planning a learning process and the type of activities conducted; "*I often implement storytelling and drama activities in my classroom. Also, play was frequently performed*" (Buse-pre-interview). Video-based observations demonstrated that a daily concept was presented to the children in an integrated manner, and the teacher predominantly implemented art activities.

Figure 1. A sample of Buse's implemented activities and the children's products

As observed in the Figure 1, Buse used the board to hang only children's art products without any additional information about the children's learning process before PD training. The art products in this photograph did not disclose the children's whole learning story because there was not any documented information about the learning process. After a series of training, Buse regularly began to document the children's learning using PD during the second semester. Buse's practices in planning the learning process changed after implementing PD. One of the most noteworthy changes was that Buse started to integrate the children's information obtained from PD into the learning process.

> … PD is very important for my activity planning process. It developed my profession, so it is the most important educational tool for me. I gained the skill of looking from the children's perspective. I made all the objectives and concepts concrete because I learned to look at them from a child's point of view. (Buse-Post-interview)

Furthermore, she believed that teaching strategies and instructions became more child-centered after PD practices because the children were actively engaged in a problem, and they inquired the knowledge about how to solve the problem. PD process also aided her to become more planned and systematic. Also teaching instruction also changed depending on individual, small, and large group activities. For her, small group activities were very effective in increasing interaction among the children.

Observing and collecting data

During the initial observations, Buse did not take any children's photos and used none of the presentation boards to present the children's learning process. Video-based observations revealed that Buse took photographs to share them with parents because the photographs were not taken while the children were engaged in an activity. Furthermore, observations revealed that Buse did not systematically observe the children during the activities. As the observations continued throughout the first semester, some traditional displaying examples were observed.

Figure 2. A sample from an initial PD panel

As can also be seen from the photograph in Figure 2, the format of the panel was quite disorganized. There was no chronological order, so the children did not know which activity was conducted first or last. Moreover, the panel did not present the process of the children's learning because it included only a single activity.

After training, it was observed that PD enhanced Buse's observer role in the classroom. She stated that she sought pieces of evidence regarding the children's learning and development through photograph taking, note-taking, voice recordings, and video recordings. Buse stated that she prepared the data collection tools for PD products before the learning process began.

> … I made preparations beforehand. Sometimes, the camera battery was out in an activity, so I missed the moment of the children's interaction. Therefore, I prepared the data collection tools before an activity. (Buse-Post-interview)

Figure 3. A sample from initial portfolio entries

When the organization of the portfolios was analyzed, as seen in Figure 3, there was only the children's work in this portfolio. Furthermore, as can also be seen from the photographs presented above, both the panels and portfolios were formed simply by art products. However, she changed her strategy after training and started to put observation notes, interpretations, developmental scales, CDs, and photos of the children from in-class activity into the portfolio.

> … PD was not clear to me when I first implemented it. I always preferred art activity products to place in the children's portfolios. However, I realized that children also wanted to share other products with their parents in addition to art activities. So, I realized that their folios should be designed together with their photos, notes, CDs, other products, and their photos. (Buse-Post-interview)

Interpretation of children's information

Before PD training, there were no specific criteria to exhibit children's products on the classroom' walls while selecting their learning evidence. However, after PD training, Buse responded in the post-interview that she preferred to select the children's products having more content to display through PD tools. Even though she put it that way, it was seen that she still preferred to display children's art activity products most of the time. Moreover, there was no comment or interpretation with respect to the children's learning process or objectives in the initial PD.

> Everything the children did in the classroom was exhibited on the boards every day without distinction. At the same time, we certainly informed parents by sharing the children's photographs via the K12 system. (Buse-Pre-interview)

In time, Buse said she believed that using PD improved her professional practices in making important connections between products and children's learning. Buse often prepared PD panels with the children. While the initial documentation panels did not include her interpretations, her subsequent panels started to include her interpretations regarding children's learning. Buse also made some inferences based on the evidence derived from PD. Before training, she sometimes had difficulty in understanding the process of interpretation. Accordingly, it was observed that the activities sometimes did not address the children's interests. Some of the activities lasted a long time while she was just at her desk, and the children got bored and lost their motivation to participate in the activities.

Figure 4. A sample from the final documentation panels after pedagogical documentation training

When Buse's documentation panels were examined in the light of the feedback she received and a few PD implementations, it was seen that Buse aimed to reflect the whole learning process in the documentation panels. As shown in Figure 4, there were photographs, children's dialogues and feelings, and the teacher's reflection on the ongoing activity. Moreover, the teacher hung several photographs and explanations up to display what the children produced during the learning process.

Sharing time

One of the most remarkable changes in Buse's practices through implementing PD was that she prepared all the gathered evidence so that the children could prepare the documentation tools together. Furthermore, in the process of documenting, Buse provided the children with an environment to share their opinions. In this process, the children verbalized and shared their thoughts and feelings with the teacher and classmates. After training, she also started to use monthly bulletins, an easel, and mobile folding panels to share the children's works. She stated that these documentation tools were frequently utilized in the classroom.

Figure 5. A sample of a mobile folding panel

Buse and the children frequently used the mobile folding panels to present what they produced. Figure 5 demonstrated that mobile folding panels were very effective in the process of sharing children's works as one of the documentation tools.

Decision-making for the future

The data showed that the assessment results and their interpretations were not considered for planning a future activity beforehand. Consistent with the teacher's answers, observations also supported her expression that she did not consider any assessment results while designing a future activity. Therefore, the following activity was determined only by a monthly plan that included several objectives and indicators from all developmental areas and National Days. She stated her opinion as follows:

> … when we are planning, we considered the features of the months. For instance, we will celebrate October 29 Republic Day in the coming weeks. (Buse-Pre-interview)

In the second semester, she started to consider how children felt and what they thought while conducting an activity. She explained this process as in the following:

> … objectives in the National Early Childhood Curriculum are beneficial but sometimes I need to take into consideration what children feel or whether or not they are having fun; for instance, which activity they like, at the desk or on the floor, listening to storytelling or lecturing, etc. Before presenting a topic, I ask the children a series of questions to understand their needs and interests. I often arrange the activities based on this information. (Buse-Post-interview)

In a sense, the decision-making process was sometimes not easily observable because Buse made some inferences for the learning process and future activity planning. Therefore, in overcoming this obstacle, the interview functioned as the most important source of data. During her first semester of teaching before implementing PD, she rigorously followed pre-planned programs and she was highly worried about completing activities on time. By contrast, she was much more relaxed and flexible after implementing PD. Moreover, she was highly attentive to the children's ideas and hypotheses while conducting the activities.

Case Leyla - Making Children's Learning Visible Before & After Pedagogical Documentation Training

In the current study, Leyla, the preschool teacher, was the other case. At the beginning of the study, no intervention was made in Leyla's practices at any point because the aim was to see how Leyla was implementing assessment strategies without PD training. However, in the second semester of her teaching, Leyla received both weekend and in-class training in the implementation of PD. In the weeks that followed, she integrated PD practices into her teaching process and collected various items of evidence from children to make their learning process visible.

Planning the learning process

Leyla stated that the planning process was determined at the beginning of the academic year. Together with the other teachers, they would plan for both the first and second semesters. Thus, the planning of the learning process was done based on the pre-planned teaching program.

> … we have a plan before the beginning of the academic term. We plan the first and second semesters separately. We talk about field trips and what kinds of activities we can plan etc. (Leyla-Pre-interview)

She also mentioned that her classroom was just re-arranged at the beginning of the academic year and that she needed parents' financial support to modify the classroom environment. Furthermore, Leyla implemented frequently whole-group activities before PD practices. During this small-group activity times, children were divided into small groups and did the same task simultaneously. Leyla generally described that process as a small-group activity. After a series of training, Leyla realized that arranging the learning environment according to activity type was part of the activity process. During PD training, the most significant change observed was in her teaching instruction. Leyla believed that PD process showed her how to implement small-group activities in real terms and how they were effective for children.

Observing and collecting data

Before implementing PD, Leyla had created a parent e-mail group for a few years. For Leyla, this application helped teachers communicate with parents because they sent the children's photographs via e-mails. Furthermore, she asserted that she filled out an observation form prepared by the MoNE while observing the children. However, systematic observation was not detected in Leyla's learning environment. During the five-weeks observation period of the first semester, she rarely took photographs of the children's activities.

> After PD training, she acknowledged that the documentation process was determined according to the planned activity. After she decided for the activities, she tried to select strategies for collecting information from the children about their learning process. Nevertheless, the researchers did not observe any preparation process for making documentation. Since Leyla worked as only teacher in her classroom, she could have prepared documentation tools before an activity began. Furthermore, Leyla stated that the most frequently used assessment tools were video recordings, photographs, scales for learning and development, and observation notes after starting PD implementations.

Interpretation of children's information

Initially, Leyla shared photographs of the children with their parents without making any interpretations. At the same time, Leyla's statement showed that she did not select the photographs of the children according to any specific criterion before sharing them with the parents.

> … we took photographs of the children during an activity and immediately sent them to their parents via the e-mail group. Generally, we do not label photographs. I share photographs of the children every day. (Leyla-Pre-interview)

PD training helped her to understand that interpretation is one of the components of PD process. Throughout the five-weeks observation period in the second semester, Leyla took notes on the children's products and selected photographs that described the activity process after collecting evidence.

One of the practices that emerged after training in the interpretation process was establishing a connection between the learning outcomes. Leyla interpreted the children's learning process while preparing the documentation panel. She expressed the following:

> … before I shared examples of the activities, I added some photographs relating to the activity and wrote my comments. When I do it like that, the parents understand better what I mean. (Leyla-Post-interview)

In the pre-interview, she stated that she displayed photographs and videos of the children on an LCD monitor. During the first semester, Leyla did not hang children's products and photographs on boards or the ceiling for display. The board was always empty. Moreover, portfolios were not systematically reviewed and designed until PD practices were carried out in her classroom. However, at the end of the semester, Leyla started to prepare portfolios for each of the children. While preparing a portfolio, the children actively participated in the portfolio-creation process.

Figure 6. An example from the portfolio preparation process

In the Figure 6, children prepared their portfolios by actively participated and they created their own portfolios by selecting the activity products they wanted.

Sharing time

Although Leyla stated that the children shared what they did in the activity, observations were not consistent with her statement because Leyla did not allocate any time to share the children's learning process after the activity. During the first semester, the portfolio preparation process was not observed. She also stated that she prepared an exhibition at the end of each semester and invited parents. Leyla explained the sharing process as follows:

> … At the end of the year, we share photographs of the children. Sometimes we create a slide show to display the photographs. Sometimes we prepare an exhibition with the children's products to share with parents. (Leyla-Pre-interview)

After PD implementation, the children frequently shared their learning process and ideas after the activity. For Leyla, sharing time made the children more active during their learning process. Leyla also provided the children with the opportunity to communicate their learning by presenting their products in front of the panel or easel.

Figure 7. A sample of a group presentation at the end of the activity

Furthermore, one of the field notes showed that Leyla sometimes allocated a very long time to share their products. Therefore, the children seemed bored. The class size was relatively crowded compared to Buse's classroom. Due to the fact that the children individually were presenting their products during sharing times, the duration of the presentations was prolonged so the other children stopped listening. The findings also reflected that Leyla neither invited the parents to the school to see their children's learning and development nor built a parent-teacher collaboration during the assessment process before and after PD training. This communication process was limited to monthly bulletins.

Decision-making for the future

Throughout the five-weeks observation period before PD training, it was realized that Leyla did not take any decisions about planning the subsequent learning process based on assessment results. Furthermore, she stated that she took advantage of objectives and indicators from the national curriculum book when planning future learning.

In the second semester, implementing PD helped her make decisions about the children's development and plan the learning process. PD also helped her to plan the children's future learning process as a part of the assessment process.

> … after the activity is over, the children's interests and needs come to light. The activities were designed based on the objectives and indicators in the national curriculum book. Therefore, when I assess the children at the end of the day, I focus on the extent to which the children achieved these indicators. If these objectives are not achieved, I address them in another activity. (Leyla-Post-interview)

Finally, Leyla maintained that she arranged learning centers according to the children's interests after she evaluated the children's learning and development. More specifically, she stated that she changed the materials in the centers like materials for senses or the concept of numbers, etc.

Discussion and Conclusion

The current study investigated how the implementation of PD changed two early childhood teachers' assessment practices. This country-positioning study tried to explain how implementing PD reflected on the teachers' assessment practices in the Turkish education context. The findings of this case study can provide a greater insight into how the teachers' assessment practices change through in-service training in PD. The teachers' assessment practices were analyzed through the cycle of the PD process, i.e., planning the learning process, observing and collecting data, interpreting children's information, sharing time, decision making for the future. In line with what Menon claims (2016), the study convincingly shows that the teachers develop their point of view on PD on the basis of their local

situations such as dual as opposed to full-day education, working single versus in pairs, and private versus public schools. During the training process, the teachers integrated their PD implementations into their curriculum. Thus, both teachers developed their styles by recasting the PD implementations.

Moreover, similar findings are put forward by Aydemir-Özalp and İnan (2020) who indicated that the Turkish participant teachers integrate documentation implementation in their daily learning process to better understand children's development and learning, their interaction with others, their interest, and choices. Therefore, it can be stated that the findings of the study confirm the cyclical process of PD (Emilson & Pramling-Samuelsson, 2014). The findings also show that PD helps the participant teachers build a more complete picture of the children's development by providing various evidence through documentation panels, portfolios, and bulletins, not just documenting children's good photos or videos.

More specifically, one of the study's findings revealed that the teachers had some difficulty in the first part of the study as to how to use assessment tools to collect children's information through observation, photographs, and artifacts. The reason could be that they felt safe when they implemented habitual assessment strategies such as filling in simple observation forms. However, the participant teachers' data collection habits began to undergo major changes in the second semester after participating in PD training. They started to choose appropriate strategies for assessing children's learning and tools for collecting information such as observation notes, rubrics, checklists, making videos, taking photographs, collecting children's work, etc. The finding is consistent with those of previous studies in the related literature (Alvestad & Sheridan, 2015; Aydemir-Özalp & İnan, 2020; Knauf, 2015; Pastore et al., 2019; Suarez, 2017; Wylie et al., 2012; Yılmaz et al., 2020). There are studies which suggest that new assessment strategies can be adopted but understanding the basis of these strategies is very important and consistent implementation of them takes time in terms of realizing the pedagogical interpretation of assessment result (Buldu, 2010; Pastore et al., 2019; Rintacorpi & Reunamo, 2016). In another study, Blandford and Knowles (2012) point out that PD can guide the teachers to employ note-taking, photograph-taking, and video-recording strategies because this allows the teachers to detect children's learning and development clearly. Furthermore, another remarkable change in practice is that both teachers rarely took photographs of the children in daily activities and never used them to prepare documentation displays. However, both participant teachers started to invest more time and energy, and they developed several different strategies to implement PD to assess children's learning at the second part of the study. The teachers regularly took notes and photographs and made video recordings, and they started to use documentation panels, portfolios and bulletins more frequently to organize and share this information. Furthermore, previous studies show that continuous improvement of assessment practices depends on funding, release time, and outside experts (McDonald, 2007; Stacey, 2015; Wylie et al., 2012; Yılmaz et al., 2020). In a similar vein, Yılmaz et al. (2020), indicate in their study that teachers have some challenges while conducting PD in the Turkish early childhood context related to the adaptation of teachers to the PD process in terms of difficulty recording interaction and selecting content for PD process. Therefore, given these views, it is thought that this is why it takes time for the teachers to start implementing PD regularly and develop an in-depth understanding of its basis.

Leyla did not present children's products in the class before PD training while the other teacher, Buse, displayed only the children's art activity products on boards and ceilings. During the training, Leyla started to use mobile documentation tools to share the children's learning process although she did not present documentation displays on the classroom's wall and panels. Therefore, the mobile folding panel, the board, and the easel were frequently used by Leyla to share the children's learning process during daily activities. The reason for this could be *dual*-education which refers to the separate morning and afternoon education in the school. Before the children leave the classroom, they gather their personal belonging as another group would enter the class in the afternoon. Therefore, she may have developed her own strategies such as using an easel and mobile folding boards to implement PD in her classroom. This finding supports previous research findings in terms of making learning visible

in early childhood classrooms through displaying children's drawings, comments, and photographs of activities in the classroom for teachers and other children (Rintacorpi & Reunamo, 2016; Pettersson, 2015; Schroeder-Yu, 2008; Rinaldi, 2005). In this way, the walls are covered with several pictures of activity, and this practice encouraged children to participate in the activity process (Schroeder-Yu, 2008). Similar results are also obtained both by Paananen and Lipponen (2018) and Emilson and Pramling-Samuelsson (2014) in their studies, that teachers and children can discuss activities as a part of the PD process to enhance the children's learning achievements (Stacey, 2015).

The analysis clearly demonstrated that Leyla, who worked individually in her classroom, successfully completed the process of PD. Undoubtedly, she had sometimes difficulty in finalizing the paperwork of the PD process. Since the teachers collected the children's learning outcomes by utilizing different assessment tools, the organization of this collected information was sometimes challenging to cope with and time-consuming for them. This finding is also in line with the previous literature result in that working as a single teacher regularly implementing PD is not an easy task for the teacher (Aydemir-Özalp & İnan, 2020; Julie, 2012; Yılmaz et al., 2020). Likewise, Aydemir-Özalp and İnan (2020) find that the teachers do not have enough time to implement PD and revise it for later learning processes. When the Reggio Emilia approach is examined, it suggests that two teachers should work as partners in the learning environment because implementing PD is possible through teamwork (Rinaldi, 2001). Reggio teachers work in collaboration with another teacher in their classroom (Hendrick, 2004). In parallel with this, the literature also highlights the significance of working in pairs and peer collaboration among colleagues in terms of powerful teaching organization (Basford & Bath, 2014; Bowne et al., 2010; Hall, 2013; Yılmaz et al., 2020). Bowne et al. (2010) also stated that PD can be used as a collaborative dialogue among teachers to produce collaborative projects. Therefore, the current study's findings enhance our understanding of working in pairs in early childhood classrooms.

A comparison between Buse's and Leyla's practices for allowing children to access their personal portfolio folders showed that there was a difference between two teachers' practices. Leyla did not promote the children to be able to reach their portfolio folders on their own because these folders were kept in the cabinets in the classroom. Gathered observation data showed that the children could see their portfolio folders at the end of the semester when Leyla let them to share with their parents. Children's easy access to folders in the learning environment is an essential part of the PD process. However, Leyla's practice contrasts with the findings reported by Knauf (2015) in which he states that the portfolios are accessible for children in the classrooms. By contrast, Buse provided the children with easy access to resources and their personal folders in the classroom, and she created portfolios with the children's participation. In Buse's case, she seemed to realize the importance of giving the children the freedom to explore and investigate their personal folders, which is in line with the suggestions made by Kinney and Wharton (2008) and Gandini and Kaminsky (2004). The reason for this difference between the teachers could be that Buse worked in a private school, so there was more space to use open shelves and display the children's portfolios. However, Leyla shared her learning environment with another teacher as a result of dual-education, so she might have felt obligated to keep the children's work indoors.

Another important finding of the study is that the participant teachers felt safe while following their habitual assessment practices before PD training. Despite major changes in teachers' practices, they sometimes got confused about the integration of assessment results into the planning of the curriculum. Since the teaching process was not planned based on the information gathered from PD most of the time and preferred pre-planned learning activities, it made some children easily lose their interest during the activities. Similar findings highlight that perceived PD is something in addition to what they do in their teaching process rather than embedding it into their pedagogy. Thus, it can cause the documentation process to lose its function in some dimensions (Aydemir-Özalp & İnan, 2020; Fleet, et al., 2017). Another study shows that teachers desire to follow detailed pre-planned programs rather than planning their teaching processes in accordance with assessment results (Brough, 2012). Furthermore, Alasuutari, Markström, and Vallberg-Roth (2014) claim that teachers' working schedules are very tight due to

paperwork, so they feel more comfortable following pre-planned programs. Based on the findings of the current study and related literature, including Rintacorpi and Reunamo's suggestions (2016), the findings of the study cannot conclude that PD helped the teachers for deeper planning and utilize PD for future planning at all. The main reason could be that participant teachers underestimated children's participation in planning and learning process together with them.

Lastly, when the process of opening the classroom's door and making children's learning visible to parents was considered, it can be claimed that both teachers supported the idea that building communication between home and school was important. However, the parents rarely visited the classrooms or went inside the schools. Observations showed that there was weak teacher-parent collaboration throughout PD process. The teacher-parent communication process was maintained mostly through using monthly bulletins, and this communication was one-sided only, from the teacher to the parents. The main reason of this could be that both schools where the participants worked did not warmly welcome the parents to their schools. Observations revealed that parents needed to report and got permission from the school administration before entering into the school building. Moreover, as indicated by Lewin-Benham (2006), involving parents in schools is not an easy task because of time-constraints. On the other hand, most of the parents believe that they have no place in school or may be uninterested to see school related works. All of these could be the main barriers preventing parents from being involved in PD process. Similar findings are also presented by Yılmaz et al. (2020) and Aydemir-Özalp and İnan (2020) in relation to the Turkish context. In these studies, it is reported that the participant teachers have difficulties on building parent-teacher collaboration process because of parents' lack of interest toward PD and protectionist attitudes. Consistent with the findings of the current study, McDonald (2007) also indicates that teachers are discouraged because of parents' unwillingness to see PD tools such as panels, portfolios, and wall displays. Parallel with the findings of the current study and relevant studies in this field (Alacam & Olgan, 2021; Buldu, 2010; Yılmaz et al., 2020), the main reason for weak parent-teacher collaboration could be related to lack of parental interest in the learning and assessment process in the classrooms. Moreover, research shows that teachers have sometimes lack experience and skills in communicating effectively with parents (Ekinci-Vural & Doğan-Altun, 2021; Jafarov, 2015; Marin & Bocos, 2017). Thus communication between parents and participant teachers may have resulted in insufficient and one-sided.

Educational Implications

The current study has some implications for those teachers who intend to implement PD as a part of their professional development in assessment. Teachers are advised to make the learning process visible through documentation panels, bulletins, and portfolios. With reference to this, Wien (2008) states that PD does not mean the direct demonstration of what children learn, think, or say. Rather, it is an interpretation of how children learn and the representation of their learning stories. As indicated in the findings of the study, supplying the participant teachers with appropriate support and training in PD helped them to change their teaching processes in terms of PD implementations. In parallel with the suggestion from Amadi (2013), the potential effect of in-service training should not be underestimated. It can be suggested that both private and state-run organizations should provide ongoing professional learning opportunities for those teachers who want to modify and develop their practices with different methods including PD. Therefore, promoting PD is important in raising the awareness of teachers and making the implementation of PD more widespread.

Another finding of the current study revealed that both teachers did not regularly share documentation panels with parents because the school administrations did not let parents to visit the classrooms. The findings, therefore, make an important suggestion for the school administrations in terms of extending an open-door policy to parents in their schools. An open-door policy mainly involves open communication with parents any time they wish (Klein, 2012). Starting from early childhood education, administers should be aware of the value of involving parents in their children's education. By avoiding any disturbance in the classroom schedule, schools should arrange a program for parents visiting schools to observe their children, take part in children's learning activities, and communicate

with school staff. To break down the barriers against communication and collaboration, the teachers could easily open the classroom doors for parents through sharing documentation tools, parent-teacher conferences, school-initiated family breakfasts, etc. Alternatively, digital systems and mobile applications could be designed for parents to increase communication and provide information about their children's learning experiences. As noted by Buchholz and Riley (2019), digital documentation is an increasing assessment tool to communicate with parents through emails, robocalls, online grade books, blogs, and text messages. Therefore, this could be an effective solution for teachers who do not have enough time and space to display PD. In consequence, the findings offer notable implications for teachers working with children to think more about the possible effect of planning the teaching process. The success of teaching and learning activities depends on undertaking continuous planning based on assessment results (Bhamani & Bhamani, 2014). Although early childhood teachers in Turkey are flexible about the way they implement the learning process, governed by the MoNE's Preschool Education Curriculum, acting in accordance with children's interests and responding to their educational needs based on the evaluation of children's work should be promoted through in-service and pre-service training.

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