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## **Reflection on Practice: Pre-Service Teachers' Reflection and Intentional Planning to Enhance Toddlers' Engagement During Free Play**

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### **Abstract**

In this paper, early childhood teacher educators describe their work to provide opportunities for pre-service teacher candidates to engage in specific practices that facilitate reflection and planning related to enhancing toddlers' engagement during free play. The practices targeted were structured by the instructor and supported by the mentor teacher and included observation; guided written reflection; collective discussion and reflection; and intentional planning. Each practice and how it was implemented and completed by the instructor and students are discussed. As a result of participating in the practices, teacher candidates identified several factors they believed impacted toddlers' engagement during free play. They included location of centers, materials, and other people, variety of materials, adult interaction, and children's interests, all of which aligned with prior research. Implications for practice for pre-service teacher preparation programs and practicing teachers are provided.

*Keywords:* toddlers, engagement, free play, teacher preparation

The National Association for Young Children (NAEYC), a leading early childhood professional organization, has advocated for developmentally appropriate practices (DAP) since 1986 (Copple & Bredekamp, 2009). NAEYC's position statement on DAP states that the most powerful influences on how children learn are the teacher's interactions and relationships with the children and how the teacher addresses classroom planning and organization of learning experiences and the environment (NAEYC, 2009). In order for new teachers to be equipped to adequately support young children, pre-service preparation programs must address the multitude of teacher roles, including planning, observing, interacting, directing, scaffolding, reflecting, and ensuring optimal growth and development of young children. High quality implementation of these roles leads to teacher interactions and classroom environments that facilitate the engagement of young children in learning opportunities.

### **Toddlers' Engagement During Free Play**

Engagement has been defined as the time children spend interacting in the environment in developmentally and contextually appropriate ways (McWilliam & Bailey, 1992; McWilliam, Trivette, & Dunst, 1985). Engagement with adults, peers, or materials must occur if children are to achieve their optimal development and learning (Aguiar & McWilliam, 2013; Hooper & Hallam, 2017). Deeper learning occurs when children are highly engaged (Singer, Nederand, Penninx, Tajik, & Boom, 2014). The global quality of the classroom has been associated with toddler engagement (Hooper & Hallam, 2017; Ridley, McWilliam, & Oates, 2000). Children in higher quality classrooms, as measured by the Infant/Toddler Environment Rating Scale-Revised (ITERS-R; Harms, Cryer, & Clifford, 2003), tend to be engaged more than toddlers in lower quality classrooms (Hooper & Hallam, 2017; Ridley, McWilliam, & Oates, 2000).

Although engagement of toddlers in classroom settings can vary widely, specific child, teacher, and classroom factors have been associated with toddler engagement (Hooper & Hallam, 2017). Older toddlers (i.e., those closer to 36 months of age) in high quality classrooms tend to spend less time in non-engagement than younger toddlers (i.e., those closer to 14 months of age) in high quality classrooms (Aguiar & McWilliam, 2013). Having peers continuously nearby encourages toddlers to engage more deeply (Singer et al., 2014). Teacher affective style and positive interactions have been associated with higher levels of toddler engagement (Ridley, McWilliam, & Oates, 2000). When adults are nearby and engage specifically with children in back-and-forth interaction, toddlers tend to be more engaged (Hooper & Hallam, 2017; Singer et al., 2014). When teachers use rich, interactive approaches during book reading and play, toddler engagement is higher than when teachers read without interactions or have brief interactions during play (Garner-Neblett et al., 2017; Singer et al., 2014). Specific classroom structure and activities have been associated with higher levels of toddler engagement. Mealtimes and free play generally result in higher levels of engagement in toddlers (Hooper & Hallam, 2017). Adult-child ratio may be connected to toddler engagement. However, studies have produced mixed results (Aguiar & McWilliam, 2013; Raspa, McWilliam, & Ridley, 2001; Ridley, McWilliam, & Oates, 2000) suggesting that the actions and interactions of teachers with children may matter more than the number of teachers and children in the classroom.

### **Preparing Pre-service Teacher Candidates (PTC)**

Supporting the development of observation and reflection skills is a critical component addressed by teacher preparation programs (Council of Chief State School Officers, 2013). The NAEYC Professional Standards and Competencies for Early Childhood Educators (2018) indicate that new teachers should know how to create supportive and challenging environments; use multiple approaches, strategies, and tools to support children's learning; observe and document child learning; and use reflective and responsive practice. The field has advocated for teacher training that focuses on relationship-based practices where teachers are reflective and engage in meaningful interactions with children (Degotardi, 2010; LaParo, Williamson, & Hartfield, 2014; Manlove, Vazquez, & Vernon-Feagans, 2008; Sabol & Pianta, 2012). Sabol and Pianta (2012) believe early childhood teachers are "central agents of change" since they are integral to meaningful interactions and engagement in the toddler classroom (p. 222). If pre-service teacher candidates (PTC) become good observers, interactional partners, and reflectors, toddler engagement should occur.

In order to equip PTC to provide high quality environments that include appropriate materials and arrangements, interactive and affective styles, and daily routines and structures that support and encourage toddler engagement, learning opportunities must be provided in their preparation programs that facilitate these components. The overarching purpose of this project was to provide opportunities for pre-service teachers to engage in specific practices that facilitate their reflection and planning related to enhancing toddlers' engagement during free play. We were interested in learning more about how observations of toddlers in an early childhood program during free play would be interpreted by pre-service teacher candidates within written reflections and group discussion and used to make decisions about changes in the learning centers to enhance toddlers' engagement.

### **Theoretical Perspective**

Two theoretical perspectives, the bioecological model and the experiential learning theory (ELT) were used to guide this work. The bioecological model (Bronfenbrenner & Evans, 2001) suggests that interactions between a child and people, objects, or processes in the immediate environments impacts the child's development and learning. There are four components within this system comprising the microsystem, mesosystem, exosystem and macrosystem. This study focused on the first level of microsystem. According to Bronfenbrenner (1977), "A microsystem is the complex relations between the developing person and environment in an immediate setting containing that person (e.g., home, school, workplace, etc.)" (p. 514). The proximal influence of the classroom environment, including teacher interactions and planning, plays a role in toddlers' engagement. When adult-child interactions and environmental adjustments are made to encourage toddlers' engagement, the microsystem level is enhanced.

The second theoretical perspective supporting this work is the experiential learning theory (ELT). This framework guided the specific opportunities used to enhance the PTCs' learning. This learning theory suggests that learning is a process in which experiences create knowledge (Kolb, Boyatzis, & Mainemelis, 2001). Learners must understand and incorporate their

experiences in order for learning to occur. ELT has a 4-stage learning cycle in which learners grasp experiences through concrete experience or abstract conceptualization. Experiences are then transformed through reflective observation and active experimentation. By engaging in a concrete experience, individuals are prompted to observe and reflect. The reflections create abstract conceptualizations that promote action. This learning process was intentionally incorporated into specific components of this project. By providing opportunities for PTC to engage in specific practices, observations, and reflections, they acted to enhance toddlers' engagement during play. Furthermore, this project informed our practice and work with teacher candidates in higher education as we strive to ensure they are knowledgeable and skillful at identifying factors that enhance engagement in the learning environments for young children.

### **Context and Participants**

This project took place in an undergraduate early childhood education course at a southeastern public university in the United States. PTC are required to take the course that entails working with toddlers between 12 to 36 months of age. Sixteen PTC were enrolled in the course during the spring 2019 semester. The faculty instructor of the course recruited each of the 16 PTC to participate in the project using IRB-approved consent procedures. Fourteen PTC agreed to participate, allowing the researchers to collect and de-identify specific written work submitted as part of the practicum course. Only 13 of the 14 consented PTC completed the course activities related to the project. Of the 13 PTC, nine were White, two were Hispanic, one was Asian, and one was African American.

All PTC were juniors or seniors majoring in Early Childhood Education. Each PTC enrolled in the class spent three hours one day per week with a group of six-to-eight toddlers enrolled in a part-day, two day per week university early childhood classroom (EC classroom). A total of 30 toddlers were enrolled during Spring 2019. A mentor teacher and two-to-three PTC were present during each session in the EC classroom. In addition, all PTC enrolled in the course met as a group with the faculty instructor and mentor teacher one time per week for a two-hour seminar session.

All PTC enrolled in the course had completed two child development courses and a beginning course on teaching children birth through age eight. Two of the PTC also had completed a course on literacy development and instruction in early childhood and a practicum course focused on supporting preschoolers in an early childhood classroom.

### **Practices and Process for Implementation**

As part of the practicum course, PTC were responsible for determining changes, updates, and additions to the learning centers in the classroom two times during the semester. They worked in small groups during seminar sessions to make the needed changes. Prior to making the changes, PTC engaged in specific practices that facilitated their learning, reflection, and planning related to enhancing toddlers' engagement with the learning centers available during free play. The practices were structured by the instructor and supported by the mentor teacher. The four targeted practices included observation; guided written reflection; collective discussion and

reflection; and intentional planning. Each practice and how it was implemented and completed by the students are discussed.

### **Practice 1: Observation**

The first critical practice PTC were required to use was observation. The purpose of the observations was for the PTC to carefully watch the children in the classroom and note their movement, behaviors, and interactions during free play. PTC were given specific directions for observing and noting their observations (see Appendix A). By observing, PTC were given a concrete experience that provided an opportunity for considering what they know about toddlers' engagement and how it "looked" in the classroom. The observations also provided information about specific children's interests or patterns related to areas of the classroom in which they spent time, people that they were near, and materials that were used. Each PTC observed the children prior to each center planning seminar. Practice 1 enabled the PTC to go through the process of concrete experiences through their observations and transforming their learning through their reflective observation. PTC were to learn more about the children's interests in order to inform discussions, moving from abstract conceptualization to active experimentation in making decisions for changes in the centers.

PTC observed on their scheduled practicum day during the free choice play through a one-way mirror, eliminating the possibility of the PTCs' notetaking impacting the toddlers' engagement. When observing, PTC observed each child for 10 consecutive minutes, noting where the child played and briefly how he/she engaged during play. Each time the child moved from one center to another, the order of the stop was noted. When the observation was concluded, the PTC sketched the classroom layout with centers labeled and drew the movement path of the child from center to center noting the sequential order of the movement. This process was continued until all children present in the classroom had been observed on that given day.

### **Practice 2: Guided Written Reflection**

After collecting information through observation, PTC engaged in review and reflection on the information gathered. The purpose of this practice was to encourage PTC to engage in the experiential learning theory stage in which concrete experiences are reflected upon in order to inform the active experimentation to come. PTC were asked to review all of their notes taken during the observations and the sketches drawn at the conclusion of the observations. To facilitate their individual reflections about all children's patterns of movement and engagement during free play time, PTC were given specific prompts to guide them. They included the following.

- (a) What did you learn about the children's interests in the classroom?
- (b) Which centers were engaging and not engaging to children?
- (c) What recommendations about changes to the learning centers would you make?
- (d) What opportunities do you see for providing differentiated instruction to children in the centers?

PTC individually considered and responded in writing to each of these prompts. The resulting reflection responses were brought to a designated seminar session (i.e., within one to two weeks following the observations). PTC were to use their reflections and responses to support their

contributions as they participated in practice 3, Collective Discussion and Reflection. PTC also submitted their reflections to the instructor of the course who read them and responded to their ideas with written feedback about the level of detail, specific observations noted, or additional considerations for future observations and/or reflections.

### **Practice 3: Collective Discussion and Reflection**

The third practice used to support PTCs' learning related to creating environments that support toddlers' engagement was collective discussion and reflection. The purpose of this practice was to promote a community of learners through the sharing of ideas and provide opportunities for the PTC to learn from one another, build on others' ideas, and develop deeper knowledge and understanding about the toddlers' interests, engagement, and movement patterns. This discussion and reflection occurred during the seminar in the toddler classroom prior to the PTC updating and planning learning centers. This was an open discussion led by the faculty instructor in which students referenced their written reflections about their observations of the children during learning centers. They shared their perspectives related to the four prompts: interests of children; specific centers that were engaging or not to specific children; recommendations for changes; and opportunities for providing differentiated instruction. Each prompt was discussed sequentially and thoroughly until no other comments about a specific prompt were made by PTC. Notes were taken on big paper so all students could see the ideas shared by others. If PTC provided limited or vague details, the instructor or mentor teacher scaffolded through follow up prompts, such as "Tell me more about how you know Evie was interested in blocks," or "How would you recommend we support Keshawn's language at the sensory table?"

As PTC shared details, other PTC confirmed or disputed the information shared. The discussion allowed the PTC to discover that some toddlers' engagement, interests, and behaviors varied from day to day or were similar across days. This allowed the PTC to triangulate their data and make connections to prior learning about what influenced children's engagement. As PTC shared details about interests, impact of peers, location of centers, or other observations, new conceptualizations and ideas were developed. The faculty instructor noted commonalities between ideas shared and recorded specific details and strategies they identified related to how learning centers could be enhanced to encourage more engagement from the children. Students took pictures or took notes of this recorded information. These notes were used when the next practice was implemented.

### **Practice 4: Intentional Planning**

The final practice used to support the PTCs' work in supporting the engagement of toddlers during free play was intentional planning. The purpose of this practice was to allow PTC to make decisions and actively experiment with implementing strategies for improving the toddlers' engagement during free play. This practice followed the collective discussion and reflection and focused on intentionally planning the learning centers available in the classroom during free play. PTC were placed in small groups of two-to-three and assigned specific centers on which to focus. The centers assigned included reading, fine motor, math, science, dramatic play, music, and blocks.

During the week after the collective discussion and reflection, the small groups were to engage in an online discussion with the following prompt. “Read the requirements of ITERS-R and relate them to the centers you are assigned. Review your individual notes from your observations, your individual written reflection, and the notes from our last seminar session (i.e., collective discussion and reflection). Also, review and reflect on the sketch of the classroom layout completed when observing. Then, write three possible items that should be added or removed from the centers you are assigned. Also, write any other changes that need to be made to the learning center to enhance the toddlers’ engagement.”

On the day of the center planning seminar, PTC, the faculty instructor, and the mentor teacher met in the toddler classroom and reviewed the notes from the prior seminar that included teacher candidates’ initial ideas for enhancing the learning centers to promote the toddlers’ engagement. PTC were encouraged to share any new ideas, additional thoughts, or further observations. They were provided the plan for the day that included working with their small group to update the learning centers assigned to them. The mentor teacher provided directions about not removing materials from the centers that served as a transition or comfort items for some toddlers in the classroom. The small groups were instructed to begin their planning process by reviewing the details their small groups discussed online from the discussion prompt and to make final decisions about what should be removed or added and decide if any other changes needed to be made. They then began the work of making the needed changes in the centers. The faculty instructor and mentor teacher moved around the toddler classroom to support them by responding to questions as they worked. Once all changes were made in the centers, the small group captured their thinking on the center planning form (see Appendix B). They worked collaboratively to complete the details in the plan. Once completed, PTC shared their plans for the learning centers verbally while their peers toured the center. The peers were encouraged to provide feedback on the contents in the center and on the plan. The plan was posted on the wall in the designated center at the end of the seminar so that PTC could visually reference it each time they worked in the classroom to be reminded of the purpose and goals of the center.

### **Circling Back Through the Practices**

After the changes were made to the learning centers, PTC, children, and mentor teacher used the learning centers daily as designed for one month during free play. After a month of observing and engaging with toddlers as they played in the updated centers, PTC went through the process again implementing each of the four practices once more in order to gather information, reflect, and make decisions that resulted in revising and updating the learning centers for a second time. This process allowed the PTC to move from their abstract conceptualization of learning to transforming their learning through active experimentation. In addition, they were able to observe how their updated centers promoted engagement during the toddlers’ play.

### **Reflections from Pre-Service Teacher Candidates**

At the conclusion of the course, PTC were provided a reflective prompt, “What have you learned about planning centers using this process of observation and reflection to enhance the engagement of children?” to provide insight into their learning and realizations about factors that

impacted the toddlers' engagement. The instructor and her researcher colleague independently read and re-read each reflection by each teacher candidate in its entirety to learn more about the PTCs' perspectives about factors that impacted the engagement of the toddlers during free play. Using an inductive coding process in which the codes were derived from the data (Mason, 1996), each researcher identified codes. At mid-point during the coding process, the two researchers met to discuss the coding of the data. Specific codes were shared and discussed, and consensus was reached about the codes. After both had read, re-read, and coded all the reflections, the researchers met to share and reach consensus on the coding of all the data. Consensus was reached, and codes were categorized and grouped into themes collaboratively by the researchers.

Generally, PTC perceived there was a connection between teachers' observing children, noting where they spent time and their preferences, and reflecting on the observations with their co-teachers and toddler engagement. PTC had participated in a specific process of observing and reflecting on those observations to determine changes in centers to encourage engagement of the toddlers. Three PTC noted that this experience was helpful when planning centers. One PTC suggested, "I learned so many different things" including details about children's interests, the impact of environmental arrangement, how children play in centers, and how children's engagement changes when the room is arranged in different ways. Another PTC agreed that observing and reflecting helped her know more about the "influence the environment has on children." Furthermore, one PTC indicated that observations and data collection were "essential, the observations provided details about how to individually support children and insight into where teachers "should position themselves during the next center time."

PTC noted several components in the classroom that impacted toddlers' engagement. They perceived location of centers, materials, and other people, variety of materials, adult interaction, and children's interests as factors that impacted the toddlers' engagement.

### **Location Matters**

All PTC noted location of three environmental components impacted the engagement of toddlers within centers. They included the location of centers, materials, and other people. When reflecting on their learning, PTC discussed the location of centers and the importance of children being able to see the center furnishings and contents as valuable when trying to enhance engagement of the toddlers. An example provided by PTC when planning the reading center was "The reading center was in the back corner of the classroom and hidden from view behind a bookshelf;" another PTC elaborated, "If the reading center was moved to the front of the classroom, I think the children would spend a lot more time in that area." When discussing the music center, a similar issue was noted. "The music center is on a shelf in the same space that the children have circle time after centers. The instruments are hidden from view by the teacher's reading chair and books for small group." PTC perceived that the location of a given center impacted children's engagement with the center. If children could not see the center or were not regularly in that part of the classroom, children did not engage in the center as frequently.

PTC noted location of materials in the center as a possible factor to toddlers engaging in a center. When considering the math center, one PTC noted that moving puzzles from the floor to a higher shelf where children could easily see and access them would increase engagement in the center.



PTC also believed that if the items in the music center were made more visible and placed on shelves at eye level for the toddlers, they would engage in the center more frequently.

PTCs' reflections suggested that the location of people in or near a center encouraged children to join a center. PTC noted that adults in the classroom were more likely to join a center after a child began playing there. However, children tended to play in centers in which adults were already present. In order to heighten interest in a center in which children did not regularly visit, PTC believed, when possible, adults should position themselves in the center prior to a child arriving. One PTC said this about the reading center, "Since we follow the children to whichever center they go to, there is not normally an adult there unless there is a child there. If possible, ensure there is an adult ready to share books and stories with the children as they come over." Another PTC noted that children are "more motivated to investigate" when an adult was present in the center. PTC noted the power of other children playing in centers, too. PTC noted that some children engaged in more interactive play and sought out other children, while some children were "more prone to go to an area and play with other children and adults." The location and interaction of the centers, materials and people within the microsystem impacted upon the level of engagement of the toddlers.

### **Variety of Materials**

PTC learned that the materials included within each center are key to heightening children's engagement in the center. Varying types, challenging materials, and novel or new materials were needed to ensure children engaged in a center. PTC noted that providing various types of materials could heighten engagement of the toddlers in various centers. In the math center, one PTC noted that providing "different size and shape materials could be helpful." Providing various types of musical instruments and props, such as scarves, in the music center was suggested by multiple PTC. They also suggested including materials with various sensory aspects as a strategy for increasing engagement in centers. Specifically, including materials that made noise, had lights, were various colors, and included varying textures could encourage children to engage in the science center.

When focusing on some centers, PTC reflected on the challenge of the materials in the centers and suggested that challenging materials would encourage the toddlers to engage in the centers more frequently. Books that included more interesting and challenging vocabulary and pictures were suggested as a strategy to encourage the children to engage. One PTC recommended materials that had a "puzzle aspect. She elaborated that the children seemed "engaged by things that they can take apart and put together." One PTC noted how most children played parallel next to others; however, she suggested providing some materials that encouraged children to play with one another to provide opportunities for children to grow in this area. These reflective observations showcased that the PTC were also applying the theoretical concept of Vygotsky's Zone of Proximal Development using scaffolding and transforming to active experimentation to engage the toddlers in their play.

When selecting materials, PTC believed that new or novel materials often enticed the toddlers to enter and engage in a center. PTC recognized that with time, "the novelty wears off" with

materials and new play could be “prompted” with different materials. One PTC indicated that materials that are on the table for arrival time could be appropriate to include in centers. She suggested when toddlers were interested in the table materials that were available for a short period of time during the day, including them in a center could encourage children to engage more frequently in a center.

### **Adult Interaction**

PTC noted that toddlers were engaged in specific centers more frequently when adults were interacting with them by modeling how to use materials or use them in a new way and prompting children to engage with them in a center. PTC noted the power of adult interaction in encouraging toddlers to engage. One PTC wrote, “Modeling can do so much for children of this age. I have noticed that they imitate movements and actions from others a lot.” Later the PTC wrote, “The children go in and out of these areas a lot. This is where showing them how to use the different materials would come in handy. If they understood how to use them, then it is more likely they will play with them [rather than enter the center and leave].” PTC recognized that young children may not engage with materials that are new if they are unsure how to use the materials, therefore, adult interaction is needed. Also, they acknowledged that modeling encouraged the toddlers to engage with new or novel materials.

PTC realized that children may not visit a center if not encouraged to do so. They suggested inviting children to a center when children are less likely to join the center on their own. One PTC shared, “The teachers should be encouraged to draw children into less popular centers. It is likely that the children have not experienced what is in each of these centers and, therefore, do not know what the center offers.” Showing children toys or materials that would “spark children’s interest” was noted as a strategy to use when prompting children to enter a center. PTC discussed how the children seemed to visit the same centers each day. By an adult prompting children to join him/her in the center, children would be more inclined to visit.

One PTC summed up the power of adult interactions in relation to the toddlers’ engagement in centers, “I realized how vital it is to have adults that willingly and purposefully engage the children in questioning, exploring, and interacting with objects . . . I also realized how often children will simply watch each other or adults. This means adults should be aware of how they are presenting and modeling when they are in these spaces.” This candidate’s summation meets NAEYC’s position statement on DAP that the most powerful influences on how children learn are the teacher’s interactions and relationships with the children and how the teacher addresses classroom planning and organization of learning experiences and the environment (NAEYC, 2009).

### **Children’s Interests**

PTC believed including materials related to children’s preferences and removing non-preferred items would encourage the children to engage in a center. As PTC discussed what they learned about supporting toddlers’ engagement, many discussed focusing on the children’s interests. When discussing how to utilize interests to encourage toddlers’ engagement, one PTC shared, “Recently, I have noticed most of the children making animal sounds a lot more frequently. The animal books would strengthen their knowledge about animals, spark their interest in books, and

be an interactive way to introduce the animal puppets to the children.” When considering interests, PTC identified materials that children engaged with frequently and proposed providing similar types of items in other centers as a possible strategy for encouraging engagement in different centers. Similarly, PTC discussed how removing items that are not of interest to children and replacing them with preferred items could contribute to heightened engagement in a center. A PTC noted, “We can replace certain toys that do not get used with toys the children will like.” While another PTC when discussing the block center said, “The vehicles are popular, but it seems the overall novelty has worn off and new toys could prompt new play.”

### **Summary**

PTC identified factors that were aligned with indicators associated with global quality of early childhood classrooms (Harms, Cryer, & Clifford, 2003; Ridley, McWilliam, & Oates, 2000). Specifically, considering where centers and materials were located and having a variety of materials that were novel, challenging, and interesting to children were noted as factors that may enhance toddlers’ engagement. Similar to prior research, they perceived that adult and peer proximity, and adult interactions were influential in toddlers’ engagement (Garner-Neblett et al., 2017; Hooper & Hallam, 2017; Singer et al., 2014).

PTC applied developmentally appropriate concepts when reflecting on their observations of children and the factors that impacted their engagement. The PTC seemed to understand the influence of the organization of the learning environment, interactions that occur between adults and children, and the influence of peers (Copple & Bredekamp, 2009; NAEYC, 2009). The specific actions taken by the adults in the classroom, related to modeling, prompting, and encouraging children to join other children in a center were seen as supportive to the toddlers. PTC saw themselves as agents that could facilitate engagement of the children (Degotardi, 2010; Sabol & Pianta, 2012). Furthermore, acknowledging and incorporating children’s interests were seen as key elements in engaging young children during free play (Copple & Bredekamp, 2009).

### **Implications and Directions for the Future**

There are several implications for practice and future work in early childhood preparation programs derived from this work with pre-service teacher candidates. They include purposefully designing courses that include providing time and space for implementing practices, using practices grounded in theory, and encouraging collegial collaboration.

PTC were provided with the opportunity and time to observe toddlers during free play to learn more about their engagement. As a result, they identified specific factors that seemed to impact the children’s engagement that they could then alter, add, or remove to facilitate more engagement from the children. The factors they identified were aligned with quality indicators and developmentally appropriate practice providing an authentic assessment of their ability to apply these concepts. Teacher preparation programs should embed authentic opportunities with guided questions for teacher candidates to observe and reflect on the children, the learning environment, and their own interactions with children. This enables teacher candidates to take the lead in applying their knowledge and skills and impacting the learning of children. Practicing

teachers also should be provided time to observe the children in their classrooms during free play. By doing so, they can make more informed decisions about the environment, materials, and interactions.

Another result of providing opportunity and time for teacher candidates to observe and reflect on toddlers' engagement during free play was that teacher candidates saw the impact of their presence and interactions on toddlers' engagement. Teacher preparation programs and early childhood programs for children should invest time in this process in order to provide evidence to teachers about their role in children's engagement. By watching other adults interact with children and observing children not interacting with others, teachers will become more aware of their role in engagement. This heightened awareness could impact their practice within the classroom.

Teacher candidates must be provided structured opportunities to develop reflective skills (Council of Chief State School Officers, 2013; NAEYC, 2018). The structure provided within the reflective prompts encouraged the teacher candidates to individually and collectively consider aspects of the centers and identify recommendations. The prompts were straightforward and specific. Observations and reflections vary in their purpose. They can provide structure to teacher candidates and ensure that they consider the aspects that are the primary focus. All the candidates' observations and reflections impacted the environment due to the changes made in the centers after observations and reflections were completed and discussed. Purposefully discussing the role of observations and subsequent reflections could have an impact on teacher candidates and practicing teachers' acknowledgement of the value and use of the practices. Purposefully designing practicum and field-based courses using a theoretical framework helps the teacher preparation program to be more grounded and intentional in the learning experiences provided. This course adopted both the bioecological and experiential learning theories to guide and inform the practices implemented. Both frameworks provided specific components to consider when providing a rationale for the work and identifying practices for students to implement. The reflections and learning from the teacher candidates suggested they had an understanding of the impact of the microsystem and could use the practices with guidance and structure, while the instructor facilitated their progression through the four-stage learning cycle of the experiential learning theory.

The design of this practicum course provided many opportunities for both self-reflection and collegial collaboration for teacher candidates and faculty. PTC were first asked to observe and reflect individually on the toddlers' engagement during free play. Collegial collaboration occurred when PTC discussed their observations first online in a small group, then in the seminar as a large group. Finally, PTC moved to the actual implementation of updating the centers with their colleagues during seminar. This platform of transitioning from self-reflection to small group to large group collegial collaboration added depth in the learning process. Intentionally including opportunities for self-reflection and collegial collaboration shows promise in enhancing the learning and development of teacher candidates and should continue to be explored.

For the higher education faculty, collaboration between the faculty instructor and researcher colleague brought insight into the analysis of the data. The faculty instructor was the primary researcher for the project. During the semester-long course, she observed the PTC working in the EC classroom, graded their lesson plans and other work, including the work submitted for this project, and structured the weekly seminar sessions. The second researcher was a faculty member in the early childhood education program. However, she was unfamiliar with all other teacher candidates enrolled in the current study. Furthermore, she had no interaction with the teacher candidates during the project. Her collaboration on this study provided an objective perspective during coding and peer consensus building and a collaborative partner with whom to reflect about the practices and data collected after the work with students was completed. As early childhood teacher preparation providers, purposeful collaboration and reflection can provide meaningful opportunities to learn together and facilitate richer and more meaningful learning experiences for our teacher candidates.

Ultimately, the benefactors of the process presented were the toddlers. The teacher candidates engaged in specific practices that were intended to provide a richer and more interesting environment for their free play. Anecdotally, the teacher candidates saw the children engage more actively when their teachers observed them and used those observations to reflect and plan their environment. Future research should focus on the impact of the practices on children's engagement during free play.

Implementation of the practices presented provides a rich opportunity for teacher candidates and faculty to actively investigate and learn together. By collecting data, reflecting, and making decisions together, all parties learn more about the specific children in the classroom. The experiences provided enhance the microsystem for children and the learning for all.

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**Appendix B**  
**Learning Center Planning Form**

Component	Descriptive Details
Learning standard	
Objective	
Assessment gathering and recording methods	
Materials	
Description and arrangement of environment	
Introduction to children	
Practice and interaction support	