



## EARLY CHILDHOOD PRESERVICE TEACHERS' PERCEPTIONS ON CHILDREN'S PLAY

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### Abstract

The purpose of this participant selection model mixed methods study was to investigate early childhood education preservice teachers' perceptions on children's play. The study was conducted at one of the Midwestern universities' early childhood undergraduate education program in the United States. Within the program, 241 students at different stages within the program (Cohort I, Cohort II, Cohort III, Cohort IV, and Cohort V) participated in the quantitative phase of the study. The survey results demonstrated that concept of play does not have a shared definition. Play is viewed as social and physical activity but less cognitive. It was also found that participants at earlier stages within the program are more inclusive toward play and the participants at the later stages perceive play in more rigid and strict ways. The seniors tend to be focused on a specific outcome rather than viewing play as process-oriented activity within the early childhood classroom.

**Keywords:** Pre-school education, mixed methods, pre-service teachers

### INTRODUCTION

Extensive body of research suggest that play offers a multi-faceted educational impact and educates children intellectually, emotionally, socially and physically (Bergen, 2009, Thibodeau, Gilpin, Brown, Brooke, & Meyera, 2016; Prager, Sera, & Carlson, 2016; Wood & Attfield, 2005). However, play in early childhood education is on a decline (Pistorova & Ruslan, 2017). For example, comparing public school kindergarten classrooms between 1998 and 2010 using two large, nationally representative data sets, Bassok, Latham, and Rorem (2016) found that, in the later period, kindergarten teachers emphasized advanced literacy and math content, teacher-directed instruction, and assessment and considerably less time spent on art, music, science, and child-selected activities. As kindergarten has become heavily focused on teaching literacy and other academic skills, "preschools are rapidly moving in that same direction" (Miller & Almon, 2009, p. 7).

Researchers maintain that the majority of the early childhood teachers believe in play and the advantages it offers (Lynch, 2015; McLane, 2003; Nicolopoulou, 2011; Sisson & Kroeger, 2017). However, constraints of time and resources in combination with the pressure of accountability and testing seem to compel teachers to return to a back-to-basics curriculum and to focus on narrowly defined outcomes (Lynch, 2015; Nicolopoulou, 2011). Even when practitioners may be willing to adapt numerous roles in play-based learning, as results of a meta-synthesis of 62 studies from 24 national contexts demonstrate, they are unsure about how and when to get involved (Bubikova-Moan, Hjetland & Wollscheid, 2019).

To reverse this negative tendency, early childhood teacher educators in many universities work diligently to teach preservice teachers about the importance of play during a child's early years. Yet, when placed in schools for their student teaching fieldwork, many pre-service teachers align their perceptions about play



with the reality they observe, in which play is devalued (Jung & Jin, 2015; Jung & Jing, 2014; Pistorova & Ruslan, 2017). Therefore, the challenge today is to prepare preservice teachers for the education field in which, “child-initiated play-based curriculum, standards-based curriculum, and accountability issues frequently collide” (Jung & Jin, 2014, p. 358).

### **Teacher Education and Play**

Although there has been considerable evidence supporting the effectiveness of learning through play, scholarly discussion of play in teacher education is still limited (Blom & Damico, 2019, Miller & Almon, 2009, Jung, Zhang & Zhang, 2016). Close examination of existing studies on preservice teachers’ beliefs on play indicates that play, as a concept, does not have a shared meaning. Multiple meanings and contradictions present within the preservice teachers’ beliefs about play highlight the challenges of defining and conceptualizing play within teacher education (Altun, 2018; Klugman, 1996; Sherwood & Riefel, 2010). Yet, it is important to understand how preservice teachers perceive play since, as research shows, the perspectives they hold as future educators before beginning intensive instruction will have a vital role in how they will be able to link play and curriculum in an early childhood setting (Jung & Jing, 2014; Klugman, 1996; Jung, Zhang, & Zhang, 2016).

In this study, “preservice teachers” specifically refers to those individuals seeking initial licensure in a four-year higher education program leading the students to a Bachelor of Science in Education degree in Early Childhood Education (ECED) preparing teachers for preschool through third grade. All pre-service teachers complete field and practicum experiences with students at earlier stages of the program being placed in toddlers, preschool, kindergarten and primary grades classrooms as they move up within the program.

As for the concept of play, in the context of school, play is best viewed as a continuum with guided play on one end and free play on the other (Miller & Almon, 2009). Typically, playful learning includes both guided play and free play (Bodrova & Leong, 2010; Reed, Hirsh-Pasek, & Golinkoff, 2012). Usually play is described as an intrinsically motivated, enjoyable, process-oriented, non-realistic, and self-chosen activity (Hirsh-Pasek et al., 2009; Krasnor & Pepler, 1980). Play as “playful learning” is a focus of this study.

The concept of perception, according to Leibniz is “the expression of many things in one” (as cited in Kulstad, 1982, p. 66); in other words, a sensation along with an image. In its relevance to this study, perception includes the meanings of knowledge, beliefs, attitude, value, feeling, thinking, and implicit theory.

### **Purpose of the Study**

The aim of this participant selection model mixed methods study is to better understand preservice teachers’ perceptions on play and elucidate their preconceived notions on this term before they enter their own classrooms. Research is required to examine the ongoing variance in preservice teachers’ perceptions on play and how these views change throughout the duration of the teacher education program. The expectation is that such understanding of preservice teachers’ mental images about play might assist early childhood teacher educators in addressing this complex area of early childhood education in their preparation programs.

## **METHODS**

### **Research Model**

Sequential mixed method participatory selection model: This study is a part of a larger participant-selection model mixed methods investigation. Participant-selection model is a variation of the sequential explanatory mixed methods research design that prioritizes the qualitative phase of the study instead of the



initial quantitative phase (Creswell & Plano Clark, 2007). The study was conducted at one of the Midwestern universities' early childhood undergraduate education programs in the United States. Within the program, 241 students at different stages, Cohort I (second semester, sophomore year), Cohort II (first semester junior year), Cohort III (second semester junior year), Cohort IV (first semester senior year), and Cohort V (second semester senior year), completed two online surveys – Instrument I (Part A & B) and Instrument II (Future Professionals' Survey). The results of the surveys were used for the selection of 10 participants for the qualitative segment of the study. The participants were selected from the sample pool of 71 survey respondents, who provided contact information and also indicated that they were willing to participate in a follow up interview. The criteria for the inclusion was the “extreme or outlier cases” (Creswell, 2014). Thus, two participants from each cohort, one demonstrating the most positive attitude (highest mean score on the survey) and the least positive attitude towards play (lowest mean score on the survey) were selected and interviewed for the qualitative part of the study.

The study utilized mixed method. The quantitative question aimed to explore how the preservice teachers' attitudes towards play and the role of play in learning and curriculum differ among five cohorts of students. The qualitative inquiry focused on preservice teachers' beliefs about play and the factors that contributed to their understanding of play. Finally, the mixed methods segment was designed to explain perspectives on how play contributes to children's learning by comparing and contrasting the qualitative findings with the quantitative results.

### **Participants**

Normally, within an Early Childhood Education program, students form a cohort to complete a five-cohort sequence of courses, while gaining teaching experiences linked to coursework. Specifically, **Cohort I** (second semester, sophomore year) coursework focuses on Child Development, Integrated Expressive Arts and Social Studies, Early Math and Science, Preschool Education, and the focus of the fieldwork is on preschool (nine hours for 14 weeks). **Cohort II** students' (first semester, junior year) study focus is on Music and Rhythms, Language & Literacy, Partnerships & Guidance, and Integrated Preschool Curriculum. Students spend 20 hours per week for 15 weeks in preschools, affiliated schools, including the campus lab school, Head Start, public schools' preschools settings. **Cohort III** (second semester, junior year) coursework relates to Phonics, Mathematics, Online course IB-PYP, Home-School Community Partnerships and Integrated Social Studies. Cohort III students usually spend two days a week in urban schools with additional focus fields in math and literacy, public primary schools. **Cohort IV** (first semester, senior year) students' coursework focus is on reading and writing, developing a balanced literacy program, and math and science. For fieldwork, these students are placed in kindergarten and primary classrooms for two days per week for 14 weeks. **Cohort V** (second semester, senior year) students teach in a kindergarten or primary class for five days per week throughout the length of one semester (15 weeks) and take a Student Teaching Seminar class.

The participants in this study included 241 students (Cohort I, Cohort II, Cohort III, Cohort IV, and Cohort V). Demographic questions, including those related to age, gender, ethnicity, and education levels (Cohort) were asked in a separate section of the survey research. Of the participating students, 233 (96.7%) were female and 8 (3.3%) were male. Additionally, 54 (22.4%) Cohort I, 41 (17%) Cohort II students, 61 (25.3%) Cohort III, 44 (18.3%) Cohort IV and 41 (17 %) Cohort V students completed the study surveys. Participants' ages ranged from 19 to 38 with an average age of 21.1 ( $SD = 1.795$ ). Of the group, 137 students (231) were White, 10 (4.1%) were nonwhite. The population demographic data including gender, race, place of birth, and class rank is shown in Table 1.



**Table 1.** Demographics of sample

	N	%
<b>Gender</b>		
Female	233	96.7
Male	8	3.3
<b>Race</b>		
White	231	95.9
Nonwhite	10	4.1
<b>Born in the United States</b>		
Yes	239	99.2
No	2	.8
<b>Class rank</b>		
Cohort I	54	22.4
Cohort II	41	17.0
Cohort III	61	25.3
Cohort IV	44	18.3
Cohort V	41	17.0
<b>Age</b>		
	241	Mean: 21.01 sd: 1.795 Min: 19 Max: 38

Note: For Age, the % column shows mean and sd.

### Data Collection

The quantitative data was collected using two Likert Scale instruments - Instrument I (Part A & B) and Instrument II (Future Professionals' Survey). For the purposes of the present study, only Instrument I (Part A & B) data and results will be described.

Instrument I Likert Scale questionnaire was composed of two parts—Part A and Part B. The Part A scale was focused on *adjectives describing play* and Part B measured *activities defined as play*. Initially, this instrument was created by Sherwood and Reifel (2010), who interviewed seven preservice teachers about adjectives describing play as well as activities constituting play. Later, Lewis (2014), using the results of Sherwood's and Reifel's study, modified this instrument with permission from the original authors. Lewis (2014) tested the instrument by conducting a pilot study in which 24 participants completed the questionnaire. The pilot study provided important information that led to modification of the instrument. The Likert-type Scales were updated to be more definitive and provide a wider range of possibilities for the participants to choose from. The items from the original study's instrument remained unchanged. The survey questions design was guided by conceptual and educational literature.

#### Instrument I—Part A and Part B

Part A Likert Scale instrument ranging from 1 to 3 was used to identify the *adjectives describing play* in the early childhood classroom. The participants were presented 20 adjectives that can be used to describe play with a statement to follow the prompt: "Play is..." and choose 1 (*Disagree*), 2 (*Neutral*), or 3 (*Agree*) to indicate their level of agreement with the statement. The survey questions are presented below:



*Play is...*

1. Something children do because they want to
2. A creative process
3. Imaginative
4. Enjoyable for those involved
5. Serious
6. Focused on a specific outcome
7. Physically active
8. Socially interactive
9. Academic
10. A reward
11. Passive learning
12. Driven by rules
13. Relaxing
14. Difficult for the teacher to find time for
15. Important for learning
16. Teacher-directed
17. Educational
18. Stimulating
19. The job of the teacher
20. Something that can be done alone

Part B Likert Scale instrument was used to measure the *activities identified as play*. Using a 4-point Likert-type Scale, 1 (*Never Play*), 2 (*Seldom Play*), 3 (*Often Play*), or 4 (*Always Play*), participants were asked to rate the extent to which they believed each given activity constitutes play. Participants were provided with the following list of 25 activities that could constitute play:

1. Dancing
2. Arts and crafts
3. Reading a book
4. P.E. (Physical Education)
5. Show-and-tell
6. Asking for a turn on the swings
7. Singing the ABCs
8. Looking around while in the hallway
9. Pretending to be a teacher and calling a student “stupid”
10. Counting to 100
11. Being read to
12. Centers
13. Talking to a friend
14. Working on a puzzle
15. Doing a science experiment
16. Listening to music
17. Feeding a classroom pet
18. Cutting out pictures that begin with the letter B
19. Listening to a book on tape
20. Figuring out how to join a group already in an activity.
21. Getting one’s feelings hurt
22. Learning about other cultures



- 23. Pretending to be a character from a violent movie
- 24. Eating lunch
- 25. Telling another child that s/he cannot join a board game

### Data Analysis

Instrument I Part A (Adjectives describing play) - For analysis purposes, 20 adjectives were classified into five main groups - Developmental Adjectives, Independence Adjectives, Structure Adjectives, Pleasure Adjectives, Teacher’s Role Adjectives—identified by previous researchers (Lewis, 2014). The scores of each of the subscales, organized into the following five groups, were summed: Developmental Adjectives (Physically active, Socially interactive, Academic); Independent Adjectives (Imaginative, Educational, Something that can be done alone); Structure Adjectives (Focused on a specific outcome, Driven by rules); Pleasure Adjectives (Something children do because they want to; Enjoyable for those involved); Teacher’s Role Adjectives (Teacher-centered, The job of teacher).

Instrument I Part B (Activities identified as play) - For analysis purposes, the 25 items were organized into four main groups: Cognitive Activities, Negative Activities, Socio-Emotional Activities, Hands-On Activities identified by previous researchers (Lewis, 2014). The scores of each of the subscales, organized into the following four groups, were summed: Cognitive Activities (e.g., singing the ABCs, counting to 100, being read to, cutting out pictures that begin with the letter “B,” listening to a book on tape); Negative Activities (e.g., pretending to be a teacher & calling a student “stupid,” getting one’s feelings hurt, pretending to be a character from a violent movie, telling another child s/he cannot join a board game); Socio-Emotional Activities (e.g., talking to a friend, listening to music, feeding a classroom pet, learning about other cultures); and Hands-On Activities (e.g., physical education, centers, working on a puzzle, doing a science experiment).

The quantitative data were analyzed using SPSS statistical software and various tests such as histogram, skewness, kurtosis, Kolmogorov-Smirnov that test statistical assumptions for a one-way analysis of variance (ANOVA) that include normality, heterogeneity of variance, and independence. In this study, the significance level was accepted as .01.

## RESULTS

### Preservice Teacher Ratings of Adjectives Describing Play – Instrument I Part A

For Instrument I Part A, the scores of items on each scale were averaged for mean values of the data. Descriptive information about these ratings, including means, standard deviations are presented in Table 2. For all items, N = 241.

**Table 2.** Descriptive statistics for items on the adjective scales

	Mean	SD	Alpha
Developmental Adjectives			.753
Physically active	2.60	.515	
Socially interactive	2.75	.454	
Academic	2.71	.473	
Independence Adjectives			.308
Imaginative	2.98	.157	
Educational	2.83	.398	
Something that can be done alone	2.71	.583	



Structure Adjectives			.375
Focused on a specific outcome	1.60	.638	
Driven by rules	1.27	.489	
Pleasure Adjectives			.336
Something children do because they want to	2.90	.346	
Enjoyable for those involved	2.87	.359	
Teacher's Role Adjectives			.493
Teacher-directed	1.31	.531	
The job of the teacher	1.78	.715	

Note: For all items, N=241.

### Preservice Teacher Ratings of Activities Identified as Play – Instrument I Part B

For Instrument I Part B, the scores of items on each scale were averaged for mean values of the data. Descriptive information about these ratings, including means, standard deviations on preservice teachers' beliefs about how often items in the set of provided activities constitute play can be seen on Table 3. For all items, N = 241.

**Table 3.** Descriptive statistics for items on play activities scale

	Mean	SD	Alpha
Cognitive Activities			.802
singing the ABCs	2.30	.803	
counting to 100	1.84	.695	
being read to	2.16	.769	
cutting out pictures that begin with the letter B	1.71	.747	
listening to a book on tape	2.02	.803	
Negative Activities			.630
pretending to be a teacher and calling a student "stupid"	1.95	1.007	
getting one's feelings hurt	1.52	.764	
pretending to be a character from a violent movie	2.99	.977	
telling another child that s/he cannot join a board game	1.63	.817	
Socio-Emotional Activities			.683
talking to a friend	2.99	.733	
listening to music	2.97	.715	
feeding a classroom pet	2.37	.817	
learning about other cultures	2.48	.801	
Hands-on Activities			.667
P.E. (physical education)	3.32	.695	
centers	2.92	.817	
working on a puzzle	3.14	.709	
doing a science experiment	2.89	.767	

### Results of Inferential Statistics

One-way ANOVA was used to test if there was a difference in preservice teachers' levels of agreement with the play scales by cohort. Descriptive information about the ratings, including means, standard deviations, p-value and F-test can be seen in Table 4 below.



**Table 4.** Descriptive statistics of means for each scale and one-way ANOVA results for differences between class groups (Cohorts)

Scales	Cohort I (N = 54)	Cohort II (N = 41)	Cohort III (N = 61)	Cohort IV (N = 44)	Cohort V (N = 41)	F test
Developmental Adjectives	2.61 (.39)	2.73 (.37)	2.67 (.40)	2.70 (.42)	2.75 (.38)	$F_{(4,236)} = .940, p = .442$
Independence Adjectives	2.85 (.26)	2.86 (.22)	2.89 (.19)	2.88 (0.24)	2.70 (.40)	$F_{(4,236)} = 3.678, p = .006$
Structure Adjectives	1.38 (.42)	1.41 (.39)	1.35 (.43)	1.40 (.45)	1.70 (.47)	$F_{(4,236)} = 4.571, p = .001$
Pleasure Adjectives	2.86 (.26)	2.90 (.23)	2.90 (.23)	2.88 (.29)	2.89 (.36)	$F_{(4,236)} = .278, p = .892$
Teacher's Role Adjectives	1.53 (.48)	1.67 (.55)	1.56 (.51)	1.44 (.45)	1.55 (.58)	$F_{(4,236)} = 1.073, p = .371$
Cognitive Activities	2.21 (.57)	2.26 (.64)	2.01 (.53)	1.76 (.41)	1.73 (.49)	$F_{(4,236)} = 9.373, p < .001$
Negative Activities	1.88 (0.61)	2.18 (0.69)	2.14 (0.53)	1.99 (0.61)	1.91 (.65)	$F_{(4,236)} = 2.292, p = .060$
Social-Emotional Activities	2.80 (0.56)	2.90 (0.66)	2.70 (0.49)	2.53 (0.51)	2.55 (.47)	$F_{(4,236)} = 3.712, p = .006$
Hands-On Activities	3.17 (.54)	3.20 (.53)	3.09 (.46)	2.99 (.53)	2.83 (.55)	$F_{(4,236)} = 3.458, p = .009$

Note: The nonparametric Kruskal-Wallis test was used instead of one-way ANOVA for the Independence Adjectives variable that violated the equal variances assumption required by ANOVA. The Kruskal-Wallis test result for Independence Adjectives variable was not significant ( $p = .026$ , respectively), implying that there is no difference in the mean score between the five cohorts (see Table 5). Because the Kruskal-Wallis test results were non-significant, multiple comparisons tests for Independence Adjectives were not conducted.

**Table 5.** Kruskal-Wallis test results for independent adjectives scale

Variable	H	Df	p-value
Independence adjectives	11.096	4	.026

The multiple comparisons test results indicated that Cohort V students had a significantly higher Structure Adjectives score than students in Cohort I and Cohort III ( $p < .001$ ). Moreover, students, in Cohort IV and Cohort V had significantly lower Cognitive Activities scores than Cohort I and Cohort II participants ( $p < .001$ ). Post Hoc test results across two instruments are presented in Table 6 below.



Table 6. ANOVA post hoc test results

Dependent Variable	Sample 1-Sample 2	Mean Difference (1-2)	Sig.
Structure Adjectives	Cohort I–Cohort V	-.31549	.005
	Cohort III–Cohort V	-.34266	.001
Cognitive Activities	Cohort I–Cohort IV	.45118	.000
	Cohort I–Cohort V	.48311	.000
	Cohort II–Cohort IV	.49978	.000
	Cohort II–Cohort V	.53171	.000

## DISCUSSION

Table 7 represents the summary of the overall significant findings of the study. The multiple comparisons test results indicated that Cohort V students had a significantly higher Structure Adjectives score than students in Cohort I and Cohort III ( $p < .001$ ). Moreover, students, in Cohort IV and Cohort V had significantly lower Cognitive Activities scores than Cohort I and Cohort II participants ( $p < .001$ ).

Table 7. Summary of significant findings

Variable	Test used	Conclusion
Structure Adjectives	One-way ANOVA	Significant difference ( $p < .001$ )
Cognitive Activities	One-way ANOVA	Significance difference ( $p < .001$ )

### Results of Instrument I Part A - Preservice Teacher Ratings of Adjectives Describing Play

Overall evaluation of mean values across Table 2 illustrating results of descriptive statistics, shows that there is not a single play adjective that held the entire range of responses (1–3) and was agreed upon wholly by the participants. Out of the 20 adjectives provided to the participants, there were two that indicated highest level of agreement: “Play is imaginative” ( $M = 2.98$ ) and “Play is something children do because they want to” ( $M = 2.90$ ). Among the other 18 items, there was more variety, with participants’ responses varying in level of agreement. For example, the items “Enjoyable for those involved” ( $M = 2.87$ ) and “Play is educational” ( $M = 2.83$ ) had higher means, while items such as “Play cannot be driven by rules” ( $M = 1.27$ ) and “Play cannot be teacher-directed” ( $M = 1.31$ ) had the lowest means. Overall, the data shows that preservice teachers view play as an imaginative, independent, pleasurable, self-chosen activity that belongs to children.

Also, the high mean value on item “Play is educational” ( $M = 2.83$ ) shows the relative consensus among participants that play relates to learning, while the lower mean values on items like “Play cannot be driven by rules” ( $M = 1.27$ ) and “Play cannot be teacher-directed” ( $M = 1.31$ ) indicate that most of the participants rejected the idea of play being goal-oriented, structured, or teacher-directed.

This perception of play is in congruence with the widely accepted definition of play as an intrinsically motivated, enjoyable, process-oriented, non-realistic, and self-chosen activity (Hirsh-Pasek et al., 2009; Krasnor & Pepler, 1980). In addition, the fact that there was not one item on this part of the survey that all



students agreed upon supported the idea that the construct of play is a “roomy subject, broad in human experience, rich and varies over time and place” (Eberle, 2014, p. 214), which is difficult to define. This supports previous researchers’ findings (Lewis, 2014; Sherwood & Reifel, 2010) and indicates preservice teachers’ diversity of beliefs and opinions about play.

The Post Hoc test results indicated that Cohort V students had significantly higher Structure Adjectives (for example, “Focused on specific outcome,” “Driven by rules”) mean scores than participants in Cohort I and Cohort III. The higher Structure Adjectives mean score implies that participants’ view of play becomes somewhat narrow as they advance through the program. It can be inferred that these differences are a result of time spent in the teacher education program. Unlike Cohort I and Cohort III participants, Cohort V appears to focus on rules and the end product in play. The differences were statistically significant (see Table 6). Lewis (2014), who originally developed the Instrument I Part A and B, also found this difference between two cohorts on the item “Play is focused on a specific outcome,” with participants in Cohort III tending to agree more with this statement than participants in Cohort I (Note that there were four groups of students in the program that was studied by Lewis, while this study had five groups of students in the program).

One possible explanation is that with the extensive student teaching experiences and substantial exposure to math, science, language, and other content knowledge in the last few semesters of college, the seniors’ thinking is more focused on organization of play for achieving a learning outcome. Yet, this might imply that preservice teachers’ view of play and education of young children, in general, becomes somewhat narrow as they advance through the program. Unlike the newer students to the program, seniors appear to focus on rules and the end product in play. This is important to consider for early childhood teacher education programs that prepare teachers for education of young children where open-ended, process-oriented and inquiry-based education is more important than teaching for narrowly defined outcomes.

### **Results of Instrument I Part B - Preservice Teacher Ratings of Activities that Constitute Play**

Overall evaluation of mean values across Table 3, illustrating the results of descriptive statistics, demonstrates that none of the 25 items held the entire range of responses (1–4) and were agreed upon wholly by the participants. Out of the 25 activities provided to the participants, there were two that indicated the highest level of agreement upon what constitutes play: “P.E. (physical education)” ( $M = 3.32$ ) and “Working on a puzzle” ( $M = 3.14$ ). On the other 23 items, there was a range of responses as well with items such as “Pretending to be a character from a violent movie” ( $M = 2.99$ ) and “Talking to a friend” ( $M = 2.99$ ) having higher means, or agreement among the five groups, and the negative items like “Telling another child that s/he cannot join a board game” ( $M = 1.63$ ) and “Getting one’s feelings hurt” ( $M = 1.52$ ) having the lowest means. The participants also agreed less on the Cognitive Activities scale that include items like “Counting to 100” ( $M = 1.84$ ), “Cutting out pictures that begin with the letter B” ( $M = 1.71$ ) or “Listening to a book on tape” ( $M = 2.02$ ) and agreed more on Socio-Emotional Activities (“Talking to a friend,” “Listening to music,” “Feeding a classroom pet” and “Learning about other cultures”) and Hands-On Activities (“P.E. [physical education],” “Centers,” “Working on a puzzle,” “Doing a science experiment”) scales.

Thus, in general, the results indicate that participants are more likely to perceive activities like physical education, working on puzzles, centers, doing a science experiment, or talking to a friend as play rather than activities related to school such as singing ABCs, counting to 100, or reading. Therefore, there is a tendency in preservice teachers’ perceptions to view play as a physical, social, hands-on, and emotional activity but less cognitive and educational. This trend in perceiving play as less related to formal learning was also captured by previous researchers (e.g., Klugman, 1996). In his study, Klugman found that the participants did associate play with learning and development—in particular, social development.



However, only 48 out of Klugman's 168 respondents believed that children can learn more through play, and eight respondents agreed that play contains some elements of formal learning.

Thus, it can be concluded that the link between play, learning, and development for the study participants is not well established. In addition, the fact that there were so many items in which at least one participant believed the activity was *never* play and at least one participant believed the activity was *always* play indicate that there is no universal agreement among the participants on what constitutes play. This goes along with the aforementioned notion that the construct of play is difficult to define.

The results of the multiple comparisons test indicate that participants in Cohort IV and Cohort V had significantly lower mean scores on the Cognitive Activities Scale ("Singing ABCs," "Counting to 100," "Being read to," "Cutting out pictures that begin with the letter B," or "Listening to a book on tape") than their peers in Cohort I and Cohort II. Lewis (2014) also came to similar results finding significant differences on the Cognitive Activities item between Cohort I and Cohort IV with Cohort I gravitating more toward considering these activities as play and Cohort IV participants agreeing less to accept these activities as play.

One possible explanation of these results is the participants' coursework and field placements. These participants at the advanced stages of the program have completed the Preschool Education course offered in Cohort II in which they may have been put into a mindset that not all activities are play while the Cohort I and Cohort II participants have not completed that course yet. Cohort IV students' coursework focus is on reading and writing, developing a balanced literacy program, and math and science. For fieldwork, these students are placed in kindergarten and primary classrooms for two days per week. Thus, the educational environment the participants are placed in where they might not see play at all and focus on academics, may also have influenced their perceptions on play in an adverse way.

It can be inferred from these results, that while the underclass students hold an open and inclusive view of play, the upperclassmen's perceptions of play become stricter and somewhat narrow as they progress in the program. Even though it can be argued that the survey items are not truly representative of play in its purest sense, the differences in mean scores between the groups is a clear indication of some tendency in upperclassmen's perspectives to perceive play in a narrow way.

It is well known that students entering teaching profession come to the program of study with set beliefs about education (Donaghue, 2003; Fajet, Bello, Leftwich, Mesler, & Shaver, 2005; Klugman, 1996; Ng, Nicholas, & Williams, 2010; Pajares, 1992; Richardson, 2003). These beliefs and perceptions largely come from the 12 or 13 years of schooling experience they gained before coming to college through the "apprenticeship of observation" and personal biographies (Lortie, 1975) that are often hard to elicit and identify. However, it is through these lenses, preservice students view and comprehend any new concepts presented to them in their college classrooms and/or field experiences that nevertheless, come to light when the students teach in their own classrooms (Pajares, 1992; Sanger & Osguthorpe, 2011).

Play perceptions are not exception. Students come to college with deeply seated beliefs about play originated in childhood (Sherwood & Reifel, 2010; Klugman, 1996). Unfortunately, these beliefs are difficult to dislodge (Leauepe, 2009). When the preexisting knowledge is not fully challenged it creates barriers for understanding. Accordingly, concepts of play, learning and development cannot be fully integrated in participants' minds if play is just play and fun. Therefore, as researchers suggest, while students do gravitate toward progressive college agenda that emphasizes constructivist and inquiry play-based learning and teaching during their college training (Cevher-Kalburan, 2015; Charko, Fraser, Jones, & Umangay, 2016; Jung & Jin, 2014; Jung & Jin, 2015; Nicholson & Shimpi, 2015; Nicholson, Shimpi, & Rabin, 2014; Ridgway & Quinones, 2013; Van der Aalsvoort, Prakke, Howard, König, & Parkkinen,



2015), it is unclear whether they will apply the gained knowledge on play in teaching and curriculum making in their future classrooms (Ahn, 2008; Jung & Jin, 2015; Jung, Zhang & Zhang, 2016).

In this study, perhaps due to the gap in knowledge the study participants' perceptions about play became somewhat narrow, close to graduation, as they immersed in the current test-driven educational environment. Encounters with the "realities" in the field, where play is not commonly in practice, possibly further deepened their confusion. Therefore, it can be predicted that it is more likely that preservice teachers will align their perspectives with those in the field and continue to perpetuate the existing practice in which play is devalued. Without adequate training and preparation of teachers, this trend is going to continue. It is therefore the responsibility of early childhood teacher educators to establish early years' practitioners as play professionals who have a clear understanding of both play and learning, their relationship to one another, and the role of the teacher in facilitating play (Howard & King, 2015).

### **Limitations of Study**

In addition to not having qualitative data, there were some limitations in this study related to reliability and homogeneity of variance. The survey instruments used in this study had previously reported Cronbach's alpha values in the acceptable range. In this study, while some alpha coefficients matched or were relatively close with the previous researchers' alpha scores (all of which had been above or near the acceptable level), several of the subscales on Instrument I were well below the acceptable threshold of reliability.

One of the possible reasons of low Cronbach's alpha values for some subscales is that the items had three scale points, so there is very small range of variation. Cronbach's alpha assumes that the items are measured on a ratio scale (or can be assumed to be measured on a ratio scale). The "best" number of scale points to use is between 5 and 7 (Preston & Colman, 2000). However, some of the original subscales used three points or four points (Instrument I Part A and Part B, respectively). Additionally, some of the subscales only had two items (Pleasure Adjectives, Structure Adjectives, Teacher Role Adjectives) while appropriate number of items (or appropriate minimum number of items) needed to measure a given construct is four to five (Hinkin, Tracey, & Enz, 1997).

Additionally, certain statistical tests require meeting certain assumptions about the distribution of the data in order for the inferences drawn to be valid. Analysis of variance (ANOVA) is a parametric statistical test, and as such, requires several assumptions to be met in order to use it. The assumptions are independence of the observations, normality, and homogeneity of variance. While there was no problem with independence, the assumptions of normality and homogeneity of variance were not met for some dependent variables. According to the Kolmogorov-Smirnov test, virtually all of the dependent variables were not normally distributed, and according to Levene's test, Independence Adjectives variable did not meet the assumption of homogeneity of variance. ANOVA is typically robust to violations of the assumption of normality, but it is less robust when there are violations of the assumption of homogeneity of variance. Therefore, the Kruskal-Wallis test was used for the Independence Adjectives variable with non-constant variance. Thus, it is not recommended using the study instruments, Instrument I Part A and B, in future studies without considerable improvement of the survey.

### **Implications and Recommendations**

The study findings illustrate the absence of uniformity in perceiving play in early childhood education. For example, reading a book was considered by one participant as play and was not considered as play by another. The absence of a shared definition of play makes it challenging to incorporate it into the teacher education program to establish the critical link between play and learning. The prospective teachers have a good sense of what is play, even though their perspectives vary. What needs to be clarified then is the concept of learning.



## **Teacher education**

In the light of the findings, it is suggested to re-direct the focus of early childhood teacher education program from teaching play to teaching learning. A change in language should address the confusion between the two concepts, consequently deepening preservice teachers' understanding of developmental and learning process that take place in children's play. Students' ability to clearly define the concept of learning will allow them to re-construct their preconceived notions of play. When students have a clear understanding of how young children learn, develop and construct knowledge, play-based pedagogy and curriculum will, hopefully, become a part of formal teaching and learning in a test-driven environment. This shift in language and fundamental knowledge hopefully will help solve the widespread problem of academization in early childhood education as well as problems of teaching diverse learners (such as English Language Learners, children with special needs, children with trauma, children in poverty, etc.).

Due to the absence of a single definition of play, early childhood teacher education programs should determine their own definition based on the context of the university, their students and their own research and teaching goals. This definition should be broad and holistic and distinctively defined from other developmental stages. Based on this definition, teacher educators need to come to decide what teaching texts, approaches, methods and experiences they will prioritize in teaching future teachers to foster a holistic vision of child development and learning.

Moreover, the students should be exposed to the most updated neuroscience research to establish the critical links between the body and brain. The aim is to unfold the concept of cognitive and intellectual development for the future professionals to gain a better understanding of how children learn at early stages. The results of this study demonstrated that students at earlier stages of the teacher education program hold more inclusive attitude toward play. Therefore, to preserve, deepen, and further develop their perspectives, it is recommended using "play *as* educational practice" (Wood, 2014) that drives the learning and pedagogy verses using it as "play *in* educational practice" where instructors choose and plan activities to achieve a specific outcome. Play *as* education approach should aim to engage students' bodies and activate senses using various forms of arts, music, and movement. Such holistic and creative approach to teaching and learning will allow the future practitioners to experiment and explore the social, cognitive, physical and emotional aspects of learning processes and experience what children undergo in play. Engaging in creative learning and teaching at the college level will create the most beneficial learning environment that fosters future teachers' intellectual development and help them to manage their own mental, emotional and physical well-being.

## **Policy making**

Although the National Association for the Education of Young Children (NAEYC) continues to emphasize the critical importance of play in children's lives and education (Copple & Bredekamp, 2009), the findings of this study illustrate the difficulty of defining and conceptualizing play in early childhood education. Therefore, it is recommended that leading organizations would clearly define the concept of learning in its main documents and standards, approaching it broadly and holistically. Learning in early childhood education cannot be limited to seeing it as "increasing quantity of (surface) knowledge and skill" (Niikko & Ugaste, 2019, p.48). Hence, the concept of learning should be defined distinctively within and between ages and stages in early childhood. These changes will hopefully result in new understanding of teaching in early childhood that meets the needs of a whole child who learns and develops through play.

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