International Journal of the Whole Child

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Introduction

Tiffany Wilson, Editor

This spring issue is fully committed to providing readers with an abundance of information relevant toward supporting children's holistic learning and development. In particular, authors clearly identify a variety of strategies to support creating integrated, inclusive, and holistic learning experiences both in the home and at school.

Articles:
Analyzing Student Achievement Data: Preparing Teacher Training Candidates for Leadership
Angela Danely, Karen Loman, Natalie Tye

In the first article, "Analyzing Student Achievement Data: Preparing Teacher Candidates for Leadership," Angela Danley, Karen Loman, and Natalie Tye discuss the importance of ensuring teacher candidates with relevant fieldwork opportunities to analyze and apply student achievement data. The authors provide a summary of the relevant literature and highlight the rationale for research describing teacher preparation programs that use student achievement data; this topic in the research remains deficient. Danley, Loman, and Tye conducted an action research study examining the impact of learning to analyze and interpret authentic student achievement data during their teacher preparation program. Authors describe how these early field experiences better prepare teacher candidates to assume future school leadership positions.

Teacher Perceptions of Gender Roles, Socialization, and Culture During Children's Physical Play
Dalal Alanazi, Rana Alghamdi, Adil Alghamdi

In the second article, "Teacher Perceptions of Gender Roles, Socialization, and Culture During Children's Physical Play," Dalal Alanazi, Rana Alghamdi, and Adil Alghamdi examine how teachers enact roles that shape gendered and non-gendered play. They discuss how a child's play can be influenced by the teacher-created environment. In order to support creating a proactive physical environment, authors describe what is meant by gender stereotyping and gender neutral. Alanazi, Alghamdi, and Alghamdi highlight the importance of maintaining teachers' awareness of their own personal biases.

Classroom Practices, Physical Activity, and the School Day: A Preliminary Analysis
Monica M. Brown, Kathleen G. Burriss, Larry L. Burriss & Donald Snead

In the third article, " Teacher Practices, Time for Physical Activity, and the School Day: A Preliminary Analysis," Monica M. Brown, Kathleen G. Burriss, Larry L. Burriss, and Donald Snead discuss the need to include physical activity and play during the typical school day and furthermore, describe the importance of teachers' understanding what is meant by appropriate physical activity and play opportunities. Brown, Burriss, Burriss, and Snead provide data describing the ways in which classroom teachers describe their implementation of physical activity and play during the schoolday. Teacher training, recess time, and apps related to physical activity and play are also described.

Pictures for Reflection
Playgrounds: Think Differently
Kathleen G. Burriss
Photographs by Larry L. Burriss

Kathleen Burriss asks readers to think differently about playgrounds. Using questions, photographs, and a suggested reading list, Burriss suggests ways to design holistic, inclusive, and innovative outdoor play spaces.

Tech Talk
How EdTech Can Support Social and Emotional Learning at School and at Home
Nancy Caukin, Leslie Trail, Ashlee Hover

Nancy Caukin, Leslie Trail, and Ashlee Hover discuss the role of technology in supporting children's social and emotional learning (SEL). In their article, "How EdTech Can Support Social and Emotional Learning at School and at Home," they describe how EdTech might be used as a complimentary form of SEL instruction. Caukin, Trail, and Hover provide readers with a background into the SEL framework and highlight the research showing positive outcomes for the use of SEL in schools. Authors provide readers with instructions to implement SEL in daily classroom life. Finally, they include the importance of establishing EdTech in conjunction with traditional learning, especially in times of school closure.

ETC.
Teacher-Child Interactions and Dramatic Play: Stories from Three Cultures
Rana Alghamdi, Darlene DeMarie, Dalal Alanazi, Adil Alghamdi

Rana Alghamdi, Darlene DeMarie, Dalal Alanazi, and Adil Alghamdi provide readers with a discussion of the critical importance of dramatic play in the classroom as a social and academic learning tool for both teachers and children, and further describe how culture influences this interaction. In their article, "Teacher-Child Interaction in Dramatic Play that Enhance Young Children's Learning: Stories from Three Continents and Three Cultures," they define a teacher's

multiple roles in facilitating dramatic play, such as planning, scaffolding, and modeling. Finally, Alghamdi, DeMarie, Alanazi, and Alghamdi conclude with a discussion of how dramatic play is truly holistic for children's learning and development.

Children and Families: Health and Wellness
Gratitude: A Lifestyle Worth Developing
Barbara Whitman Lancaster

Barbara Whitman Lancaster, in the article, "Gratitude: A Lifestyle Worth Developing" discusses how adults are charged with the responsibility of modeling the social-emotional learning of gratitude with the goal of teaching children the power of resiliency and positive thinking. She explores reasons and benefits for becoming grateful and describes how to cultivate a habit of gratitude within families and children.

Education by the Numbers
The Basics
Donald Snead

In "Education by the Numbers," a new IJWC feature, Donald Snead provides readers with relevant numbers associated with education, children, and families. In order to initiate this new content, Snead, in "The Basics," provides readers with current U.S. student demographic data and then identifies the numbers related to the education budget. Numbers drive many issues related to education; this new IJWC overview intends to support discussion, motivate thinking, and consider alternatives.

STEAM
STEAMING Ahead by Challenging Thinking
Natalie Tye, Sarah Willard

For the STEAM content, Natalie Tye and Sarah Willard In their article, "STEAMING Ahead by Challenging Thinking," discuss the importance of the addition of the "A" in the STEM acronym to make STEAM. They provide a history of this movement as well as future directions, such as the inclusion of an "R" for reading. In addition, Tye and Willard support teachers in transitioning from rote to integrative STEAM teaching; they include a case study as an example. Finally, they emphasize the importance for the incorporation of teaching styles that challenge students and help them to succeed in a changing world.

Page Turners: Books for Children
Maria T. Genest, Katrina Bartow Jacobs, Carla Meyer
Michelle Sobolak, Patricia Crawford

Editors Maria T. Genest, Katrina Bartow Jacobs, Carla Meyer, Michelle Sobolak, and Patricia Crawford identify and discuss a collection of current children's literature. They provide educators and parents with a variety of books for early childhood, the elementary years, and adolescent readers as well.

Analyzing Student Achievement Data: Preparing Teacher Candidates for Leadership

Angela Danley[a], Natalie Tye [b], Karen Loman[c]

[a-c]University of Central Missouri

Dr. Angela Danley is an Associate Professor of Elementary and Early Childhood Education at the University of Central Missouri. She teaches undergraduate and graduate courses. Additionally, she supervises teacher candidates in the clinical practicum.

Dr. Natalie Tye is an Associate Professor of Early Childhood Education at the University of Central Missouri where she teaches junior level teacher candidates in undergraduate program. She also teaches graduate level courses in early childhood.

Dr. Karen Loman is an Associate Professor of Elementary and Early Childhood Education at the University of Central Missouri where she teaches junior level teacher candidates and supervises the candidates in their clinical practicum.

Abstract

The purpose of this article is to share how one teacher education program at a Midwestern university prepares teacher candidates to analyze student achievement data, which is believed essential as one of the roles a teacher candidate needs in order to develop teacher leadership in the classroom. The authors provide the teacher candidates' relevant assignment and discuss the implications toward developing leadership. In particular, the action research results of two teacher candidates' writing lesson scores and personal reflections are highlighted. In addition, a former teacher candidate shares how her experience prepared her for the teacher leader role.

Key Words: teacher leaders, student achievement data, analyzing data

Introduction

From the moment teachers enter the doors of the school building, they assume the role of teacher leader within the walls of their classrooms. Harrison and Killion (2007) state, "Teacher leaders assume a wide range of roles to support school and student success… they build the entire school's capacity to improve" (p. 74). Classroom teachers remain responsible for delivering effective instruction focusing on content knowledge, grade level standards, and assessments. Additionally, in order to make informed instructional decisions, teachers

analyze student data. The National Association of Elementary School Principals (NAESP) (2011) states, "To help all students achieve, teachers need to systematically and routinely use data to guide instructional decisions and meet students' learning needs" (p. 7). Analyzing student data provides teachers with a snapshot of what their students know and should know (Lewis, Madison-Harris, Muoneke, & Times, 2010). There is a critical need to prepare teacher candidates (TCs), not only in lesson delivery and classroom management, but also with a developing understanding regarding analyzing and interpreting student achievement scores. Critically, understanding how to analyze and interpret students' scores fulfills one of the many roles of teacher leadership. TCs analyze achievement scores to make informed decisions about their instruction as aligned to the Interstate Teacher Assessment and Support Consortium (InTASC) Standards: 1- Learner Development and Standard; 6 - Assessment (Council of Chief State School Officers, 2011). Analyzing student data indicates a direct relationship to teacher leadership (Killion et al., 2016).

Background and Action Research Setting

In the teacher preparation program at a Midwest regional university, the school-university partnerships represent a critical component of the clinical experience. Teacher candidates (TCS) are placed in a variety of school districts from rural, suburban, and urban communities during their first semester as a senior. The elementary and early childhood programs place TCs in the field beginning in their junior year, where TCs receive classroom support from the university supervisor and the cooperating teacher through observation and feedback. Once a week, TCs provide small group lessons and one-on-one instruction with students while in the field placement. TCs gain experience administering English Language Arts assessments such as running records (fluency, decoding, comprehension), sight words, and writing. After the junior year, the TCS transition into senior coursework.

During the senior year, teacher candidates participate in a combination of field placement (two days) and coursework (once a week). TCs implement whole group assessments and data informed lessons in mathematics, English language arts, and in science or social studies. This first semester senior experience provides a smooth transition into student teaching wherein the university supervisor releases responsibility to the mentor teachers. In order to meet the needs of students in the classroom, the clinical experience allows TCs to reflect on what they learned, the outcome of the lesson including evidence of student learning, and how teacher candidates can improve in their instruction. For this action research, TCs were given an assignment on teaching a writing lesson followed by administering a writing prompt. This assignment charged the candidates to analyze the students' writing to determine next steps in their teaching. Although candidates in the course completed the required assignment, it involved collaborating with their cooperating teachers on the writing lesson and prompt. This collaboration piece is important for planning and ensuring each candidate follows the individual school pacing guide. The two teacher candidates, who provided a narrative for the purpose of this action research, completed their practicum in two Midwest suburban schools.

Literature Review

Analyzing student achievement data, kindergarten through twelfth grade, provides educators with information to support adjusting their instruction to the individual needs of students (Hamer, 2014). It remains critical for TCs to evidence the ability to transfer their skills and knowledge associated with analyzing achievement data to their future classrooms. It is also important to prepare teacher candidates to use student achievement data to inform instructional decisions. Harrrison and Killion (2007) contend although teachers have access to achievement data, they do not often use it to drive instruction. Providing authentic and meaningful opportunities to analyze student achievement data prepares teacher candidates to become effective leaders in the contemporary classrooms.

Analyzing student achievement data to meet the academic needs of the students can be an overwhelming task. Teachers already access student data through classroom and district assessments, with the expectation they use results to inform instruction (Deluca & Lam, 2014). It is important for teachers to "own" their data in order to make sense of the results. Morrrison (2008-2009) stated, "If teachers are ever to use data powerfully, *they* must become the coaches, helping themselves and colleagues draw on data to guide student learning, find answers to important questions, and analyze and reflect together on teaching practice" (para 3). It is through this process that teachers take on another role of leader, by strengthening grade level teams and adding to overall school success. Morrison also affirmed teachers become self-coaches in analyzing their data if administrators and teacher leaders promote three essential components:

- Realize that data include more than end-of-year standardized test scores.

- View collecting data as a way to investigate the many questions about students, teaching practices, and learning that arise for any committed teacher.

- Talk with one another about what data reveal and how to build on those revelations (para 4).

Killion (2008) coached and suggested key questions for teachers to analyze student achievement data:

 1) What is this assessment measuring? 2) What are the characteristics of the students involved in the assessment? 3) What type of assessment was used? 4) What type of conclusions can be drawn from this type of assessment? 5) How many students were assessed? (p. 8).

When teachers become more cognizant of the data, they confront and make informed instructional decisions. Once teachers become self-coaches mining the data, they can engage in collaborative conversations, focusing on improving teaching and learning. As the National Board for Professional Teaching Standards (NBPTS) (2014) affirms, "Teacher leadership is no longer optional. It is important for student learning…" (p. 1).

There is limited research on preparing teacher candidates to analyze achievement data. This current project contributes to the literature for teacher education programming connected to analyzing student achievement data. Additionally, this manuscript allows for teacher education

programs to consider the importance for field embedded course assignments to focus on collecting achievement data related to literacy or other content areas in order to help prepare TCs as classroom leaders. In order to support diversified student learning, this discussion describes the importance of preparing TCs for the classroom by using data to drive instruction. It is the belief that when teachers enter the walls of their classrooms, they are teacher leaders with the responsibility of the varied teacher leader roles, including analyzing student achievement data.

Action Research Process

This action research described the need to prepare TCs for the classroom and also illustrated their capacity to become teacher leaders. The questions guiding the action research include: 1) How has analyzing achievement data prepared two teacher candidates for their future career as a classroom teacher leader? 2) How has the program prepared a classroom teacher to take on a leadership role in the school?

This action research focused on teacher candidates transitioning into the future teacher leadership role. The two TCs highlighted in this action research implemented a writing lesson, collected authentic student work from the lesson, and analyzed the results. The assignment protocol is provided (see Table 1).

Table 1

Protocol for Teaching and Scoring the Writing Prompt: Before and After Activities

Before Teaching the Lesson and Giving Writing Prompt

1. Choose two focus students. These focus students should have different learning needs. Please provide an overview of the two focus students and the entire class (student characteristics and contextual factors). (At least 3 paragraphs: 1 per focus student and the entire class. 600-900 words)

2. What modifications or accommodations will you make for your two focus students and why? (100-150 words)

3. Describe the writing activity and why you selected that activity. (100-150 words)

After Teaching and Giving the Writing Prompt

After the lesson and writing prompt, you will analyze assessment evidence to explain progress and achievement towards learning objectives demonstrated by your whole class, subgroups of students, and individual students.

1. **Whole class**: In this section, describe and summarize the learning of the

   class based off your pre-assessment scores (the class set of the first draft of

   writing).

   ● What were the learning goals and the objective(s) of your lesson?

   ● Provide the qualitative data (the results of your pre-assessment scores (first draft of the students' writing).

     ○ Writing scores should be placed in a table and graph to represent the student scores.

     ○ Summarize what the table and graph inform you about your students' learning (i.e., the number of students who met the criterion based off the rubric). What evidence did you gather about the students' writing scores towards writing to the prompt or writing skill?

   ● Based off the writing score, what are 3-4 writing strategies you could work on with your class as a whole?

   ● (600 words maximum + tables, images, etc.)

2. **Focus Students:** Include an example of the two focus students' work (writing and

   rubric). Looking at the two focus students you selected with different learning

   needs and who need different types of accommodations and modifications:

   ● Explain why it is important to understand the learning of these particular students.

   ● Use what you know about the students and also the scores from the writing and their writing sample to draw conclusions about the extent to which these students attained the learning objectives from the writing lesson and prompt. Use samples of the students' work to support your answer. (250- 300 word limit per student)

   ● Based off the writing scores, what are 3-4 writing strategies that you could work on with your focus students [3-4 per student and strategies that you

could work on with your focus students (these should not be identical strategies)].

3. **Reflection and Self -Evaluation**:

- If you taught this lesson again, what would you change? Why would you change it? What is your evidence that it needs changing?

- What did you learn from teaching this lesson that will make you a more effective teacher?

Results

Teacher Candidate #1

Personal Narrative Writing Prompt Results

For this writing prompt assignment, TC #1 chose to have her second grade students focus on what they were thankful for while incorporating writing with detail, using complete sentences, and handwriting. After implementing the lesson, the TC released her students to write their narrative. She collected student writing and analyzed the results by displaying the scores in a graph (see *Figure 1* below). Additionally, she developed next steps and writing activities for future instruction for whole class as well as focus for particular students. Due to confidentiality of the focus students, only her results and analysis for the whole group are provided.
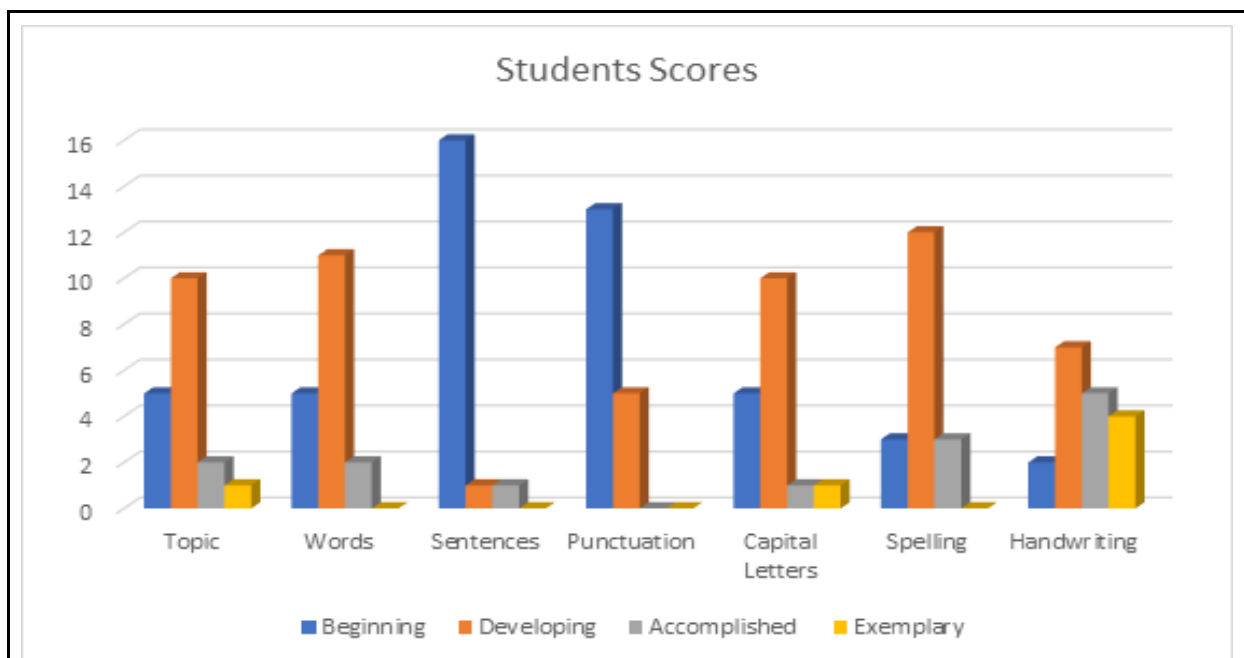
Figure 1

After scoring the students' writing based off the use of the rubric (see Table 2), TC#1 found her students struggled with accomplishing the expectations set for them. After assessing the students' writing, she found there were a small number of students who scored in the exemplary section of the rubric. Six out of the 18 students scored in the exemplary section of the rubric. The majority of scores were in the developing portion of the rubric.

Table 2

Second Grade Narrative Writing Rubric

	Beginning 1	Developing 2	Accomplished 3	Exemplary 4	Score
Topic	Key word(s) near beginning	Main idea or topic in first sentence	Sufficient main idea or topic sentence	Interesting, well-stated main idea/topic sentence	
Words	Related words or ideas mentioned	Some key words or related ideas included as details with meaning	Key related words and ideas used as details with meaning	Key related words and ideas used correctly; defined for reader; interesting choice of words	
Sentences	Sentence fragments	Mostly complete sentences	Complete sentences	Complete sentences; variety	
Punctuation	Some punctuation	Most sentences have punctuation	Correct punctuation	Correct punctuation and variety	
Capital Letters	Upper and lowercase letters are not distinguished	Uses upper and lower case letters	Begins sentences with upper case	Correct use of case for beginning or sentence, names, etc.	

Spelling	Many spelling errors	Some spelling errors	Few spelling errors	No spelling errors	
Handwriting	Hard to read; not well formed	Mostly legible	Well-formed letters	Neat, easy to read, well formed	

Based on student scores, TC#1 stated that writing strategies could be done in small groups or mini-lessons. For students who were in the accomplished to exemplary categories, TC#1 wrote,

> "I would challenge them to expand on their details by adding more descriptive words to their writing. I would have them explore the questions "who, what, where, when, and why" in their writings to add as much detail as possible."

TC#1 also reflected that students could work on revising their own writing without direct help from the teacher, or work in pairs. For the developing stage of writing, TC#1 stated the following activity would focus on providing student examples of writing with detail. "Students could highlight the topic sentence and the detail in the writing example." This would allow the students to see an exemplary example of what writing with what detail looks like. For the beginning stage of writing, TC#1 wrote how she could work in small groups and provide topic sentences and examples of supporting detail sentences. Students could take supporting detail sentences and sort them into the appropriate topic sentence.

Teacher Candidate #2

Personal Narrative Writing Prompt Results

For TC#2's writing lesson, his fourth grade students developed a personal narrative. Students brainstormed ideas before beginning writing, which focused on the topic of their choice and on the structure of the paper, including a topic sentence, transitions, and a conclusion. The use of grammar and punctuation were also part of the writing expectations. The TC collected student writing and analyzed the results by displaying the scores in a graph (see *Figure* 2). Further, he developed next steps and writing activities for his two focus students and for the whole class. Due to confidentiality of the focus students, only his results and analysis for the whole group are provided.
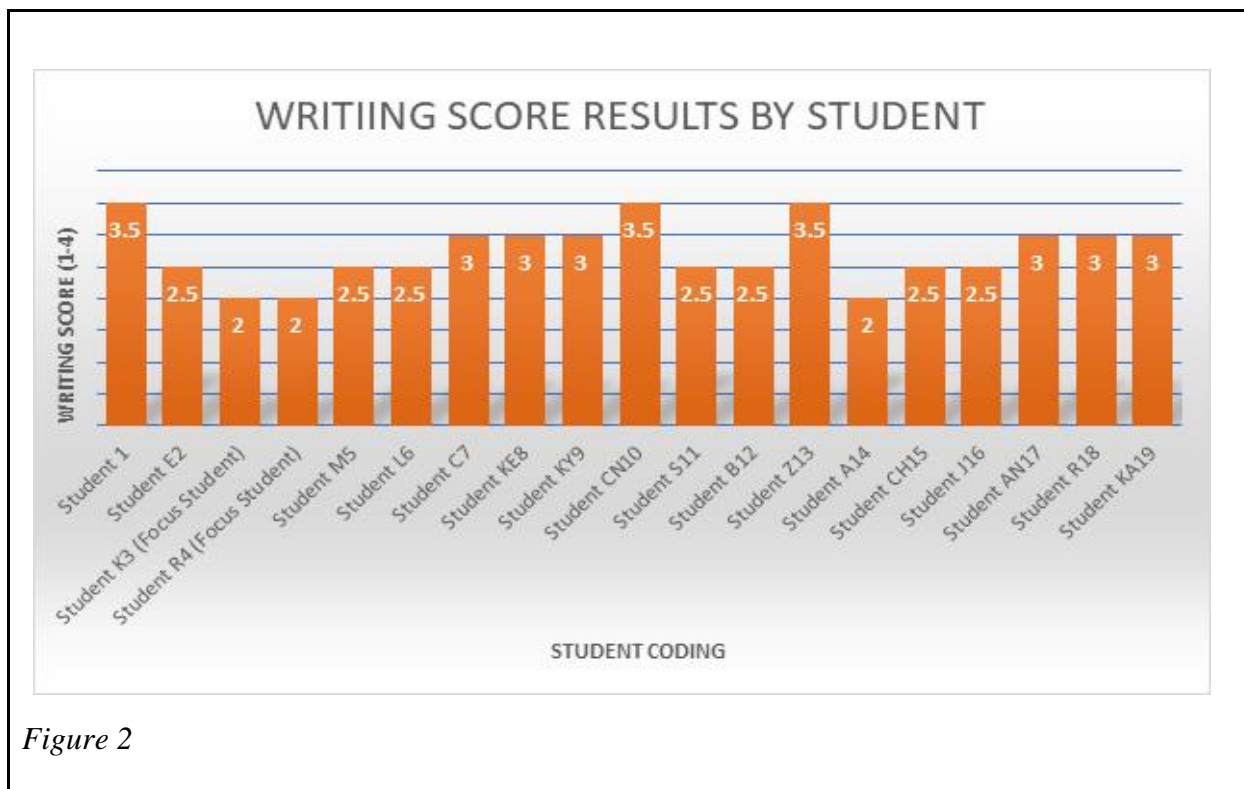
Figure 2

The data TC#2 collected from the personal narrative writing samples provided him insights on his teaching. TC#2 scored his 4th grade students' narrative writing using a rubric from StudyLib (2018) (see Table 3). When scoring his students' writing, he discussed how three students scored an equivalent of a 3.5. Six students scored an equivalent of 3 and seven students scored a 2.5. Out of the 19 students, approximately 47% scored a three or higher, while 43% of the students scored below a 3. TC#2 wrote in his reflection, "Data revealed to me that the students were split on how to organize and develop a narrative piece of writing."

Table 3

Fourth Grade Narrative Writing Rubric

4th Grade Narrative Writing	
*This is a snapshot of the 4th grade writing expectations as cited in StudyLib (2018). **The original rubric can be found at this link:** **https://studylib.net/doc/14318054/rubric-for-narrative-writing—fourth-grade**	
Overall	The writer wrote the important part of an event bit by bit and took out unimportant parts.
Lead	The writer wrote a beginning in which he showed what was happening and where, getting readers into the world of the story.
Transitions	The writer showed how much time went by with words and phrases that mark time such as *just then* and *suddenly* (to show when things happened quickly) *or after a while* and *a little later* (to show when a little time passed).
Ending	The writer wrote an ending that connected to the beginning or the middle of the story. The writer used action, dialogue, or feeling to bring the story to a close.
Organization	The writer used paragraphs to separate the different parts or times of the story or to show when a new character was speaking.
Elaboration	The writer added more to the heart of the story, including not only actions and dialogue but also thoughts and feelings.

Craft	The writer showed why characters did what they did by including their thinking.
	The writer made some parts of the story go quickly, some slowly.
	The writer included precise and sometimes sensory details and used figurative language (simile, metaphor, personification) to bring the story to life.
	The writer used a storytelling voice and conveyed the emotion or tone of the story through descriptions, phrases, dialogues, and thoughts.
Spelling	The writer used what he knew about word families and spelling rules to help him spell and edit. He used the word wall and dictionaries when needed.
Punctuation	When writing long, complex sentences, the writer used commas to make them clear and correct.

From the data TC#2 collected, he discovered several different strategies that could be used with the whole group. The first strategy he suggested was the use of small group instruction. TC#2 wrote, "I would use grouping because some of the students seemed to have a hard time organizing their thoughts individually." The second strategy he discussed was whole group instruction with explicit teaching. He also stated, "I felt as though I provided limited instruction as to what important details should be mentioned in a narrative story." The third strategy that TC#2 discussed was giving the students the opportunity to revise their first copy. He also suggested that conferencing would be implemented to help them improve on their writing. TC#2 did state that he had limited time to administer the writing prompt after his lesson and he did not have the opportunity to conference with each student within the allotted time frame.

Teacher Candidates' Personal Experience on Analyzing Student Achievement Data

Teacher Candidate # 1.

This candidate is a Caucasian female, currently completing her student teaching in a larger suburban school district. During her first semester senior year coursework and field placements, faculty were already noticing future leadership potential through her ability to use data to make informed decisions. Upon completion of this work, TC#1 provided a narrative depicting her data analysis process.

After completing the writing data analysis, TC#1 wrote, "I am more prepared and equipped for my future classroom. For my writing analysis, I chose for my students to write about what they were thankful for. Students listened to a read aloud, while getting the opportunity to answer questions based on the book. They then completed a graphic organizer, listing out six things they were thankful for. Once completed, students moved on to the writing portion of the lesson. The students had to choose one of their topics from their graphic organizer and expand upon it in their writing. Once completed, I scored and analyzed the data of the whole class, but more specifically for two students with different learning needs within the classroom. Through this process, I have learned how to evaluate my students' work to improve their learning through accommodations and modifications. By analyzing students' work, they [my students] will be able to make larger strides in their learning and writing skills, by reaching their full potential."

Additionally, she wrote, "Before completing the writing analysis, I was making educated guesses with my accommodations and modifications. I was basing my information off of observations and not facts or evidence. This meant my accommodations and modifications did not have a constant success rate, was not being implemented properly, or implemented with the wrong students. Through the analysis of my students, I was able to give them the appropriate accommodation and modification to fit their needs because of the factual evidence I gained. Analyzing the students' work allowed me to pinpoint exactly what they were struggling with in their writings, compare it to other classmates' work, and implement the correct accommodations and modifications. As a classroom teacher, this means I am allowing my students to learn in the best circumstances possible for their growth. This allows my students to also be given accurate accommodations and modifications to learn the best way their brain knows how, giving them the largest improvement in their writing skills in a shorter amount of time. There is a variation of learning and skill within a classroom and that will be the case when I have a classroom of my own."

"It is my goal to have my students reach their full potential on an individual level. Students reaching their full potential looks different for every student. Going into a classroom of my own, I know I am prepared as a teacher leader to facilitate and analyze all my students properly to implement the appropriate lessons, accommodations and modifications. This makes me feel confident that I am giving my students the best learning environment for themselves and their needs by allowing them to reach their full potential."

Teacher Candidate #2.

This candidate is a Caucasian male, who completed his student teaching in a smaller suburban school district. After completing the work in this first semester senior experience, this student expressed interest in possibly pursuing a role as principal at a later point in his career.

Upon completion of this work, TC#2 provided a narrative depicting his data analysis process. "During my senior semester in spring 2018, I completed the writing prompt assignment. Before completing the writing prompt with a group of 4th graders, I was not exactly sure what to expect from a 4th grade writer. I chose for the students to write narrative pieces so I could get an idea of each student and their imagination. I found that each student can vary in their writing ability especially when giving details within a narrative. Although after grading each narrative according to a 4-point rubric (provided by the classroom teacher), I noticed that there were quite a few students falling in between the 2 and 3 category. Grading each narrative was quite difficult for me as well as time consuming. However, I feel that all the time and effort I put into grading paid off immensely. Due to the fact I am student teaching in the same grade I administered the writing prompt with last spring, I have a better idea of what a proficient 4th grade narrative looks like compared to an exemplary narrative. Having a baseline set of writing to take into my student teaching was beneficial when working with the students on writing."

He further wrote, "As far as the data analysis project goes, I think that by having the opportunity to create such an extensive project really helped as far as reading student data in my student teaching semester. Going into student teaching, I was not sure how much student data I would have access to, but I soon found out that I had access to quite a bit. Analyzing student data can be difficult at times without having the right tools in hand, but I will say it is helpful knowing what each student is excelling/struggling with. Working with student data last spring, I have learned that a lot goes into planning and executing learning strategies to help each student. As a student teacher, I have worked with data in Math and ELA which has given me an insight as to how each student's performance affects them in the classroom. Student data is everything when working to improve student performance in any subject. The most important thing when using student data is all about how the teacher is able to read the data and how that teacher uses it for the benefit of the students."

TC#2 also discussed how this project connected to teacher leadership. "I feel as a first-year teacher it is important to bring any and all ideas to the grade level team/school, especially if those ideas are in regards to improving a student's education. Being able to read student data correctly can provide the teacher with various options on how to improve a given student within the content area they struggle. Having the opportunity to work with student data while in college classes and during student teaching has prepared me to be able to read data correctly and determine the best approach to help students. Once I have my own classroom of students, I feel as though I can bring my knowledge of reading data and help any student thrive in their educational career."

A Former Teacher Candidate Who is Now in a Teacher Leader Role

This former candidate is a Caucasian female, who completed her student teaching in an urban school district where she was later hired. As a former candidate, this classroom teacher was already displaying leadership characteristics. She developed a strong understanding of how to use student achievement data to make informed instructional decisions. Now a second-year classroom teacher, she provided a narrative depicting her experience with the data analysis process and her transition to a more active leadership role based on her understanding of data and the analysis for student learning (personal communication. December 11, 2018).

The second-year teacher wrote, "As a 2017 graduate of this Midwestern university and 2nd grade teacher in my second year of teaching at the elementary school under the leadership of my principal, I feel exceedingly fortunate for the experiences I have had in my professional career thus far. Being a part of the Midwestern university elementary education clinical pathway program was the first opportunity for my success as an educator. Through this program, I was able to partake in active, authentic learning. Beginning my junior year, I was placed in urban, suburban and rural classrooms. During my time in those placements, I had the opportunity to not only observe veteran teachers but lead small group lessons and co-teach alongside mentor teachers. I truly believe these experiences quickly and efficiently prepared me for my career."

"I was fortunate enough to work in the elementary building with my current principal and my cooperating mentor teacher for 1 ½ years for my required practicum before graduating. During this time, I was able to familiarize myself with the district and school policies, procedures, curriculum, students and their powerful data analyzation process. When I was hired on as a second grade teacher at this Midwestern urban elementary school, I felt more than adequately prepared to embark on my first year as an elementary teacher."

The former candidate discussed how the experiences helped her become a data team leader. "In my first year of teaching, I taught on the same grade level team as my cooperating teacher, whose role then changed to being my mentor. My principal provided advice, support, and a familiarity that was comforting. I held the role of data review team leader for my grade level my first year. Having observed the school's data review process previously, I was prepared to administer assessments, gather data, set student goals and have weekly conversations with my team to plan and drive our instruction."

"As I go through my second year of teaching, I feel confident and excited to take on the role of being a mentor to a teacher candidate from this Midwestern university. My experiences with the university, and at the elementary school has equipped me to evolve into a teacher leadership role. I look forward to sharing instructional strategies and classroom management techniques with a future teacher. I am eager to show them my passion for data analysis and help them see how purposeful planning can truly lead to student achievement."

A Principal's Perspective on How Analyzing Student Achievement Data Has Prepared the Teacher Candidate for the Classroom

This principal is a Caucasian female, working in an urban school district who partners with the university clinical program. She has been an educator for 16 years and has served as a principal for five years. This principal has witnessed growth from the above-mentioned teacher candidate from her junior year to her second year as a classroom teacher. She played an integral role in hiring this teacher as well. This principal (personal communication, December 8, 2018) provided her perspective on the transition into teacher leadership.

The school principal wrote, "I have had the great opportunity of working collaboratively with the Midwestern university, since 2014. Currently, my building is hosting our third group of juniors who will loop into their senior block at the elementary school, and who will hopefully student teach with us. Since starting our partnership, hiring high-quality, classroom-ready teachers has become easy. I have found that the teacher candidates from the Midwestern university, who spend time in my building, are better prepared to start their teaching career, compared to their peers who graduated from other universities. The teacher candidates can analyze student achievement data and collaboratively make decisions about instruction based on those data. They can contribute to planning and have meaningful conversations about teaching and learning. The graduates from this Midwestern university I have hired, who spent time during their junior and senior blocks, have transitioned into teacher leaders in my building more quickly than their peers."

The principal also stated. "Teachers who are teacher leaders have applied for and been intentionally selected to serve in that capacity. Teacher leaders attend additional professional development provided by the district, as well as professional development I provide. They help plan and implement all building-level professional development. Additionally, they serve as mentors to new teachers. The mentor role includes coaching, observing and providing feedback, and being observed by their mentee. This happens at least once per quarter, or more if requested. I expect all teachers to be professional and on their "A" game, however, teacher leaders exemplify what I expect from all staff."

Discussion

When reviewing the writing prompt data analysis from TC#1 and TC#2, both teacher candidates were able to organize their student data in a graph and were able to interpret the results to make informed instructional decisions. Opportunities for teacher candidates to analyze student achievement data prepare them for a classroom position as well as a teacher leader role. From the experiences in the coursework, TCs can transfer what they learned about the importance of assessments and data analysis and carry this into their future teaching career. These early experiences with data analysis allow the TCs to connect their learning to the school district's data cycle. Once in a permanent teaching position, TCs with early experiences working with authentic data, find it easier to transition to leadership roles. It is through the authentic process of data collection and not "fake" data provided in the university classroom, that allows TCs the opportunity to dissect and process results in a meaningful way. By collecting and analyzing data

for the purpose of driving instruction, TCs see and understand the value placed on assessment through their lesson implementation and planning of next steps based on data they collect. TCs are able to adapt teaching and rely on strategies to support learning based on evidence rather than trial and error. These authentic experiences working with data, along with the support of university instructors and cooperating teachers prepare TCs for future career leadership roles and best teaching practices.

Based on reflections from the former TC in her second year of teaching, it is clear to see how the early preparation and support from university instructors and cooperating teachers provide relevant and appropriate opportunities to work with data, preparing TCs for an active role in leadership. By collecting data and learning the steps with appropriate supports, TCs gain personal understanding of the data collection and analysis process as well as develop artifacts from their work to review later in their own classrooms. These artifacts serve as reminders of how they learned the process and can guide future data analysis. These TCs can then feel confident in their first years of teaching and assume the role of teacher leader earlier and more efficiently than their peers without these purposeful experiences. When principals hire new teachers, they feel confident knowing the teacher candidate was provided opportunities to analyze student achievement data and to generate instructional decisions from the collected data.

Limitations

Limitations to this action research included a small sample size. Another limitation was the time each of the two candidates were in the field, which was two days a week. Each TC was given one or two days to complete their writing prompt with the students. Increased focus is sought on preparing teacher candidates to analyze the data to take it to the next level, which is immersing TCs on how to differentiate instruction to meet the needs of diverse learners.

Implications for Practice/Next Steps

In considering next steps, it is important to follow TCs through the junior semester into the student teaching experience where they have the continued opportunity to use a reliable assessment tool. This step is essential in order to determine the growth through time that the TCs may have gained in their understanding of how to analyze student achievement data. Comparing TCs' growth for two-to-three years would provide insights on teacher candidates' ability to analyze student data while also allowing the college instructor to use the results to tailor the instruction. Creating other opportunities for TCs to analyze student achievement data across the content areas, such as math, would be of additional value. To extend on this research study where TCs focus on a small unit of instruction, a benefit for the program and TCs, would be to provide the opportunity to teach a full unit of study in a content area such as math or communication arts prior to student teaching. This would benefit the TCs because they would pre-assess and post-assess the skills taught. Providing the TCs this opportunity could help those who find it challenging to interpret and analyze student data. In return, this field experience would afford the college instructors, mentoring teachers, and principals the opportunities to work side-by-side with the TCs to ensure preparation for student teaching and career leadership.

Conclusion

Preparing new teachers for the classroom is no small task. From the time teacher candidates begin their junior to their senior levels, college instructors cover several areas: classroom and behavior management, instructional strategies, lesson and unit plan development, understanding the purpose of assessments, writing assessments, and analyzing student achievement data, which all connect to support emerging classroom teacher leadership. Xu and Patmor (2012) stated, "Developing teacher leadership skills in both in service and pre-service teachers is important enough to sustain school improvement and student achievement that it must be actively incorporated into training programs for those… preparing to teach" (p. 4). In some regards, the college instructor is the instructional coach each semester who has a responsibility to continuously reflect and provide course modules to develop effective teacher candidates who are ready to assume the role of classroom teacher leader.

The work of preparing TCs to analyze student achievement is typically done in isolation. Authentic experiences embedded in field placements remain necessary for active and purposeful learning. The partnerships with each school district and the schools within each district remain critical to the program outcomes, ensuring that all TCs receive support at all levels of their learning. The most beneficial learning occurs when TCs are immersed in the field working side by side with mentoring teachers who are willing and able to help prepare them for becoming teacher leaders who can use achievement data to meet the needs of students in the classroom.

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Teacher Perceptions of Gender Roles, Socialization, and Culture During Children's Physical Play

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Abstract

Play involves activities promoting children's development in physical, social, emotional, and cognitive domains (Dewar, Servos, Bosacki, & Coplan, 2013). The existing literature describes ways in which teachers' perceptions may influence children's emerging gender roles during physical play. This paper describes teachers' perceptions of children's gender roles and the relationship with physical play. A teacher's potential influence on emerging gender roles during physical play is discussed.

Keywords: Physical play, gender, early childhood education, preschool

Introduction

Physical play in young children's daily activities can be defined as "any body movements produced by the skeletal muscles and that results in a substantial increase over the resting energy expenditure" (Reunamo, Hakala, Saros, Lehto, Kyhälä, & Valtonen, 2014, p. 32). Logue and

Harvey (2010) describe how opportunities for physical play in early schooling often contribute to children's brain development, while improving social skills during later years. It is relevant to explore how early childhood educators can help their students to develop socially in regard to physical play and emerging gender roles. For instance, when these educators support active, physical pretend play, such as "running, chasing, climbing, playfully wrestling, grabbing, kicking, and tumbling," they contribute positively to children's social behavior (Logue & Harvey, 2010, p. 34). Through socialization with their peers during play, children develop behaviors, interests, and personality traits.

In addition to social experiences, children's cultural and ethnic backgrounds effect gender role expectations (Servos, Dewar, Bosacki, & Coplan, 2016). Teachers' understanding of the ways that children's home life influences their choice of gender roles becomes important. Servos et al. (2016) found in the culture of some families, boys demonstrate empowerment as girls take on subservient roles, especially during physical play in preschool settings. It is critical teachers of young children create a range of learning environments wherein physical play affords flexibility regarding gender role learning and development.

Educators create environments that support both boys and girls in choices about gender that lead to opportunities for social, emotional, and cognitive growth. By achieving this goal, early childhood educators use play to help children make sense of their gender roles. Thus, the purpose of this paper is to explore how preschool practitioners perceive children's gender roles as influencing their physical play.

Physical Play Defined

Child's play is an experience in socialization that supports physical, emotional, and cognitive development in boys and girls. Physical play is a typical form of child's play, occurring during the preschool years. In terms of a muscular perspective, physical play comprises movements, which are classified as gross motor skills (Reunamo et al., 2014). Examples of gross motor skills include running, throwing, and chasing; gross motor skills differ from fine motor skills, like writing and drawing. It is critical educators help children to achieve basic motor competence with fundamental motor skills (FMS) development. Reunamo et al. (2014) explain, "FMS are movements intended to gain or maintain balance, transport the body from one point to another and impart force to or receive force from an object" (p. 32). Through active physical play, children learn to support their physical well-being as a whole.

Physical Social Orientations

Physical play dictates children's physical orientation. Referring to children's personal choices and production of activities during play, physical orientation concerns the transition of a child learning to play alone to engaging in group play (Reunamo et al., 2014). Physical play demonstrates the potential to improve children's social skills. Because children learn during play, they indicate capacity to build their inner selves. Inner self refers to children's understanding of themselves, their needs and feelings "who they are, what they know and how they feel" (Reunamo et al., 2014, p. 34). In addition, participation in physical play in early childhood education contributes to societal trends, such as safety, weight management, and active lifestyles

(Reunamo et al., 2014). Furthermore, physical play links to short and long-term consequences of social prowess or competence. According to Colwell and Lindsey (2015), play becomes a reflection of a child's competence with peers and a direct cause of skill building that leads to positive relationships.

Play orientation affords children with the ability to perform socially. Colwell and Lindsey (2015) noted that some children experience "improvements in peer interaction skills following play training" (p. 497). These dynamics suggest the relationship between physical orientation and social competence among boys and girls. In play, boys and girls evidence different play preferences. For example, girls tend to engage in play activities involving soft animals and dolls; they depend on oral interaction, such as drama, while boys usually engage themselves in play activities involving aggressive play and physical interaction, such as superhero play and playing with action figure toys. Colwell and Lindsey (2015) suggested that the primary reason for gender segregation in children's play is the boys' orientation for dominance and competition and their preference for rough-and-tumble play. Colwell and Lindsey (2015) further report, "These aspects of boys' interactions are aversive to girls, whereas boys find playing with girls less interesting than playing with other boys because girls do not respond to boys' bids for rough-and-tumble, or competitive, play" (p. 498). By observing children's choices for play orientations, it is possible to gather information about their social skills. This allows educators the opportunity to plan for and direct beneficial play activities that improve peer relationships among children of both genders.

Social Characteristics and Gender

The gender effect influences social characteristics of physical play experiences. Through observations, Colwell and Lindsey (2015) describe how, for some preschool children, it appeared they were more liked by their peers during same-sex physical play. Additionally, teachers, who observed the children who played with same genders, tended to believe those children exhibited higher levels of social competence. These data suggest some evidence that same-sex physical play is associated with same-sex peers' acceptance; these findings indicate same-sex physical players may also improve social competence. In contrast, playing with mixed-sex peers during physical play was related to less peers' approval, which provides fewer opportunities to develop social competence (Colwell & Lindsey, (2005).

Next, it is important to discuss the issue of gender-stereotyping, which occurs frequently in the social environments of preschools. Keller (1986) defined gender as "what a culture makes of sex" (p.172). Gender stereotypes refer to a cultural categorization for people based on their biological sex and, consequently, assign the roles and assumptions about how they should look, interact, behave, and even play according to their sex. In Chapman's (2016) case study, data described how teachers remain instrumental in creating social environments that "do not implicitly or explicitly encourage gender stereotypes" (p. 1271). As gender is often defined as a social aspect of feminine and masculine types, it affects boys and girls in different ways. Utilizing a feminist poststructuralist approach (Blaise, 2005), Chapman (2016) sought to determine if preschool teachers' perceptions about gender influenced the nature of play. She described many ways teachers' perceptions showed relevant effects on play; she declared,

>The educators' perceptions emerge, and are thus transferred to the children, through their program planning, resources offered, feedback provided, general interactions with other educators and the children themselves, and, most significantly, the amount of facilitating and involvement in the children's play (p. 1280).

Research findings indicate that during play, there exists a relationship between social characteristics and gender roles. Additionally, the literature suggests the influence of early childhood practitioners as both establishing and observing the relationship between children's gender roles and their physical play activities. Finally, studies show teachers notice how play may change due to gender roles and stereotypes (Chapman, 2016). By providing a range and variety of inclusive physical play events, early childhood educators affirm children's natural gender role learning and development. For example, preschool teachers design lessons incorporating play that focuses on the individual child, and not his or her sex (Chapman, 2016). Consequently, children develop and understand gender role as a result of the social environment and those individuals who participate.

Preschool Children and Gender Roles in Physical Play Environments

The play spaces, such as playgrounds, provide children with opportunities for gender roles. For instance, Conry-Murray (2013) found children exhibited gender-atypical experiences in different educational settings, preferring to experience opposite gender roles in their activities and gender expression from what is typically a cultural expectation. This finding may also indicate how a child's learning environment can pressure him or her to adopt traditional gender norms. Moreover, the Conry-Murray (2013) study "examined the question of whether young children consider the context and personal preferences when judging whether people should adhere to gender norms" (p. 211). Thus, preschool children balance concerns about gender roles in physical play, which hones their reasoning skills across different educational settings (Conry-Murray, 2013). Consequently, there exists many variations in preschool boys' and girls' involvement in gender-typed activities. For example, one cause of variation is the social situation in which a boy or girl may play with a same-sex peer, opposite-sex peer, or interact with a teacher. This social situational variation influences the rate of children's engagement in particular activities. Goble, Martin, Hanish, and Fabes (2012) conducted a study to identify children's gender-typed activity choices related to preschool, physical play. These researchers noticed that children's choices reflected their gender role as well as their identity when they play with the same-sex peers or alone. This finding indicates children's social interactions with peers and teachers help to expose them to a wide range of physical activities which involve gender-typing and gender differences.

Play Themes

By observing differences in play environments, early childhood educators can see the variety in gender-stereotype of play themes in which children engage. For example, Änggård (2011) focused on children's gendered and non-gendered play in natural play environments. Ethnographic data revealed four different preschool play themes—war and superhero, family, animal, and physical. These themes reflect ways children develop their understanding of gender

role during play activities. For example, gender role differences appear across play themes, such as rough and tumble play (R&T). "R&T play is a form of play that is both social and locomotive, and it co-occurs with pretend play, which is parsed into two categories: thematic fantasy play and social dramatic play" (Storli & Sandseter, 2015, p. 2004). Boys are more apt to engage in pretend roles typified by superhero play involving play fighting, jumping, and running. Boys and girls display contrasting behaviors often on the playground. For instance, boys tend to react physically as opposed to verbally when compared to girls. Physical behavior is then channeled into improved social competence, self-regulation, social problem solving, and trust (Hart & Tannock, 2018). Wohlwend (2012) described critical sociocultural perspectives regarding play, literacy, and gender role as social practices.

Findings involving princess play, a Disney-created activity that features masculine and feminine characters, (Wohlwend, 2012) suggest how boys and girls practice with the princess play texts correlated to gender role expectations in children's play. Data indicate boys and girls chose to play the characters that are compatible with the cultural assumptions and show their gender construction for their gender roles as male and female. This finding leads one to compare and contrast different forms of play as well as to consider a variety of environments with differing themes. For instance, Giraldo and Colyar (2012) investigated gender roles within the classroom. Using qualitative research, Giraldo and Colyar (2012) examined the effect of teachers' practices on the construction of children's gender identities. After observing and using teachers' case studies, the researchers suggested a connection between teachers' practices and interaction, and the handling of gender-stereotyped situations. These findings indicated how teachers' interactions affect young children in early childhood. For example, teachers who used inclusive gender language and inclusive gender practices promoted neutral teaching environments. They helped to create the impression both genders can be involved in similar activities in their classrooms. They also improved their students' ability to express themselves freely without fear of discrimination. In contrast, teachers, who used gender-stereotyped language and interacted differently with boys and girls, supported gender segregation and stereotypes in children's interpersonal relationships and interactions with one another. Importantly, play themes reflect vigorous behaviors that allow children to explore and develop gender roles. Rough and tumble (R&T) play is a frequent activity among preschool-aged children, particularly with boys. This play theme enhances children's social competencies and it provides practice for skill building (Storli & Hansen Sandseter, 2017). Many researchers find that gender roles influence both teachers and students during R&T play (Colwell & Lindsey, 2015; Goble et al., 2012; Logue & Harvey, 2010). For instance, gender differences among teachers can impact the way they perceive play themes, like R&T play (Storli & Hansen Sandseter, 2017). Many studies demonstrate male teachers as more positive and as more willing to allow children to engage in R&T play than female teachers who look at this kind of play as aggressive and fostering violence (Logue & Harvey, 2010; Sandberg & Pramling-Samuelsson, 2005; Storli & Hansen Sandseter, 2017).

On the other hand, children take on different gender roles based on the nature of play themes. For example, between the ages of two and six years, boys tend to engage in physical play, such

as R&T, and they often avoid playing with girls who engage in feminine activities, such as playing with dolls or using kitchen materials (Servos et al., 2016).

Thus, by interacting with adults and peers representing different gender roles, preschool children learn to represent their gender identities while participating in a variety of play themes. They tend to internalize and imitate the roles the adults and same-sex peers perform during their interaction with others and bring this understanding of role into their play.

Play Culture, Gender, Environments, Social Competence and Culture

Play Culture. The culture of play among young children affects their preferences of play type because culture permeates every human activity including play. Børve and Børve (2017) describe how culture is ingrained in all play activities. For instance, the culture of rural South American Indian society encourages boys to play by using bows and arrows because this kind of play enhances children's hunting skills. However, this kind of play in other cultures may be considered a form of violent play. Therefore, play differs across cultures based on cultural beliefs and lifestyles. As a consequence, cultural gender assumptions and rules about how to act as a male and female effect gender roles and preferences even during play.

Physical Environments. Børve and Børve (2017) focused on how physical environments influence the construction of play activities according to gender role expectations. For example, these researchers noticed that during indoor play, rooms and zones signal to the children what materials to use, what gender role is expected, and what activities should occur (Børve & Børve, 2017). The play culture of children is greatly affected by their physical environment. Play culture is a socially constructed concept that comes about when children mingle with adults and their peers within a certain physical area. For instance, Børve and Børve (2017) described how boy's play was noisy, required more attention, and used larger spaces compared to that of girls. Additionally, data show the physical presence of adults and role models in the physical environment also significantly effect children's play. Therefore, children's play practices become influenced by gender and require different physical space guidelines.

Social Competence and Gender. As children learn how to actively play in a culture that supports learning, establishes goal setting, and develops peer competence, their social abilities tend to improve. Accordingly, relevant data exist describing play and gender's effect on children's social and peer competencies. Colwell and Lindsey (2015) looked carefully at how preschool children's pretend and physical play in same-sex, opposite-sex, and mixed-sex peer settings affected their attainment of competencies. Their results indicated the connection between play form and social competence is determined by the child's sex and gender orientation. Thus, a culture of play contributes to preschool children's social development and the effects of gender role on their preferences during play.

Gender Role and Culture. Gender roles and cultural norms affect the way teachers perceive play activity and gender roles among their students. Data describe how children learn while adults direct them to play offering education via gendered role modeling. This is achieved when adults share cultural meanings and demonstrate cultural objects (Servos et al., 2016).

Teacher Perceptions of Gender Role and Physical Play

By observing young children's gender roles, patterns, and differences, early childhood educators perceive ways to elicit student learning as a result of physical play. For example, using early childhood professionals' understandings, Ärlemalm-Hagsér (2010) examined gender choreography and micro-structures. These teacher-participants represented different understandings about teaching play from gender perspectives (considering gender identities, gender schema theory; Bem,1993), and "doing gender" (Ärlemalm-Hagsér , 2010)**.** Using early childhood professionals' understandings, Ärlemalm-Hagsér (2010) noted teachers tended to focus on socio-cultural perspectives of children's play. "Doing gender" involves allowing children to explore their gender identities through activities that specify gender roles, especially on the playground. Further, many teachers perceived outdoor play involves gender-neutral situations, while other teachers instruct play activities from a gender-blind perspective**.** Gender neutral refers to the type of situations that do not classify or treat people differently according to their sex. Gender-blind refers to the practices that reinforce gender inequality and gender differences. Other researchers investigated how male and female preschool teachers' perspectives about play and gender differences were alike or different. Sandberg and Pramling-Samuelsson (2005) observed the attitudes of preschool teachers and discussed there is a difference in the play willingness of male and female teachers. This study indicated more male teacher playfulness with young students during play than female teachers. These studies emphasize how preschool teachers share diverse perceptions as a result of their own gender roles and the gender roles of their students.

Cultural perspectives of gender roles also affect teacher perceptions of play and their students' gender role behaviors. Servos et al. (2016) discuss how children become exposed to gender dynamics which follow the cultural expectations of gender roles. This exposure shapes children's attitudes and beliefs about gender expectations later in life. Many researchers find that early childhood educators tend to represent unique ideas about the way preschool children react to gender role expectations during school activities, like play (Chapman, 2016). Granger, Hanish, Kornienko, and Bradley (2017) discuss how most teachers' perceptions regarding gender roles and play follow rigid cultural notions describing what constitutes masculinity and femininity. Teacher perception research allows educators to not only look at their students' behaviors, but also to consider their own attitudes about gender and culture (Giraldo, & Colyar, 2012). Chapman (2016) asserts the critical importance for teachers to identify their own gender role biases before they can begin to transfer these values to their students. In this way, teachers view gender role as a nuanced rather than a binary construct that is dependent on multiple dimensions of identity influenced by factors like religion, sexuality, social class, and ethnicity (Chapman, 2016). "Building on past research suggesting that educators' gender identities and gender orientations may play a role in how gendered issues are managed within the classroom setting," many findings pinpoint the importance of teachers' professional development (Dewar et al., 2013, p. 381). Therefore, in order to promote the well-being of children, teachers gain knowledge of how gender role expectations and cultural norms effect ongoing gender role learning and development.

Feminist Perspectives

Theoretical Concept. From a feminist standpoint (Blaise, 2005)**,** there is a growing trend to observe early childhood education, particularly in relation to children's play and gender role development. De Lair and Erwin (2000) describe how feminist perspectives offer key insights into the constructs of "race, ethnicity, social class, gender, and sexual orientation" (p. 154). As this current literature review centers on teachers' perceptions of gender roles and physical play, applying feminist perspectives is a prudent choice. This perspective uses feminism as a philosophy in which society is male dominated, causing women to become under acknowledged and to evidence less societal power (De Lair & Erwin, 2000). In a classroom setting, teachers with a feminist perspective apply this perspective to instructional practices to benefit children's views of society.

It is critical to assume the idea of many voices. According to De Lair and Erwin (2000), these voices reflect the differences in teachers and students' social and cultural backgrounds. When early childhood educators demonstrate feminist perspectives, they may help children to become empowered. De Lair and Erwin (2000) claim,

> Feminist ideas provide a way to fill in the gaps left by the traditional
> curriculum, a foundation for moment-by-moment decisions in the classrooms,
> a unique framework for examining the influences of gender, ethnicity, language,
> culture, social class, and sexual orientation, and validate the affective experience of
> children and professionals who have experiences outside dominant culture (p. 167).

Thus, the factor of multiple voices espoused by feminism can inform teachers' perceptions of their students' activities, such as play.

To be clear, the benefit of observing early childhood education data through feminist perspectives helps to illuminate gender concerns, such as inequality and male dominance. This means, teachers become responsible for forming and justifying best practice guidelines (De Lair & Erwin, 2000).

Generating from an understanding of feminist theory, the concept of patriarchy "pervades western culture, extending into the seemingly fun spaces of children's play" (Prioletta, 2019, p. 2). Preschool teachers may be unaware of gender-related inequalities during play. Prioletta (2019) found that relying on child development helped to adjust gendered power dynamics through a critical feminist theoretical lens. A teacher examines dominant cultural structures in preparing play environments. Teachers in Prioletta's (2019) research study described how they noticed gender power imbalances during play in which girls continued to navigate boys' domination.

By considering the socializing context regarding gender role expectations, the teachers in Prioletta's study made statements, such as: "I think [the boys] are just being themselves. I think they're just more physical. They use actions…Girls are a lot softer and more mild-mannered and they're not as aggressive as the boys are" (2019, p. 6).

Lastly, one of the major principles of feminism is for early childhood professionals to empower their students. De Lair and Erwin (2000) emphasize how it is integral for preschool teachers to allow their students to express their thoughts and feelings, especially during play activities, which are impacted by the media and dominant society. Hence, according to feminist views, these children begin to challenge conventional gender norms, such as boys not playing with dolls. The goal of De Lair and Erwin (2000) is to show the importance of meaningful, social relationships during preschool play that represents an inclusive community. In doing so, children become empowered to collaborate and share experiences in gender equitable surroundings.

Conclusions and Implications

When teachers understand the relationship between gender roles and physical play, they improve instructional activities, broaden materials, and ensure flexibility. A major implication is the determination of how to provide opportunities for effective physical play in children's development of gender identity and orientations in a preschool context (Reunamo et al., 2014). Physical play provides a range of learning supporting social, physical, and cognitive experiences. The knowledge of children's gender-typed activity preferences supports teaching practices, which empower student growth and learning (Goble et al., 2012). Hence, it is clearly necessary for preschool children to experience learning situations in which they "do gender," developing gender identities and exploring gender roles without being gender stereotyped. Furthermore, it is critical for future research to focus on preschool, physical activities and their effect on children's assumptions regarding play and gender. With training and study, educators develop curriculum and instruction that improves gender equality for children on the playground. As Prioletta (2019) asserts, "{the}concept of feminist pedagogic gaze may afford early learning practices and future directions for research" to develop and benefit early childhood education (p.1).

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Teacher Practices, Time for Physical Activity, and the School Day: A Preliminary Analysis

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Abstract

Existing data describe the positive relationships across children's play/physical activity, mental wellness, physical health, and intellectual success (Carter, 2016; Crnic & Kondo, 2019; English 2019; Tomporowski, Davis, Miller, & Naglieri, 2007). This current mixed-method study identifies ways in which classroom teachers describe implementing physical activity and play

opportunities during a typical school day. Classroom teachers (N = 511), pre-k through sixth grades, completed surveys identifying the types of play and physical activities (recess, games, movement) they implemented during the day, the time allowed for each type of experience, use of software to support the movement, and training associated with physical activity and play. Data describe teachers' pervasive use of GoNoodle as an activity break during the school day. These findings support previous research demonstrating a concern for children's outdoor recess time. Implications describe how teachers' lack of adequate training may undermine children's developmentally appropriate physical activities and play experiences. Authors discuss the potential of these data in planning for children's long-term physical and mental health and well-being.

Keywords: physical activity, recess, play, children's well-being, teacher planning

Background and Introduction

The premise for the current study is that appropriate physical activity and play significantly affect children's health, wellness, and academic learning (Motta, McWilliams, Schwartz, & Cavera, 2012; Pellegrini, 2005; Tomporowski et al., 2007). In spite of the data-driven and standards-based public-school arena, ensuring appropriate physical activity and quality play remain integral for children's holistic learning and development (Motta, 2018; NASPE, 2013). During the school year, children spend more than one thousand hours of their time in a classroom. These waking hours for children's learning and development become substantive in framing how they make future choices. Choosing to be inactive is a choice and leads to long-term harmful effects in adulthood (Booth, Roberts, Thyfault, Ruegsegger, & Toedebusch, 2017; Motta, et al., 2012). Physical activity is positively holistic and evidences far more benefits than what can be seen as merely a cathartic event or as means to winning a competitive game. Instead, physical activity is the natural way in which the body stimulates, supports, and changes body functions. Appropriate physical activities, in combination with current nutritional guidelines, evidence the potential to nurture children's long-term health and wellness (Motta et al., 2012; Pellegrini, 2005; Tomporowski et al., 2007).

In order to provide data to plan for the implementation of appropriate physical and play activities into the daily school routine, this study identifies the range and duration of different types of physical activities used by classroom teachers and describes teachers' practices to consistently include physical activity throughout the daily schedule. Additionally, the authors consider the contributions of play for children's learning and development and discuss how both physical activity and play remain integral in contributing to children's holistic health and wellness.

Review of the Literature

Physical Activity

Physical activity is any movement causing muscles in the body to contract beyond what they would at rest, which is a state of inactivity (Office of Disease Prevention and Health Promotion, 2016). Physical activity contains two components: 1) *Baseline activity* requires less energy and occurs in activities such as slowly walking or standing; 2) *Health-enhancing physical activity*

requires more energy and is associated with events such as dancing, climbing on playground equipment, or brisk walking. When individuals exhibit a minimum of baseline activity, they are inactive and not considered as taking part in the adequate amounts of physical activity. Children who take part in sixty minutes of health-enhancing physical activity a day meet the recommendations set by the Office of Disease Prevention and Health Promotion (2016).

Health-enhancing physical activities include outdoor recess and 'break times' within the classroom. 'Break-times' refer to amounts of time distributed throughout the day to allow students a change of pace from the traditional assigned academic tasks. For example, indoor breaks may include jumping jacks, running in place, or moving to a video/recording. In many instances, teachers claim children need to "get their wiggles out" and therefore ensure an outdoor recess or break-time activity during the school day. For some educators, the underlying belief is by their providing time for recess, play, or movement breaks, children release pent-up and surplus energy and become better able to return to the academic tasks with renewed focus. It is true that through physical activity, children become refreshed and more attentive in returning to school day routine; it is not because children released surplus energy. Research does not provide data to support a "Surplus Energy Theory" (Evans & Pellegrini, 1997).

Physical activity is holistic and proactive and leads to enhancing specific components of mental processing in social and cognitive development. When children engage in physical activity, such as stretching, amounts of cerebrospinal fluid in the central nervous system increase. Additionally, physical activity produces neurotransmitters within the body that become natural motivators: noradrenaline and dopamine help increase retention of learned material and increase the likelihood the child will feel energized as they learn new material (Jensen, 2013).

One of the long-term consequences for children who do not regularly take part in physical activity is the possibility of becoming overweight or obese. Childhood obesity continues to be a leading public health concern for both healthcare professionals and school personnel (Burriss & Harrison, 2004; Center for Disease Control and Prevention, 2018; Frye, 2018). *Obesity rates* remain at approximately 18 percent for the last ten years; 14 percent of children (ages two-to-five years of age, enrolled in the program Women, Infants and Children (WIC), represent *obese categories*. Furthermore, findings describe how nearly one-third (31.3 percent) of children, ages 10-to-17 years, can be categorized overweight or obese; data also describe 13.9 percent of high school students as *obese (Center for Disease Control and Prevention, 2018, 2019a).*

Childhood obesity increases the risk of a multitude of preventable diseases including Type 2 diabetes, asthma, high blood pressure, cardiovascular disease, colon cancer, and arthritis (Center for Disease Control and Prevention, 2015a, 2018, 2019a, 2019b). The combination of poor health status and lack of physical activity significantly affects a child's long-term health and may lead to premature death (Center for Disease Control and Prevention, 2019a, 2019b). Carrel and Bernhardt (1996) indicate U.S. school personnel report a lack of training with regard to intervention and assert coordinating school efforts will diminish childhood obesity.

Physical activities include aerobic activity such as brisk walking or running. Critical for children's development, physical activity promotes muscle and bone strengthening. Informed

adults/educators cautiously implement "age-appropriate" activities. Human bodies develop at different rates depending on age and other factors. Some physical activities represent higher quality and more appropriately target physiological needs of individual children than others. For example, it is important children do not take part in structured muscle-strengthening programs such as weightlifting, which places strain on muscles. Instead, play activities (jungle gyms and tree climbing) build strength (Centers for Disease Control and Prevention; Physical Activity Guidelines, 2020). In addition to supporting physical development, physical activity supports children's mental health.

Mental Health

Mental health disorders do not only affect adults but children as well. Findings (Motta, et al., 2012; Oppizzi & Umberger, 2018) describe how exercise benefits students who might suffer from PTSD, anxiety, and depression. Physical activity provides benefits more so than psychotherapy and psychotropic medication because exercise is something children can engage during their natural daily activities (Motta et al., 2012).

During childhood, early warning signs for some conditions arise. These signs include mood, anxiety, and psychotic disorders such as depression, phobias, obsessive-compulsive disorders, bipolar disorder, and schizophrenia (The National Institute of Mental Health, n.d.). Children experience stressful and traumatic events which trigger emotions affecting their daily living. The National Institute of Mental Health (n.d.) identifies warning signs including:

> Frequently feels very angry or very worried, cannot sleep or eat, is unable to enjoy pleasurable activities, isolates and avoids social interactions, feels grief for a long time after a loss or death, uses alcohol or drugs, obsessively exercises, diets and/or binge-eats, hurts other people or destroys property, exhibits low or no energy, smokes, drinks, or uses drugs, feels as if not in control of emotions, thinks of suicide, harms self-such as cutting or burning, and/or thinks mind is controlled or out of control (p. 1).

Through outdoor recess, play, and movement activities, knowledgeable teachers plan times during the school day for children's physical activity. In support of children's holistic learning and development, it is critical educators understand the research evidence for the relationship between physical activity, play, and wellness.

A variety of research studies describe the diverse ways in which physical activities positively target the whole child (Burriss & Burriss, 2011; Carrel & Bernhardt, 1996; Center for Disease Control and Prevention, 2015a, 2015b, 2018, 2019a, 2019b; Donnelly, Hillman, Castelli, Etnier, Lee, et al., 2016; Jensen, 2013; The National Institute of Mental Health, n.d.). Despite the multiple contributions of physical activity toward children's holistic development, some school administrators perceive recess as lost instructional time and believe it is more important to focus on academic instruction (Pellegrini, 2005).

Recess

Throughout the United States, many school districts indicate decreasing the time for outdoor recess; diminishing time for recess and physical activity negate the relationship across physical

activity, recess, and children's wellness (Alexander, 1999; Burriss & Burriss, 2011; Kieff, 2001). As children continue to participate in an educational system requiring mastery skills in academics, there remains less of a focus for play and social activity. Reasons given for reducing recess time include high-stakes testing, liability issues, or stranger-danger (Burriss & Burriss, 2011). Recess provides children with opportunities and challenges not possible in the traditional indoor classroom (Stone, 1993). Outdoor recess allows space and equipment for children to engage in a range of different vigorous physical activities. Depending on children's ages, stages, and interests, outdoor recess promotes individual, small, and large group physical activity and play (Burriss & Foulks Boyd, 2005).

Play

Stone (2005) suggests teachers recognize free play is unlike active or outdoor learning. Free play helps develop cognitive, social, physical, and emotional skills that significantly affect the whole child. Play and games encourage children to apply their social cognitive skills to the demands of the game (Pellegrini, 2005). Schools can be the ideal environment for inviting, encouraging, and supporting children to participate in a range of play-generated physical activity opportunities.

Although play activities include categories referred to as "functional, constructive, dramatic, and games with rules" (Stone, 1993), for the current study, authors highlight the importance of "functional and games with rules." Functional play includes activities such as repeatedly running, jumping, or bouncing. The child moves merely for the pleasure of moving, and these gross motor activities may occur with or without interaction with objects. This play decreases as a child grows older, but when it can fully take place, children benefit with many opportunities for creative enjoyment (Centers for Disease Control and Prevention 2019a, 2019b; Stone, 1993; Stone, 1995). "Games with Rules" describe play which uses set boundaries of rules and regulations. Older children can think at an advanced cognitive level, understand directions, follow sequences, and regard rules. Older children can collaborate as a team-mate and know how to take turns. Younger children, not cognitively mature, will evidence difficulty in games that require following directions and turn-taking. It is common and appropriate for younger children to create their own rules for invented games. For example, an entire class may join in pretending to drive race cars as they run across the playground. Including sound effects, the children re-create the traditional running game of Follow-the-Leader (Stone, 1993). Additionally, children, particularly younger children, become associated with "rough and tumble" play (Reed & Brown, 2000). Through rough and tumble play, in addition to developing emerging respect for friends and an awareness of inappropriate players, children learn how to run with friends, fall appropriately, stretch arms and legs, and safely tumble. Rough and tumble play is most appropriate for children, and yet classroom teachers often perceive this play activity as inappropriate and potentially dangerous for children (Pellis & Pellis, 2007; Reed & Brown, 2000).

Educators, understanding what type of play is most appropriate for children's different ages and stages, become more able to prepare, monitor, and promote quality learning experiences (Frost, Wortham, & Reifel, 2005; Stone, 1993, 2005).

Children require adequate time to identify their play episode, choose play partners, and become physically active in their play; prior research describes at least 30 minutes essential to develop quality play experiences (Christie & Wardle, 1992). Through quality play, teachers provide physical activity for children and simultaneously support their learning, development, and adaptive functions. Play is an outlet for children; it allows them to express their feelings of happiness, worry, fear, or anxiety. Play affords children with opportunities to explore complex feelings in a risk-free and emotionally safe place (Stone, 1995).

In addition to physical, social, and emotional benefits, findings demonstrate gains to mental functioning in children related to exercise on tasks involving the use of executive functions (Tomporowski et al., 2007). Working memory, mental flexibility, and self-control reflect skills of executive control. Executive functions and self-regulation skills allow individuals to multitask, recall instructions, plan, and stay attentive. In order to learn these skills, children practice, rehearse, and apply the skills in a variety of situations. When developed, children and society benefit. It is crucial children participate in activities encouraging creative play and social connection. In addition to the benefits of physical activity, play experiences provide children with relevant opportunities to navigate stressful situations and assume control of their own actions (Centers on the Developing Child: Harvard University, 2016; Stone, 2005). Play and physical activity contribute toward children's physical, social, emotional, and intellectual well-being.

Physical Activity Alternatives

In addition to recess and play opportunities, teachers use apps and videos to plan for breaks and physical activity during instructional time. By using educational interactive learning apps and videos, such as GoNoodle (https://www.gonoodle.com/), teachers encourage children to become active. The vice president of GoNoodle believes that children are not receiving anywhere near their recommended daily sixty minutes of physical activity. Teachers in Knoxville, Tennessee, partnered with the health insurance company, Blue Cross Blue Shield of Tennessee, to launch the use of GoNoodle to aid in providing both brain and physical activity breaks for children. Children take part in a range of mini interactive videos, varying in length from three to five minutes requiring moderate to vigorous levels of activity. The videos also include learning materials teachers may easily incorporate into their lessons. Teachers describe how this type of program helps with classroom culture; student's seat-time diminishes, and participation increases in activities that promote engagement and focus (Knoxville New Sentinel, 2015).

To prepare environments that most effectively support children's holistic learning, educators plan for both physical activity and quality play experiences. Informed educators understand the human body requires physical activity to learn and develop. As teachers plan their daily schedules, they intentionally find times for a range of physical activity as well as incorporate play opportunities. On behalf of learning and development, in order to maximize time and effort, it is incumbent upon educators to understand the potential range of physical activity and play events and determine how to most appropriately integrate on behalf of children's different ages and stages.

Method

This mixed-method study asked classroom teachers to describe how often and in what ways they planned for physical activity during a typical school day. Specific research questions identified times in the school day set aside for recess, play, and physical movement activities. Rationalistic survey data and open-ended narratives describe teachers' practices and times allowed for different physical activity experiences.

Participants and Instruments

Teachers in three school districts (23 schools) in an urban area in the Southeastern United States received a 13-item survey. Central offices for each district forwarded the surveys to individual schools whereby school-staff disseminated surveys to individual teacher's mailboxes. A cover letter explained the researchers would return to the school to collect the anonymous completed surveys. In addition to the school districts, researchers distributed surveys to teachers enrolled in graduate courses at a university in an urban area in the southeastern United States. Researchers distributed 867 surveys, with a 58.9% return rate (N=511).

Analysis

Researchers used descriptive statistics to establish an initial baseline to describe how teachers incorporated physical activity and play during the school day. Data described additional ways teachers identified other forms of physical activity.

Using the SPSS 22.0 statistical package, results provided frequencies and categories; a constant-comparative approach (LeCompte & Preissle,1993) interpreted teachers' open-ended narratives. For the qualitative analysis, two researchers independently read the teachers' open-ended responses and identified participants' similarities. Then, they jointly read the responses and discussed and shared coding strategies and, using participants' phrases, identified category names. Finally, researchers read through the narratives to identify discrepancies. For this last layer of analysis, researchers compared the quantitative analyses and narrative data sets to discover any inconsistencies.

Results and Discussion

Participants included teachers in grades K – sixth. Teachers included both male and female with an age range from 21 to 53+ as indicated in Table 1.

Table 1: Grade Level by Teacher Gender, and Teacher Grade Level by Age

Grade Level	Gender				Age			
	Male	Female	Other	Total	21-31	32-52	53+	Total
Kindergarten	1	79	3	83	29	48	5	82
Primary	0	16	--	16	6	7	3	16
First	1	71	--	72	22	42	7	71

Second	4	75	--	79	33	37	8	78
Third	4	72	--	76	40	31	6	77
Fourth	5	52	1	58	19	37	2	58
Fifth	2	48	--	50	11	34	4	49
Sixth	1	6	--	7	1	5	1	7
Other	2	8	33	43	1	5	1	7
Total	20	427	37	484	162	246	37	447

The following data in Table 2 revealed participants reported a range of planned daily physical activities. Teachers' data generated the following categories: (a) physical activity (n=376), (b) games (n=96), (c) play (n=6), and (d) other (n=76).

Table 2: Types of Physical Activity as Described by Teachers

Physical Activity	376
Play	6
Games	96
Other	76

Table Note: These numbers total more than N= 511 due to multiple responses.

In categorizing the hundreds of teachers' responses identifying the types of breaks allowed for children during a typical school day, "Physical Activity" occurred 67.9 % of the time, but "play" only 1.1 %. These data clearly indicate classroom teachers do not consider play as potential for children's physical activity. It is true not all play suggests physical activity, but an understanding of play does identify play as a viable alternative for physical activity (running, some games, jump ropes, some ball activity).

It is interesting to note that of the 359 written responses, 182 (50.6 %) referred to GoNoodle. This level of descriptions of using GoNoodle may indicate some confusion regarding the definition of "physical activity." The exploratory parameters of the current study did not provide

a way in which researchers may identify teachers' GoNoodle preferences. For this reason, it is uncertain whether the GoNoodle videos used by teachers involved vigorous physical activity (jumping, dancing, kickboxing) or, in contrast, provided children with minimal to moderate movement. A concern regarding minimal activity is not to negate the potential use of some GoNoodle videos as "brain breaks" from the routine, but a caution is that not all videos contribute to the 60 minutes of daily vigorous physical activity as recommended by the Center for Disease Control and Prevention (2019a). Additionally, it is critical to understand indoor physical activity breaks do not substitute for outdoor recess. While it is true one indoor basketball game may substitute for an outdoor basketball game, the premise for the current study is to consider play as a viable alternative for physical activity. This means, toward promoting physical activity, an understanding of the relationship across play, recess, and free choice becomes critical.

Recess

Outdoor recess provides children with experiences not possible in the indoor classroom (Burriss & Foulks Boyd, 2005). Four hundred and sixty-nine teachers reported recess as a part of the traditional school day. Despite the existing literature supporting the importance of children's recess (Alexander, 1999; Burriss & Burriss, 2011; Kieff, 2001; Pellegrini, 2005), the current findings indicate authors' concern regarding teachers' understanding of the relationship across space and equipment provided for recess, targeted activities during recess, and time allowed for recess activities. Data in Table 3 identifying recess occurred, on average, 6.14 times per week, with an average of 21.4 minutes per recess event.

Table 3: Average Number of Recess Breaks and Times

Categories	Average Breaks
Number of Breaks	6.14/week
Average Time	21.4 minutes/recess period

Influencing these results, 17 teachers reported 15 weekly recess breaks. While 15 recess events per week may be possible, researchers challenge these particular 17 data entries. Toward an understanding of the holistic benefits for children, it is important to consider not merely the number of recess events per week, but as well the average amount of time per recess event. Existing literature evidences children require adequate time (30 minutes) (Christie & Wardle, 1992) to establish play schemes such as making rules, establishing procedures, identifying leaders, and creating roles. Finally, the current study did not ask teachers to describe the options provided for children during their recess time. In addition to number of times and duration for each recess event, it is important to consider the variety of different spaces, range of complex materials, and potential surfaces provided for children's flexible, inclusive, and innovative physical activity and play. Children need time to develop their scripts and games; providing multiple recess breaks with minimal time (15 minutes) does not maximize children's physical

health and well-being. Once again, it is important to recall the purpose and population of the current study. Authors contend for younger and elementary aged children, the parameters defining physical activity should include play and recess and not be restricted to organized games such as soccer, basketball, or volleyball.

Teacher Knowledge.

Table 4: Teachers Indicating Specialized Training (n=197)

Specialized Training	Number of Participants (Percentages)
Yes	83 (42.2)
No	114 (57.8)

Advanced knowledge regarding physical activity and play becomes necessary in order for teachers to plan appropriate and holistic learning experiences. Toward successful implementation, teachers' understanding of how to design and use the outdoors is critical. The natural environment includes bushes, trees, flowers, dirt, and grass; the constructed environment may include climbing/sliding equipment, benches/tables, or a gazebo/stage. These current data evidence in Table 4 only 42.2 % of teachers reporting some prior training regarding physical activity; teachers' reports represent a wide range of training. Additionally, findings show 57.8% of teachers reported their receiving no training regarding physical activity. For those participants who reported some prior training associated with physical activity (42.2 %), it is important to consider the range of differences in types of training. For example, some teachers included a university course while others noted in-service or workshop sessions. In spite of school districts providing teachers with professional development in the areas of mathematics, literacy, and technology, what of physical activity and play? Of course, it would be imperative to explore what this training would look like. Would it be merely how to play various games, or would it involve children's physical development? This type of in-service support would ensure teachers extend their ability to secure children's safe and effective physical activity and play opportunities. Advanced knowledge is integral when supervising physical activity. The authors suggest, as is the case with other disciplines (math, literacy, science) that teachers engage in many and continuous in-service trainings regarding physical activity and play. It is critical teachers exhibit current knowledge in their understanding

In addition to understanding the most appropriate ways to incorporate physical activity and play, educators remain aware of the support and encouragement they provide. Bullying, gender bias, and rejection during physical activity and play can cause emotional issues with children, and lead to low self-esteem. Informed educators know how to support their students, so they plan physical activity and play as positive experiences rich with the potential for exploration and growth. The goal is for physical activity and play to be platforms to nurture children's health, wellness, and life success.

Physical Education

Physical education (PE) is a component of the curriculum and requires physical movement. Teachers (n = 460) described PE as offered on average 2.5 times per week with an average of 42.8 minutes per session. Considering the time required to transition to the gym, provide directions, and organize and distribute materials, these 42.8 minutes do not ensure this PE time is committed to vigorous physical activity. To support children's need for vigorous physical activity, it is important to consider, in addition to PE, other ways to create movement opportunities.

Games

The Games category showed a 17.33% of teachers used games as physical activity. As exploratory data, this category does not specifically describe what kinds of games teachers used to provide for physical activity. For example, some teachers listed a desk-top game as a break. This activity may be an appropriate brain break from the regular school routine, but does not provide children with vigorous physical activity. Furthermore, considering the primary ages of the children, the importance of recess and free play become affirmed and structured games diminish.

Conclusion

The findings support previous research demonstrating a concern for children's physical activity in schools. Findings also indicate the lack of adequate teacher training which may undermine children's developmentally appropriate physical activities and play experiences.

Future Research

One area of future research would be a study focusing specifically on teachers' use of GoNoodle. A study would allow researchers to more accurately identify and describe the range of this popular alternative. "What GoNoodle spots are used and why?" "What do teachers believe is gained by using the GoNoodle videos?" Current data show teachers widely use the GoNoodle as a physical activity break alternative. However, for physical activity breaks to truly help children, it is critical for teachers to understand the relationship between physical activity and children's development. In other words, merely using GoNoodle once or twice a day is not systematically integrating physical activity on behalf of children's holistic learning. "Why are some GoNoodle exercises more appropriate for some children's ages than others? "How often should different GoNoodle videos be implemented?" While the GoNoodle alternative may be enjoyable, it is not the panacea for children's need for play and physical activity.

Additionally, future research exploring teachers' training/education in the areas of physical activity and play is important. Further research on this training deficit highlights the need for in-service support. Children's health and wellness remain vulnerable without an understanding of quality play and appropriate physical activity. Since children spend most of their day in the school environment, it appears reasonable for educators to assume responsibility to include time for physical activity and play. Implementing time for recess is still problematic. Current data suggest inconsistency between the times recess is offered each week and the time allowed during

each recess event. Data examining the kinds of physical activity and play children engage during recess remains important.

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Pictures for Reflection

Playgrounds: Think Differently

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Playground Space: Take a Good Look

As adults plan children's outdoor spaces, what initial questions do they ask? Do they consider the possible range and variety of holistic experiences that promote children's social, emotional, cognitive, and physical learning and development?

Photo by Larry L. Burriss

Do adults design spaces to nurture both inter- and intra-personal interactions (events and games to develop oral language and nonverbal cues, experiences to support and care for peers/ nature/critters, and opportunities to enjoy time for quiet and reflection alone and with others)? Did adults include manufactured equipment in order for children to climb, tunnel, and grip as well as plan for natural spaces wherein children learn to appreciate, explore, and problem-solve with nature (bushes, trees, flowers, dirt)?

Do adults plan for active and constructive play by including wagons, tables, chairs, balls as well as building materials such as shovels, pails, wood, and blocks? Do adults ensure a variety of play opportunities by providing different spaces (hard surface for wheel toys, chalk talk, and bouncing balls; mulch surface for falling and running; grassy surface for running and tumbling)? Instead of ordering from a catalog, did adults consult with professionals knowledgeable in designing children's complex, inclusive, and integrated play spaces?

Do teachers prepare to integrate indoor learning with outdoor experiences (stage for language arts/dramatic play, portable tables for arts and crafts, access to water for science and play)? Did adults plan for children's capacity to challenge, problem-solve, and innovate (garden, bird feeders, variety of climbing equipment, building materials)? Did adults ensure an inclusive outdoor space for all children to play and learn together?

Swings are fun, but for how long?

Why are some outdoor spaces more popular with children than others? As children begin to engage in play, they first ask, "What does this object/material do?" After some exploration and discovery, the child then asks, "What can I do with this object/material?" Play is about a child's ownership of the process; the child directs the play. This ownership involves children's deep thinking, active exploration, and innovative application.

Photo by Larry L. Burriss

For example, as a child considers the traditional playground swing, she asks, "What does this swing do?" With rehearsal, she comes to understand by pumping her legs forward and backward, the swing goes higher. This discovery may be pleasurable, but for how long? Just as quickly, a child's natural curiosity and desire to challenge, she will then ask, "What can I do with this swing?" This exploration of the swing's potential for complexity may include standing, twisting, or jumping off in flight. This process of ownership is also observed as children use the traditional slide. After several times walking up the steps and sliding down the chute, the child seeks innovation.

He might consider sliding down the chute on his tummy, walking up the chute, or sending toys and stones down the chute to discover which objects travels faster.

If playground equipment and apparatus remain designed for a single function, children in their natural state of challenge and curiosity, will use creativity, innovation, and problem solving to expand function.

Notice the rectangular shape? But what purpose does it serve?

Recently, while observing children at play, an eight-year-old transformed this rectangle into a popular hamburger restaurant. Simply, by calling out to other players, she quickly created a long line of potential customers. The play is now more complex because the event involves ordering different foods (perspective-taking, language, role play); making money to exchange (adding, counting, vocabulary); and creating food orders (role play, language, following emerging scripts).

Photo by Larry L. Burriss

As an adult observer, it was difficult to discern the mulch used for the pretend food from the mulch used for the pretend money; the children appeared quite clear regarding the rules (creating mulch food and money props, identifying leaders, and developing scripts).

In planning for quality outdoor play space, consider the open-ended and innovative capacity when ordering equipment, incorporating nature, and planning with teachers. Referring back to the rectangle, what is the function?

Depending on the children's direction for the play, they may need a stage, boat, mountain or for now, a counter to order hamburgers. In other words, the rectangle becomes whatever the children require at that time to support their play.

P.S. Regretfully, we cannot provide readers with the rich sounds of the playground. There was laughing, giggling, yelling, and screaming. Yes, children screamed as they slid, ran, and climbed. In other words, they loudly screamed because they could; if not in the playground, where else can they use their "outdoor voices"? And yes, there was also crying. A child's missed turn on the climber, a fall and a scraped knee, or a disagreement with a peer who did not want to play resulted in tears. Depending on the age/stage, children frequently resolved their issues; sometimes, a caring adult offered insight. In all instances however, the playground is a space to nurture children's emerging sense of self and other.

This reading list supports new possibilities

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TECH Talk

How EdTech Can Support Social and Emotional Learning at School and at Home

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Leslie Trail is an Adjunct Professor in the Womack Family Education Leadership Department in the College of Education at Middle Tennessee State University and a High School English Teacher at Eagleville School. She began her career working in Health Care management for seven years before further putting her English Degree to work as an English teacher. She loves learning ways to more effectively engage students in the classroom to move their learning forward, so her research interests generally revolve around teaching strategies.

Ashlee Hover, Ed.D. is an Assistant Professor in the Womack Educational Leadership Department in the College of Education at Middle Tennessee State University and a former elementary school teacher. She works with pre-service and in-service teachers and serves as the program coordinator for the Curriculum and Instruction Online Master's Degree at MTSU. Her research includes child development, digital learning, performance-based assessments, and teacher preparation.

There is a need to move away from a narrow focus on just academic outcomes, to one that considers the long-term development and well-being of children, a whole child approach (Association of Supervisors and Curriculum Developers (ASCD), 2020). When we think about teaching the whole child, we should think about providing a healthy, safe, engaging, supportive, and challenging classroom experience (The Whole Child, 2015). As part of educating the whole child, we need to consider children's social and emotional learning. The Collaborative for Academic, Social, and Emotional Learning (CASEL) defines social and emotional learning

(SEL) as the process in which individuals "manage emotions, set and achieve goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions" and includes a framework with five core competencies (CASEL – What is SEL?, 2019, para. 1).

What is the Framework for SEL?

CASEL's integrated framework promotes intrapersonal, interpersonal, and cognitive competence and includes five core competencies: 1) self-awareness, 2) self-management, 3) social awareness, 4) relationship skills, and 5) responsible decision-making. Self-Awareness is the ability to recognize one's emotions, behaviors, and ways of thinking. It includes understanding one's strengths and weaknesses and having a sense of optimism and confidence. Self-management is the ability to regulate emotions, thoughts, and behaviors, as well as control stress and self-motivate. It includes the ability to set and pursue goals. Social awareness involves the ability to empathize and understand social and ethical norms for behavior. It includes recognizing available resources for support. Relationship skills describe the ability to establish healthy relationships with diverse people. It includes using appropriate communication, cooperation, and negotiation. Responsible decision-making is the ability to make good choices about social interactions, understand consequences, and consider the well-being of others (CASEL, 2019).

What Does the Research Say?

We know that intentionally incorporating SEL in schools produces positive outcomes. CASEL has engaged in over two decades of research into the effectiveness of SEL in schools. Some of the claims include, positive long-term effects on personal lives, academic outcomes, social behaviors, and the ability to reduce poverty and increase economic mobility. In addition, for every dollar invested in SEL, there is an eleven-dollar return. In this video, educators and administrators discuss how implementing SEL in schools has made a tremendous impact. On a larger scale, a 2011 grant-funded meta-analysis of 213 different studies written by Durlak, Weissberg, Dymnicki, Taylor, and Schellinger showed that incorporating SEL programs in schools had positive benefits on students' social and emotional skills, attitudes, behaviors, and academic performance. In a 2017 follow-up meta-analysis of 82 school-based studies involving more than 97,00 kindergarten through senior high school students, Taylor, Oberle, Durlak, and Weissberg asserted that there are long-term benefits of school-based implementation of SEL programs across diverse geographic contexts and age groups including social-emotional skills, attitudes, and sense of well-being.

How Can Schools Implement SEL?

Maurice Elias (2016) explains the seven steps to implement SEL into schools: 1) "build a school infrastructure that can support SEL", 2) "assess how well-coordinated your school's SEL programs are", 3) "assess the school's culture and climate", 4) "articulate shared values, themes, and essential life habits", 5) "provide consistent and ongoing opportunities for students to practice SEL skills", 6) "improve faculty readiness to teach SEL", and 7) "connect to those who are walking the walk." The first step, building a school infrastructure to support SEL, may begin by creating a committee to set attainable goals and use planning cycles with action plans that are

developed in eight-week increments of time. The second step, assessing the school's SEL programs, involves school members taking a critical look at existing programs and initiatives and making sure that there is "harmony" across the programs and that SEL is used as the "integrative glue." The third step, assessing the school's culture and climate, includes gathering and analyzing data about student, staff, and parent perspectives from surveys, walk-throughs, focus groups, and artifacts. The fourth step, articulating shared values, themes, and essential life habits, involves schools focusing on core beliefs and actions that address academic, moral, and civic development and creating mottos and mission statements that are emphasized and used every day. The fifth step, providing consistent and ongoing opportunities for students to practice SEL skills, goes beyond the mere presenting of the information to practicing and reinforcing use of the skills. The sixth step, improving faculty readiness to teach SEL, gives faculty the tools they need to understand the theory, literature, and pedagogy of SEL and to easily incorporate SEL into standards, rubrics, and mandates. The seventh step, connecting to those who are walking the walk, happens when schools or districts are connected to other schools who are actively incorporating SEL. Organizations and programs that can help are CASEL, the National Association of School Psychologists, Second Step, Lions Quest International, Responsive Classroom, Open Circle, Social Decision Making/ Social Problem-Solving, and the Schools of Character.

How Can EdTech Support SEL?

EdTech can be used to support SEL and provides the flexibility of learning at school, home, and elsewhere. There are a variety of free and low cost options for a range of ages that promote the competencies outlined by CASEL and Elias' (2016) fifth step, which is to provide consistent and ongoing opportunities for students to practice SEL skills. Table 1 provides a list of edtech options that support SEL and align with one of the competencies outlined by CASEL.

TABLE 1

EdTech Tools that Support SEL and Align with CASEL Competencies

SEL Competency	App	Price	Target Age	Description
Self-Awareness: recognizing one's emotions, behaviors, and ways of thinking; understanding one's strengths and weaknesses; having a sense of optimism and confidence	Emotions (Avokiddo)	$2.99	4+	Gives young children opportunities to explore feelings and emotional connections through several characters and props, activities explore the cause and effect relationship of facial expressions.
	Emotionary (Funny Feelings)	$1.99	4+	A great resource for children with special needs, includes descriptions of emotions and funny feelings,

				allows users to draw an emotionary "selfie" to show how they are feeling.
Self-Management: regulating emotions, thoughts, and behaviors; controlling stress, self-motivating; setting and pursuing goals	Breathe, Think, Do (Sesame Street)	Free	4+	Teaches young children about problem-solving, self-control, planning, and time on task; players are presented with different scenarios in which a monster character must regulate his/her emotions using the breathe-think-do technique.
	GoNoodle	Free	6-12	Short physical activities that provide children with brain breaks to increase concentration and attentiveness, activities require children to cross the midline of their bodies which engages both sides of the brain.
	Stop, Breathe & Think (Tools for Peace)	Free	11+	Emotional check-ins and personalized recommendations for mediation, sleep, breathing, and yoga.
	See Saw	Free	All	This service allows classroom teachers to communicate with parents and share student work. It also helps build SES by engaging students in a variety of work styles. With this program, students can demonstrate their knowledge in a variety of modes as they develop their own awareness of how they learn and communicate.
Social Awareness: empathizing and understanding social and ethical norms for behavior	Touch and Learn - Emotions (Innovative Mobile Apps)	$1.99	4+	Includes photographs that represent four different feelings per page, players match verbal cues with appropriate photos to help them identify body language and understand emotions

	Forest - Stay Focused (Seekrtech)	iOS: $2; Android: Free	4+	Productivity app; the main purpose is to teach users to stop using phones as distractions and to be socially present; the more time users spend in real-life, the more their virtual tree grows.
Relationship Skills: establishing healthy relationships with diverse people; using appropriate communication, cooperation, and negotiation & **Responsible Decision-Making:** making good choices about social interactions, understanding consequences, and considering the well-being of others	Peppy Pals Social Skills	Free	4+	Includes games, books, videos; animals socialize, take care of each other, solve problems, explore emotions
	The Middle School Confidential Series Bundle (Electric Eggplant)	$6.99	8-14	The books/apps are designed by a teen expert, Annie Fox, and presented in a graphic novel sequence in which readers follow a group of seventh-grade friends as they navigate friendships, families, and school.
	Class Dojo	Free	All	This can be a school-wide or classroom teacher program that helps schools build a culture around helping students monitor their own behavior. With Class Dojo, teachers track the good things that students do through the day as well as concerns that teachers have about student behavior. Students are able to earn points for good deeds, good work, and good behavior.

Managing Tech

Certainly, edtech is an excellent resource to help teachers and parents meet the social-emotional needs of students. However, we would be remiss to think that this is the only way to meet these needs. As a matter of fact, it is important for us to balance the use of technology with more natural ways of meeting social-emotional needs of students. Teachers and parents should be warned of over-using technology. Technology is a tool that we can use to support other methods that we use to help build SEL for students such as providing hands-on activities, outdoor learning, and creative play (Wabisabi Learning).

Benefits of Tech During Times of School Closure

In recent days, the United States has watched county after county close its doors due to the COVID-19 virus. When teachers are using edtech in their classes on an on-going basis, the transition to meeting the needs of students outside of the classroom can more easily be met. These students already know how to maneuver and access the technology, and, therefore are able to continue their learning outside of the classroom. The ability to maintain a learning schedule for children helps meet their emotional needs during times of uncertainty (CDC, 2019). If teachers have already acclimated students to using edtech on a regular basis, this need can more readily be met.

As children are home during extended breaks from school, parents can support their children and their own social and emotional learning by employing these edtech applications with their children. Time spent with children both face-to-face and with edtech learning tools may provide rare opportunities for productive, meaningful family time.

Conclusion

Students bring all aspects of their life to school. Using knowledge of students' social and emotional intelligences, teachers are able to create an environment where student focus, interests, and background merge with the information that they are teaching. This not only helps students grow academically, but it also creates a more well-rounded student who can apply academic knowledge to long-term learning. As teachers focus on the social and emotional learning of their students, as well as classroom and school culture, they can build meaningful relationships with their students, resulting in a stronger sense of well-being, increased self-awareness and self-management, and improved behavior and academic outcomes. Incorporating edtech at school and in the home can be a tool to assist teachers and parents in improving students' social and emotional learning.

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ETC

Teacher-Child Interactions and Dramatic Play: Stories from Three Continents and Three Cultures

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Abstract

Dramatic play involves children choosing roles and acting them out. Teachers assume a variety of roles in providing an environment wherein children pretend to be a different people, in different roles, or even something that is not a person. The benefits of dramatic play revealed in previous research include improvements in children's cognitive, social, and emotional development. Bronfenbrenner's Bioecological Theory (1994; Bronfenbrenner & Morris, 2007) and Vygotsky's Sociocultural Theory (1978; 1986) frame the current discussion. Children become empowered through dramatic play as they learn to consider the perspectives of their classmates, and as they negotiate and balance ideas from other children. This paper focuses on the design, development, and enhancement of dramatic play in early childhood settings in three different countries within three different continents (Saudi Arabia, South Africa, and the United States). The authors provide stories within classrooms from these countries and describe how each situation reveals cultural differences in play, and how the new understandings impacted both the teachers and the children's subsequent actions and thinking. Conclusions describe the bi-directional benefits of play for children and teachers.

Keywords: dramatic play, early childhood development, cognitive and social development, teacher roles, cultural perspective

Cohen (2018) describes how the Victorian's dichotomy between work and play is no longer appropriate. It is noteworthy that providing optimal play experiences requires careful planning, preparation, and monitoring by adults who understand how to relate to children as well as how to enhance their learning in choice-driven play environments. When adults know strategies that ensure children experience safe and mature play (Lillard et al., 2013), learning is more likely to take place. In addition, adults observe the results of their planning during children's play to build upon and extend children's later learning. In this scenario, teachers also become learners; especially when they are teachers of children from cultures that differ from their own. Thus, optimal play experiences and learning become bi-directional.

Scientific evidence supports three different principles of play (Hirsh-Pasek, Golinkoff, Berk, & Singer, 2009): 1) children require not only free play, but also play that is guided and facilitated by others; 2) both academic and social skills remain important, and the former does not dominate the latter; and 3) play and learning are not incompatible. After defining dramatic play, two theoretical lenses (Urie Bronfenbrenner's Bioecological Theory and Lev Vygotsky's Sociocultural Theory) frame examples of play interactions with different trajectories due to differences in cultural contexts. Subsequent sections are organized by different teacher roles in children's dramatic play activities: planning and preparing materials for children's play; facilitating and scaffolding children's play; and modeling roles. In each section, stories illustrate teaching strategies used with children in three countries within three different continents. These countries (Saudi Arabia, South Africa, and the United States) represent unique cultures. Using stories, examples of how observing children's play as well as the cyclical process that builds understanding for teachers in different cultural contexts become evident.

About Dramatic Play

When engaging in dramatic play, children adopt roles and assume responsibilities for these roles in scenarios which mimic the real world and culture of children (Leong & Bodrova, 2012). Similar to drama, different parts comprise dramatic play. As such, when children engage in dramatic play, they play a wide range of parts or roles. Young children are drawn to symbolic thinking as they engage in problem solving, social learning, and writing and reading (Szecsi, 2008). During the play process, children assume an imaginary role, and then, they act the part by performing tasks related to that role.

For example, a common type of dramatic play observed in preschools in the United States takes place in the kitchen center. Children pretend to cook using tools (e.g., a spatula) typically found in their families' homes. Children may assume the roles of different family members. Those who pretend to be children in the family may ask, "What's for dinner?" When food preparation is finished, all may sit at the small table in the center to eat the pretend food.

It is important for parents and teachers to recognize the value of dramatic play. For too long people believed children's play was inconsequential. Many adults associated play only with children's fun. In some instances, adults considered academic skill learning as "serious business" and thought learning academics was children's "work." Through many years, researchers clearly refuted this belief by providing data showing the beneficial effects of dramatic play, especially for young children in preschool and kindergarten (DeMarie & Bugos, 2020; Hall, 2015).

It is important to provide two different theoretical lenses describing how play contributes to children's and teacher's learning.

Theoretical Lenses Framing the Benefits of Children's Play

Urie Bronfenbrenner's Bio-Ecological Systems Theory. Urie Bronfenbrenner (1994; Bronfenbrenner & Morris, 2007) identifies many levels of environments and systems which interact with children's characteristics and qualities and describes the impact of these interactions on their learning and development. Each person has biological and genetic factors that influence how others treat them. For example, a child with physical challenges may be treated differently than a child who does not have those physical challenges. Also, other factors may influence how others treat the child. For example, the way children dress may affect how others interact with them. A child whose clothes are dirty or smell probably will get different reactions from others than a child who wears the latest fashion. Bronfenbrenner's Bioecological Theory also elaborates on how the environment has four interrelated systems: the microsystem, mesosystem, exosystem, and macrosystem. Each system is detailed in the sections that follow with examples from classrooms in different cultural contexts.

Children's Microsystems. "Patterns of activities, social roles, and interpersonal relations experienced by the developing person" are part of children's microsystems (Bronfenbrenner, 1994, p. 5). These interactions take place among children and the people, places, and materials they encounter in environments where they engage, and these interactions influence the child's learning and development directly (i. e., family, school, neighborhood).

The same object may elicit different play scenarios in different countries. For example, in Saudi Arabia, one of the authors added a blanket to the dramatic play center. She watched as the boys pretended to be men and to wear it as a "ghutra". A Ghutra is a traditional Arab headdress fashioned from a piece of square, usually cotton, cloth typically worn by Arab men. In a classroom in the United States, another author added a blanket to the dramatic play center on the doll bed. A girl put the doll under the blanket and kissed her good night. Finally, the children in South Africa used the blanket to wrap the doll babies and placed them on their backs. Thus, dramatic play centers become critical areas in classrooms that provide teachers with an inside look at the children's expressions of cultural practices.

Children's Mesosystems. A mesosystem is the interaction between two microsystems. The direct interaction *between* these systems (e.g. home, school) is important for children's and teachers' learning; the interactions *among* these microsystems (e.g. interactions among the child's family members; home and school interactions) also impact children's development and learning. For example, children benefit when their parents and teachers communicate with one another. For example, parent-teacher communication is demonstrated in many forms besides in person interactions. In South Africa, teachers wrote in a daily journal for each child. They did this while the children were napping in the afternoon. The teacher reported something that the child did or said, or something that happened on that day. Then parents had the opportunity to reply to the teacher or to ask questions in this shared journal. Newsletters also were sent home monthly to parents with photographs and news.

At one preschool in the United States, where technology was more available to families, teachers posted daily photos and descriptions on the website. They included photographs of children engaged with materials and with other people at the center. Because accountability and standards remained important to parents of children within this particular setting, the teachers provided links to the required State standards that were demonstrated in the posted photos and text. In this way, parents referenced how play activities helped their children to achieve the Florida standards for preschool education.

What is interesting is that a national survey of kindergarten teachers revealed they did not consider academic skills to be the most important ways for children to be ready and successful in kindergarten (Curby et al., 2017). Instead, the kindergarten teachers rated the four social-emotional skills (e.g., "getting along with others") higher than the four academic skills (e.g., "knowing upper- and lower-case letters"). Thus, there currently appears to be a mismatch between what parents think is the most important ways to prepare their children for kindergarten and what kindergarten teachers reported as the most important aspects of readiness for success in kindergarten. And, group dramatic play certainly enhances children's social skills.

When one of the authors visited the child development center in South Africa years later, the teachers asked her to lead a parent workshop. Parents had requested teachers start requiring their children to complete worksheets in order to be ready for school. At the workshop, she explained the benefits of children's play and shared photos and videos of how alumni children, who were successful in school, had played when they were at the preschool. Parents then worried less about their children's readiness for school.

Likewise, in Saudi Arabia, parents who are highly educated worry about the achievement of their children. Therefore, documenting the accomplishments of children is important for helping parents to realize that children are learning and also are demonstrating mastery of key standards in the process of their playing.

DeMarie et al. (2018) emphasize the importance of relationships within early childhood settings and provide recommended questions for parents to ask when assessing the quality of different levels of relationships inside a prospective early childhood program for their child. For questions go to https://www.apa.org/education/k12/high-five.pdf.

Children's Exosystems. Bronfenbrenner also recognized the importance and impact of other contexts, exosystems, influencing children, but in which children might never have direct interactions (e. g., parent's workplace). For example, although children may never go to their parents' workplace, this system, which Bronfenbrenner labeled an exosystem, can influence how much time their parents can spend with them after school and whether they have money for food, clothing, or housing.

Children's Macrosystems. The culture (i.e., macrosystem) in which children's family and neighborhood are situated contribute to children's learning. Regarding learning, children who were born in a different country from the one where they are currently educated, face the challenge of being in a school that promotes different cultural values from their home country culture. For example, a child born in Saudi Arabia who was relocated to the United States would be shocked to see women and men working together in the same school and participating in coeducational classrooms. Because males and females attend different schools in Saudi Arabia, this aspect of American culture would be unfamiliar. Thus, communication between parents and teachers becomes essential for bridging cultural differences and for promoting understanding. Importantly, children can use play to express their feelings and understandings.

In addition to Bronfenbrenner's theory, Lev Vygotsky's Sociocultural Theory provides a lens for the importance of language and culture. Vygotsky also emphasizes the role of adults in enhancing children's learning.

Lev Vygotsky's Sociocultural Theory. Vygotsky (1978; 1986) believed learning took place within children's zone of proximal development. Berk (2013) defined the zone of proximal development as a "range of tasks too difficult for the child to do alone but possible with the help of adults and more skilled peers" (p. 267). In play, the meaning of words takes the place of objects, and daily oral language develops (Einarsdottir, 2014). During play, learners interact in social settings and use their culture's psychological tool, which is language. These interactions, as described by Vygotsky's Sociocultural Theory, stretch children's way of thinking, a factor that helps to improve language acquisition. According to Bodrova (2008), an approach based on Vygotsky's theory suggests that "young children can master necessary prerequisites of academic skills through engagement in mature make-believe play" (p. 357).

Isenberg and Jalongo (1997) suggest, "Everyone knows that children learn from their teachers, but it literally turns education on its head to consider the other direction - the many ways that teachers can and must learn from children and families" (p. 6). Thus, when teachers observe

children's play, they learn about children's culture and language, and they become better able to enhance children's learning.

Like Bronfenbrenner, Vygotsky thought learning could not be separated from its social context (Bodrova & Leong, 1996). While children play with props (e.g., toys or objects), they engage in beneficial cultural practices (Miller, 2011). Play in classrooms provides ample opportunity for "learning as a natural by-product of involvement in tasks with adults or more competent peers" (Miller, 2011, p. 175). Thus, teachers remain an instrumental part of children's play activities. Examples of responsibilities of teachers are explained in the following section. Different teacher responsibilities help children to build higher levels of thinking.

What Are the Different Roles of Adults When Children Play?

Adults engage in multiple roles that can enhance children's play and benefit their learning. Although preparing the materials for play is an important role for adults, they also assume other key responsibilities: facilitating, role modeling, and scaffolding children's play. And, as teachers observe children playing with the materials they prepared, they learn and plan to enhance (i.e., scaffold) children's future play.

Teachers plan and prepare materials for children's play. Props remain essential for creating viable play environments in early education classrooms. Props, or items used by children to make play scenarios realistic, become integral because they facilitate make-believe or dramatic play. Without props, children's play activities become less creative and productive. As Gupta (2009) explains, it is possible to let children participate in projects where they design and employ props.

One of the authors used a strategy to involve children in planning their dramatic play center in a Saudi classroom. First, children labeled who they wanted to be. This required negotiation and compromise with other children. The author used role necklaces to help children identify what role/character their friend assumed as well as to identify their pretend role/character for others.

Teachers can brainstorm themes and ideas for play scenarios before they gather materials to use as props (e.g., phones or cash registers) and costumes (Hall, 2015). Because they handle props to make their play authentic and mature, young learners may require the assistance of their teachers. As adult role models, teachers "need to model how to use props in a symbolic way, gradually expanding the repertoire of different uses of the same object" (Leong & Bodrova, 2012, p. 32). For example, in the Saudi classroom, the teacher may provide new and unconventional props, removing the more popular ones like plastic fried eggs. While students at higher levels may need to create new props, those in lower levels may modify their existing props to perform other functions. For instance, the teacher may request the learners to utilize the same props they used to create a dog, to come up with a Dalmatian.

Many teaching strategies used by preschool and kindergarten teachers include making signs, building play sets from cardboard boxes, and using other materials that are symbolic representations. Hence, prop usage, as a teaching strategy, improves the quality of dramatic play for children.

When teachers observe children playing with these props, they gain an inside look at children's culture. This is especially true when the teacher is not a member of any of the children's cultures (i.e., their macrosystem according to Bronfenbrenner). This was the case when one of the authors co-created a child development center for two-to-six-year old children in South Africa. The author brought or made many materials for the children, and then she witnessed how children engaged with those materials. She took photographs of children's play and later learned the meaning of that play from adult members of the children's culture. One example is detailed.

An annual event in Tampa, Florida called Gasparilla features a parade, where one can collect a multitude of free strands of beads. The author collected beads from the parade in the United States and brought them to the child development center in South Africa. Her "American lens" expected children, and especially females, to wear the beads as a fashion statement. However, this did not occur.

Instead, it was only the boys who put on the beads; then, they began to dance and chant. After observing for some time, one of the girls, who was an immigrant from a different country in Africa, put strands of beads around her neck and joined the boys in dancing and chanting. The boys stopped dancing; laughing so hard, they fell to the ground. One of the boys then went to her, took her hands, and said, "If you want to dance, we can dance like this." He proceeded to lead her in "Western style dancing."

The author shared photographs of the episode, and she attempted to hum the tune she heard with someone who was a member of that culture. The woman said, "Oh, yes!" She proceeded to translate the chant and told her why it was not appropriate for a girl to dance with the boys. Because the girl was from a different African country, she also was not familiar with that cultural practice. Episodes like this helped the author to get inside the children's culture. It helped her to understand why some environmental conditions were expected, and how she could provide tools to help children to express their learning in culturally appropriate ways.

Teachers facilitate and scaffold children's play. In a more directive role, teachers not only plan and prepare the classroom environment, they also explain and discuss lesson objectives as well as monitor and evaluate the results (Leong & Bodrova, 2012).

Facilitating children's play. In one of the author's classrooms in Saudi Arabia, the teachers prepared artifacts and materials to support children's play related to the theme for that week, which was the bakery. The teachers placed dress-up clothes such as a chef's hat and materials such as oil, flour, bowls and spoons in the house area. They also created a checklist to assess children for their understanding of this theme. The checklist included items such as naming the ingredients for making bread. Children from the United States who entered this preschool setting probably would not be familiar with how fresh bread was made. It might be more culturally relevant for them to have a frying pan and spatula available to pretend they were making hamburgers.

Leong and Bodrova (2012) mentioned that a teacher may need to take a role in the play to enrich it when it has become "stale" (p. 33). For example, when the children pretended that they were at a restaurant, the teacher later called to make a reservation. Thus, children, framed by their

cultural lens, play and interact with materials and peers in particular ways. However, teachers can also engage and enhance their play without taking over in a primary role. Through careful observation, teachers and children from outside the dominant culture can learn from this play.

Likewise, teachers may facilitate children's play by providing a structure for their activities. Often, this means that teachers, parents, or older peers act as guides, helping children to make decisions and to solve problems. For example, in the Saudi classroom, if the child wanted to make bread and there was not flour at the center, the adult would ask the child what could be done to get the flour. Facilitators stay outside of play areas for the most part, and they add materials and ideas only as needed or requested (Jones & Reynolds, 2011).

Teachers prepare the place and provide it with necessary materials, walk around the center, and ask the children exploratory questions to help them to expand their play and to discover resolutions. Teachers support children's ability to problem-solve during their play.

Scaffolding children's play. Scrafton and Whitington (2015) describe scaffolding as adult support that helps children do things they cannot accomplish on their own. Scaffolding is most beneficial when adults support children to access play, particularly when some of them are not actively participating. Wasik and Jacobi-Vessels (2016) believe the critical role of adults in children's play is to scaffold the learning of children without directing the children's play. Leong and Bodrova (2012) mentioned that to remind children of new vocabulary, the teacher can take a secondary role such as patient or customer and make a request from the children as they act out the main role (e.g., a doctor). Therefore, by assuming a role in dramatic play, teachers can scaffold children's learning without directing the play.

In a Saudi Arabia classroom, the author watched as a child evidenced trouble completing his tower in the block center, so he said, "I want to make a big tower as a kingdom center tower, but my tower keeps falling down." The author asked him, "Why do you think the tower is not staying up?" and "What do you need to fix it?" Then the child started to put all the bigger blocks on the bottom. Then the author continued to ask him, "Could you think of another way to make it stay up?"

This illustration shows how teachers' questions can provoke children's thinking. Critically, without explicitly telling a child what to do, the teacher's question helps the child to solve a problem through play. Answers are not simply "right" or "wrong." Instead, children experience the opportunity to try, and if that does not work, to try again, and if that does not work, they will then try again. Perhaps these experiences encourage children to develop growth mindsets and to persist when they encounter future challenges (Dweck, 2006).

Teachers as role models. While facilitators guide children from a distance, role models get in close and do the same activities as the children. They show the children what to do and how to do it. Jones and Reynolds (2011) described role models as frequent players who enjoy relationship building and content enrichment with their students. The reasons for entering their play are to help children get started with new or unfamiliar materials or to help them through difficult social experiences. To help children make progress in this manner, the adult models play strategies (e.g., entry), so children trust them as co-players.

For example, when a newcomer attends class, the teacher may want to support that child's entry into play. While one of the authors was standing and watching the children in her Saudi classroom playing at centers, she saw a child standing off to the side of the dramatic play center. The child seemed unsure about how to participate with others. The author talked to the child and pretended she was a neighbor who had come for tea. The author then sat down at the table and invited the reluctant child to serve her a tea.

In the United States, for example, the week before or after Thanksgiving, the teacher might ask a reluctant child if he or she would like to make a Thanksgiving dinner. She would invite the child to tell what they should cook for their Thanksgiving dinner. Other children would be likely to join after the reluctant child decided the meal, and the teacher announced their intention. The teacher would allow the children to proceed with their own ideas for preparing the meal. As soon as teachers see the newcomer has been accepted into the play environment, they would step out of the situation and encourage the children's play to progress.

Adults support children's play and learning when they direct, facilitate, and model responsibility. Leong and Bodrova (2012) described "Propels," an acronym for plan, roles, props, extended time, language, and scenario. Propels is a method used by early childhood educators to determine the level of mature play taking place in their classrooms. The acronym PRoPELS can be explained as follows:

- **Plan**- The potential of children to think about play before it starts.
- **Roles Children Play**- The collection of expressions (verbal, emotional, etc.) that children make when acting out a role.
- **Props**- The various items or objects that are used by children when playing.
- **Extended Time Frame**- The time taken by a play activity, over and above that which has been allocated, mostly taking several hours or days.
- **Language**- The verbal utterances made by children when playing a certain role and coordinating their actions with their counterparts.
- **Scenario**- The situation that is acted by children, which is characterized by role playing according to a given script.

Thus, the intention is not for teachers to direct children's play. Instead of controlling the play, they provoke children's thinking and helping them to take the initiative to play together. A gentle question or a hint about a situation is all that is needed to help the group of children to launch their own ideas and to build upon them.

Supporting Academic Skills in Dramatic Play

Leong and Bodrova (2012) declared that "mature make-believe play is an important and unique context, providing opportunities to learn not afforded by other classroom activities" (p. 34). Thus, it is natural to suggest that dramatic play can be implemented to enhance and enrich curriculum and instruction (e.g., writing and literacy).

Writing instruction. Because of dramatic play, early learners begin to appreciate the meaningfulness of the printed word. These children enjoy printing words that give their everyday

life purpose. Peterson (2015) notes that some children, who are reluctant to write in class settings, are satisfied by printing words in the context of their play 'worlds.' This is true because when children write while playing, they fulfill a purpose that is meaningful to their needs.

For example, a teacher encourages the children to write when they write a prescription when playing a doctor role, or reading the product packaging at a pretend drugstore, or interpreting a map while travelling. They embed literate behaviors in their play. As an instructional practice, it is important because it promotes children's understanding of text and early writing development.

Peterson (2015) indicates dramatic play that involves writing benefits a culturally relevant pedagogy. Children engaged in play often integrate home and cultural knowledge into their writing as they create play themes associated with their cultures. With the guidance of adults, children explore the benefits of dramatic play in the development of their writing abilities (Harden, 2015).

In terms of the products of writing in dramatic play sessions, functional purposes become evident. For example, Ihmeideh (2015) asserts "When children engage in dramatic play activities, they experience realistic settings and functional reasons for using print" (p. 252). Peterson (2015) labels the signs used in association with these play activities as 'environmental print.'

A main function of environmental print is to provide a range and variety of contextual information for the children as they play with props in centers and/or scenarios. Observers report some children create their own unique letter and word writing while they are engaged in dramatic play scenarios. For example, one of the Saudi authors had a food theme one week, so all the lessons and activities that week related to food. She turned the dramatic play center into a grocery store and asked children who engaged in that center to write a shopping list. She noticed most of the shopping lists contained rice and chicken. This is because Saudi's national meal, "Kabsa", consists of these ingredients. Children in the United States might include items such as hot dogs and apples; whereas children in South Africa might include bread and biltong (a beef jerky) in their list of items. Creating lists helps children to see writing as a means, not just as an end. They begin to understand how language works.

Boyle and Charles (2010) utilized a case study to investigate the effect of socio-dramatic play on the support of the beginning writer. They found that in writing/spelling lessons involving teacher-facilitated 'scribing,' young students gained early writing skills to hone as emerging writers. Thus, preschool and kindergarten teachers, who develop writing instruction, always consider the utility of making play activities include functional purpose.

Literacy Instruction. Literacy instruction, complemented by dramatic play activities in early education settings, prove successful. As Sharp, Escalante, and Anderson (2012) state, "The arts, and specifically the dramatic arts, promote increased oral language development, reading readiness, reading achievement, comprehension, and writing skills" (p. 1). Consequently, dramatic play serves as a perfect medium for literacy instruction.

Harden (2016) found that by creating literacy-linked activities in a classroom of four-to- five-year-old children, she could create a setting of dramatic tension. This prompted the children's active participation. Moreover, the children in this study found meaning in signs and cards used in dramatic play centers designed for literacy instruction. Hence, these findings show the importance of using dramatic play scenarios to pose literacy-linked activities that support children in reading, writing, and language arts.

Moreover, preschool and kindergarten teachers often use the environment to explore student's literacy needs. Roskos and Christie (2011) describe how an environment that enriches literacy (e.g., an area for creative drama) promotes literacy behaviors in students. For instance, in the Saudi classroom, the teacher places items in a model fridge, with unreal food in plastic containers. All the items that may be found in a kitchen are provided, including a bin, menus, cereal boxes, and others so that it looks like a real kitchen. The teacher then invites the children to create shopping lists in their books.

The children assume family roles such as father or mother, purchase the food from the 'center', and begin 'cooking'. As the children perform the activities, they learn to read and pronounce the names of the various foods. Children practice by reading the menus or cereal boxes, and then writing the same items on the shopping lists. Finally, the children read aloud their shopping lists as their colleagues listen.

In helping children to develop concepts and language, it is critical teachers make a connection between literacy and children's life experiences (Wasik & Jacobi-Vessels, 2016).

Thus, the separation between learning and play disappears. This symbolic representation is meaningful because this is truly child-initiated.

Implications and Conclusions

Considering this discussion, it is highly advisable preschool and kindergarten teachers focus on strengthening the developmental domains (cognitive, social and emotional, speech and language, fine motor skill, and gross motor skill developments); this can be achieved through children's dramatic play scenarios. When the social, cultural, and academic benefits to young minds are witnessed, more teachers might be willing to incorporate dramatic play into their daily classroom activities. Furthermore, when parents, concerned about academic standards, see the benefits documented, they will also appreciate the value of dramatic play.

Increasing the amount of dramatic play in the early education classroom is important for building common ground between children with culturally diverse backgrounds. Scrafton and Whitington (2015) believe when preschoolers build meaning with peers during play, they can overcome "cultural, linguistic, racial, and religious differences between their home culture and preschool" (p. 213).

Knowing this, early childhood educators can develop curriculum and lessons that reflect cultural diversity during play activities. Playing together, children can learn about each other culturally and socially. Therefore, one of the goals of dramatic play in the classroom is improving peer

relationships among classmates from different backgrounds. Dramatic play also improves children's daily oral language and literacy skills.

Through dramatic play, teachers assume the responsibility to support children in the development of these oral language and literacy skills. As Ihmeideh (2015) insists, "Play allows children to build and extend their knowledge and skills as they interact with their environment, with others, and on their own" (p. 250). Believing this to be true, most educators strive to support play environments where children can grow and develop on a day-to-day basis.

In conclusion, the main implication of this review is that dramatic play has benefits for children's language and skill development, and further, dramatic play supports inclusion in culturally diverse environments. Also, it is important to note how well dramatic play and dramatic play centers facilitate learning in developmental domains, support writing in authentic contexts, and positively impact curriculum and instruction.

When young children play, teachers and other adults realize children are learning many new skills and abilities in a meaningful context. Encouraging dramatic play in early childhood serves to fortify children's learning and development. As children play in a mature fashion, they become literate participants in an academic environment, where active and authentic learning occur. Thus, the power of dramatic play supports the success of early childhood education and children's academic skill development. Teachers' observations and subsequent actions become integral to optimize play for children's learning and development. Through dramatic play, teachers learn about children's culture. This is especially important when that child's culture is not one the teacher shares. Therefore, learning from dramatic play is bi-directional and cyclical; and most importantly, play and learning are not opposites.

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Children and Families: Health and Wellness

Gratitude: A Lifestyle Worth Developing

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According to Webster (1999), gratitude is the state of being grateful, thankful, a readiness to show appreciation, and a disposition to return kindness. Practicing an attitude of gratitude is a habit vital, not only to an individual, but as well to families and society as a whole. As we observe our current state in society, some believe it appears attitudes of entitlement, resentment, and victimhood are evident. The purpose for this current discussion is to explore the reasons and the benefits for being grateful and furthermore, to consider ways to cultivate a habit of gratefulness in families and thus, influence our children.

Adams (2019) suggests we be grateful for our life and for the fact of life itself. He asserts that if we allow ourselves, we can find many reasons to be grateful (awareness to enjoy the senses (seeing, hearing, and smelling); ability to speak; capacity to feel; aptitude to learn; capacity to extend mercy; and the potential to forgive). When we look at the broader picture, we acknowledge that our lives are contingent on others; their ability to give life and love, for our language, our culture, our roots, our heritage. Adams (2019) believes gratitude reflects and recognizes reality; this reality refers to the truth about our human condition that escapes the self-centered child or narcissistic adolescent. Adults learn this sense of reality with maturity and experience. Frequently, individuals depend on what they receive, but not necessarily what they earned, controlled, or were entitled because of their particular merits.

Generating from extensive studies, Adams (2019) describes gratitude as revealing itself with a positive mood, increased resiliency, better physical health, less fatigue, and more restorative sleep. Gratitude lends to patience, humbleness, self-control, joy, better relationships, kindness,

service, and even wisdom. Having an attitude of gratitude is just an overall healthy, joyful, and good decision.

Hussong (2017) discusses how psychologists studying gratitude clearly describe gratitude means more than saying thank you. Instead gratitude requires children to use a set of socio-emotional skills. The researchers at the University of North Carolina's *Raising Grateful Children Project* purport that gratitude in children incorporates perspective taking, emotional knowledge, and skills that children start to develop approximately from three-to-five years of age (Hussong, 2017).

Hussong (2017) describes four parts to the experience of gratitude:

1) What we NOTICE in our lives for which we already recognize to be grateful.

2) How do we THINK about why we have been given these things? (Why did I receive this?)

3) How we FEEL about the things we have been given? (Does it make us happy?)

4) What we DO to express our appreciation in return. (Is there a way you want to show how you feel about receiving this?)

Children become able to show more gratitude as they develop and become mature. This happens as children gain cognitive skills, practice using these skills, and begin to connect the NOTICE, THINK, and FEEL aspects of experiencing gratitude coupled with the DO part of expressing gratitude (Hussong, 2017). This awareness of process is tantamount to our understanding as we nurture young ones to make gratitude part of the family milieu.

Conversely, Adams (2019) believes entitlement involves exaggerated feelings of superiority and deserving more than others. Entitlement is a psychological trait that leads to unmet expectations. Entitlement is the opposite of humility and gratitude and instead, seeks to foster self instead of others. Adams (2019) suggests that gratitude is based in the reality of the human person and virtues of humility, wisdom, and kindness; whereas, entitlement is delusional and destructive. Entitlement fosters negative traits and vices such as anger, resentment, self-righteousness, superiority, emotional fragility, and of course, ingratitude. In other words, gratitude seeks to give more where entitlement seeks to receive more; gratitude builds and entitlement destroys.

Reiser (2014) poses 11 suggestions for instilling true gratitude in our children. These easy-to-follow recommendations become a supportive way for families to incorporate daily practices of gratitude.

Reiser (2014) suggests gratitude goes beyond manners and instead, becomes a mindset and lifestyle. The 11 practices include:

1) Name your blessings every day.

2) Be a grateful parent (tell our children why we are grateful for them). Gratitude goes beyond material things.

3) Resist the urge to shower children with too much. It is important children learn to value and respect their possessions.

4) Have children participate/collaborate when they want something. (Children can use allowances or earnings to save for a wanted item.)

5) Write thank you notes. Some suggest writing a handwritten note is a dying art. It is important children participate in this practice. (This author requires her community/public health nursing students to sign thank you notes for all the outside speakers that come to share with the class).

6) Set a good example by saying, "Thank you." No one will ever fault you for frequently saying thank you with sincerity; express appreciation. By practicing these values, our children will embrace what we practice and not merely what we speak. Ask yourself, "What does your walk look like?".

7) Blessing by serving; spirituality and gratitude go hand-in-hand. Reiser suggests Linking gratitude with a spiritual authority.

8) Encourage children to give back; better to give than to receive. For example, starting the habits of passing along children's used toys, helping the elderly, or sharing cookies with a neighbor become powerful life lessons.

9) Insist on politeness and respect. Treat others with dignity and respect. It is important to treat children this way as well. (Be wary of anyone who does not). Be accountable for what you say and how it makes someone feel. Be a role model.

10) Look for teachable moments and seize those moments. Connect the concept of gratitude with real life settings.

11) Find the silver lining. Make lemonade from a lemon…have an attitude of gratitude and let your face show it. It is critically important that children see adults modeling these behaviors.

Situations become more about the perspective than the actual circumstance.

It is more productive to teach children to be resilient and to refocus on the positives; sometimes, it becomes easier to overlook the positive when caught up in a difficult circumstance.

In other words, let us look at the positives and interact with our children to create a proactive and grateful family.

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Education by the Numbers

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The Basics

Most Americans embrace the philosophy for U.S. education and believe it is a necessity for life (Ozmon, 2012). Two initial questions become: "how many students participate and what is the budget"?

In the United States, the estimated cost for all related spending on public Pre-K-12 education in 2019-2020 school year is $680 billion ($13,440 per student). This is seven percent of the GDP.

There are approximately 50.8 million students attending public elementary, secondary and Charter schools.

There are 35.5 million students enrolled in Pre-kindergarten through eighth grade.
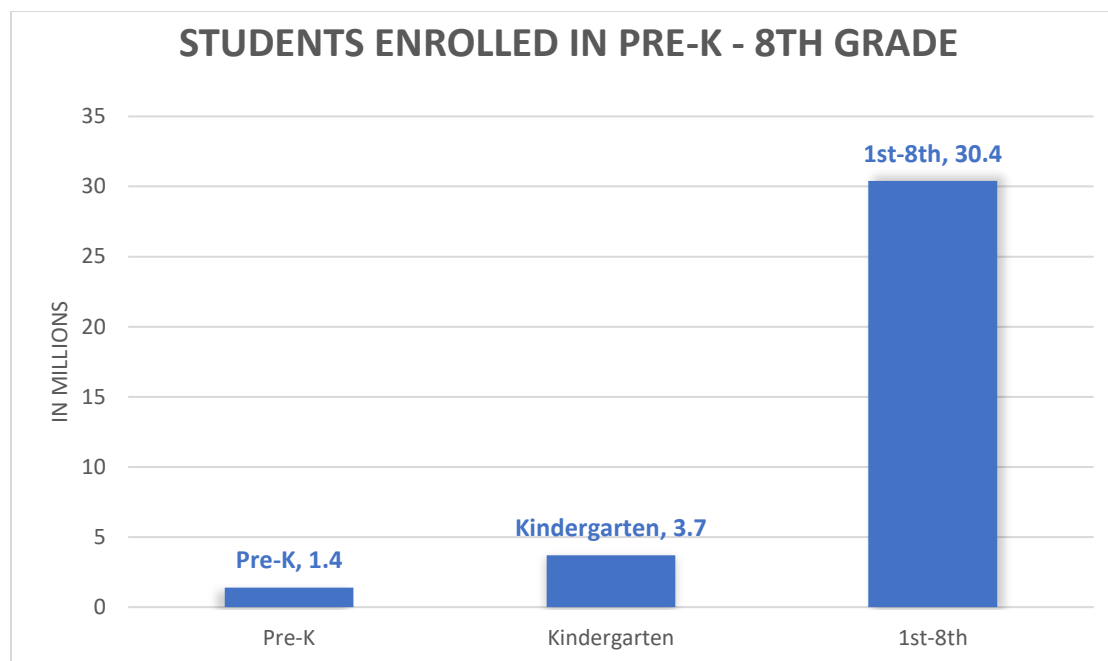
STUDENTS ENROLLED IN PRE-K - 8TH GRADE

Table 1: Students enrolled in Pre-K - 8th Grade

There are 15.3 million students in secondary (9th grade-12th grade). 4.1 million students are enrolled in 9th grade, and typically enter high school.

The demographics of public-school students, Pre-K-12:

White Students	46.7% (23.7 million)
Hispanic Students	27.4% (13.9 million)
African American (Black) Students	15.2% (7.7 million)
Asian Students	5.3% (2.7 million)
American Indian/Alaska Native Students	1.0% (.5 million)
Pacific Islander Students	0.4% (.2 million)

Figure 1: Demographics of public-school students enrolled in Pre-K - 12th grade

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STEAM

STEAMING Ahead by Challenging Thinking

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Introduction

Teaching in the U.S. is currently being driven by political bureaucracy. Under the design of "common core," the political solution to achieving equality is a pre-packaged curriculum and standardized testing where all children are provided the exact same learning experiences with the same high-stakes assessments. The expectation for teaching, learning, and assessment is "sameness." However, considering the whole child, developmental processes, and the characteristics of a diverse society, sameness should not be the priority of the educational system. This paper showcases a different approach taken in one elementary art classroom. Instead of using a pre-packaged curriculum, the teacher provided students with the opportunity to guide their own learning through STEAM (Science, Technology, Engineering, Art, and Mathematics) activities.

The short film, Alike (Lara & Méndez, 2016) was produced in an effort to elicit the emotional dilemma that society may face with a population who all think alike. The film follows a father and child through a personal account of how people are trained for productivity by society, highlighting how our educational system fosters alikeness for the purpose of career readiness, but

devalues creativity. The film warns of the coming travesty for the future of our children and society as a whole. Throughout the film, the child struggles with completing worksheets and attempting to maintain creativity in his learning experiences. However, the teacher continues to insist on learning without creativity. At the same time, the father visibly sees the change in his son as each day of school passes. Eventually, the child succumbs to the demand for output without creative energy, and the father realizes the damage caused by a lack of the arts in education. "Is this the ideal model for teaching our future leaders, to be alike and to stifle creativity?" This paper demonstrates the need for arts-based education and provides an example of how arts can be integrated with other subjects.

Background

The current push in education has a laser focus on teaching language arts and mathematics to better prepare our students for an ever-changing world. The concern is this initiative leaves little room for the teaching and integration of the arts. In an interview, Judith Ramaley, while president of the National Science Foundation in 2001, shared her vision and process for coining STEM, standing for Science, Technology, Engineering, and Mathematics (Christensen, 2011). Ramaley's intent was to capture the connection between subject areas in education (Christensen, 2011). Her work intended to call attention to the importance of science and math in order to understand the universe using technology and engineering (Christensen, 2011). This perspective started a national recognition of STEM curriculum valuing a balanced education.

The STEM movement became a front for math and science education advocacy efforts. In 2001, No Child Left Behind legislation intensified a need for literacy education in the classroom with consequences for schools that did not show improvement in test scores (Wexler, 2018). This push for literacy education left no place for the teaching of science in the classroom. Due to a lack of teacher preparation or requirement to teach in the areas of science and math, the National Science Foundation and Science Partnership identified a crisis in the school system (National Academies Press, 2006). It was not until No Child Left Behind legislation in 2007, that standardized testing was expanded to include science education. Prior to this time, literacy education was the highest priority in the public-school system (Christensen, 2011; Hallinen, 2019; Wexler, 2018). For this reason, the STEM initiative represented a new aspect of teaching science, technology, engineering, and math in the classroom.

The STEAM Movement

With STEM education taking an active role in the school system, Ramaley envisioned the inclusion of arts education to broaden student learning and intensify teaching experiences (Christensen, 2011). Yakman (2008) first coined STEAM education by adding the "A" standing for "arts." Yakman's work showcased a model for learning in the language of mathematical thinking through art education. By adding the arts into STEM education, teachers were provided an avenue for allowing creativity through art, movement, and representational thinking in learning experiences. For some educators, the STEAM movement proved to be the needed reasoning for allowing creativity back in the classroom. Now, after years of STEAM education, progressivists predict the incorporation of reading to be the next logical step in the STEM

movement, using the acronym STREAM. Many educators are already adopting these practices, adding literacy education components to STEM and/or STEAM lessons. Many educators find it to be a logical and natural inclusion in the integrated learning process.

As defined by Jacobs (2004), the integrated movement as exemplified by STEAM, involves a conscious effort to apply knowledge, principles, and/or values to more than one academic discipline simultaneously. The disciplines may be related through a central theme, issue, problem, process, topic, or experience. STEAM education can be viewed as a partnership between the arts and sciences. All the disciplines easily compliment and strengthen one another (Christensen, 2011).

Building STEAM into Teaching

By blending subjects together, students make stronger connections, and meaningful learning outcomes are increased. The interplay between subjects should be fluid as one flows into the other. Educators who struggle with incorporating STEAM instruction in their curriculum may be asked by administrators to reflect on current lesson plans and student learning outcomes for the purpose of identifying ways to incorporate other subjects that could flow smoothly together. The key to infusing STEAM in an already developed curriculum is not to change everything that has been planned, but to identify one specific concept and develop a plan for incorporating other subject areas into the learning experience. Some teachers may find planning STEAM activities to be overwhelming, and the key is to start slowly. By taking integration one step at a time, the educator can find success. This may instill the confidence to attempt further integrations into teaching experiences; rather, than trying to integrate across all STEAM areas at once and getting lost in the process. The inclusion of the arts is only enriching when thoughtfully considered as an integral part of the learning process. Educators should not just add art to check off a box; instead, educators consider the quality of every learning experience.

Quality STEAM programs include motivation, engagement, and real-world context where students apply meaningful math and science content (Moore et al., 2014). STEAM teaching evidences inquiry-based and student-centered methods. Teamwork and communication become the vehicle for students to engage in the design process in order to effectively solve engineering challenges. By providing a safe environment, students are encouraged to think critically and creatively, while given opportunities to promote a growth mindset.

In order to deeply appreciate STEAM education initiatives, it is necessary to investigate how students are most inclined to learn. Gardner (2016), focusing attention on the implications of multiple intelligences, highlighted possibilities in which to differentiate for different learners. Multiple Intelligences theory determines how students are able to gain and apply new information. This theory supports the magnitude to which students learn in diverse and unique ways (Gardner, 2011).

To use Gardner's Multiple Intelligence theory in teaching, educators first reflect on how they themselves learn. For example, "Are educators asking students to learn in ways that would be challenging for adults?" If so, they could be unintentionally stifling the learning experience for students by limiting the delivery method. Everyone has different strengths and intelligences, and

these differences make us unique in our contributions to society. There is no average student and not all students learn in the same ways. Why should educators abandon the Multiple Intelligences, as some currently suggest, when it is evident that all students learn differently?

Many early childhood and elementary students demonstrate their natural creativity in diverse ways. They are confident and capable of creating a dance, developing a song, or designing a masterpiece through the visual arts. However, by the time these students become seniors in high school, very few will consider themselves to be creative at all (Lehrer, 2012). So how can a teacher create a classroom where students are not only encouraged to think divergently, but are supported in realizing the power behind their creative ideas? Creativity is not bound to a specific content area; it is the underlying opportunity within everything children learn and do.

Study

Jacobs (2004) suggested that the movement to integrate involved a conscious effort, and the American Society for Engineering Education (Moore et al., 2014) added that the context for learning must be motivating, engaging, and applicable to the real world. Accordingly, some educators are taking the leap to create real-time, integrated learning experiences. This study describes one elementary art teacher from a rural school district in mid-Missouri. This article follows her experience creating challenge-based learning opportunities for fourth grade students in her classroom spanning across a year of instruction, all while maintaining district curriculum requirements. After an initial year of experimental design, this educator was able to replicate the process in subsequent years. Students in her classroom have benefitted from the unique integrated approach as described in the following section.

Sarah Willard, a fourth-grade art teacher, started the year by introducing and defining the term, *collaborative relief sculpture*. She set project parameters through a presentation on possible color schemes, and provided her students a selection of artists available to research. Students were initially tasked with individually studying an artist of their choosing and creating a digital presentation focusing on the artist, the style, and the inspiration. Students were given tablets to facilitate the research process, and began to narrow down their artist preference according to style, color, and subject matter. This component of research instilled personal understanding of the artist and motivated later design elements for the project.

Throughout the research process, students were tasked with determining for whom the sculpture would be created, where and how it would be displayed, and the purpose for the work. Students held meaningful discussions based on audience, message, and needs. Some students suggested the work be displayed in the hall of their school, while others wanted to serve a greater need by donating the sculpture to a children's hospital or community center to give hope to others. Based on student discussions, Mrs. Willard reached out to potential clients while students continued researching concepts.

Upon completion of the research process, students were able to create a relief sculpture design based on the different artist's particular elements derived from research. Early in the project, students were still working individually on designs for a finished sculpture. Once initial designs were sketched, students worked in teams to collaborate on the project, deciding on one of the

individual designs to support as a team. Each team created a student design presentation utilizing the SAMR model (Substitution, Augmentation, Modification, Redefinition (Puentedura, 2006) to enhance technology integration and support the selected design.

Each team shared their final presentation with the whole class for review. Teams provided artist information along with their selected design concept. Once all teams presented their designs, the class held an election to determine the winning design for the collaborative relief sculpture project.

With a final design concept selected, the entire fourth grade class was able to begin creating the sculpture as designed. Throughout the process, Mrs. Willard led discussions but included the winning team in the leadership and execution of the work. The class divided into groups to work on different aspects of the project, referring back to the original design throughout the process.

During this final stage of the project, students were still discussing what to do with the completed sculpture. Some students suggested selling and donating the money to a charity, while others suggested donating the work to an office, school, or hospital. Mrs. Willard gave students full rights to determine the best direction for their work. This incorporated a meaningful and empowering component to the work that is essential for student learning and growth. During these conversations, there were no definable boundaries between the teacher and students. Instead, all participants worked in a collaborative group, which identified needs and wants, and then reached a desired goal.

Each year, Mrs. Willard's fourth grade class has created a collaborative relief sculpture for a different audience and to serve a different purpose. The first year of the project, fourth graders donated a sculpture with the word *Hope* to the Children's Mercy Hospital Philanthropy office to give hope to children and their families. The next year, the Children's Mercy Hospital Education Department reached out to the fourth grade class to commission a sculpture as well. The final collaborative relief sculpture had a focal point on the word *Study*. The third year of the project, fourth graders were commissioned by the University of Central Missouri to create a sculpture. The class created their own version of the United States flag incorporating stars and stripes into the design. The fourth year of the project resulted in a 5-foot tall gumball machine to be sold and money donated to a charity of the class' choosing.

Preparing students for a changing world

Immersive projects like the collaborative relief sculpture foster creativity and innovation, which are necessary characteristics in a complex, changing society. Preparing students for an ever-changing world should not happen through traditional teaching and testing. Kim (2011), after studying the effects of rote teaching and the use of standardized tests to train students' minds, describes how this type of teaching has increased the fear of failure, and as a result, has led to decreased creativity. With standardized tests weighing so heavily on the minds of districts and administration, students are often taught to memorize content through teacher-led activities rather than student-centered experiences. This type of traditional teaching removes the natural curiosity students have for learning, stifling a deep understanding of concepts and their potential real-world applications. Students often demonstrate a lack of interest in rote memorization tasks,

which typically precludes the meaningful exploration of topics and diminishes students' interest and excitement for learning.

To expand on this idea of creative, integrated approaches in education, consider the following example. Integrating STEAM components in classroom teaching is just one possibility. Educators should refocus their efforts to expand thinking opportunities, and help students feel confident in striving for the seemingly impossible, like reaching for the moon. "Moonshot thinking" is a model created by Teller (2013) involving goals that are difficult, or perhaps even impossible to achieve. It is not actually a new concept. One of the most iconic examples of Moonshot thinking occurred in 1962 when President John F. Kennedy announced in a television broadcast that the United States would go to the moon. He said he did not know how and he did not know when, but that it would happen. Teller (2013) states it is easier to project for improving at ten times rather than ten percent in a given situation. Willard, from the art classroom described above, could have supported students in improving ten percent capacity in classroom problem solving skills. Instead, she pushed beyond the classroom to extend their problem-solving skills to the local community and beyond. By exceeding the goal and envisioning what appears impossible, students and adults find the internal drive for success. The hardest things to achieve are the most worthwhile. In this way, perseverance and grit are necessary traits.

It is important for educators to provide opportunities for students to develop perseverance and grit for greater success now and in the future. It may be difficult to look at teaching from a STEAM perspective and immediately shift one's practice to an integrated approach, but the hardest things to do, those that seem impossible, are the most worth doing.

Another example is Challenge-based learning, a concept introduced by Apple Corporation under the umbrella of STEAM, which was designed to challenge society to take action and make a difference in the world (Nichols et al., 2008). Challenge-based learning, which is an extension of problem-based learning in the sense that students exceed what seems possible, is a collaborative learning experience in which teachers and students work together to learn about compelling issues, propose solutions to real problems, and take action. The approach asks students to reflect on their learning and the impact of their actions, and publish their solutions to a worldwide audience. The Challenge-based learning framework emerged from the Apple Classrooms of Tomorrow—Today (ACOT2) project initiated in 2008 by Apple, Inc. to identify the essential design principles of a 21st-century learning environment (The Challenge Institute, 2008). Challenge-based learning can possibly make implementation of creativity in the classroom more feasible. Sometimes, teachers start by taking too big of steps and quickly become overwhelmed with the changes occurring in the classroom. By starting with Challenge-based learning, the teacher can take steps to move students toward a more creative mindset and incorporate STEAM practices in their classroom.

Re-envisioning teaching

To take the first step, the role of the teacher changes from lecturer to mentor/coach. Teachers become willing to share their classroom practices, goals, and discussions with their students. Mrs. Willard demonstrated a willingness to share control, and the results were beneficial for

everyone involved. Teachers can share their power with the students with whom they work by creating a vision together. Every child deserves to be taught in a way that enriches their minds, unlocks their true potential and provides them with the skills to flourish in the modern world. By changing the paradigm from teacher as authoritarian to teacher as facilitator/guide, real change can occur in education.

Classroom teachers can start right where they are right now. Substantial changes are not necessary to see meaningful results in student thinking. There are endless opportunities for changing *what* teachers do and *how* they do it. The first step is for a teacher to think about what they are teaching right now and how they can maximize the learning through content integration. Perhaps the best way to begin integrating is to add a relevant technology piece or include an engineering element. From there, a teacher may begin to naturally make STEAM connections to their own work in the classroom. When considering lesson planning, teachers thoughtfully examine if there is a project in which they could release control and allow students to develop solutions on their own or in small groups. Sometimes teachers limit their work with students by thinking small. The teacher purposefully includes elements of Moonshot thinking or Challenge-based learning throughout project work. Those learning experiences where students can experiment with solving real-world issues - directly from the classroom context - prove the most meaningful and relevant. Allowing students to take control of their own learning will increase student motivation and engagement levels.

Conclusion

The short film Alike (Lara & Méndez, 2016), described previously, demonstrated the dangers of training students' minds to conform rather than encouraging the creativity within. There are educators working diligently to ensure their students receive the opportunity to think creatively. There are other educators who want to make a change in how they teach, but are unsure where to begin. When educators determine to make a change in how teaching occurs, they may become immediately overwhelmed with the task of reinventing teaching. Before getting overwhelmed in a plan to make big changes, it is necessary to consider some ways creative thinking is already built into the classroom. Sometimes educators are doing more than originally realized.

By starting with what is already working and is part of an overarching goal for shared learning in the classroom, educators can find ways to integrate learning across subject areas while also challenging the thinking of their students. The fear of failure and ability to teach students to embrace failure is an integral part of learning in STEAM education. It is important for students to see the teacher embrace failure and observe the teacher's reaction to making a mistake. It is through example that students begin to understand the value in learning from mistakes. Big thinkers transform, inspire, and challenge.

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Page Turners: Books for Children

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Picturebooks

Believe: A Pop-Up Book of Possibilities

Written and illustrated by **Robert Sabuda**

Candlewick, 2019. ISBN 9780763663971

With sparse text and Sabuda's characteristic solid white pop-ups, this book invites readers to dream big and set the course to live up to their potential: "When I dream of the future/ I will dream big./ When I build my life/ I will reach high". Although aimed at a young audience, it is hard to imagine that children and adults of all ages would not enjoy Sabuda's inspirational words and mesmerizing, complex paper engineering. A good choice to read with children or to share as a gift book to mark special occasions or milestones. Ages 3-8. (PAC)

Let Me Sleep, Sheep!

Written by **Meg Mckinlay** Illustrated by **Leila Rudge**

Candlewick, 2019, ISBN 9781536205473

This hilarious tale of a bedtime ritual gone awry will delight young and old readers alike. The main character, Amos, always counts sheep to help fall asleep, however, he never expected that the sheep would drop into his bedroom with a thud! The story continues with Amos trying to create the perfect fence for the never satisfied sheep to jump over so they can complete their duties and return to their normal lives. All the work tires Amos out and he finally falls asleep, leaving the sheep to frolic in his bedroom. This tale will amuse all audiences. Ages 5-8. (MJS)

Maybe Tomorrow?

Written by **Charlotte Agell** Illustrated by **Ana Ramírez González**

Scholastic. 2019. ISBN 9781338214888

This delicately rendered text highlights the feelings, particularly sadness, that we may carry with us each day. Elba's big heavy block is dragged behind her, slowing down her thinking and preventing her from leaving the park where she sits. Norris, who always travels with a flock of beautiful butterflies, shows Elba (and young readers) how friendship and kindness can help share the burden of the big heavy block, and maybe tomorrow, the block will become smaller and lighter. Ages 4-8. (MTG)

Squirrel's Family Tree

Written by **Beth Ferry** Illustrated by **A.N. Kang**

Scholastic. 2019. ISBN 9781338187366

This book uses repetition and rhyme to describe the interdependent relationship between squirrels and the mighty oak tree: "Squirrels come and squirrels go, scatter-hoarding to and fro, making sure that oak trees grow, and grow, and grow, and grow." With dynamic illustrations of the natural world, informative text, and a "Nutty Facts" section at the end, **Squirrel's Family Tree** provides young readers with a realistic depiction of the life cycles of the squirrel and the oak and the centrality of the acorn through it all. Ages 3-5. (MTG)

Waiting for Chicken Smith

Written and illustrated by **David Mackintosh**

Candlewick. 2019. ISBN 978I536207712

In **Waiting for Chicken Smith**, text is supported by muted illustrations of a summer at the beach created by Mackintosh using pen, pencil, watercolor and kraft paper. During this summer tale, the main character yearns for an old friend and recalls their many adventures on the beach. Before long he is reluctantly called away for new escapades with his sister where he learns that even without his old friend there are many new adventures to be had. This story speaks to old friendships, the change that time inevitably brings and the surprise of new friendships. Ages 3-8. (MJS)

Grumpy Duck

Written by **Joyce Dunbar** Illustrated by **Petr Horáček**

Candlewick. 2018. ISBN 9781536204247

Some days just don't go the way we hoped. In **Grumpy Duck**, Duck is dismayed to find the pond has dried up, and wanders around with a little gray cloud above her. When her friends try to

cheer her up, they find out how quickly grumpiness can spread - from a small gray cloud to a massive black thunderhead. Will they be able to break the cycle and find their good cheer again? This story, with its simple prose and bold mixed media illustrations, offers young children an opportunity to think about how our moods impact one another, and how we can turn a bad day around, if we can just find the right perspective. Ages 3-8. (KBJ)

Bear's Book

Written by **Claire Freedman** Illustrated by **Alison Friend**

Templar Books. 2019. ISBN 9781536205718

Like many aspiring authors, when Bear sits down to write a story he finds that inspiration can be the hardest part. He decides to take a walk to see if he can get some good ideas started, but he keeps being interrupted by his friends. When he goes home, he finds that everyday adventures - mixed with a dash of imagination - can be the best beginning to any tale. **Bear's Book** is a lovely tale of persistence, patience, and creativity. It will encourage the youngest writers among us to think about how they can use their own experiences to craft wonderful stories. Ages 3-8. (KBJ)

Young Adult Literature

Hamilton and Peggy!: A Revolutionary Friendship

Written by **L.M. Elliot**

Katherine Tegen Books, 2018. ISBN 9780062671318

Riding the on the wave of popularity of the Hamilton Musical, this well-researched, historical fiction novel tells the story of Peggy, the youngest of the Schuyler sisters. The story explores how the American Revolution affects Peggy's with her parents, her sisters, and of course her sister's famous suitor Alexander Hamilton. However, make no mistake, Peggy is the heroine of this tale, and the novel highlights the often-overlooked contribution of America's Founding Mothers. Ages 15+. (CKM)

Other Words for Home

Written by **Jasmine Warga**

Balzer + Bray, 2019 ISBN 9780062747808

Jasmine Warga's Other Words for Home conveys a raw and vulnerable story told in verse. The story follows Jude, a Syrian girl, as she and her mother flee to the United States as Syria increasingly becomes uncertain and violent. This modern-day story of immigration tells the story of one young girl's desire to start her new life in the United States while honoring the life she left behind. Warga addresses the realities of racism and intolerance while telling a story of bravery and hope. Ages 10-14. (CKM)

Flights of Fancy: Creative Inspiration from Ten Award-Winning Authors and Illustrators

Written & illustrated by **various noted authors and illustrators**

Walker Books, 2019. ISBN 9781536205367

In this profusely illustrated anthology, ten acclaimed creators of children's books explore the inspirations and influences that guide them. Each chapter is written and illustrated by a British Children's Laureate. Prose and illustrations provide inspiring, workable ideas for nurturing the creative potential within each reader. Individual chapters could serve as an excellent mentor texts for budding authors and illustrators, giving readers an opportunity to learn from the likes of Michael Rosen, Anthony Browne, Lauren Child and many more. Ages 11+. (PAC)

IJWC Updates

For the new column, "Emerging Professional," the IJWC editorial team invites students (undergraduate, masters, and doctoral levels) to submit papers including problem resolutions, literature reviews, and research designs (qualitative or quantitative). The topic choices remain broad with the primary focus on how this content supports all children's holistic learning and development. IJWC editors remain committed to providing student-authors with relevant, productive and concrete feedback. Importantly, a student may identify additional authors; the key factor is for the student to be "first author."

The IJWC mission remains committed to promoting an understanding of holistic learning and development for all children. In particular, IJWC editors believe by supporting student authors with modeling, feedback, and mentoring, IJWC strengthens and extends understanding, recognition, and implementation of "best practices" into the next generation of educational professionals and child advocates.

How to Submit a Student Paper

In order to target the "Emerging Professional" column and to distinguish your paper as a "student submission," merely identify "Emerging Professional" at the top of your document. In this way, the manuscript will be forwarded to the appropriate editors committed to supporting emerging scholars.

If you have any questions regarding this particular process, contact tiffany.wilson@mtsu.edu

See you in the 2020 IJWC Fall issue!