2018

Play2Learn: promoting learning through play during the academic day

BOSTON UNIVERSITY

SARGENT COLLEGE OF HEALTH AND REHABILITATION SCIENCES

Doctoral Project

PLAY2LEARN:

PROMOTING LEARNING THROUGH PLAY

DURING THE ACADEMIC DAY

by

MEGHAN DALEY

B.S., Boston University, 2009
M.S., Boston University, 2011

Submitted in partial fulfillment of the

requirements for the degree of

Doctor of Occupational Therapy

2018

Approved by

Academic Mentor _____

Liat Gafni-Lachter, OTD, OTR/L
Lecturer in Occupational Therapy

Academic Advisor _____

Karen Jacobs, Ed.D., OT, OTR, CPE, FAOTA
Clinical Professor of Occupational Therapy

ACKNOWLEDGMENTS

I would like to express my deep gratitude to Professor Liat Gafni-Lachter, who was extremely supportive throughout her guidance in the creation of this project. She continually inspired and encouraged me throughout this journey. I would also like to thank my peer mentors, Tracy and Beth, for their invaluable feedback and patience each step of the way, which was very much appreciated.

To my husband, Justin, who continually supported me through this endeavor and knows more about occupational therapy than he could imagine! To my family, who encouraged me from the beginning of this journey and provided their unwavering love to persevere. They continued to reassure me of how important and beneficial my project was.

Finally, to all the students with whom I have worked in past, present, and future, who have influenced and motivated me to create this program. They always amaze me with their perseverance through their academic years.

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MEGHAN DALEY, MS, OTR/L

Boston University, Sargent College of Health and Rehabilitation Sciences, 2018

Major Professor: Liat Gafni-Lachter, OTD, OTR/L, Lecturer in Occupational Therapy

ABSTRACT

Education and student success are among U.S. citizens' highest priorities. Changes in educational policies have led to academic "push down," in which children are expected to achieve academic milestones in core subjects (reading, writing, and mathematics) at younger grades. However, although performance expectations have increased, child development sequences and timelines have not changed to support expectations. Various solutions, including sensorimotor, educational, and play programs have been trialed, but the academic achievement gap continues to grow. Successful programs include opportunities to develop foundational sensorimotor skills, follow developmental sequence, align with curriculum, and use aspects of a child-driven play-based approach to learning.

In response to the need to better prepare students for meeting academic expectations, the Play2Learn (P2L) program was developed based on previous evidence. The program's premise is to use play as a learning tool with an educational approach to promote student academic success. The P2L is a 6-week program (six educational modules) for occupational therapy practitioners and teachers. Each module includes 50-

minute interactive lectures, expert mentoring, and practical application. Topics include defining play and its benefits, risk factors of play, strategies and justification for play in the classroom, how to be playful with students, and application of play strategies. With this program, teachers will confidently and effectively use play in the classroom setting to promote learning, adapt familiar lessons to make them developmentally appropriate and playful, and justify how it aligns with the curriculum. Program objectives are to enhance student academic performance and improve behavior, attention, sensorimotor skills, social-emotional skills, language, processing, and cognition. The desired long-term outcomes are to increase play during the school day, change curriculum design to be more developmentally appropriate, develop new ways to assess student performance, and educate all students regardless of their academic abilities.

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Background

Education and student success are amongst the highest priorities for citizens of the United States (Mackey, 2016). With a national agenda to enhance academic achievement, expectations to obtain learning milestones are rising. The change in educational policies leads to a phenomenon called the academic "push-down," in which children are expected to achieve academic milestones in core subjects (reading, writing, and mathematics) at younger grades. The problem is that, although performance expectations have increased, child development sequences and timelines have not changed to support them. This results in an academic achievement gap between system demands and student abilities that strains students, teachers, related service providers (including occupational therapy practitioners), school-district program directors, school administrators, and national and state policies and standards.

Federal and state policies, which set educational standards for students, have become increasingly rigorous (Bassok, Latham, & Rorem, 2016; Gallant, 2009; Lauen & Gaddis, 2015; National Council of Teachers of English, 2014). Educational law and programs such as Common Core Standards, Race to the Top, and the Every Student Succeeds Act (ESSA, the replacement of the No Child Left Behind Act of 2001 [NCLB]), have set higher expectations for students in public school systems across the United States (Bassok et al., 2016; Booher-Jennings, 2005; Lauen & Gaddis, 2015). The NCLB set a goal of having 100% of students proficient in both reading and mathematics (Association for Supervision and Curriculum Development, 2015). In 2013, only 41% of

fourth-grade students and 34% of eighth-grade students achieved proficient or higher scores in mathematics. English and Language Arts achievement scores for both fourth- and eighth-grade students were also just as low, with 34% of students scoring at or above the proficient mark (The Nation's Report Card, 2013). Due to these high standards, educators have reformed their expectations, classroom organization, and pedagogical approach to teaching starting in the preschool and kindergarten years. These changes may not align with best practice (Bassok et al., 2016; Booher-Jennings, 2005; Gallant, 2009).

Contributing Factors

Individual student academic "success" can be defined based on grade-point average, report cards, classroom assessments, and standardized assessment scores. District performance is evaluated based on state tests, which program directors and school administrators perceive as reflecting the quality of the school district. Therefore, state test results place immense stress on program directors and administrators, which in turn pressures the teachers. Teachers feel forced to improve student test scores to the proficient mark, which can have a negative impact on the classroom and can change the educational environment and the material they teach. Teachers may also feel that student scores influence their own performance evaluation, labeling teachers as either "good" or "bad" (Booher-Jennings, 2005; Firestone, 2014). The current academic expectation push down leads teachers to require children to spend the majority of the academic day engaged in tabletop activities and paper-and-pencil tasks seated at a desk (Gallant, 2009; Lust & Donica, 2011). This practice leaves less opportunity for students to engage in sensorimotor and free-play activities essential for developing the skills needed to excel

academically.

As a result, students may develop gaps in foundational skills necessary for classroom success. Foundational skills include sensorimotor, cognition, processing, visual-perceptual, and social-emotional skills (Bassok et al., 2016; Case-Smith, 2015). The lack of mastery of foundational skills, in turn, reduces students' ability to succeed in more advanced academic skills, including reading, writing, and mathematics (Amundson, 2005; Gallant, 2009). For example, preschool students are expected to write words legibly, although they have not mastered the motor control for a pencil. They are expected to add and subtract simple numbers without understanding the more basic spatial concepts learned through motor play (Amundson, 2005; Texas Education Agency, 2015). Play is also important for developing attention, processing, cognition, and social-emotional skills (Tanta & Knox, 2005). Thus, limitations in these skills may reduce academic success.

Impact of the Problem

The lack of opportunity to develop skills can lead many students to fall behind, as evidenced by increased referrals to occupational therapy services for handwriting, reading, sensory processing deficits, and behavioral problems. Students who are "not reading proficiently by third grade are four times less likely to graduate high school on time" (Daily, 2014, p. 2). Students, parents, teachers, school administration, and related service providers experience the adverse effects of this shortcoming. Foremost, students who fall behind academically experience low self-esteem, act out in class, receive unnecessary office referrals that result in time away from education and recess, and often

are referred unnecessarily to special education. Consequences students can face within the school include

> (1) teachers assigning lower marks for the writing quality of papers with poor legibility but not poorer content, (2) students slow handwriting speed limiting compositional fluency and quality, (3) students taking longer to finish assignments than do their peers, (4) students having problems with taking notes in class and reading them later, (5) students failing to learn other higher-order processes such as planning and grammar and writing avoidance and later arrested writing development. (Case-Smith, 2005, p. 588)

Students who struggle with handwriting may begin to struggle with academic achievement.

Occupational Therapy Role in Remediating the Problem

According to Clark, Jackson, Polichino, and the Commission on Practice (2011, p. S46), within the school setting,

> occupational therapists . . . work with children, and youth, parents, caregivers, educators and other team members to facilitate children's and youth's ability to participate in every day activities, or occupations. [Occupation therapists can] use their unique expertise to help children and youth with and without challenges prepare for and preform important learning and developmental activities within their natural environment. [Such expert knowledge consists of] skills in biological, physical, social and behavioral sciences to evaluate and intervene with individuals across

the life course.

Occupational therapists are trained to evaluate performance skills, patterns, contexts, environment, activity demands, and client factors. They also assess development in areas such as adaptive, cognitive, communication, physical, and social-emotional domains (Clark, Jackson, Polichino, & the Commission on Practice, 2011).

Overview of the Proposed Solution

The proposed solution to this problem is to train occupational therapy practitioners to educate and mentor teachers to incorporate play within the classroom setting to promote the natural skills development described previously. The proposed program will focus on enhancing participating teacher' knowledge and skills regarding child development, benefits of play, and strategies to justify and increase play within the classroom setting. Program directors and school administrators will also be trained on the benefits of permitting play within the classroom setting. The program, titled Play2Learn (P2L), provides opportunities for students to develop skills necessary for academic success while adhering to academic standards. The 6-week program includes six 50-minute interactive lectures with expert mentoring, practical application, and follow-up observation.

Summary

Academic success is an important part of the health and wellness of children in our country, in childhood and later in adulthood. As occupational therapists, our goal is to enhance participation in meaningful occupations, including learning. Our training in developmental theories and processes allows us to understand the factors leading to the

problem and offer developmentally appropriate solutions. Therefore, the goal of this doctoral project was to understand the barriers to academic success and to develop solutions to mitigate those challenges. First, a thorough review of the literature was conducted to understand factors contributing to the problem and to explore other solutions currently being implemented. This information, along with theoretical bases to support the proposed program, is presented is Chapter Two. Chapter Three contains the proposed program, P2L, which is a teacher training aimed at remediating the learning gap, and Chapter Four presents a plan to evaluate the P2L program. Chapters Five and Six include the funding and dissemination plans, respectively. Finally, Chapter Seven presents the conclusion, a discussion of the significance of the program in the school setting, and the impact P2L can have for the occupational therapy practice.

CHAPTER TWO: THEORY AND EVIDENCE BASE TO SUPPORT THE PROPOSED PROJECT

Introduction

This chapter thoroughly describes the problem of increased academic demands without the supplement of required developmental skills and evaluates existing solutions to resolve it. In the first part of this chapter, theoretical frameworks are used to explain the rise and complexity of the problem. The problem originated in response to societal views towards improving academic performance and college readiness by creating more rigorous curriculum standards to intensify academic expectations (Common Core State Standards Initiative, 2018). However, child developmental sequences and fundamental developmental milestones have not changed to support these academic expectations.

An explanatory model developed to depict the factors leading to the problem and the interactions among those factors is presented in the following sections. Evidence supporting the different factors in the model is reviewed and synthesized. In the second part of this chapter, existing solutions for the current problem are presented and evaluated. Attempted solutions include formal and informal sensorimotor-based approaches, educational approaches, and play-based approaches. The chapter conclusion demonstrates the need for a new solution to address the problem.

Overview of the Problem

Expectations for academic performance from young students in the United States are rising. Although students spend a majority of their time participating in academic work and are given ample opportunity to learn, they often are required to complete

academic tasks that do not coincide with developmental timelines, creating a gap in academic performance. Young and developing preschool and kindergarten students are spending more time sitting at a desk or table rather than playing and developing sensorimotor, fine and gross motor, cognition, processing, and social-emotional skills (Lust & Donica, 2011). As a result, student opportunity to develop the foundational skills required to complete academic tasks is hindered. Students learn to compensate or adapt their skills to meet the task criteria presented, which may build a false basis for the foundational skills. That is, when tasks are above student abilities, students may use inefficient motor patterns and skills to complete the task, such as *drawing* rather than *writing* letters of the alphabet. The compensated foundational skills may not develop, mature, refine, or grow strong enough to complete academic tasks as these tasks and demands grow more challenging. The compensated foundational skills are "only emphasized when the students have 'failed' to 'catch' the skills.…[These] students are likely to fall behind early and develop more habits that require remediation" (Dinehart, 2015, p. 104). As students grow, they develop deeply rooted performance patterns and need to rely on the automaticity of skills to maintain grade-level pace. It may be difficult to remediate these skills in later grades, as the students get older.

Use of Theory to Explain the Problem

The Ecological Model of Human Development and the Dynamic Systems Theory are two systems theories that are helpful in understanding the problem origins and the factors that influence its exacerbation. The first, Urie Bronfenbrenner's (1994) Ecological Model of Human Development, enables an understanding of the multiple external

systems leading to the problems that students experience. The second framework, Dynamic Systems Theory as adapted by Esther Thelen (1992) for child development, illuminates how the problem evolves within the individual students. (Spencer, Perone, & Buss, 2011).

Ecological Model of Human Development

Bronfenbrenner's (1994) Ecological Model of Human Development assists in demonstrating how a change in one system subsequently affects all other systems. The theory consists of five systems or levels, the largest being the *chronosystem*. The chronosystem "encompasses change or consistency over time not only in characteristics of the person but also the environment in which the person lives" (p. 40). Changes that happen in the chronosystem cause other systems to adapt to these modifications. For example, when societal priorities place higher importance on the value of education, they cause other systems to modify their expectations, values, and environment to meet the standards of the chronosystem.

The system immediately affected by the chronosystem is the *macrosystem*, which Bronfenbrenner (1994) described as the "overarching pattern of micro-, meso-, and exosystems characteristics of given culture or subculture.… [It] may be thought of as a societal blueprint for a particular culture or subculture" (p. 40). The macrosystem consists of national and state policy makers that create the standards criteria. To meet the high standards set by the chronosystem, the macrosystem's solution consists of attuning federal policy (e.g., NCLB, ESSA) and developing programs, such as Common Core Standards and Race to the Top. This concentration has reduced the opportunity for

children to engage in activities needed for the natural development of sensorimotor, cognition and processing, visual-perceptual, and social-emotional skills. An enormous focus on education and its standards have been on the rise due to the high value the United States places on education. This results in more rigorous and competitive standards for public school students.

The next system in Bronfenbrenner's (1994) Ecological Model of Human Development is the *exosystem*, which encompasses the link and relationship between "two or more settings, at least one of which does not contain the developing person, but in which events occur that indirectly influence processes within the immediate setting in which the developing person lives" (p. 40). Due to the high standards set at the national and state levels, school administrators may place strict demands on teachers to introduce complex subjects to students at younger ages to increase the students' exposure to specific material. Familiarizing students to these complex subjects may result in higher scores on state testing. The number of students with high and passing scores on state testing is considered a direct reflection of the quality of the school system and their administrators (Booher-Jennings, 2005; Firestone, 2014; Gallant, 2009).

The *mesosystem*, the system next to the microsystem, "comprises the linkages and processes taking place between two or more settings containing the developing person" (Bronfenbrenner, 1994, p. 40). The mesosystem best describes the relationship between the home and school environments. The student's home may have a positive or negative outlook on schools. A negative view of education in the home environment may carry over into the student's view of education. In this case, the student will not put forth effort

or be motivated to do well in school. Conversely, if the home environment stresses the importance of education and performing well in school, the student may have a positive outlook on school and perform to the best of his or her ability. The teacher–administrator relationship may also have a positive or negative impact on the model. If teachers feel they do not have school administration support, they may not teach to their best ability. However, if teachers feel supported, they can a have a positive impact in the classroom and with other teachers.

The next level or system is the microsystem, "a pattern of activities, social roles and interpersonal relations experienced by the developing person in a given face-to-face setting with particular physical, social and symbolic features" (Bronfenbrenner, 1994, p. 39). The microsystem for this particular problem includes teachers with whom students interact daily and related service staff, including occupational and physical therapists, and speech-language pathologists. Teachers have high expectations of students entering their kindergarten year and may blame previous teachers or the families of students who lack school-readiness skills (Booher-Jennings, 2005; Gallant, 2009). These relationships directly affect the students' performance and attitudes towards their academic experience.

At the center of the model are the students. They must develop and master various skills to succeed in the classroom. These development areas include sensorimotor, sensory processing, fine and gross motor, cognition and processing, visual perception, visual-motor integration, and social-emotional skills. Students need opportunities to develop lower-level skills such as various grasp patterns and core strength to sit in a chair, to master higher-level skills such as handwriting. Reduced opportunity to develop

crucial foundational skills can contribute to the ever-growing academic achievement gap.

Dynamic Systems Theory

The Dynamic Systems Theory, as adapted for child development by Thelen (1992), proposes that motor skill mastery requires practice and opportunity to apply the skills in real time (Spencer et al., 2011). This theory assists in explaining the development of both strong foundational skills and compensatory skills to meet the academic tasks presented.

The Dynamic System relies on the organism (child), the environment, and real time. A main principle of the theory is the ability to self-organize. According to Smith and Thelen (2003, p. 343), the "developing organisms are complex systems composed of very many individual elements embedded within, and open to, complex environment." These systems include cognition, musculoskeletal, neuro-motor development, sensory processing, perception, and social-emotional factors that constantly change as they respond to the elements of the environment and the attributes of the task presented (O'Brien, 2015). For students to self-organize, "the parts are coordinated without an executive agent or program that produces the organized pattern" (p. 343). The "organic components and the constraints and opportunities of the environment" (p. 344) determine coordination of the movements and behavior. This shows that no one input demonstrates significance over another—all systems work together to produce the movement or behavior. Self-organization skills are not predetermined, meaning students produce variable responses to meet the needs of the task. This describes the way a person responds to presented tasks, requiring organization of multiple systems to perform as

intended.

The second principle of the Dynamic Systems Theory is time. Time scales range from milliseconds for axonal excitation to years for mastering a new skill (Smith & Thelen, 2003). Time scales vary for "action, learning, development and evolution as distinct processes," explaining that the time line to master skills varies from person to person. Change in behavior "occurs over different time scales" (p. 344). According to Spencer, Perone, and Buss (2011), the Dynamic Systems theory explains that "change occurs within complex systems with many components that interact over multiple time scales from the second to second unfolding of behavior in to the longer scales of learning, development and evolution" (p. 260). Development and mastery of skills comes from "exploration, or the active testing of the possible spaces where current skills and the desired tasks interest and the subsequent selection of those actions that match the functional needs best" (Thelen, 1992, p. 192).

Students learn through input from multiple systems that interact in dynamic ways to both facilitate and constrain movement (Case-Smith, 2015). They receive input through exploration and experimentation with movement patterns to complete a task until they develop an optimal movement pattern they can apply across various situations. With sufficient and varied practice, children are able to develop efficient motor-skills patterns. Common skills students must develop for success in academic settings are fine motor skills, which include manipulating numerous classroom materials. Environmental factors such as "experience holding different drawing utensils, experience drawing on different surfaces, experience in manipulating small objects, e.g., puzzles, blocks, small figurines"

(p. 92) may influence the development of manipulative skills and grasps. Students approach these tasks in various ways. Through practice across varied contexts, they can develop, master, and generalize foundational skills for academic success.

Based on the Dynamic Systems Theory, lack of sufficient practice will result in poor development of the foundational motor skills required to meet the high academic and developmental demands. The theory explains why some students develop stronger foundational skills, whereas others build a weak foundation at risk for crumbling as demands increase. Students who are able to develop consistent and appropriate motor patterns may interpret their experience differently than their peers do, due to different intrinsic factors. If expected to complete tasks above their developmental age, students may compensate by creating their own motor patterns sufficient to meet the task *at that time*. However, as academic demands become more difficult, these motor patterns may not adequately meet the challenging task demands. The motor patterns can fail, causing students to fall behind grade level.

Explanatory Model

The explanatory model presented in Figure 1 was developed to depict the multiple systems that lead to academic standards' influence on student performance. Adapted from Bronfenbrenner's Ecological Model of Human Development, this explanatory model assists in explaining how multiple external contexts can influence how children develop and grow throughout their academic careers. The model portrays that societal views, along with federal and state policies, have affected school administrators and teachers' implementation of academic standards. Each system may affect students and their

opportunities to develop skills required for academic success. The outermost circle—societal views—represents the importance our society ascribes to education and achievement. This influences federal and state policies regarding educational standards. School administrators are responsible for school districts meeting standards, which compels how teachers manage their classrooms and how related service staff provide therapeutic interventions. Students are at the center of the model. Their interaction with each system results in their development not only of skills required for academic success, but also as individuals.

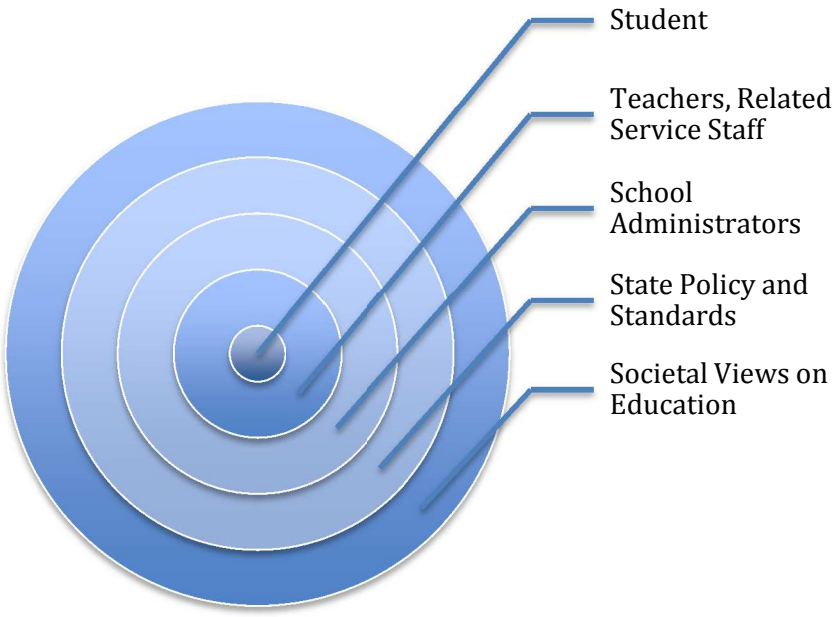


Figure 1. **Ecological model of human development for academia explanatory model**

Evidence to Support the Proposed Explanatory Model

An extensive search of the literature was conducted to identify evidence that supports the elements of the proposed explanatory model. The search used scholarly data bases, the Educational Resource Information Center (ERIC), and PsycInfo to identify research studies and to review current U.S. policies that shaped present educational standards. The literature search also included reviewing references from articles the author deemed important. Non-scholarly articles from reputable sources (e.g., the American Occupational Therapy Association [AOTA]), Association for Supervision and Curriculum Development, National Alliance of Specialized Instructional Support Personnel, and National Council of Teachers of English) also provided opinions and perspectives of education from multiple systems within the explanatory model. (See Appendix A for detailed charts.)

Macrosystem to Exosystem: Policy Shaping Educational Standards

Education is an extremely important occupation of today's youth. School systems are responsible for grooming students to lead successful adult lives (Bazyk & Cahill, 2015). Although there is minimal current research stating the importance today's society places on education, it can be assumed that education is a top priority for the United States based on its multiple policies, revisions, and mandates regarding education. Policy affects education in numerous ways because it "is shaped by trends in health and education practice" (p. 664). Federal and state policies and programs, such as Common Core Standards; Race to the Top; and the ESSA, which replaced NCLB, have set high expectations for students in public school systems across the United States (Bassok et al.,

2016; Booher-Jennings, 2005; Lauen & Gaddis, 2015). These policies set the standards for students and have become increasingly more rigorous than in the past (Bassok et al., 2016; Gallant, 2009; Lauen & Gaddis, 2015; National Council of Teachers of English, 2014). For example, NCLB set a goal of having 100% of students in the 2013–2014 academic school year achieve a proficient score in both reading and mathematics (Association for Supervision and Curriculum Development, 2015). The impact of society's views and federal policies demanding standards have changed the school experience for today's youth.

Current standards do not align with the sequence of child development. For example, students are expected to enter kindergarten with basic reading and writing skills. However, students with typical development learn to read between the ages of 6 and 7 years and are not ready for handwriting lessons until the latter portion of kindergarten (American Academy of Pediatrics, 2015; Schneck & Case-Smith, 2015). Meanwhile, there have been substantial changes to the time allotted for core and non-academic subjects, with a larger focus on mathematics and literacy due to the content of state testing and goals of federal policies (Bassok et al., 2016; Booher-Jennings, 2005; Gallant, 2009; Lauen & Gaddis, 2015; National Council of Teachers of English, 2014). As a result, instruction time is being reduced instead teach to test, test preparation, and scheduled testing times (Bassok et al., 2016; National Council of Teachers of English, 2014).

Teachers can forfeit up to 110 hours of instruction to accommodate testing, which results in students missing a significant amount of valuable time for learning (Booher-

Jennings, 2005; National Council of Teachers of Education, 2014). Even kindergarten teachers now also use more standardized testing. For example, 29% of kindergarten teachers use standardized tests at least once a month to assess progress and determine areas that require remediation (Bassok et al., 2016). With education a top priority for American youth, policies and programs developed to control educational standards have drastically altered the way learning occurs for young students.

Exosystem to Mesosystem: School Administrators Influence on Teachers' Performance

School administrators heavily influence teacher performance, style, and curriculum implementation, which is dictated by educational standards (Bassok et al., 2016; Booher-Jennings, 2005; Gallant, 2009; Lauen & Gaddis, 2015; National Council of Teachers of English, 2014). Federal and state policies hold school districts responsible for educating their students, as measured by state and standardized testing outcomes (Bassok et al., 2016; Booher-Jennings, 2005; Firestone, 2014; Gallant, 2009; Lauen & Gaddis, 2015; National Council of Teachers of English, 2014). As a result, teachers often are encouraged to "triage" students beginning their academic career based on learning capability and academic achievement to ensure high performance on state and standardized testing (Booher-Jennings, 2005; Lauen & Gaddis, 2015).

During triage, students are categorized into three groups and then taught based on test scores (Booher-Jennings, 2005; Lauen & Gaddis, 2015). The first group performs at or above grade level. The second group, "bubble students," performs slightly below grade level. These students receive specialized instruction from teachers to remediate skills to improve their test scores to "proficient" according to state standards. The third group

scores significantly below grade level and are often referred for special education evaluation to relieve accountability. Educators report feeling pressured by administrators to manage their classroom in certain ways and concerned that student performance on state testing can (positively or negatively) affect the teachers' annual performance evaluations (Booher-Jennings, 2005; Firestone, 2014; Gallant, 2009; Lauen & Gaddis, 2015). School administrators often require teachers to re-align their beliefs on curricula and best teaching practices, even though it may not benefit all students.

Mesosystem to Microsystem: Challenges Experienced by Teachers

Teachers are charged with the important role of educating the youth of America. Expectations for school-readiness have been increased and tend to be above typical developmental milestones. Time allocated for instruction of core subjects have been altered to align with state and standardized testing, and students have minimal exposure to ancillary classes such as music, art, and physical education. Classroom organization also has been regulated to assist students in meeting the high standards of federal and state policies. Teachers feel pressured to align their teaching techniques with that of principals and school administrators, as opposed to implementing best practice in education (Bassok et al., 2016; Booher-Jennings, 2005; Firestone, 2014).

Teachers also have higher expectations for school-readiness norms. Kindergarten students are now required to begin their education careers with developed foundational skills previously been taught in the first grade. A study conducted in 2010 compared classrooms from 1998 to 2010 and found expectations that "children should learn to read in kindergarten increased sharply from 31% to 80%" (Bassok et al., 2016, p. 5). This

study also reported a large increase in the number of teachers who believe kindergarten students should have formal reading and math instruction, as well a strong knowledge of the alphabet before entering kindergarten—skills customarily acquired within the classroom setting prior to change in standards. Current standards do not coincide with developmental sequence of students.

Teachers are changing the way they educate their students based on the importance of test scores. Many believe students should demonstrate certain skills in preparation for passing state tests and performing at grade level on standardized tests when they enter their classroom (Booher-Jennings, 2005). Students who are predicted to perform poorly will likely be retained at their current grade level, even though they make progress within the classroom. Curricula previously focused on play, social participation and learning through exploration of the environment have shifted to more academic-driven curricula focused on test preparation (Gallant, 2009; Miller & Almon, 2009). Many learning centers, such as arts and crafts or dramatic play, have been replaced with time spent engaged in worksheets and independent learning.

Classroom organization and materials available to students to promote learning in the classroom have been adjusted to reflect the shift from play to academia in kindergarten classrooms (Bassok et al., 2016; Gallant, 2009). The amount of time spent on core academic subjects has changed significantly, focusing instead on mathematics and language arts to accommodate state and standardized testing areas (Bassok et al., 2016; Booher-Jennings, 2005; Gallant, 2009; Lauen & Gaddis, 2015; National Council of Teachers of English, 2014).

Many teachers also feel pressured with the amount of information they must introduce and students must master in the time is allotted for education. One teacher reported, “The progressive curriculum and grade level expectations from state and district levels do not consider or allow for developmental differences” (Gallant, 2009, p. 210). As previously mentioned, teachers can lose up to 110 hours of instruction time to testing and preparation. Gallant (2009) reported the factors that most affect how a classroom is taught are “state and federal mandates, availability of materials, children’s preschool experiences [and] first grade expectations” (p. 213). Over 70% of respondents ranked these factors as either most or considerably influential.

Finally, motivation is a large factor in how teachers provide education to their students. Motivation can be extrinsic or intrinsic. Firestone (2014) explained that *extrinsic* motivation includes incentives or punishments based on achievement measures, but with *intrinsic* motivation, teachers reward themselves based on results from their work. This type of motivation is often observed when a teacher demonstrates competence in their area of education, and between a teacher and a student when the student begins to grasp concepts that previously were challenging. Extrinsic motivation can influence, even depress, intrinsic motivation. Although some teacher-incentive programs may help, others, such as performance-based programs, may have a negative impact on education because they are difficult to monitor actions for results. Performance-based programs often lead teachers to teach to the test to improve classroom scores and receive better performance-based evaluations. This, in turn, causes teachers who were previously intrinsically motivated to teach students on their abilities using evidence-based

techniques, to teach instead to test for improved performance-based evaluations.

The Role of Related Service Providers (Occupational Therapists)

Within schools, occupational therapy is considered a related service. Traditionally, occupational therapy practitioners provided services only for students in special education to address "academic, nonacademic, extracurricular and prevocational and vocational areas" (AOTA, 2014a). However, occupational therapy practitioners can contribute significantly to educational outcomes of all students by working closely with teachers and school administrators. According to AOTA, practitioners can co-teach in the classroom during various activities and provide in-service presentations to educate teachers and school staff on the role of occupational therapy, development, and the importance of play. With implementation of the ESSA, occupational therapy practitioners can play a larger role within the school setting as specialized instructional support personnel. The ESSA promotes collaboration between all members of the academic team, including related service staff. That is, occupational therapy practitioners can collaborate with teachers, administrators, and parents to ensure that students succeed within the classroom by addressing obstacles interfering with academic success and a positive learning environment, supporting physical as well as mental wellness, and helping students succeed academically (National Alliance of Specialized Instructional Support Personnel, n.d.).

Microsystem to the Individual: The Impact on Students

Students, the core of the explanatory model, are affected by all other systems in the model. Educational instruction is now taught based on the content of state and

standardized testing rather than based on individual student needs. Student socialization with peers has been significantly reduced because most of their day is spent engaged in worksheets and independent work. With instruction focused on testing, opportunities to develop other non-academic skills essential for student success, such as social skills, perseverance, curiosity, and conscientiousness, are also reduced (National Council of Teachers of English, 2014).

Disciplinary action within the classroom setting has significantly increased. Rusby, Taylor, and Foster's (2007) study found that first-grade male students were more likely to receive discipline referrals than were female students. The most common reasons for office or discipline referrals were physical aggression and disruptive or defiant behaviors. Male students were more likely to engage in physical aggression warranting an office referral, whereas when female students acted out, their behaviors were usually disruptive or defiant and resulted in a "time-out." One possible reason for these behaviors is student frustration with the management of academic tasks in which they are not succeeding, along with minimized opportunities to develop coping skills via social-emotional play.

Summary

The high value that United States places on education reflects in the high expectations set by federal and state policies. School administrators ensure teachers uphold and meet these high standards because they are held accountable for district performance on state and standardized tests. To certify the standards are met, school administrators hold teachers responsible for student performance. In turn, teachers' high

expectations of students may not always correspond with developmental milestones.

Teachers evaluate their abilities based on student performance on state testing and have changed their expectations and classroom management based on academic standards. They now expect students to enter kindergarten with skills formerly taught in the first grade. They have significantly altered their classroom organization to shift focus from learning through experience to academia, specifically mathematics and literacy, and now emphasize state testing results rather than other skills that help shape students as a whole—such as social skills, perseverance, conscientiousness, and curiosity. Instruction time is sacrificed for testing preparation and test-taking.

Students are also highly affected by the changes made to meet federal and state expectations. They are given minimal opportunity to develop and master skills required for academic success. Instead, they spend a large portion of their day engaged in independent tabletop work. There are more discipline referrals, and at young ages, possibly because students are not receiving individualized instruction based on their needs. Students are triaged based on their academic abilities and taught according to the group they are categorized into at a young age. Students who fall behind in the third and final category are often referred for special education evaluation, so teachers will be no longer accountable for state and standardized testing of these students. This allows teachers to focus more energy on students closer to passing or reaching proficiency on tests.

With stricter standards, changed curricula, and altered classroom organization, students do not receive optimal opportunities to develop the skills necessary to lead

successful adult lives. However, implementation of the ESSA allows an opportunity to transform interpretation of the standards and change classroom organization to benefit students. Occupational therapists and other related service staff can lead workshops to train teachers and school administrators on appropriate developmental milestones and ways to foster skill acquisition of lifelong learners, as well as meet high academic expectations that support societal views and meet federal and state expectations.

Current Solutions

The review of solutions to remediate the problem focuses on sensorimotor programs, educational solutions, and play-based learning to promote learning within the classroom setting.

Sensorimotor Solutions

Sensorimotor programs are often used within the school setting to allow students a break from class work or to assist in developing sensorimotor skills to improve students' sensory processing and the gross and fine motor skills required for academic success. The options discussed in this section can be naturally integrated within the students' day. Others can be purchased commercially but require procuring training, and often products, from the company.

Informal movement breaks are organically embedded into a school day, such as recess, ancillary classes, meals, and classroom rotations. These breaks allow students a mental and physical respite from the classroom demands. Recess and play help students "develop the social, emotional, physical and cognitive skills they need to be successful in both school and society" (AOTA, 2014b). Recess schedules vary in school districts

nationwide. Teachers are apprehensive to allow their students to take advantage of scheduled recess time due to their colleagues and administrators perceptions of them (Booher-Jennings, 2005). They feel pressured to use the entire school day for academics exposing students as much as possible to curriculum that may be present on testing. Test scores determine their value—whether they are "good" or "bad" teachers. Due to the strong focus on academics, schools limit the time for scheduled recess. According to the Center on Education Policy, recess time has decreased in approximately 20% of school districts to allow more instruction time for core academic subjects (Ramsetter, Murray, & Garner, 2010). As a result, students have fewer opportunities "for engagement in social participation, improved physical and emotional health . . . and preparation of the body and mind for attentiveness and engagement in the classroom" (AOTA, 2014b, p. 2).

Several commercially available programs exist to remediate the lack of opportunities provided for play:

Brain Gym (2016). Available to teachers, the Brain Gym program encourages breaks within the classroom with the intent of teaching students to recognize when they need to engage in movement activities. Eliciting 26 natural movements to enhance learning within the classroom, Brain Gym teaches students body awareness—to recognize when they need a break and to select an exercise while still engaged in the classroom lesson. Thus, it allows the students to be in charge of selecting movement-break activities. Program disadvantages are that it does not promote student interaction or creative play and does not include a curricular component.

Ready Bodies, Learning Minds (n.d.). This option was developed by a physical therapist, Athena Ogden. The program addresses reflex integration, sensory integration, body awareness, and their effects on learning abilities. It provides training on assessment of reflexive integration and implementation of various motor activities to improve student body awareness in preparation for learning and classroom activities. The program recognizes and explains that students are building weak foundational skills in order to meet classroom demands at a young age, and this foundation may crumble as they get older and demands increase. Ready Bodies, Learning Minds emphasizes integrating reflexes and body awareness for sensory systems to build sound skills. Its limitation is its lack of an academic component.

Learning Without Tears (2013). This program specifically concentrates on handwriting skills and school readiness for children from preschool age through the fifth grade. Developed by an occupational therapist, Jan Olsen, the program consists of three components: *Get Set for School, Handwriting Without Tears,* and *Keyboarding Without Tears.* Get Set for School is intended for preschool students.

Get Set for School is unique because it follows children's typical developmental sequence and has a set curriculum based on student developmental levels (Learning Without Tears, n.d.). It also uses a multisensory approach to promote development and learning with active teaching. According to a study conducted by Learning Without Tears (2013), children who were taught following their Get Set for School program demonstrated mastery of key academic skills at the end of the preschool year. Compared to the control group, more students exposed to the Learning Without Tears curriculum

scored above average on standardized testing. This program assists in demonstrating that developmentally appropriate expectations and tasks benefit students' growth and academic success. One disadvantage of Learning Without Tears is that many of its activities are teacher guided, which tends to limiting creative play and peer interaction. There is also a high focus on gaining academic skills, rather than learning through exploration.

Unfortunately, many of these well-developed, evidence-based programs are not implemented in classrooms. These programs were developed by and geared towards related services such as occupational therapists, occupational therapy assistants, physical therapists, and physical therapy assistants who normally work only with students eligible for special education services. The programs could be implemented in the general education classroom with great benefits, but many school districts may choose not to implement due to cost of training and products, time away from classroom teaching, expectations for school readiness, or lack of awareness that programs exist.

Educational Solutions

To meet accountability demands and standards set by national policy, school districts use "educational triage." Triaging can begin in the early stages, even kindergarten (Booher-Jennings, 2005). Schools triage students into three groups: grade-level, "bubble students," and "hopeless." Each group is taught differently based on their capabilities (Lauen & Gaddis, 2015). That is, students are taught, or not taught, based on the category to which they are assigned, which is unfair to students receiving less individualized instruction based on needs.

With such emphasis placed on accountability and test scores, teachers mainly teach to test. Au (2007) conducted a qualitative metasynthesis to determine if and how high-stakes testing affects curriculum content, knowledge form, and pedagogy. Of 49 studies analyzed, approximately 80% found curriculum content changed through either contraction or expansion to focus on context in high-stakes testing. In 24 of the 49 studies, teachers used a *fractured knowledge* format, "teaching . . . content in small, individualized, and isolated test-size pieces, as well as teaching in direct relation to the tests" (p. 262). Of the articles analyzed, 77.6% noted that pedagogy had been altered because of high-stakes testing, and 65.3% of those had moved to a teacher-centered pedagogy. Au's metasynthesis proved that teachers changed core teaching concepts from a student focus to teaching to pass state and standardized testing—that is, from teaching whole subjects to introducing information that could appear on the test. Although teachers are held accountable, education is severely compromised.

Play-Based Learning Solutions

Minimal research addressed formalized or standardized play-based preschool programs, especially in the United States. Research regarding play-based and student-driven curriculum has been conducted in other countries and revealed promising results. However, in the United States, schools have switched to an academic-based curriculum, with limited play in order to meet academic standards. Although, many teachers believe play-based programs are the most appropriate solution, they feel pressured by administrators and colleagues to maintain the stricter academic based curriculum (Booher-Jennings, 2005).

One approach to play-based learning is the Montessori Method implemented internationally in over 20,000 schools for ages 0 through 18 years (Al, Sari, & Kahya, 2012). Developed in Italy by Maria Montessori, the method uses didactic techniques paired with self-guided student driven activities. The system allows children to control their own learning experience and focuses on student "independence, freedom within limits, and respect for a child's natural psychological development" (p. 1867). Students discover and explore their environments and develop areas of interest, providing meaning to their learning. Montessori schools have been implemented and adapted in a variety of settings, including for inner-city, low-income, and "at-risk" students, as well as in affluent areas. However, it can be an expensive undertaking and requires specialized training (Age of Montessori, n.d.).

A research study conducted by van Oers and Duijkers (2012) examined different methods of focus for teachers. Two classrooms in the Netherlands included in the study used different teaching methods; one was teacher-driven and the other was student-driven. Both classroom models recognized that students are active learners, a relationship between teachers and students is required, and students must work with each other to learn. The teacher-driven program, Piramide, was developed for students aged 3 through 7 years and created for test development. This program incorporated three school-day components: working with the teacher, independent work and scheduled free play. Research showed that students exposed to this type of curriculum scored better on standardized tests. However, the standardized tests were created by the same group that developed the Piramide curriculum.

The play-based classroom, Developmental Education, permitted teachers and students to take on different roles to expand knowledge across contexts (van Oers & Duijkers, 2012). With this approach, students gained knowledge through meaningful experiences with others, including peers and the classroom teacher. This approach allowed the teacher to guide students to deeper connections to the task by "asking questions, raising problems, or just using new tools and relevant words" (p. 523). According to the researchers, students in the Developmental Education classroom demonstrated higher mastery of vocabulary when compared to their peers receiving the Piramide curriculum.

Van Oers and Duijkers' (2012) study detailed classroom set-up, curricula, and benefits of student-driven and teacher-driven based classrooms. However, the study used a small sample size and was conducted in the Netherlands, where the classroom dynamics and curricula do not align with current U.S. standards. For example, even the teacher-driven classrooms in the study elicited more free play than in U.S. classrooms.

Summary

Numerous programs and methods have been trialed to find the best solution to educate the youth of America. With such a high priority placed on academics, there has been a shift from student-driven to teacher-driven teaching. The variety of programs developed by professionals take approaches different from the educational realm, which focuses on improving test scores by taking a special interest in students who have the most potential to improve test scores and positively affect accountability. In contrast, these programs use multisensory approaches that grant students the opportunity to

develop skills necessary for academic success. Although each program has unique components with evidence that illustrates positive outcomes, the common theme is child-driven, hands-on experience. This experience involves play as the natural guide for young students to develop foundational skills for academia and skills that will help the students for the rest of their lives—an approach not often executed in the United States.

Based on a thorough literature review, it appears that the essential elements of a successful and effective program should include sensorimotor components. Developmental sequence should also be taken into consideration to build strong foundation skills. Sensorimotor skills are crucial because students require these skills to access and participate in their classroom environment and curriculum successfully and independently. The program should also be easily relatable to the curriculum. This would make the program easy to implement within the daily classroom routine and to justify to colleagues and school administrators. The program should also consider using aspects of a child-driven approach, allowing students develop skills at their own pace and explore their own interests. This approach would make lessons more productive because it allows students to develop their own meaning and understanding of the information taught. The last essential component for a successful and effective program is a play-based approach. Through play, students develop physical, cognitive, adaptive behavioral, social-emotional, and communication skills; learn about their abilities and interests; and so much more. These skills not only benefit the child as a student, but also carry into adulthood. To best address the problem of such high academic expectations with curriculum push-down, a solution that includes these essential elements should be the

priority to best meet the needs of students, teachers, school administrators, school districts, and society.

CHAPTER THREE: DESCRIPTION OF THE PROPOSED PLAY2LEARN PROGRAM

The P2L program was developed based on the findings from the extensive literature review on the problem and its existing solutions described in Chapter Two. The P2L is an educational program for teachers aimed at utilizing play as a learning mechanism with an educational approach to promote student academic success. The program focuses on training teachers about sequential development of skills necessary for academic success and designing opportunities to learn through exploration and hands-on experience.

Background

Play is a primary occupation of students. It provides the opportunity for children to naturally develop essential skills and is one of the best mechanisms for learning. Children can learn through play in ways that cannot be taught because it allows children to explore "and orient [themselves] to the actual world of space and time" (Case-Smith, 2015, p. 483). They are able to practice and rehearse "endlessly the complicated patterns of human living and communication, which [they] must master if [they are] to become a participating adult in our social life" (p. 483). Play creates opportunities for children to interact with peers, release built-up energy, and relax from the high demands of academia and it promotes brain development (Ginsburg, 2007; Tanta & Knox, 2015). Children learn to be flexible, manage change in routine, and take control over situations, as well as social-emotion skills, language, appropriate communication with peers, and initiation through play.

There has been a significant decrease in the amount of time allotted for play in school, both structured and unstructured. According to the Center of Public Education, 20% of schools have decreased the time designated for recess to increase the amount of instruction time for core academic subjects such as reading, writing, and mathematics. Kindergarten students spend up to 46% of their day engaged in fine motor and tabletop activities (Lust & Donica, 2011). Dixon's (2013) study revealed that only 35% of preschool and 5% of kindergarten students' day is dedicated to unstructured play—a significant amount of time for children between the ages of 4 and 6 to be directed in academic tasks without breaks to process the information or apply the lessons to their everyday experience.

The P2L program was developed in response to a need identified in the educational setting. Developmental theories inform us that to succeed academically, students must develop a strong foundation of skills that include social-emotional development and cognition, processing, sensorimotor, and visual-perceptual skills. Through this developmentally sequential, child-driven, curriculum- and play-based program, teachers promote individualized student success.

The P2L program design is intended to be practical and easy to implement each day. Teachers learn the benefits of play and its importance, various risk factors, different types of play, strategies to incorporate and justify play, to adapt play to align with curriculum standards, how to be playful, and ways to change the environment to be more conducive for play. They are encouraged to use their creativity to create lessons that provide unique and meaningful opportunities for children to gain knowledge and practice

life skills. This approach allows students to interpret, practice, and implement the lesson's message with their classmates, which promotes meaningful experiences that can be generalized to academia and everyday life. In addition, the occupational therapy practitioners closely mentor the teachers and offer feedback regarding implementation within the classroom setting.

Delivery Methods

The 6-week P2L program will offer occupational therapy practitioners six educational modules that each include interactive lectures, expert mentoring, and practical application. Each lecture will run for 50 minutes, and topics will change each week (Appendix B). The theme for the week will be discussed using multimedia and an interactive approach (See Appendix C for example). Discussions can include definitions, real-life examples, strategies for classroom implementation, problem solving, opportunities for hands-on practice when applicable, and open conversation at the conclusion of each week for questions or concerns. These modules will then be presented to teachers. They will also receive support to implement the week's lesson in their own classrooms with their students. Observation times will be scheduled with the teacher to allow the most favorable time for students to engage in play. Teachers will receive written feedback after each observation and have opportunity to provide their opinions regarding the lecture and observations. At the conclusion of the program, teachers will be asked to complete a survey providing feedback regarding the content, presentations, and any other comments they wish to add. Teachers will be able to contact the program implementer at any time during the program through email, office phone calls, or in

person when the implementer is on the campus.

The preliminary phases of P2L will be conducted in a live workshop format. As the program grows, an interactive, online platform with discussion posts and access to the provider for questions and feedback will be considered. This online format would allow participants to take modules at their own pace, more participants to take the course at one time, and access the program on a national level.

Role of Personnel

Program Development and Implementation: Occupational Therapist

The program developer (author) is an occupational therapist who will primarily be responsible for initiating, recruiting, implementing, and executing the P2L program. The program fits criteria to receive continuing education units for occupational therapy practitioners (Texas Board of Occupational Therapy Examiners, 2018). The author will seek approval as a continuing professional education provider through the Texas Education Agency (2016), which would allow teachers to receive credit towards certification renewals (one professional development unit for each meeting attended). Once the program receives accreditation, the marketing process seeking endorsement from program directors and school administrators will begin.

The occupational therapist will be responsible to meet with related services and early childhood, preschool, and kindergarten program directors. Once the directors approve the program, the occupational therapist will meet with school administrators at the assigned campus to obtain approval for program implementation. Once approved, the occupational therapist will seek out teachers interested in implementing the P2L program.

Information will be presented in a variety of ways (i.e., emails, flyers, and announcements) to introduce the program to teachers. A meeting with interested teachers will be held to introduce and describe the program and answer questions.

As interested and committed teachers are identified, the occupational therapist will train teachers for 6 weeks. Weekly meetings consist of 50 minutes after school (during existing after-school meeting times) and 30 to 45 minutes for observations in the classroom setting to provide feedback to teachers between meetings regarding discussion topics. The observation session allows teachers to demonstrate skills learned, followed by feedback from the occupational therapist to promote learning through play within the classroom.

Primary Program Recipient: Teachers

Teachers will be the primary recipient of the program. A maximum of four teachers will be selected to participate. Participants will attend weekly 50-minutes meetings and 30-minuted individualized in-class guidance and feedback sessions. They will be encouraged to actively participate in discussions, ask questions, and give examples from their classroom settings. Teachers will be provided with feedback for implementing strategies within the classroom setting. Creativity will be encouraged as teachers create a center and apply state standards. Confidence to include play within the classroom will increase as teachers learn strategies and apply them in own classroom settings with the support of teacher recipients.

Secondary Program Recipient: Students

Students are the secondary recipient of the program. Enhancing play in the

classroom setting will benefit students in many areas including sensorimotor, visual-motor, social-emotional, cognition, and play skills. Students will be given the chance to learn, interpret, execute, practice, and master lessons within the classroom through applying experience and personal meaning. With meaningful lessons, their attention to task and behaviors may improve. Through play, students engage in learning. It may not appear to be a traditional learning style, but it will have more meaning, allowing students to develop skills necessary for academic success and life.

Program Approval and Support: Program Directors and School Administrators

For this program to run successfully, a number of school professionals will need to support it and its intended outcomes. First, related service and early childhood education program directors must support and approve the program content. The implementer will demonstrate how the program can positively affect not only students, but also teachers, administrators, and the school district as a whole. Information presented will include child development sequence, current expectations, how time is currently used in the classroom, and how these affect the manner in which teachers teach. Once the need for the program has been established, the benefits of play, predicted long-term outcomes, and the program's advantages for the school district will be discussed. After program directors approve the program, school administrators will be approached. A similar meeting will be held to discuss the positive and negative aspects of current classroom teaching methods, management, and expectations of students, as well as advantages of implementing the program.

Recruitment Procedure

Teachers will receive information promoting the program through emails, flyers in their school-designated mailboxes, and afternoon announcements. General education teachers will have access to all phases of the program. A meeting will be held prior to implementing the program to inform interested teachers and answer any questions attendees may have. Those interested in continuing and committing to the program will be identified through a sign-up sheet or by emailing the occupational therapist.

Desired Outcomes

Desired outcomes include changes in teacher and student performance, as well as in the curriculum.

Teachers

Teachers will confidently and effectively implement play within the classroom setting to promote learning goals. They will:

1. Identify three lessons per week to incorporate play. With the training provided and classroom observations, teachers will be well versed in how to adapt a familiar lesson to make it more playful with hands-on experience.
2. Advocate for play as a means to enhance learning. Teachers will be able to explain how the activity supports and complements the curriculum standards in multiple education areas and promote it among their colleagues.

Students

Students of teachers who participate in P2L will demonstrate competence and enhanced academic performance:

1. Improved behavior: The numbers of office and behavior referrals will decrease by 10%. Play allows students to release built-up energy and relax from the high demands of academia. Play and recess also decrease problem behaviors. Young students are not built to sit still through the entire school day. With no opportunity to move, students tend to act out. Students unable to keep up with academic demands also tend to act out when unable to meet expectations. Through play, students develop skills and practice and implement new lessons learned. Play also improves their attention to task. With students attending to teacher-direct lessons, developing more skills, keeping up with standards, and being excited to learn, problem behaviors should decrease.
2. Enhanced focus on play and academic tasks: Enriched skills and competence will increase academic performance, as measured by time spent on task and completion of developmentally appropriate designed tasks.
3. Decreased referrals: The number of referrals to special education due to accountability for state testing scores should decrease.
4. Improved sensorimotor skills: Teachers will demonstrate an understanding of sequential development by identifying two to three skills that may be difficult for students to master due to their development levels. Play allows students to explore and thus develop, practice, and master sensorimotor skills to build a solid foundation of physical skills required for basic academic skills, such as sitting in a chair, holding a pencil, and joint attention.

5. Improved social-emotional skills: Students will identify two new classmates as friends. The social component of play allows students to develop language and social-emotional skills, as well as flexibility, turn-taking, rules following, and much more. Children will now have the opportunity to work on these skills and develop new friendships with their peers.
6. Expanded language: Students will express themselves using expanded sentences. They will have the opportunity to develop and build their vocabulary through play. They can practice different language skills, such as taking turns in conversation, responding to questions, and so forth.
7. Increased cognition: Students will approach problem solving with flexibility, bringing everyday skills into their play. As their play skills develop—experimenting and applying their knowledge to develop meaningful experiences—children will learn skills to problem solve, follow rules, create new complex scripts, and expand creativity.

Curriculum Changes

1. Increased play: By the conclusion of the first launch of P2L, unstructured play within participants' classroom setting increase 20 minutes per day. The P2L is easy to adapt to the curriculum and to incorporate daily. At the end of the 6-week program, students will engage in unstructured play 20 more minutes each day (100 minutes per week). With the benefits of play and its positive impact on students, teachers will be more apt to include play every day.

2. More developmentally appropriate curriculum: Curriculum will change to be more developmentally appropriate. That is, by educating teachers and program directors on the developmental sequence compared to curriculum standards, it will become apparent that the education system should meet students where they are, rather than push down the curriculum in preparation for state testing.
3. Decreased referrals: The number of referrals to special education due to accountability for state testing scores will decrease. With less curriculum push-down focused on state testing, students will more likely will be taught based on their abilities rather than triaged into groups.
4. New assessment measures: Students learn and develop in different ways. By developing new measures to determine students' individual growth, progress, and academic success, teachers, school administrators, and school districts will be held accountable to educate all students regardless of their ability level entering the classroom, diminishing educational triage.

Potential Barriers

Notably, there has been minimal research on training teachers to be playful and to include play in the classroom and minimal evidence applicable to the P2L program's unique focus on teacher implementation with students as the secondary outcome. There is, however, an abundance of evidence regarding the importance and benefits of play in early childhood. There also has been research on children spending their day in the classroom setting engaged in rote learning, worksheets, and tabletop activities, as well as the academic push-down. With such a large focus on academia, teachers are pressured to

teach to state testing rather than allow student to learn through exploration.

Another potential barrier for P2L is obtaining program director and administrator approval. For example, they may not approve the program timing or content or even recognize the need for the program. Administrators and program directors may want to use afterschool meetings to address other topics, for which all teachers (not just participants) may need to be present, or decide that occupational therapists may better spend their time serving individual students in the special education program. Further, because program directors and administrators had increased the time allotted for academia to prepare students for testing—and including play within the classroom setting contradicts their solution—they may disapprove the program content and implementation.

Teacher participation in the program is another possible barrier in terms of the number of teachers willing to participate or if and how they continue implementation within their classroom setting. Many teachers hesitate to implement programs and take advantage of recess. They are apprehensive about how colleagues and superiors will perceive their classroom and teaching techniques in environments where academics are the priority. In response to a need-based survey created by the author and conducted in two school districts, a majority of teachers recognized the need for play but felt there was not enough time with so much material to present to students. Despite potential program weaknesses, the benefits of the P2L program and promotion of play may outweigh the negative aspects, resulting in participation and active support from administrators.

Conclusion

With an ever-increasing focus on education and curriculum push-down, students are given minimal opportunity to play during the school day. The P2L provides a practical and easy-to-implement solution by training teachers to incorporate play within the classroom setting. The program provides teachers with strategies to incorporate play without taking away from educational guidelines and curriculum standards. Teachers participating in the 6-week program have access to hands-on training and mentoring to implement and use P2L. They provide students with meaningful experiences to be successful as a student and to learn and practice everyday skills.

CHAPTER FOUR: EVALUATION PLAN

The P2L program was developed to enhance young students' academic success by increasing participation in age-appropriate play, social skills, and learning activities. The program includes training to certify occupational therapy practitioners as teacher-trainers. The occupational therapy practitioners provide training on constructing meaningful, playful experiences to promote learning and build the foundational skills their students need to meet current educational expectations. The P2L is a six-module continuing education and professional development program that includes distant instruction together with individual mentoring.

The goal of the evaluation plan is to identify the effectiveness, relevance, efficiency, and impact of P2L in promoting knowledge and applying the information and strategies learned throughout the modules. The evaluation plan includes two phases: an evaluability assessment (Phase 1) and two pilot studies of program implementation (Phase 2). In Phase 2, Pilot 1 will evaluate program use directly with teachers, and Pilot 2 will evaluate the program's utility in preparing occupational therapy practitioners to train teachers. Evaluation of the P2L program will be conducted using a formative evaluation to determine whether the program is being implemented as intended and is meeting its established goals and objectives (Niemeyer & Duddy, 2016). Often, this type of evaluation during the initial stages of a program uses an ongoing assessment system, and the finding are used to improve program delivery (Newcomer, Hatry, & Wholey, 2015). Specifically, the purpose of this formative evaluation plans is to determine if the P2L program is appropriate for preschool and kindergarten teachers to integrate play in their

classroom to promote academic success.

Overview of Evaluability Assessment

Phase 1

Phase 1 will explore various aspects of the program delivery prior to a soft launch in Phase 2 and determine if all elements are present and being delivered as intended. This assessment will be completed by eliciting input from stakeholders (i.e., program directors, school administrators, teachers, and occupational therapists) about the teacher-training modules on various aspects of play and techniques addressed in the group. Specifically, it will determine whether P2L can be effectively carried out as intended within the school system's organizational structure and whether the observation and feedback forms are effective. This phase is important because it allows the author to modify program activities and measurement approaches for optimal results. Interviews and focus groups will be used to collect information, which will assist in determining how practical, feasible, and relevant the interactive lectures and discussions are. Interviews will also be used to determine if strategies are realistic and if the feedback and observation forms provide sufficient information for change. Phase 1 will be completed by December 2018, prior to initiation of Phase 2.

Phase 2: Pilots 1 and 2

The evaluation plan for Pilots 1 and 2 during Phase 2 will be formative and summative. The purpose of Phase 2 is to determine if the intervention is creating the desired change, given the planned inputs and program activities. The objectives of Pilot 1 are to (1) determine whether participants demonstrate changes in the way they

incorporate play in the classroom; (2) assess participant satisfaction with the content, instruction, and ease of program implementation within the classroom setting; (3) identify needed changes in the teacher feedback questionnaire to apply and justify play within the classroom; and (4) demonstrate the cost-effectiveness.

The objectives of Pilot 2 are to (1) determine whether occupational therapists effectively articulate the benefits of play and developmental milestones; (2) assess occupational therapy practitioner satisfaction with content, instruction, and ease of implementation; and (3) evaluate the effectiveness of the observation feedback forms. The results of the evaluation plan will be used to improve aspects of each P2L component to ensure its success and value within the school setting.

The evaluation plan will use an ongoing assessment system to confirm the P2L program is being applied as anticipated and to determine which components are successful and what changes need to be made. Data collected and analyzed throughout each pilot will include time spent in the classroom before and after the program, observation feedback forms with a competency component, student progress on district-required assessment, and in-depth interviews with participants. Qualitative data gathered from surveys and interviews will also be used to determine if the program made a positive impression. This information is important because it can demonstrate to key stakeholders the features that worked and changes that were made to ensure the P2L program would be as effective as anticipated when the final version is launched.

Scope of Evaluation: Timeline

The combined program evaluation phases will take approximately 9 months to complete due to holidays, vacations, and scheduled days off throughout the academic year. Data will be collected at the beginning and end of each phase to compare results.

Phase 1

Phase 1 will take approximately 2 months. This phase will take place at the school district where the program is intended to be implemented. Phase 1 should be completed by the end of December 2018 in order for Phase 2 to commence. Inclusion criteria for participants will be early childhood, preschool, and kindergarten teachers; related service staff; administrators serving the school; and program directors of early childhood, kindergarten, and related services. The exclusion criterion will be teachers of special education for the purpose of the evaluation. (Including special education teachers will be considered as the program develops.) The number of participants will be limited to 15.

Phase 2: Pilot 1

Pilot 1 will begin in January, the third grading period, and take approximately 10 weeks to complete. Four teachers will actively participate in the 6-week interactive program with observation and feedback. This allows 4 subsequent weeks to analyze data and make necessary changes prior to beginning Pilot 2. Inclusion criteria are teachers of a preschool or kindergarten classrooms willing to commit to a 6-week program and to implement the program in their classroom. Exclusion criteria are teachers of special education and teachers unable to commit to the 6-week program.

Phase 2: Pilot 2

Pilot 2 can begin after finalization of Phase 2 Pilot 1 and will take approximately 5 weeks to complete. Occupational therapists and occupational therapy assistants will participate in a six-module lecture series that will take place during a staff-development day. At the conclusion of the modules, participants will complete surveys and provide feedback, allowing time to make necessary changes. The final 4 weeks of the pilot will be devoted to analyzing data and preparing reports for key stakeholders. The inclusion criterion will include occupational therapy providers employed by the district. The exclusion criterion will be contract staff due to their inability to district meetings.

Evaluation Questions

Upon the completion of each phase, data gathered will reflect the goals and objectives outline in the vision of this chapter. Evaluation questions will include:

Phase 1

- Was P2L an effective program to promote development in the classroom?
- Did P2L take away from instructional time?
- Was the program easy to implement and cost-effective?
- What were the benefits to the students? To teachers? To administrators? The school district?
- Did course participants increase knowledge regarding development and the benefits of play?

Phase 2: Pilot 1

- What were the teachers' impressions of P2L and its purpose to include play in the classroom?
- Did course participants increase self-efficacy to include play in the classroom setting?
- Were teachers able to implement P2L as it was intended?
- Were teachers able to include more play within their daily routines?
- Was there a decrease in the number of office referrals?
- Has there been an increase in student's state and district test scores?

Phase 2: Pilot 2

- Were occupational therapy practitioners satisfied with the training modules?
- Did occupational therapy practitioners demonstrate improvement on competency questions?
- Did course occupational therapy practitioners increase self-efficacy to include play with-in the classroom setting?

Data Collection

Phase 1

Data collected in Phase 1 will be primarily qualitative through use of surveys, focus groups, and in-depth interviews. The author will create surveys, which volunteer occupational therapists will then test and review for clarity and understanding. Survey questions will relate to goals, priorities, and beliefs on incorporating play in the

classroom. They will contain open-end responses, as well as a Likert-style scale questionnaire, to obtain both qualitative and quantitative data. A facilitator-moderated focus group will also be held to identify potential stakeholders' trends, views, perceptions, experiences, and attitudes on a training for developmental sequence, implementation of play in the classroom setting, and teacher training to enhance daily classroom routines. This focus group will consist of up to 15 people across all stakeholder groups. The group's discussions will be recorded, transcribed, and analyzed to recognize common themes across stakeholders.

Phase 2: Pilot 1

Data collected in Pilot 1 will be quantitative and qualitative. Data regarding teacher schedules, time allotted for play, office referrals, and student testing scores will be collected and analyzed prior to implementing the program pilot. Teachers will also complete a competency module regarding their knowledge on development and play, as well as a self-efficacy questionnaire before commencing the modules. Each week, teachers will complete a brief post-test quiz to check for understanding and help determine if information presented was effective. They will also complete surveys to provide feedback to the author regarding the information, presentation format, and any other suggestions regarding the module. Upon completion of Pilot 1, in-depth teacher interviews will gather their ideas, perspectives, and experiences of the interactive lectures and the discussion, observation, and feedback components, quality of information provided, and ease of implementation. Teachers will also report changes in their daily schedule to demonstrate increased time in play and decreased time engaged in

worksheets. Two occupational therapists will conduct field observations for validity of the implementation of the intervention group. Inter-rater reliability will be established prior to field observations. The two occupational therapists will also conduct a field study of the classroom teachers to observe their incorporation of the skills taught into the classroom daily routine. Student report cards, performance on district assessments, and the number of office referrals will be examined prior to and after the program's implementation to assess the effect on student performances. However, due to the short timeframe of the program and natural progression of development, student progress may not change significantly. Thus, at the end of the school year, reports and district standardized scores will also be examined for progress.

Phase 2: Pilot 2

Data collected from Phase 2 will be both qualitative and quantitative, consisting of group discussions and surveys with occupational therapy practitioners. The lecture series will be recorded and transcribed to analyze trends in live questions and feedback. Participants will also complete a survey that consists of Likert-type scale, didactic yes/no questions, and open-ended questions to provide written feedback to address areas that may need to be changed or improved.

Type of Research Design

Phase 1

This phase will require a qualitative approach to research design. Information will be gathered in Phase 1 through surveys, interviews, and focus groups. The data will be analyzed through an enumerative method (Newcomer et al., 2015). Information obtained

from interviews and focus groups will be labeled and analyzed using a hermeneutic approach because this approach is valuable when there is "access to rich data in the source of interview transcripts or comprehensive notes of observations" (p. 579).

Phase 2: Pilots 1 and 2

The research design considered for Phase 2 is a basic value-added design. This type of research best fits the components of Phase 2 because the design is a "comparison group design of program impact adjusting for a preprogram measure of the outcome variable" (Newcomer et al., 2015, p. 145). Phase 2 will analyze data based on teacher reports and compare statistical outcomes. The intervention component design will be based on data of participating teacher classes, including teacher self-reports on daily schedules, time allotted for play, number of office referrals, and other agreed-upon measures from Phase 1. Teachers will be asked to complete a survey about the program's ease and effectiveness using a Likert-scale and open-ended responses. Two trained occupational therapists will also gather quantitative data to ensure the program is being implemented as proposed.

Data Management Plan

Data for Phase 1 and 2 will be collected through interviews, surveys, and focus groups. Information collected through paper systems will be recorded electronically for ease of presentation. Quantitative survey data will be coded using an ordinal method because the Likert-style scale helps produce ratings using numerical values; open-ended responses will be coded using the nominal method. The qualitative information gathered from interviews and focus groups will be transcribed, analyzed, and interpreted using the

methods previously described. Codes will then be created to assist in labeling and categorizing responses, and the data stored in spreadsheets for easy access and generation of tables or graphs as needed. Data collected in Phase 2 will be quantitative and qualitative. Quantitative data will include information from surveys with a rating scale, time spent engaged in play, time spent sitting at tables engaged in worksheets, report-card grades, district assessments, and office referrals. Qualitative data will include information from the focus group, open-ended survey questions, and interviews. Data collected will be coded using an ordinal method, and stored electronically for ease of presentation (e.g., to generate graphs and tables). The qualitative information gathered from surveys for the training and intervention will be analyzed using the same method described in Phase 1. Quantitative data will be analyzed using a t-test or Chi-square collected by the program evaluator.

Conclusion

The author will be primarily responsible for data analysis and summarization, and a research assistant responsible for data input. Using a presentation program, the author will provide results to stakeholders and participants, summarize findings, and recommend the next steps to launch the program successfully. The report will be presented during one of the remaining staff-development days, and a copy of the presentation emailed to those unable to attend.

CHAPTER FIVE: FUNDING PLAN

Project Description

The many stakeholders in the area of education include program directors, administrators, related service staff, teachers, students, and parents. With student success as the primary outcome goal for all stakeholders, school districts are using what they believe is the best method to educate students. The proposed P2L program provides a more student-driven, developmentally appropriate approach to teaching students, which the National Association for the Education of Young Children (2009) considers best practice. The P2L is a 6-week interactive lecture program with an observation and feedback component for positive integration of play within the students' natural environment.

Funding Plan Introduction

The funding program outlined in this chapter reflects required financial support to develop, evaluate, deliver, and disseminate P2L. There will be four phases for this proposed program. The first will be an evaluative phase to gather information from identified stakeholders and possible participants. The second and third phases will be pilots of the program. The first pilot will be for teachers to determine the effectiveness of the P2L curriculum; the second pilot will be a simulated one-day training for occupational therapy practitioners on implementing the P2L program within their schools. The pilots will be used to examine and evaluate the course effectiveness and then adjust the program based on participant feedback. The last phase of the program will be the final product and launch of P2L.

Available Local Resources

Local resources are available for all phases of the P2L:

- Volunteers, friends, and colleagues, including occupational therapists, teachers, diagnosticians, and school administrators will review and provide feedback on various aspects of the program. This feedback on program components, such as content, presentation, outcomes, surveys, and any other areas, will be completed prior to launching Pilots 1 and 2 during regular work days, staff-development days, and as on-campus support. Once feedback has been received and adjustments made, the program will be made available.
- A local early childhood-preschool-kindergarten school will host the Pilot 1 testing as part of on-campus support.
- Occupational therapists and occupational therapist assistants will be trained in Pilot 2 during a staff-development day to mimic a one-day seminar. This training will be provided at no cost because it will be conducted during the school-year.
- Participation incentives may be given during each phase depending upon grant acquisition. Incentives may include gift cards, supplies, and equipment for the classroom or play areas.

Needed Resources

Table 1 presents cost of course development, course delivery, and the resources necessary for all program phases.

Table 1. ***Projected Budget Needs***

Resource	Pilot 1 (Teachers)	Pilot 2 (OTs)	Final Phase	Explanation
Course developer	0	0	0	Program created as part of PP-OTD program. Course development will continue to change with course of evidence-based practice and changes in local, state, and national policies.
Course Instructor	$2,727[a]	$364[a]	$227/week x 6 weeks = $1,364[a]	Pilots 1 and 2 will be completed as part of regular work day: Pilot 1 after-school meetings and as part of OT on-campus support to assigned schools (10 hours/week x 6 weeks). Pilot 2 as a staff professional development day (8 hours) at average hourly rate of $45.45 (Bureau of Labor Statistics, 2018) = $363.60. Implementers should allot 1 hr/week for each lecture plus 1 hr/participant for observation and feedback for up to four participants ($45.45 x 5 hrs) x 6 weeks. Actual cost of all phases will be $0 because it will be completed during work hours as on-campus support.
Software	0	0	0.00	Course will require presentation software (Google or PowerPoint) already available to the instructor.
Communication	0	0	0.00	Emails and phone lines.
Supplies, material, Equipment	0 0 $275	0 0 $275 $105	0.00 0 $275	Phases 1 and 2: Projector/smart boards available in all classrooms. Computers with presentation software are available in all classrooms and district laptops. Copies can be made if projectors are not available. Complete set: Curriculum, presentations and feedback/observation forms. Estimating $55.00 per set (Staples, 2018) x 5 (1 Instructor and 4 participants per pilot program). U.S. Copyright (2018) for logo, program, and modules ($35 for each).
Travel	0	0	0	Travel costs included as part of course instructor district salary.
Facility rentals	0	0	0	Pilots 1 and 2: Classrooms for lecture

				and observations are available on campus at no cost. Final Phase: local facilities will be used, typically at no extra cost.
Evaluation	$1,150 $1,400 $300			Focus group facilitator for Pilots 1 and 2 to elicit feedback from neutral parties. Research assistant Annual salary ($33,990) calculated to a rate of $35/hour for 40 hours (J. Daley, personal communication, May 27, 2018). Recording device for focus groups and in-depth interviews.
Dissemination			$7,464 $2,828	Detailed in Table 3 Actual cost using resources available to author
Other expenses			$2,550	Application and annual fees for 4 years for AOTA approved courses (AOTA, 2018)
Total			$18,249 $9,158[b]	

Note: [a]Actual cost will be $0.00 because the activity will be completed by the author; [b]Final estimate reflects actual cost of $0.00 for several line items[a].

Funding Opportunities

Many resources are required for the pilot, as well as the final, phases. Table 2 lists possible sources to fund Pilots 1 and 2 and components of the final phase. The remainder of the funding for the final phase can be provided as part of course tuition.

Table 2. ***Potential Funding Sources***

Type	Source and description	Amount
National grant	Crayola (n.d.): Champion Creative Alive Children. Previous projects include Bridging the Gap with Art, Building Thinkers, Curriculum Maps and School Culture, Growth Mindset.	$2,500 and Crayola products
State grant	Texas Occupational Therapy Foundation: To increase evidence for practice and promote public awareness of occupational therapy (Texas Occupational Therapy Association, 2018).	$2,500
Foundation grant	Aldine Education Foundation: Innovative teaching grants. "To provide community-based support to the Aldine Independent School District in pursuit of excellence in teaching, innovation in the classroom, and superior learning opportunities for all students" (Aldine Education Foundation, 2018).	$1,500–$7,500
Local/community grants	H-E-B (2018a) Community Support: Supports education and literacy; donations for teachers serving their communities. H-E-B (2018b) Early Childhood Award: Private or public schools that focus on education for students under five. To "offer support to help create or enhance Kinder Readiness programs that prepare children to enter kindergarten socially and academically ready to learn" Sam's Club/Walmart Foundation (Walmart Foundation, 2018): Education: Public K-12 school	Variable – not available on public website $5,000–$10,000 $250-$5,000

Conclusion

The proposed budget outlined on estimated costs of delivering the P2L program consists of Pilots 1 and 2 and the launch. The total budget has two totals. The first and more expensive costs were calculated as though the program were being implemented in another school district and accounted the occupational therapist's time. However, the

author is currently employed by the district and these costs are minimized because the implementation can be categorized as “on-campus support” and trainings can be conducted during staff-development days. Potential funding sources were also identified. National grants were considered; however, the initial program phase did not meet eligibility criteria. Instead, smaller, local grants were considered and outlined in Table 2. Available resources are sufficient to fund the P2L program.

CHAPTER SIX: DISSEMINATION PLAN

Introduction

Aspects of dissemination, including goals, target audiences, key messages, communication activities, and budget and evaluation plans are described in the following sections. Although students are the primary *beneficiaries* of the program, occupational therapy practitioners and preschool and kindergarten teachers are the primary and secondary *recipients*. A tertiary audience consists of program directors, school administrators, and parent groups. Plans to disseminate to program directors and school administrators focus on long-term benefits, best practices, and employee satisfaction. The message to Parent Teacher Association/Organizations (PTA/PTO) will be the importance of parent involvement in their children's education and increased awareness regarding outcomes of the curriculum push-down, lack of play, and their effects academic careers.

Dissemination Goals

The following goals assume the evaluation plan (Chapter Four) was completed and the P2L program launched.

- Long-term goals (2 to 5 years)
    - Increase the number of teachers who participate in P2L program
    - Change curricula and state and national standards to a more developmentally appropriate curriculum with increased community awareness through teachers, program administrators, school districts, PTO/PTA, and state education agencies
    - P2L implemented in three states

- Short-term goals (6 months to 2 years)
    - Occupational therapy practitioners within the local school district will implement P2L within their assigned early childhood, preschool, and kindergarten campuses
    - Results of Pilots 1 and 2 will be disseminated to surrounding school districts and regional education services centers
    - P2L will be presented at regional conferences, cluster meetings for related service providers of Region 4, and the Texas Occupational Therapy Association (TOTA) conference
    - Occupational therapy practitioners will successfully implement P2L within their preschool and kindergarten classrooms.

Target Audience

A primary target audience of the Play2Learn program is school-based occupational therapists assigned to early childhood, preschool, and kindergarten campuses. They will be the key implementers and leaders of the 6-week course. The program will initially be aimed at occupational therapists in the greater Houston area and the State of Texas. As the program grows and develops, the audience will expand to surrounding metropolitan areas throughout Texas and eventually a national level.

The secondary target audience of the P2L dissemination plan will be preschool and kindergarten teachers, who are the prime recipients of the program implemented by the campus-assigned occupational therapy practitioner. This target audience's awareness and acceptance of P2L will be crucial to the program's implementation. The teachers will

be expected to apply information learned in each module into their daily classroom routine.

Finally, tertiary recipients of the dissemination plan will be program directors, school administrators, and the PTA/PTO. Approval from program directors and school administrators is imperative for P2L implementation. Parent groups will also be a focus of the dissemination plan because parents often want to be involved in their children's education. They have a voice at school-board meetings and can raise awareness to other parents in the community, as well as to other important stakeholders on the local district's school board. This group can assist in strengthening the relationship between teachers and parents with improved communication and can work with principals and other faculty to make improvements in the school.

Key Messages

The key messages are specific to each audience. The message for occupational therapy practitioners incorporates the benefits of P2L, including that it is easily implemented within the classroom because teachers will be taught strategies to increase play naturally within their daily schedules. The P2L easily relates to occupational therapy and its role within the school setting. This, in turn, allows practitioners to use P2L and justify time allotted for its implementation as on-campus support. Strategies taught to incorporate play can be applied easily to curriculum and justified as learning experiences. The program focuses on a child-driven and sequential development approach to promote building foundational skills for academic success.

Key messages for the teachers of both preschool and kindergarten focus on

improvements in the children's achievements and classroom behaviors. A major benefit of P2L is that it was developed to fit easily and seamlessly into the daily classroom routine. For example, classrooms often have academic centers that concentrate on core academic subjects where play can be naturally included. Teachers also will be encouraged to allow their class to attend recess and not revoke recess as a punitive measure. The P2L provides teachers individualized support and mentoring. The program allows them to work with each student at their developmental level towards individual progress. This is a desirable alternative to academic triaging and basing progress on state and national testing. Beyond the course tuition, no purchase is required—teachers are encouraged to use equipment already in the classroom. In addition, with students engaging in more play, given freedom to explore, and taking needed breaks from academic instruction, they more likely will attend during instruction with fewer unwanted behaviors.

Finally, the message for the tertiary audience will be directed towards parents and the PTA/PTO, as well as program directors and school administrators. Messages to parents and the PTA/PTO will include an explanation of the curriculum push-down, developmentally appropriate expectations, and advantages of learning through play such as skill development and student wellbeing. Messages for program directors and school administrators include better learning outcomes, curriculum-based enrichment, cost-effective teacher training, happier teachers, and fewer behavioral issues in the classroom. Another potential outcome from the program may be improvement in national and state test scores, which will reflect positively on the school district.

Sources

Primary Audience

The TOTA is the state membership organization for occupational therapy practitioners. Monthly meetings are held throughout the six districts and at an annual conference typically in November. Through monthly meetings and networking, P2L can be introduced to local occupational practitioners. Presenting this continuing education course at the annual conference will also make the P2L accessible to practitioners in the State of Texas. The AOTA is a national association for occupational therapy practitioners and occupational therapy students. A poster will be presented at the annual AOTA conference or at the AOTA Children and Youth Specialty Conference. This poster can also be an outlet to disseminate the P2L program, making it available on a national level.

Secondary Audience

To reach the secondary audience, various websites can be used to announce the program. Websites such as those of the Texas Education Agency and Texas Classroom Teacher Organization advertise available continuing professional education units, which are required for teachers to maintain certifications. Another website to promote P2L is Education Service Centers that serves 20 regions across Texas. The website offers professional development courses at convenient location and discounted rates.

Tertiary Audience

One of the best ways to reach parents and schools' PTA/PTO is through groups such as the PTO Today and National Parent Teacher Organization. These sites post advertisements for programs and products related to school and academic success. School

administrators can be reached through the National Association of Elementary School Principals. This organization offers information regarding resources and best practices. Presenting at the Texas Elementary Principals and Supervisors Association may also be a way to introduce school administrators to P2L. Membership in the organization offers access to webinars and subscription to newsletter in which the program could be advertised. Facebook groups for preschool and elementary PTO/PTA and school administrators can also be a dissemination platform.

Communication Activities

The communication activities listed in Table 3 describe activities the author plans to take to reach each audience group. Activities, including written, electronic, and person-to-person contact, will also be prioritized according to audience, time specifications, and the responsible party.

Table 3. ***Dissemination activities***

Activity	Target audience	Description	Priority/timing
Written information	All	Article in occupational therapy magazine (e.g., *OT Practice*) and listserv *OT Connections*; postings to teacher, principal, and PTO/PTA websites.	Supplemental article for less formal OT magazines to make OT practitioners aware of the P2L program, written and submitted within one to two months Pilot 2 conclusion.
	All	Author-created newsletters sent to subscribers	Author will create a quarterly newsletter and email to all audiences subscribed to the program to update audiences on program results, implementation case studies, and any other relevant information regarding play, development, early childhood, legislation, etc. Subscribers will be encouraged to forward newsletters to potential participants. Newsletter will be initiated within the first year of P2L.
Electronic/ social Media	All	Website	A website created using a graphic designer will allow all audiences to access information regarding the P2L program information and sign up for and request the program within various school districts.
	Primary	Facebook	P2L can be advertised on various Facebook pages, such as Pediatric Occupational Therapists and School-based Occupational and Physical Therapists. These group allows members to post/discuss ideas, advice, continuing education, etc.
Person-to-Person	Primary	Conferences (TOTA, AOTA)	Poster presentations: -TOTA Mountain annual conference, submit according to conferences guidelines/timing. -AOTA Specialty conference, submit for poster presentation in June following Pilot 2 completion. -AOTA annual conference held in April submit according to guidelines/timing.
	Primary, tertiary	Cluster meetings	Region 4 Education Service Center quarterly meetings with related service department heads and program directors: Short presentation allows the primary and tertiary audiences access to the P2L program within a region close to the author.

Budget

The budget for the dissemination plan will include materials for poster presentations, handouts and brochures for attendees, website and graphic designer, time expenses for all areas, and possible travel expenses to conferences (Table 4).

Evaluation

An evaluation will be conducted to determine how effective the dissemination plan was and if the target audiences were reached. The success of the dissemination plan will be measured using various components, including the number of occupational therapists and teachers applying P2L, presentations given, U.S. states P2L has reached, and subscriptions to the quarterly newsletter, as well as the increase in presence in social media platforms.

First, the acceptance of articles in a journal or a magazine and proposals for poster presentations at conferences will assist in measuring successful dissemination. To determine if electronic media outlets are being used, the number of followers of the P2L Facebook page, as well as the number of comments, shares, and "likes" on various pediatric occupational therapy and school-based therapy pages will also be considered to determine the dissemination plan success. A platform analytics application will track website traffic and engagement. Successful dissemination will also reflect in the numbers of quarterly newsletter subscribers, visits to the website, and continuing education courses booked.

Table 4. ***Dissemination budget proposal***

Activity	Cost	Justification
Written communication:		
Journal articles	$909.00[a]	Estimate 20 hours to complete final drafts of articles to submit to journal/magazine x $45.45/hr (Bureau of Labor Statistics, 2018).
Newsletter	$727.20[a]	Estimate cost for author to create quarterly subscriber newsletter at 4 hr/quarter x $45.45/hr x 4 quarters.
Electronic Media:		
Website	$168	Website = $14.00/month x 12 months (Wix, n.d.).
	$0	Google (n.d.) Analytics will be used to track website traffic.
	$454.50[a]	Estimate 10 hours to create the website using Wix templates x $45.45 per hour.
Facebook pages	$2,363.40[a]	The author is a member and able to post to professional Facebook groups. Estimate $45.45/hr x 1hr/week x 52 weeks to post, respond to questions/comments and maintain P2L Facebook page.
Person-to-person:		
Children & Youth specialty conference	$325	Conference registration cost.
	$1000	Travel to/from conferences and accommodations.
TOTA annual conference	$300	Conference registration cost. No travel costs included because the conference is held near author's residence.
AOTA annual conference	$325	Conference registration cost.
	$500	Travel to/from conference and accommodations.
Cluster meetings	$181.80[a]	Estimate typical 4-hour meeting x $45.45/hr. Meetings are often held near school district; no travel costs will be required.
Poster	$100	Cost/time to create and present.
Information handout	$110	Brochures/information page created to give to conference attendees and poster presentation visitors. Estimate 1000 color copies x $.11/copy (Staples, 2018)
Total	$7,463.90	
Final estimate[b]	$2,828.00	

Note: [a]Actual cost will be $0.00 because the activity will be completed by the author; [b]Final estimate reflects actual cost of $0.00 for several line items[a].

Conclusion

The dissemination plan is an integral component of this doctoral project. Its goal is to introduce the P2L program to the school-based community. Through this dissemination plan, occupational therapy practitioners, teachers, school administrators, program directors, and PTO/PTA will become aware of the P2L program. The program will be presented at various conferences and informational handouts given during poster presentations. Articles will be published in journals and magazines related to the target audiences. Social media will also provide target audiences with information regarding the benefits of P2L. Success will be measured by acceptance of presentations and numbers of informational handouts provided, social media followers, quarterly newsletter subscribers, and continuing education courses given.

CHAPTER SEVEN: CONCLUSION

Education is one of the most important occupations through childhood into early adulthood and continues to be one of the most valued facets in the United States. This focus has led to changes in national policy and state standards making curriculum more rigorous. To meet current standards, states, school districts, program directors, administrators, and teachers have significantly altered the way education is delivered to students. National policies push students to be proficient in core academic areas to prepare for college and the workforce. School districts pressure staff to produce high test scores. Program directors and administrators place insurmountable pressure on teachers to teach their students to perform at a high level on state testing. As a result, teachers are altering what, how, and who they teach.

The problem is that child developmental sequences and fundamental developmental milestones have not changed to support these academic expectations. With such a high concentration on academia to meet state testing standards, students' days are spent at their desk focusing on academic tasks typically above their developmental abilities. However, students require the opportunity to develop, refine, and master foundational skills to participate actively in their learning. This foundation includes sensorimotor, cognition and processing, visual-perceptual, and social-emotional skills, which can be achieved through play (Bassok et al., 2016; Case-Smith, 2015). Children learn best through play applying their knowledge, practicing skill sets, and creating meaningful learning experiences. Teachers are often aware of the benefits of play, but they feel as though there is not enough time to allow play and still cover the

arduous curriculum. They may often implement quick and convenient breaks from learning, but these do not equate to *play*. Even though education has changed its standards to improve student academic performance, current solutions are only widening the academic achievement gap.

The goal of this project was to understand the barriers to academic success and to develop an innovative solution to mitigate these challenges. An extensive literature review identified the best approach is to increase play in the classroom, allowing students to develop foundational skills for academic success. The result was the P2L program developed to reduce the gap between students' developmental capacities and required academic performance. The P2L is designed to train occupational therapy practitioners on how to educate and mentor teachers to incorporate play within the classroom setting to promote natural development of foundational skills. The program focuses on enhancing teacher-participants' knowledge and skills regarding child development, benefits of play, and strategies to justify and increase play within the classroom setting. Program directors and school administrators also will be trained on the benefits of permitting play within the classroom setting. The P2L provides opportunities for students to develop skills necessary for academic success while adhering to academic standards. The 6-week program includes six 50-minute interactive lectures, with expert mentoring, practical application, and follow-up observation.

Occupational therapy practitioners are often underutilized within the school setting, receiving referrals for handwriting and sensory processing. However, they could work with and provide intervention in many more performance areas. Occupational

therapists are trained to evaluate performance skills, patterns, contexts, environment, activity demands, and client factors. They assess development in such areas as adaptive, cognitive, communication, physical, and social-emotional domains to help students succeed in their environment (Clark et al., 2011). With implementation of the P2L program, occupational therapy can increase awareness of all other areas where occupational therapy services can benefit, not only for students receiving special education services, but also students in general education, teachers, and the environment.

The P2L can change perceptions of how occupational therapy practitioners deliver services in the school setting. Currently, only students receiving special education services who also receive direct occupational therapy services are provided individualized basis using a "pull-out" (of the classroom) method. Instead, the P2L program can be provided to general education classrooms as a whole, reaching more students. Occupational therapy practitioners' training in developmental theories and processes allows us to understand factors leading to the problem and offer developmentally appropriate solutions to positively affect more students and potentially eliminate future special education and occupational therapy referrals. Through this method, special education students are also included in all aspects of the academic day with their neuro-typically developing peers.

The ESSA implementation affords an opportunity to transform interpretation of standards and change classroom organization to benefit students. Occupational therapists and other related service staff can lead workshops to train teachers and school administrators on appropriate developmental milestones and ways to foster skill

acquisition of life-long learners, as well as meet high academic expectations that support societal views and federal and state expectations.

Another innovative feature of P2L is the availability of expert mentorship with observational feedback to ensure positive practical application of strategies learned. Most often, continuing education courses lack this aspect in their course delivery. With P2L, occupational therapy practitioners and teachers are able to discuss each week's topic confidently and safely with peers and the instructor. Practitioners will then observe participating teachers applying the strategies they learned in the natural settings of their own classrooms and provide feedback on strengths of application and areas to modify strategies for improved outcomes. This strategy allows for carryover into the classroom setting and generalization to other subjects throughout the academic day.

The P2L has the potential to change how occupational therapy is viewed and services are provided in the school setting. It brings play back into younger grades to provide students the opportunity to build a strong foundation of skills in developmentally sequential order to prepare for rigorous academic demands. The program also has the potential to increase awareness that current standards are above students' ability and advocate for developmentally appropriate policy changes.

In summary, this project aimed to decrease the gap between academic demands and students' skills. Through P2L, occupational therapy can be reconceptualized within the school setting and transform how services are delivered to minimize this gap. The P2L program supports teachers to ensure strategies learned are applied to best support

students, teachers, administrators and program directors. It has the potential to be widely disseminated and benefit young students nationally and internationally.

APPENDIX A

RESEARCH QUESTION

Author & year of publication	Type of report	Participant characteristics & selection	Site/context of study	Variables & measures	Procedures	Key findings	Application Yes, supports model
Bassok, D., Latham, S., & Rorem, A. (2016.). Is Kindergarten the New First Grade? *AERA Open, 1,* (4), 1-31.	Paper that compares data from 1998 and 2010.	Two kindergarten groups from Early Childhood Longitudinal Study from 1998 and 2011. Multi-stage probability design to obtain nationally representative samples Students: 1998- 21,000 2010 – over 18,000 Teachers: 1998/99- 2500/3350 2010/11– 2700/3850	In-depth study comparing classroom from 1998-2011 regarding multiple variables and measures.	Changes across 5 areas: Teacher's beliefs about school readiness Time allotted to academic and non academic subjects Classroom organization Pedagogical approach (PA)– how subjects are taught Assessment practices	Teacher surveys analyzed Readiness- rate on scale for agreement about multiple statements and rate # of skills Time: Frequency each subject was taught, how often specific skills taught Class organized – number of centers PA: activities are either child selected, teacher direct whole class direct, rate activities: table work vs. hands on.	Readiness: increase in all areas: more than double in reading before kinder, knowing alphabet before Substantial changes in nonacademic subjects Fig 1- skills more advanced based on % of '98 teachers in literacy and math skills, Sci and SS skills touched upon substantial decrease from '98-'10 Classroom organ – common theme – reading area, writing center, listening center	Increase focus on literacy and math Increase in teacher beliefs on kindergarten readiness skills Substantial reductions in art, music and science from '98-'10 Decrease in activity centers, possibly due to increase focus on math and literacy Kinder teachers using standardized testing "overall..results suggest that public school kindergarten classrooms

1. Large sample size, a lot of statistics showing differences from 1998 – 2010. 2. Little discussion on implications for students in the future, positive or negative effects			Daily Phys. Ed or recess Assessment Practice: importance of student evaluation (effort and cooperation), standardized assessments	and math area with manipulative. Substantial drop in centers focused on SS and Sci 20% drop in Arts PA – Child Select: 54% down to 40% at least one hour a day. Whole class doubled Independent work: Worksheets and text books increase 10-17% from '98='10 Assessments – 22% increase on importance of achievement regarding local, state and professional standards and increase on comparing performance to peers	became increasingly similar in structure and focus to typical first grade classrooms" p.14. more pronounced in low income and non-white areas

Author & year of publication	Type of report	Participant characteristics & selection	Site/context of study	Variables & measures	Procedures	Key findings	Application
National Council of Teachers of English. (2014). How standardized tests shape and limit student learning – A policy research brief produced by the National Council of Teachers of English (1-3). Retrieved from http://www.ncte.org/library/NCTEFiles/Resources/Journals/CC/0242-nov2014/CC0242PolicyStandardized.pdf	Policy Brief	N/A	Policy paper Regarding impact of standardized testing from teacher perspective	Addresses: How curricula are changed to perform well on tests How learning other skills are impacted negatively	N/A	Teachers lose from 60-110 hours of instruction due to testing Instruction also decreased due to testing prep – does not always address specific needs of students, which decreases teachers' roles	Assists in explaining that teachers have altered teaching methods due to state testing State testing has decreased the amount of instruction time Students' are not exposed to certain life-skills due to classroom curriculum alterations to accommodate testing.

Author & year of publication	Type of report	Participant characteristics & selection	Site/context of study	Variables & measures	Procedures	Key findings	Application
Rusby, J.C., Taylor, T.K & Foster, F.M. (2007). A descriptive study of school discipline in first grade. *Psychology in the Schools, 44*, 333–350.	Research randomized control descriptive evaluation. This study is part of a larger study completed	20 elementary school from 12 districts in Oregon 55 first grade teachers (all female) 717 students and their 'primary' parents At Risk sample: 186 Universal Sample: 531 students	Public schools in Oregon	School Discipline Referrals School Level Factors Teacher Reports of Student Behavior Parent reports of Student Behavior and Family Income.	Teacher Questionnaire ($10 per report) for behavior Parent Questionnaire ($15-30 per completion) demographics, parenting skills, behavior. Follow up phone calls Archival records of academic, special education, and behavioral records collected by research assistants	Boys are more likely to receive discipline referrals than girls. Discipline referrals were given most frequently for 1. Physical aggression 2. Disruptive and defiant behaviors Most prevalent consequence was 'time out' Students identified by teachers as having more challenges were more likely to receive discipline referral. SES did not predict the # of referrals	School level of influence for discipline referrals used to measure problem behavior Predictors for discipline referrals Students may be receiving more office referrals due to high expectations placed on them by

Author & year of publication	Type of report	Participant characteristics & selection	Site/context of study	Variables & measures	Procedures	Key findings	Application
Lauen, D. L. & Gaddis, S. M (2015)	AB type report. Looks at tests scores from two years prior and two years post implementation of NCLB	school setting in North Carolina mid to late 2000s Grades 3 - 8 Math –Pre 2005, Post 2007 English: Pre 2007, Post 2009	Study looks at how holding schools accountable for test scores has effected students with high and low academic performance when state standards become more rigorous, possibly placing more students below grade level	math and reading end of grade test scores according to state tests Student background: Race, educational setting, male/female, SES, grade retention, English proficiency	Comparison of test scores 2 years prior and 2 years post standard increases for math and reading	Weak evidence of accountability prior to increasing standards and accountability pressure rises with increase in standards. Math and Reading scores demonstrated a significant gap between middle and high performing students and a small gap between low and middle performing students. Academic Triage may be more pronounced in	Standards are more rigorous Teaching focuses on "bubble kids" who could positively or negatively impact overall outcomes Students are being taught differently based on their capabilities

1. Strengths – large sample size. Relative to project. Results can be applied to project. Current school district low achieving, high ethnicity 2. Limitations – Not national representation - only takes into consideration North Carolina standards. Does not include school or student observations. Validity of assessments not tested or taken into consideration 3. Other comments- Important/helpful information in background section on NCLB and Common Core				lower achieving schools	

Author & year of publication	Type of report	Participant characteristics & selection	Site/context of study	Variables & measures	Procedures	Key findings	Application
Booher-Jennings, J. (2005). Below the bubble: "Educational triage: and the Texas accountability system. *American Educational Research Journal, 42,* 231-268.	Qualitative study – Case-Study design	Brickland ISD – high poverty, almost all Hispanic Pre-K to 5th grade 34 interviews with teachers, admin from school and district, approx. 45 minutes long author was participant-observer in 3rd and 4th grade classroom Quantitative data including test scores and family information taken from 86 students 3rd grade students	Question 1. How and Why did the school and ISD change their policies and practice in response to Student Success Initiative (pass reading and writing)? Question 2: How and why have teachers changed their practice as a result	Successful/unsuccessful Coded data from interview looking for key words: "data-driven" Using data to facilitate educational triage – "bubble kids", safe, suitable and hopeless Students in special education and their accountability Good/Bad teachers – earned respect amongst teacher	Data collected through observations documentation reviews, formal interviews and informal interviews Total time 180 hours as participant observer Documentation review: lesson plans, emails, staff meeting minutes, grade level strategic planning. Quantitative data taken from test scores and family background on 86 students.	Focuses on effects of accountability and teacher willingness to change Negative outcomes from higher ups. Student scores don't effect teachers or their annual evaluation. Neo-institutional theory and study of the faculty workplace. "Good Teaching" equals high test scores. Students being triaged in Kinder	Educators feel forced to change their practices from higher ups Students are taught based on their abilities. Students who have potential to make progress and positively impact school scores. Students who are "hopeless" receive little attention/ individualized instruction

Author & year of publication	Type of report	Participant characteristics & selection	Site/context of study	Variables and Measures	Procedures:	Key Findings:	Application
Firestone, W.A. (2014). Teacher evaluation policy and conflicting theories of motivation. *Educational Researcher, 43* (2), 100-107.	Essay comparing intrinsic and extrinsic motivations of teacher evaluations as well as evaluation policy Good teachers enhance student learning, race to the top and teacher incentive fund	Economics Based Theory – Race to the Top, uses quantitative data for incentives and punishment – extrinsic Principal Agent Theory – principal demands compliance, but cannot monitor work Self- intrinsic – autonomous, Efficacy, competence (between teacher and student)	Author applies two different theories to determine best practice for teacher evaluation	Student growth not always considered in assessment Issues between principal, the reward, and the goal Incentives for math and literacy scores Untested skills not a classroom focus Teaching to the test Test-based incentives not making American students more competitive	Examined pros/con Economic based theories vs. Principal Agent Theory .	Extrinsic can influence intrinsic Teacher and principal preferences do not align State testing that provides feedback for extrinsic motivation poor measure Time: to allocate incentives and provide good working conditions for teachers Teachers still leave lack of supplies and poor discipline Intrinsic: work is influenced from students and fellow teachers	State testing can influence teachers' motivation and the way the classroom is run due to extrinsic incentives to improve test scores. Teachers will do what it takes to improve their evaluation from administrators. Goals set at district level and policy level

Author & year of publication	Type of report	Participant characteristics & selection	Site/context of study	Variables & measures	Procedures	Key findings	Application
Gallant, P. (2009). Kindergarten teachers speak out: 'Too much, too soon, too fast!". Reading Horizons, 49 (3).	Survey of kindergarten teachers in Michigan	229 Kindergarten Teachers in 6 Michigan counties. Experience ranges from 1 to 38 years. Average 15 years. 2/3 of teachers have master degree 96% hold elementary endorsement 64% early childhood specialization 18% reading endorsement	229 public kindergarten teachers in 6 counties in Michigan 50% half day kinder 23% offer full day kinder 27% offer varying schedule 13% offer multiage grouping 65% report tat least half of their students participated in early education program.	Used 5 point likert scale responded to 24 statements about best practice Statements reflect issues to structure and theories of learning	Surveys mailed, post paid return envelopes and explanatory letters mailed to principals in 6 counties to give to their kindergarten teachers. Open ended answers on surveys were transcribed identifying major issues (working condition and literacy instruction)	Variability in length of day, number of children per classroom, and assistance received in the classroom, yet curriculum expectations remain the same More focus on reading and writing than socialization 'too much, too soon, too fast' immediate and long term emotion and academic consequence Curriculum doesn't consider abilities or leaning styles.	Listen to and support kindergarten teachers Teachers are now focused on readiness perspective rather than emergent perspective
NOTE: Good perspective on how teachers feel about high expectations							

Author & year of publication	Type of report	Participant characteristics & selection	Site/context of study	Variables & measures	Procedures	Key findings	Application
National Alliance of Specialized Instructional Support Personnel (n.d.). Specialized Instructional Support Staff: Every Student Succeeds Act. Retrieved from https://www.aota.org/~/media/Corporate/Files/Practice/Children/Specialized-Instructional-Support-Personnel-ESSA.pdf	PowerPoint presentation regarding ESSA	Addresses SISPs: Counselors, nurses, psychologists, social workers, OT, PT, SLP, audiologists, music therapy, art/dance movement	Presentation geared towards how ESSA impacts Specialized Instructional Support Personnel (SISP) which includes	Academic standards Academic Assessments Accountability Fiscal requirements Training Professional development Literacy program between grades k-12 Student support and grants	*n/a*	Promotes collaboration between academic team members ESSA no longer uses AYP, teacher evaluations based on test scores, accountability based only on test scores Defines role of SISPs in schools SISPs are now committee members	OT role in schools based on new definition and areas that we can address – Fine and gross motor skills, early childhood development, address barriers to educational success, academic achievement, work with team to help students meet needs

Author & year of publication	Type of report	Participant characteristics & selection	Site/context of study	Variables & measures	Procedures	Key findings	Application
Frequently asked questions: What should the occupational therapy practitioner know about Common Core Standards? Retrieved from https://www.aota.org/~/media/corporate/files/secure/practice/children/faq-common-core-standards.pdf	Information sheet	FAQ's regarding common core state standards	Information for OT practioners on best practice with CCSS	What CCSS is and why it was developed Application of CCSS CCSS assessment in school districts CCSS and students on IEP OT and CCSS Examples of OT and CCSS Improving knowledge of CCSS and OT	n/a	There is a role for OT and CCSS Possible to play a larger role than service students independently on IEPs. Able to participate in RTI CCSS drives teachers' lessons	OTs can work in the classroom to support classroom activities Co-Teach classroom lessons/activities Deliver workshops on role of OT
NOTE: Descriptions of OT role and Common Core Standards. Ideas on how to reach more students indirectly.							

Author & year of publication	Type of report	Participant characteristics & selection	Site/context of study	Variables & measures	Procedures	Key findings	Application
Rusby, J.C., Taylor, T.K & Foster, F.M. (2007). A descriptive study of school discipline in first grade. *Psychology in the Schools, 44*, 333–350.	Research randomized control descriptive evaluation. This study is part of a larger study completed	20 elementary school from 12 districts in Oregon 55 first grade teachers (all female) 717 students and their 'primary' parents At Risk sample: 186 Universal Sample: 531 students	Public schools in Oregon	School Discipline Referrals School Level Factors Teacher Reports of Student Behavior Parent reports of Student Behavior and Family Income.	Teacher Questionnaire ($10 per report) for behavior Parent Questionnaire ($15-30 per completion) demographics, parenting skills, behavior. Follow up phone calls Archival records of academic, special education, and behavioral records collected by research assistants	Boys are more likely to receive discipline referrals than girls. Discipline referrals were given most frequently for 1. Physical aggression 2. Disruptive and defiant behaviors Most prevalent consequence was 'time out' Students identified by teachers as having more challenges were more likely to receive discipline referral. SES did not predict the # of referrals	School level of influence for discipline referrals used to measure problem behavior Predictors for discipline referrals Students may be receiving more office referrals due to high expectations placed on them by

APPENDIX B

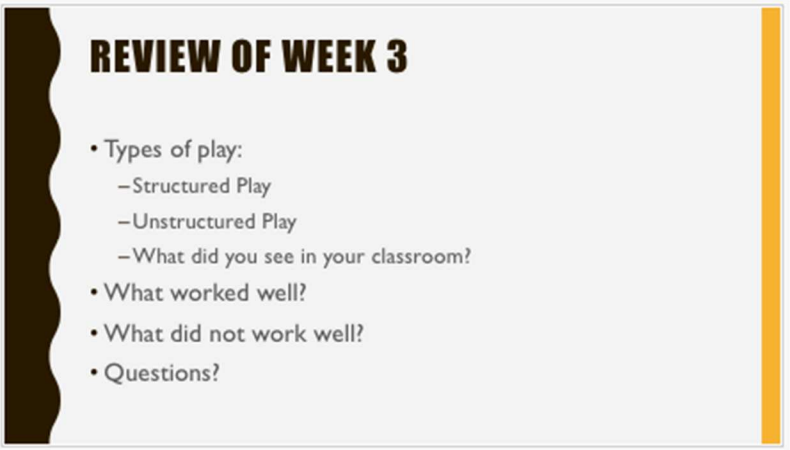
SCHEDULE OF TOPICS

Week 1: What is Play? Why is it Important? • Define play • What does play look like in the classroom? • Benefits of play and why it's important
Week 2: Risk Factors of Play: • Gender roles • Ethnicity • Socio-Economic Status • How time in the classroom is spent
Week 3: Types of Play in the Classroom: • Structured Play • Unstructured play • Free play • Developmental Sequence of Play
Week 4: Strategies and Justification for Play in the Classroom • Reading • Writing • Math • Social Studies • Science
Week 5: How to be Playful with Students • Strategies on how to play with students • Discuss benefits of teachers contributing to the learning process. • Didactic learning versus scaffolding
Week 6: Application of Play Strategies • Create your own center! Teachers create their own play center with description of strategies and how it applies to curriculum standards

APPENDIX C

MODULE 4 EXAMPLE

1



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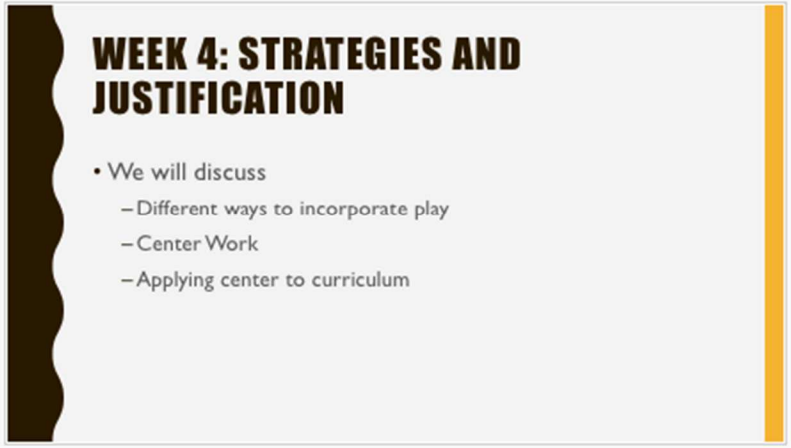
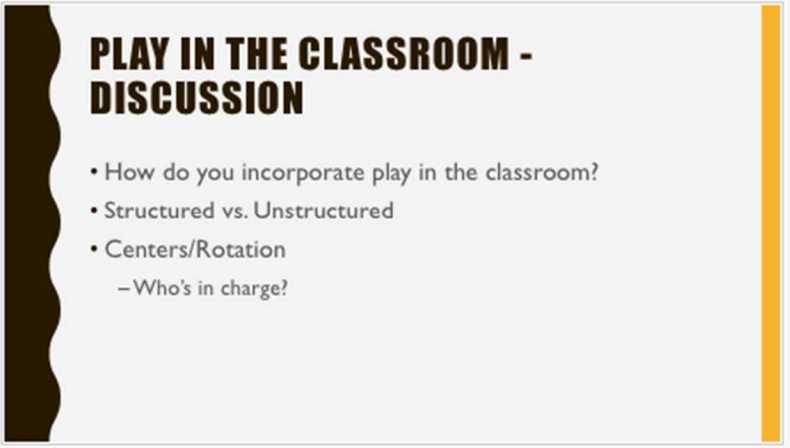




CENTERS – PRETEND PLAY

- Theme: Restaurant
- Academic Areas::
  - Writing
  - Reading
  - Math
  - Science
  - Social Studies
  - Language
  - Everyday Skills

5

READING

- Look at the menu
- Read recipes
- Read the order
- Name of the restaurant
- Other examples…

6

APPLYING TO TEKS

- Identify TEKS/Pre-K Guidelines addressed
  - Engages in pre-reading and pre-reading related activities
  - Self-selects books engages in pre-reading behaviors
  - Recognize that text has meaning
  - Uses large speaking vocabulary

WRITING

- Create the menu as a class
  - Multiple drafts
- Create sign restaurant
- Write down the order
- Sign name to the bill
- Color while waiting for food

APPLYING TO TEKS/GUIDELINES: WRITING (PP. 78-87)

- Intentionally uses marks, letters and symbols
- Capital and lower case letters
- Forming letters
- Child writes own name
- Discuss and contribute to draft and edit
- Appropriate directionality when writing

9

MATH

- Writing numbers for quantity
- Prices of food items
- Paying for bill
- Giving change
- Shapes of food

10

APPLYING TEKS/GUIDELINES: MATH

PP. 88-101

- Counting objects
- Rote count to 30
- Uses ordinal terms
- Recognizes numerals
- Names common shap
- Location words
- Compares objects

SCIENCE

- Hot food vs. Cold food
- Describing food
- Collect tools: cups, bowls, timers,
- Using five sense to explore
- Differentiate between living and non-living
- Sort plants and animals

APPLYING TEKS/GUIDELINES: SCIENCE
(PP.102-106)

- Child observes, investigates, describes and discusses properties and characteristics of objects
- Child uses simple measuring devices to learn about objects
- Child observes, investigates, describes and discusses sources of energy

13

SOCIAL STUDIES

- Vote on type of restaurant and name
- Create a map of where the restaurant is located
- Assigning jobs: waiter, host, chef
- Class discussion: Why do we go to restaurants?

14

APPLYING TEKS/GUIDELINES: SOCIAL STUDIES (PP. 107-112)

- Student identifies similarities between himself, classmates and other students
- Student identifies similarities and differences in characteristics of families
- Connects life to events, times, and routines
- Demonstrates that all people need food clothing, shelter
- Explores geography tools and resources
- Child engages in voting methods for group-decision making

OTHER BENEFITS

- Sensorimotor skills
- Cognition
- Social-emotional skills
- Language

SUMMARY

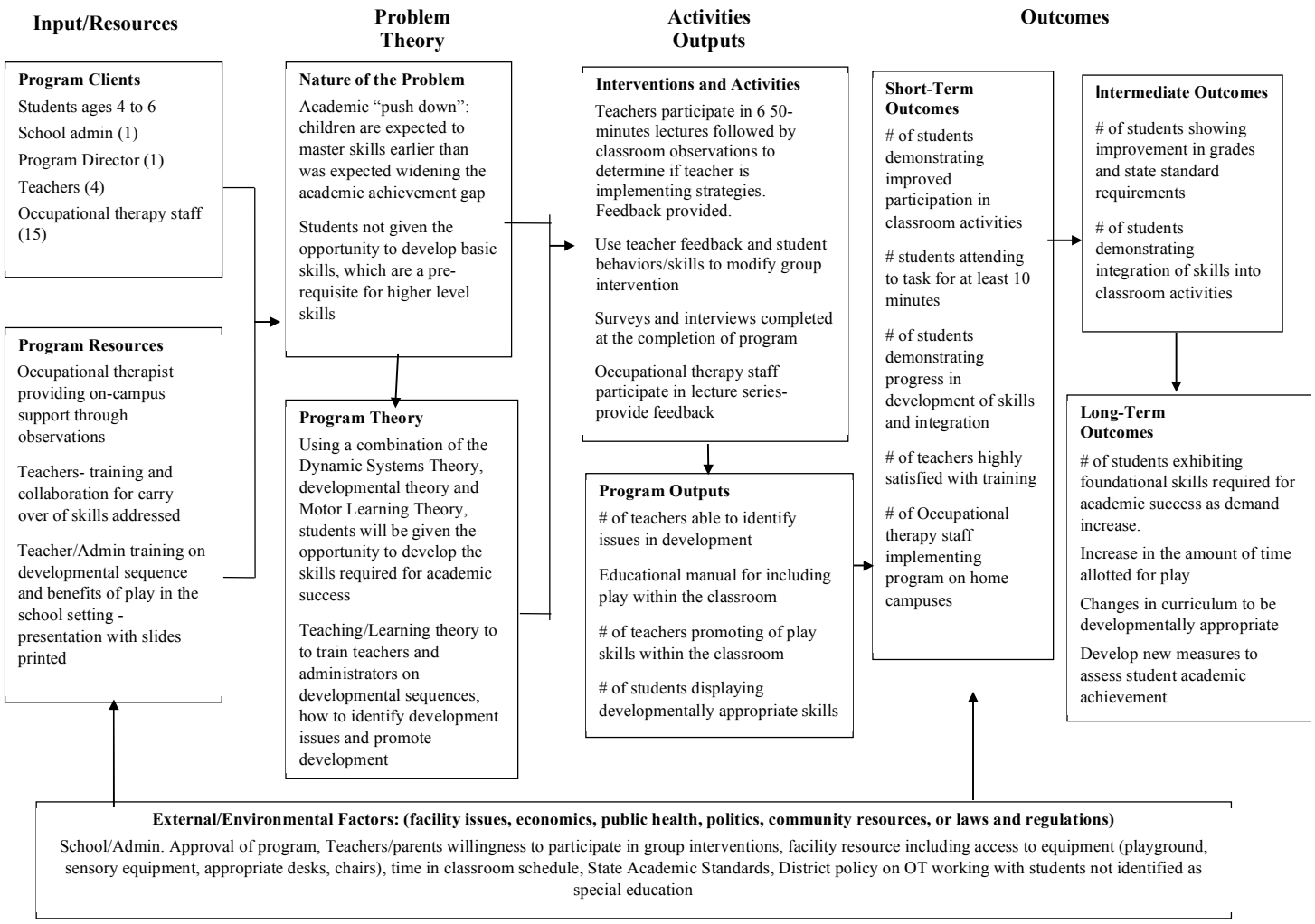
- Applying play to TEKS
- How can you incorporate this in the classroom?
- Questions or concerns?
- Confirm observation times

REFERENCES

- *Texas Education Agency (2017). Texas essential knowledge and skills for kindergarten. Retrieved from https://tea.texas.gov/curriculum/teks/*

APPENDIX D

LOGIC MODEL



EXECUTIVE SUMMARY

Introduction

Academic success continues to be one of the highest priorities for the United States (Mackey, 2016). With such a tremendous focus on academics, changes made to laws governing public school systems require more accountability for students' educational achievements. Accountability is measured through state and national testing to ensure students are performing at a proficient level in academic subjects. (Bassok et al., 2016; Booher-Jennings, 2005; Lauen & Gaddis, 2015). The No Child Left Behind Act of 2001 set a goal of having 100% of students proficient in both reading and mathematics by the 2013–2014 school year. Unfortunately, this goal was not met (Association for Supervision and Curriculum Development, 2015). School district program directors, administrators, and teachers have made adjustments to assist students in meeting national and state criteria.

State education agencies and school districts have changed the way they teach students. With more rigorous curriculum standards, often above students' ability level, schools introduce students to possible testing information at younger ages to potentially increase scores during testing periods (Bassok et al., 2016; Booher-Jennings, 2005; Lauen & Gaddis, 2015). They have increased time allotted during the school day for subjects that are tested, covering more material (Booher-Jennings, 2005; National Council of Teachers of English, 2014). Teachers have also changed core teaching concepts from student-focused to teaching to pass state and standardized testing and from teaching whole subjects to introducing information that could appear on testing. These changes

severely compromise education.

These curriculum changes place much greater academic performance expectations placed on students than in the past. Students are expected to start preschool and kindergarten with a skill set that was previously taught during later school years (Gallant, 2009). The problem is that students' developmental structures required for academic success do not have the time and experiences to mature. For example, preschool students are expected to write words legibly, although they have not mastered the motor control of a pencil (Amundson, 2005; Texas Education Agency, 2015). The current academic expectations lead teachers to require children to spend the majority of their day engaged in tabletop activities and paper-and-pencil tasks seated at a desk (Gallant, 2009; Lust & Donica, 2011). This practice leaves less opportunity for students to engage in the sensorimotor and free-play activities essential to develop the skills needed for academic achievement.

As a result, students may develop gaps in foundational skills and sensory-processing necessary for classroom success. Foundational skills include sensorimotor, cognition and processing, visual-perceptual skills, and social-emotional skills (Bassok et al., 2016; Case-Smith, 2015). The lack of mastery of foundational skills, in turn, reduces students' ability to succeed in more advanced academic skills including reading, writing, and mathematics (Amundson, 2005; Gallant, 2009). Play is important for developing attention, processing, cognition, and social-emotional skills (Tanta & Knox, 2015). Limitations in these skills may also reduce academic success.

Various solutions have been used to remediate the problem of meeting academic

expectations and narrow the academic achievement gap. Commercially available sensorimotor solutions, such as *Brain Gym* (2016) and *Learning Without Tears* (n.d.), are effective, evidence-based, and theory-driven solutions. However, school districts may choose not to use these programs due to costs of training and products, time away from teaching, or lack of awareness that the programs exist. Educational solutions trialed include "triaging" students, causing teachers to educate students differently based on their capabilities (Lauen & Gaddis, 2015). Students who fall slightly below grade level often receive small-group instruction and individualized attention to remediate knowledge for passing test scores, whereas students above or significantly below grade-level do not receive the instruction they warrant (Booher-Jennings, 2005; Lauen & Gaddis, 2015). Play is another approach used. The Montessori Method allows students to discover and explore their environments, develop interest areas, and provide meaning to their learning. However, it can be an expensive and requires specialized training (Age of Montessori, n.d.). A common theme among all approaches that yielded positive results is a child-driven, hands-on experiences using play to develop foundational skills for academia. Unfortunately, these approaches are not often executed in the United States.

The Play2Learn Program

The researcher developed the Play2Learn (P2L) program in response to needs identified in the educational setting to minimize the academic achievement gap by better preparing students to meet academic expectations. The program's main premise is to use play as a learning tool with an educational approach to promote student academic success. Based on developmental theories, it is expected that as students enhance

foundational skills needed for academic success, they will succeed in meeting the rigorous classroom demands. The goal of P2L is to train teachers on the sequential development of skills so they can create opportunities for students to learn through play. It was designed to be delivered to occupational therapy practitioners, who in turn instruct teachers in their school districts.

The P2L is a 6-week program that includes six educational modules on defining play and its benefits, risk factors of play, strategies and justification for play, how to be playful with students, and application of play strategies. Program delivery includes 50-minute interactive lectures, expert mentoring, and practical application for each module. Practitioners will observe teachers applying the P2L lessons in the classroom to ensure they use the strategies and to assist them with practical application to improve carryover of the modules.

The objective of P2L is for teachers to use play within the classroom setting confidently and effectively to promote learning, including adapting a familiar lesson to make it developmentally appropriate and playful, while justifying how it aligns with the curriculum. Ultimately, the program offers to enhance student academic performance and improve behavior, attention, sensorimotor skills, social-emotional skills, language, processing, and cognition. The desired long-term outcomes of this program are to increase play during the school day, change curriculum design to be more developmentally appropriate, develop new ways to assess student performance, and educate all students regardless of their academic abilities.

Evaluation Plan

To promote knowledge and application of information and strategies learned throughout the modules, an evaluation plan will identify P2L's effectiveness, relevance, efficiency, and impact. It uses formative evaluation to determine if the program is being implemented as intended and meeting established goals and objectives (Niemeyer & Duddy, 2016). Specifically, the purpose of this formative evaluation plan is to determine if the P2L program is appropriate for preschool and kindergarten teachers to integrate play in their classroom to promote academic success. The author will use a presentation program to provide results to stakeholders and participants, including a summary of findings and recommendations on the next steps to launch the program successfully.

Funding and Dissemination

The P2L program was designed to be cost-effective. Modules will be conducted during staff-development meetings, and occupational therapy practitioners can document their time as "on-campus support." Teachers will be encouraged to use equipment and tools already in place in the classroom, keeping costs low for their districts. Participants will receive a booklet with modules and other available resources required to implement P2L successfully.

The dissemination plan is an integral component of P2L to increase awareness. Target audiences include occupational therapy practitioners working on preschool and kindergarten campuses, preschool and kindergarten teachers, school district program directors and administrators, and PTA/PTO. The program will be submitted for presentation, including at the Texas Occupational Therapy Association, American

Occupational Therapy Association (AOTA), and AOTA Children and Youth Specialty conferences and informational handouts given during poster presentations at the conferences. Articles describing the program will be submitted for publication in teacher and occupational therapy trade journals. Social media will provide target audiences with information regarding the benefits of P2L. A quarterly newsletter with program updates, current policy, success stories, and other resources available will be sent to subscribers, past program participants and those interested in the program. Success will be measured by the number of registered learners and instructors.

Conclusion

Learning and participating in school activities is an important occupation for all children across the globe. As occupational therapists, our goal is to enhance participation in meaningful occupations, including learning. Our training in developmental theories and processes allows us to understand the factors leading to the problem and offer developmentally appropriate solutions. Play is one of the best, most developmentally appropriate solutions for students to develop the skills they need to meet academic expectations. The P2L is driven by developmental theories and uses systems theories to explain the problem and solutions. Information presented to teachers is evidence-based and incorporates best practice elements in both occupational therapy and teaching. The program has the potential to benefit preschool and kindergarten students across the nation by enhancing foundational skills required for learning.

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FACT SHEET

BOSTON UNIVERSITY

Play2Learn: Promoting Learning Through Play During the Academic Day

Meghan Daley, MS, OTR/L

The Problem

- 20% of schools have decreased the amount time for recess[2]
- Kindergarten students spend up to 46% of the school day seated at their table[5]
- Time allotted for unstructured play: Kindergarten 5% Preschool 35%[4]
- Over 40% of teachers report low flexibility in curricular decisions
- 25% and 29% of students who were performing proficiently in reading and math fell below grade level with the increase of standards

Role of Occupational Therapy

Occupational therapy practitioners have training in developmental sequence. They are able to support academic achievement and non-academic areas (recess, self-help, vocational, participation) and assist students with and without disabilities to participate in learning and appropriate developmental activities within their natural school setting.[1, 3]

Solution: Play2Learn

Occupational therapy practitioners will receive training to work with preschool and kindergarten teachers in a six-week program to include play within the classroom schedule and relate it to the curriculum

Teachers will learn various strategies to incorporate play into the daily classroom schedule and ways to justify play to the curriculum and current standards

Teachers will receive a weekly observation from occupational therapy practitioner for hands on experience and close mentorship

Play2Learn Content

1. Defining Play and Its Importance for Development and Academic Success
2. Identify Risk Factors of Play: Gender Roles, Ethnicity, Socio-Economic Status
3. Types of Play in the Classroom Setting
4. Strategies and Justification for Play in the Classroom
5. How to be Playful with Students: Taking a Step Back
6. Application of Play Strategies

Benefits

- Play promotes development of foundational academic skills
- Play is motivating for students and can promote meaningful learning experiences
- Easy to implement within the classroom setting and aligned with curriculum
- Low cost for practitioners and classroom teachers
- Teachers and OTs earn continuing education/professional development units

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