PREPARING PRESERVICE EDUCATORS FOR THE INCLUSIVE CLASSROOM

By

CARLA GARRISON

Bachelor of Science in Human Development and Family Science

Oklahoma State University

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Thesis Approved:

Dr. Amy Tate

Thesis Adviser

Dr. Jennifer Jones

Committee Member

Dr. Ginger Welch

Committee Member

Name: CARLA GARRISON

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Abstract: Inclusion has been heavily researched, exploring aspects from the benefits to the possible negative outcomes. Two constructs that have been found to be related to successful inclusion are positive attitudes and high self-efficacy. Research has shown that inservice teachers who possess these characteristics are successful with inclusion. The purpose of this research is to provide a professional development training focused on successful inclusion practices to preservice teachers enrolled in an early childhood education undergraduate program at a Midwest university in the United States, as well as explore changes in self-efficacy and attitudes and differences among cohorts of participants. Results indicated that both self-efficacy and attitudes toward inclusion significantly improved from before to after the workshop, suggesting that professional development positively impacted these constructs. The differences among the cohorts approached significance for self-efficacy in the pre-assessment; however, there were no other significant differences among cohorts of preservice teachers on self-efficacy or attitudes. The similarities found in the participants' levels of self-efficacy and positive attitudes toward inclusion across the span of the program suggest consistency in the program's philosophy and influence on preservice teacher attitudes and self-efficacy. The positive changes in preservice teachers' attitudes and self-efficacy underscores the salience of targeted professional development.

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CHAPTER I

INTRODUCTION

Overview

The *Difference between IEPs and 504 Plans* website provides a comparison of the

Section 504 guidelines and Individualized Education Programs (IEPs) under the Individuals with

Disabilities Education Improvement Act (IDEIA), explaining the responsibilities the public

school system must uphold for students with disabilities (Lee, 2014). Specifically, the IDEIA

requires schools to provide free and appropriate public education (FAPE) for all students with

disabilities (Lee, 2014). The IDEIA defines 13 different disabilities that qualify students for

special education and related services. These categories are as follows: intellectual disability,

deafness, deaf-blindness, hearing impairments, autism, serious emotional disturbance, multiple

disabilities, specific learning disabilities, orthopedic impairments, speech or language

impairments, other health impairments, traumatic brain injury, and visual impairments (National

Dissemination Center for Children with Disabilities, 2012).

After reviewing the various disabilities that qualify under IDEIA, it becomes clear that

students who will benefit from inclusion should be provided with the opportunity to be a part of

the general education classroom. Inclusion becomes the logical avenue for educating children

with disabilities. Inclusion requires that all students of varying abilities be included in the

classroom community and receive the individualized education needed for their success in life

and in the least restrictive environment. According to the National Center for Educational Statistics, approximately 95% of students with disabilities (as defined by the IDEIA) are served in an inclusive classroom (U.S. Department of Education, 2013). Of those 95%, approximately 40% spend 80% or more of their time in a general education classroom. There are three different types of educational classrooms in the public school systems: 1) general education classrooms, the primary classroom in which most student receive their education; 2) a special education classroom, often referred to as a *self-contained classroom*, which requires a special education certified teacher along with paraprofessionals/teacher's aids as needed to meet the students' needs; and 3) the resource room, where students receive specialized instruction for specific skills (mathematics, reading, speech, etc.). Particularly in the resource classroom, a teacher with a specific certification will work with the child for a limited time before the child returns to the general education classroom. In this study, a resource room will refer to a special education resource room, and inclusion will be defined as the practice of including students with disabilities in the general education classroom, where the majority of their peers are being educated (Vaughn & Schumm, 1995). The definition of inclusion and all of its components will be further discussed in the next section of this paper.

Even though inclusion is rooted in positive intentions, occasionally its execution falls short and leaves the practice ineffective. This ineffectiveness is primarily due to poor placement, teacher attitudes, and limited student participation in the classroom (Fisher, Roach & Frey, 2002). For further clarification, an example of poor placement would be a student with ADHD being placed in a self-contained classroom for the majority of the day. In this example, a student with ADHD would most likely benefit from being close to peers but may require a teacher's aide or extra time to complete tasks (Obiakor, Harris, Mutua, Rotatori, & Algozzine, 2012).

Attending to preservice and inservice teachers' need for knowledge and skills to effectively implement inclusion is essential.

Research has shown that a teacher's attitude towards teaching children with disabilities is greatly influenced by their experiences with inclusive classrooms. As found by Leatherman and Niemeyer (2007), a preservice teacher who had positive experiences in undergraduate coursework felt confident about implementing inclusion during student teaching. Furthermore, Newman-Thomas (2014) reviewed the importance of a preservice teacher's self-efficacy and the effects it can have on inclusion. If the teacher has low self-efficacy, or does not believe in the practice, the teacher will not implement inclusion at a benefit to the children involved. Providing future educators with positive experiences, promoting self-efficacy, and providing information on how to implement effective inclusion will be a benefit to themselves and their future students. With the expectations of meeting each individual child's needs in the classroom, preservice teachers require further instruction on effectively implementing such practices with children with disabilities. First and foremost, the definition of including students with disabilities in the general education classroom must be clarified.

Definition of Inclusion

Inclusion is when students of varying abilities are placed into a general education classroom, and their academic and social means are met through appropriate instructional practices (Vaughn & Schumm, 1995). Please note, inclusion is not meant for every child with a disability; however, in this research it is assumed that students included in the general education classroom are placed there because it has the potential to be a benefit to their well-being. It must also be noted that placement does not necessarily define practice. Hence, it is important to discuss what constitutes inclusive practices. It is true that some students with disabilities perform poorly in inclusive

classrooms, and occasionally students without disabilities also suffer (Obiakor et al, 2012). However, these results have not controlled for effective inclusive practices and therefore could be the outcome of ineffective teaching strategies (Baker & Zigmond, 1995; Obiakor et al, 2012). In order to produce desirable outcomes for all students in an inclusive classroom, teachers must diversify their instruction and goals for each individual child's needs. Inclusion is not limited to the general education classroom; students with disabilities are on an Individualized Education Program (IEP), which requires a multidisciplinary team that meets yearly to discuss the child's potential. With this multidisciplinary team, the general education teacher has a multitude of resources to help reach that child's individual needs (Baker & Zigmond, 1995; Obiakor et al, 2012). Additionally, *responsible inclusion* is when teaching practices reflect each individual student's needs (students with and without disabilities), and services are provided that allow this student-centered model to be carried out within a single classroom (Vaughn & Schumm, 1995). This too can be accomplished by utilizing the resources provided to the teacher to enhance self-efficacy in his/her ability to teach children with disabilities.

In addition to understanding inclusion, the "opposite" practice must also be defined; segregated classrooms. This is when students are pulled out of their general education classrooms into a special education classroom or resource room, to practice specific skills they are lacking (Fisher, Roach, & Frey, 2002). Although there have been negative and positive outcomes for this practice, the research would suggest that these inconclusive results indicate that each student should be placed in a classroom that best suits their particular circumstances and abilities (Zigmond, 2003).

As discovered by Muccio, Kidd, White, and Burns (2014), there are six primary components to successful inclusion: attitudes of inclusion, family involvement, classroom resources or

environment, professional development (PD), teacher skills, and inclusive classroom quality. With all of these factors combined, inclusion has the potential to foster optimal outcomes. The purpose of this research is to utilize PD to help improve these other factors by promoting positive attitudes and high self-efficacy in preservice teachers.

Purpose of the Thesis

Today's graduating teachers are expected to implement differentiated teaching practices in order to meet each child's individual needs. This concept is generally taught to preservice teachers in their undergraduate teacher preparation program. Several studies have found that teachers do not feel equipped to educate students with disabilities in their classrooms. This suggests there is not enough focus on inclusion in their undergraduate studies (Allday, Neilsen-Gatti, & Hudson, 2013; Dunst & Bruder, 2014; Gehrke & Cocchiarella, 2013; Jordan, Schwartz, & McGhie-Richmond, 2009; Logan & Wimer, 2013). Even though inclusion may be observed at their practicum sites, and has been an important resource to their teacher education, they are often not taught how to execute effective inclusion within their coursework. The university where this study was carried out uses a cohort model that consists of four blocks; Block 1 represents the first semester in the teacher education program, while Block 4 is the final semester, culminating with the intern teaching experience. Upon graduation, students have accumulated over 1200 hours of field experience in early childhood classrooms.

The current project seeks to contribute to this gap in preservice teacher preparation for inclusive classrooms in two ways. First, a professional development workshop was developed and offered to each cohort with the goal of encouraging positive inclusion experiences, promoting self-efficacy, and providing information about effective inclusion. Second, survey

results determined the impact of the professional development on the preservice teachers'

preparedness for working in an inclusive classroom.

CHAPTER II

THEORETICAL FOUNDATIONS

Inclusion has deep roots with theoretical underpinnings. The bonds developed between teacher and student are vital to the success of inclusion. Therefore, attachment theory is an important theory to consider when discussing inclusion. Along with attachment theory, social cognitive theory's primary construct, self-efficacy, must be explored. Without self-efficacy, a teacher's implementation of inclusion may be rendered ineffective. Without an effective application of inclusion, the desired positive outcomes for students with disabilities and their peers without disabilities will not come to fruition. Beginning with attachment theory, this review will explore the benefits of both theories in support of effective inclusion.

Attachment Theory

Attachment theory is useful in understanding teacher-student bonds because it provides information on how those bonds affect student performance. Ainsworth (1989) defines an *affectional bond* as one that is long lasting, and cannot be interchanged with another bond. Likewise, *attachment* is conceptualized as an affectional bond with an attachment figure that cannot be replaced by another attachment figure and there are emotions stirred if the bond is disrupted. Such emotional responses include: functionality when there is sufficient proximity to the dyad, distress at separation, happiness upon return, and sadness if there is a loss. Evidence of

an attachment bond can be seen upon separation and return (e.g., distress at separation, and happiness upon return, and/or sadness if there is a loss of proximity). When there is a secure bond, one member of the dyad can function appropriately within close proximity of the other with confidence. Typically, this theory is applied to parent-child bonds; however, this concept can be applied to teacher-child relationships as well. Even though the bond between teacher and child is not as long-lasting or durable as the parent-child bond, research has found that this bond also exhibits separation-reunion behaviors similar to those found in parent-child bonds (Koomen & Verschueren, 2012). In this light, a teacher can be seen as an *ad hoc attachment figure*, as the teacher helps regulate the child's emotions, behaviors, and provides caregiving support. These important concepts lay a foundation for a potential attachment bond, especially for younger children whose bonds with their parents may be disruptive or insecure (Ahnert, Pinquart, & Lamb, 2006; Koomen & Verschueren, 2012).

After discussing the application of attachment theory to teacher-child bonds, it is important to discuss the breadth of this bond for the child. Sabol and Pianta (2012) found that if a teacher is sensitive to the child's needs, the internal notions of relationship bonding created by the parents may be altered. To reiterate the importance of the teacher-child bond, research has shown that this bond can be predictive of a child's academic performance, psychological functioning, motivation, and engagement in school (Sabol & Pianta, 2012). Children develop attachment figures in teachers, distinct from the parents as attachment figures, at an early age. This separation allows for the relative prediction of possible academic outcomes based on attachment bonds. These secure relationships are reflected in the child's lower externalizing behaviors and better social skills, particularly when the bond is positive and the teacher is sensitive to the child's attachment needs. However, it has also been found that while a teacher's bond with a

child can reverse negative outcomes for the child, it can also make outcomes worse. In order to prevent such results, the teacher must understand the child's social-emotional cues, respond to their needs appropriately, and offer supports (Sabol & Pianta, 2012).

There are some teacher characteristics that can affect teacher-child relationships. The attachment a teacher had with their own parents may affect how they form such bonds with students. Most importantly, the ethnic differences between teacher and child must be noted. Children share a similar ethnic background with their parents, but may not with their school teacher. This difference could potentially cause biases from the teacher and affect the expectations the teacher has of the student (Kesner, 2000). According to the United States Department of Education, 48.3% of students enrolled in the 2010-2011 academic year were non-white; of those 49.17% are Hispanic. By contrast, upwards of 87% of teachers are white, according to Boser (2014). This ethnic gap could potential cause conflict within teacher-child relationships, unless the teacher recognizes their own biases and prevents them from interfering with future interactions with those children (Kesner, 2000).

Preschool and elementary educational researchers have analyzed teacher-child relationships using terms such as closeness, dependency, and conflict (Koomen & Verschueren, 2012). The interrelated behaviors that are assessed utilizing these terms evaluate a teacher-child relationship and its consequences. Building a bond with students that reflects open communication, warm affections, and harmony prevents potential conflicts between the child and the teacher. How the teacher views the relationship with the child is equally as important. If the teacher sees the relationship negatively, this will be reflected in their behaviors towards the child (Koomen & Verschueren, 2012). Moreover, children who experience high conflict in relationships with their teachers have higher levels of internalizing and externalizing behaviors in late childhood. The

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child may act out or respond with aggressive behavior if there is conflict. However, if the teacher responds to the child appropriately, these behaviors can be decreased and eventually reversed (O'Connor, Collins, & Supplee, 2012). This research provides support for the notion that healthy relationships between the teacher and child promote cooperation. When the teacher's attitude is positive toward the child, the teacher may be more willing to go the extra mile and ensure the child's success in the classroom.

Robertson, Chamberlain, and Kasari (2003) explored differences in teacher-child relationships with the presence of maladaptive behaviors. They found that teacher-child relationships reflected the behaviors of the students. In other words, if the child has difficult maladaptive behaviors, the relationship will reflect this complication. Findings also showed that the relationship with the teacher was reflected in the student's acceptance by peers. These are all contributing factors to a child's success in the classroom, which signifies the importance of developing a positive, secure attachment between student and teacher.

Social Cognitive Theory

Social cognitive theory by Bandura (1991) is rooted in self-motivational practices that allow a person to reflect and redirect their actions from outside influences. This ability to recognize motivators and self-direct is called *self-regulation.* Self-observation gives the individual an opportunity to understand their own actions and the consequences that follow, process these reactions, and then self-diagnose. Self-diagnosis becomes apparent once patterns in behavior are found, which then allows for self-correction, or regulation. Most importantly, appropriate self-monitoring behavior gives an individual the skills required to set reasonable goals for oneself and then contemplate how to achieve them. These skills are of practical use to preservice teachers because the majority of their training requires them to critically think about how they will

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theoretically handle particular situations. Moreover, *self-efficacy* is a person's understanding of their own abilities to execute within a particular situation such as teaching and guiding a child with difficult emotional behavior (Bandura, 1993). Goddard, Hoy, and Hoy (2000) found that self-efficacy determines how a teacher will react to situations in the classroom that may not be ideal and/or require skills outside their capabilities. For example, if a teacher has low self-efficacy in her abilities to teach in an inclusive classroom, she may be provided with resources that could help her yet she will not utilize them effectively. Promoting a healthy self-efficacy can turn these situations into positive outcomes, whereas low self-efficacy can leads to negative outcomes. Such negative outcomes include a lack of coping skills, minimal determination, and indecisiveness (Goddard, Hoy, & Hoy, 2000). However, high self-efficacy leads to persistence, vigorous effort, and determination. These skills are highly effective in teaching young children, particular young children with disabilities in an inclusive setting. Research has shown that knowing one's own strengths and weaknesses can be beneficial in promoting high self-efficacy and ultimately giving the confidence required to complete a challenging task (Bandura, 1980).

Bandura (1977) found that not only is self-efficacy required for difficult tasks, it must also be practiced. *Performance accomplishments* allow the teacher to find him/herself in a difficult situation with proper supports that can be a guide. Once this skill has been practiced and mastered, the teacher will feel more confident in any similar situation. Bandura also found that this high self-efficacy can be transferred to other challenging situations, and can be handled with confidence. Along with personal experiences, *verbal persuasion* is another tool used to promote self-efficacy. When encouraged and trained properly, a teacher can successfully educate young children, including those with disabilities. However, this alone will not suffice, as teachers require experience in the field in order to gain self-efficacy in their practice. Using verbal

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persuasion as a feedback tool is an effective way to give preservice teachers the skills required to be confident in their ability to teach an inclusive classroom (Lancaster & Bain, 2010).

In summary, a teacher's self-efficacy can be shaped by his/her preservice education, along with a secure bond between teacher and student. These skills can be transferred to an inclusive classroom setting. In order to fully understand the nature of an inclusive classroom, an analysis of inclusion must be explored. Understanding inclusion is the first step in promoting positive relationships between students with disabilities and their general education teachers, and in turn positive outcomes for the inclusive classroom. As with all methods of teaching, there is policy regulating its practice and implementation.

CHAPTER III

REVIEW OF LITERATURE

Policy and Its Effects on Inclusion

As previously discussed in the overview of this thesis, in order to be compliant with the IDEIA, schools must provide free, appropriate public education (FAPE). In accordance with this policy, schools allow children with disabilities to partake in regular classrooms with their peers without disabilities whenever appropriate. This inclusion of children with disabilities in a general education classroom is made possible in part by the IEP. Briefly mentioned previously, the IEP allows a multidisciplinary team to evaluate the child's strengths and weaknesses in order to design a program to meet the child's unique needs (Gartin & Murdick, 2005).

These requirements obligate general education teachers to become aware of inclusion and the proper practices necessary to produce better outcomes for all of the students for whom the teacher is responsible. IDEIA terms such as *cooperation, coordination,* and *collaboration* are used to discuss the creation of the IEP and its multidisciplinary team (Welch, 1998). This team consists of all those responsible for supporting the child educationally and can include (but is not limited to) the parent(s), general education teacher, special education teacher, a representative of the local education agency, an individual who can interpret the instructional implications of evaluation results (only in eligibility and three year re-evaluation meetings), other allied health

professionals, and the child whenever appropriate (Gartin & Murdick, 2005). This multidisciplinary team is meant to bring forth different perspectives of the child's developmental needs in multiple domains (cognitive, physical, social, and emotional) in order to implement the most beneficial educational practice possible. However, as discovered by Welch (1998) there are paradigms that exist, which result in a team to minimalize these effects. For example, the assessments required for special education services may contain biases towards specific races or ethnicities; however, if the general education teacher provides observational notes that off-set these assessment results, then an over-referral can be avoided. Collaboration is key in understanding the child's needs in order for the IEP team to be successful.

With students with disabilities being a part of standardized reform, much pressure has been placed on administration and educators to ensure their academic success. The requirements of meeting the state standards as well as the IEP goals can leave educators of students with disabilities feeling overwhelmed or inadequate. However, with resources such as those found in an IEP meeting, a collaboration of child experts can formulate ways to include the child in meaningful ways (Roach, Salisbury, & McGregor, 2002). The purpose of policy is to increase the quality of educational practices and to promote an effective implementation of inclusion. Next is an in-depth look at the current research that reviews qualities of effective inclusion and academic outcomes of such practices.

Inclusive Classrooms: Effectiveness and Academic Outcomes

The ultimate goal of inclusion is to reach each child and help foster their social-emotional and educational success. There is extensive research that demonstrates the success of inclusion for students with disabilities; however, there is merited concern for those without disabilities. From a social-emotional developmental perspective, researchers have found that all students held

positive views of those with disabilities in their inclusive classroom (Litvack, Ritchie, & Shore, 2011). Not only did they have positive views, but 10 out of 60 upper-elementary age students (mean age of 11.39 years) interviewed were unaware of having a classmate with disabilities. It is important to note that this lack of awareness could cause the students to perceive these children as incompetent instead of being empathetic towards their abilities (Litvack et al., 2011). In this study, they found four types of relationships between students with disabilities and those without: no relationship, casual friends/acquaintance, academic helper, or friends who spent consistently regular time together. Half of the participants were either casual friends or friends who spent consistent time together. One third of the class claimed to have no relationship with the student with disabilities (Litvack et al., 2011). This observation could be due to unsuccessful inclusion; if responsible inclusion was taking place, it would be expected that the students would at least have some form of relationship. Effective inclusion allows students the opportunity to provide a sense of community for each other, and gain an understanding of the diversity of the human race (Hunt & Goetz, 1997; Vaughn, Elbaum, Schumm, & Hughes, 1998).

In reference to their academic performance, Litvack et al. (2011) found that 79.3% of the average-achieving students without disabilities claimed that inclusion did not affect their academics. There were differences between high-achieving and average-achieving students; however, the majority of both groups did not report an effect. Specifically, 50% of the high-achieving students reported that they learned less. However, effective inclusion practices were not controlled for, so these findings could be the result of unsuccessful inclusion (Litvack et al., 2011).

Further, Fisher, Roach, and Frey (2002) found that schools with inclusive classrooms scored in the 80th percentile for academic achievement, whereas their segregated counterparts only

scored in the 50th percentile. Students with or without disabilities in inclusive classrooms performed just as well, if not better, than their control counterparts in a regular classroom. The authors also discussed at length the finding that the academic performance of students with or without disabilities was not negatively impacted by inclusion. Additionally, in a meta-analysis, it was found that inclusion had a small-to-moderate positive effect size on academic outcomes for students with disabilities (Baker, Wang, & Walberg, 1995). The positive effect sizes from inclusion classrooms suggest that students perform better in an inclusive setting than in a segregated setting. Hunt and Goetz (1997) discuss the importance of individualized instruction and cooperative learning for young children as a dividing factor in academic success and failure. For example, they found that all students in cooperative learning groups, such as those found in typical early childhood classrooms today, gained knowledge in the targeted academic skills. This includes students with and without disabilities

It is important that these research findings are brought to the attention of preservice educators so as to shed light on the benefits of inclusion and the potential consequences of unsuccessful inclusion. However, in order to produce positive outcomes such as the ones previously discussed, teachers must believe in the practice of inclusion and maintain a constructive attitude towards its practice. There is extensive research that examines the importance of attitude and self-efficacy, and how these constructs affect the academic classroom today.

Links among Teacher Self-Efficacy, Attitudes, and Inclusive Classroom Practices

Attitude and self-efficacy play an important role in a teacher's ability to implement effective inclusion. For example, it has been found that if a teacher has a negative attitude toward inclusion, the teacher will not implement inclusive practices appropriately (Hammond & Ingalls,

2003). In conjunction with teacher attitudes, it is equally important to examine self-efficacy. In the context of education, self-efficacy is a teacher's understanding of one's own abilities to execute effective teaching strategies, such as inclusion (Bandura, 1993). High self-efficacy comes from proper training and a teacher's ability to find resources for information; without this, a teacher may feel incompetent, which will reflect on his/her ability to teach young children (Newman-Thomas, 2014). Beginning with self-efficacy, this section will explore the links among self-efficacy, attitudes, and their impact on inclusion.

Self-efficacy. Researchers have found that teachers with high self-efficacy produce higher student achievement than teachers with lower self-efficacy (Ross & Bruce, 2007). Teachers with such outcomes demonstrated several contributing factors, including: implementing effective classroom management techniques for student autonomy, utilizing different strategies to reach each child, tending to the needs of the lower achieving students, modifying their attitudes to change student's perceptions of their abilities, and persistence. These strategies are also the primary driving forces for effective inclusion (Ross & Bruce, 2007). In order to fully understand the strategies required, teachers must appreciate how their implementation of inclusion affects others in their practice.

Goddard et al. (2000) found that not only does one teacher's self-efficacy affect the practice of teaching, but also the collective group of teachers. This is particularly applicable to inclusion because of the multidisciplinary team that surrounds a student with disabilities. The individualized education plan (IEP) for a student with disabilities is meant to bring together a team of specialists and teachers to help facilitate that child's growth and development. These researchers found that without a high collective self-efficacy, the execution of educational practices was not ideal. Therefore, it is vital that all participants are on board and support

inclusion in order for it to produce the desirable outcomes. To facilitate this support for inclusion, examining preservice teachers' views and understandings of inclusion is essential.

Preservice teachers have been found to view themselves as future teachers capable of confronting challenges with knowledge and support from administration. This self-efficacy can lead to positive decision making when difficult situations arise in the classroom such as meeting each child's unique needs. Most preservice teachers recognize the importance of inclusion while still recognizing its potential challenges. Preservice teachers placed in inclusive classrooms have the opportunity to develop a positive view of inclusion while utilizing a strengths-based approach to their instruction (Niemeyer & Proctor, 2002). Teachers' understanding of their abilities and the curriculum can be a significant factor in their approach to implementing appropriate education. A strengths-based approach allows future teachers to utilize individualized instruction to not only expand upon the students' strengths, but also to meet their individual academic needs (Newman-Thomas, 2014; Niemeyer & Proctor, 2002; Taylor & Ringlaben, 2012).

The educational background of teachers has been shown to be a valid predictor of teacher self-efficacy. Researchers have found that in-depth theoretical coursework along with hands-on experiences and constructive feedback help provide preservice teachers with the *confidence* and *competence* required to become experts in their field. This self-efficacy produces favorable outcomes in student achievement, thus arriving at the notion that preservice education is important to teacher self-efficacy and ultimately student achievement (Dunst & Bruder, 2014).

Consequently, researchers have found that teachers who have had success in teaching children with disabilities have greater job satisfaction than those who do not (Brownell & Pajares, 1999). These findings are concurrent with the previous results discussed of teachers'

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self-efficacy for teaching children with disabilities (Brownell & Pajares, 1999). Therefore, it can be concluded that high self-efficacy is linked to effective inclusive practices. High self-efficacy can be obtained by thorough preservice education and supported by a teacher's persistence in pursuing each child's educational needs. However, a teacher's attitude is also a contributing factor to inclusion. To begin, the difference between a teacher's ideal attitude and their execution should be understood.

For example, a teacher may agree with inclusion in an interview, but his/her practice in the classroom may reflect otherwise. This discrepancy can lead to a false perception of a preservice teacher's ideals on inclusion and their practice in the classroom once implementation begins. This incongruity between the teacher's mental perception and the reality of a situation is called *dissonance* (Stone & Cooper, 2001). Such inconsistencies can be reflected in teacher behaviors, which may contrast with the answers that teachers provide in an interview or questionnaire about their understanding of inclusion (Stone & Cooper, 2001; van Overwalle & Jordens, 2002). In order to close this gap between perception and reality for preservice teachers, an analysis of inservice teacher attitudes of inclusion must be discussed.

Attitudes of inservice educators. Inservice teachers who view inclusion negatively are less likely to utilize effective strategies, therefore rendering the implementation less effective (Logan & Wimer, 2013). Research suggests that this is due to the teacher's unwillingness to try something new if they are not confident in their abilities to perform such method of teaching (Logan & Wimer, 2013). For example, Bender, Vail, and Scott (1995) found that even though teachers were aware of the benefits of certain teaching strategies for students with learning or mild disabilities, they still did not use them. The researchers propose this is due to their less-than-positive attitude toward inclusion.

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Additionally, Hammond and Ingalls (2003) found that more teachers agree on the problems of inclusion than on the benefits. However, the results of the perceived benefits of inclusion are unclear. The researchers suggest this could be due to their current teaching situation. For example, they may see the idealistic benefits of inclusion, but their current execution has more problems than benefits (Hammond & Ingalls, 2003). Further, it has been found that if teachers do not see the benefit of inclusion, they will not go the extra mile to see it through to successful implementation. In essence, their expectation of the failure of inclusion is supported by their inherent actions, similar to a self-fulfilling prophecy. This expectation of the failure of inclusion will affect its implementation in the classroom, and continue the potential problems the teacher fears (Vanleeuween, Giordano, & D'Alonzo, 1998). It has also been found that without proper collaboration between special education services and the general education teacher, the implementation of inclusion can be frustrating and ineffective (Hammond & Ingalls, 2003; Vanleeuwen et al., 1998). In a brief discussion of current research and personal experience, Helm (2006) discusses the notion that good disposition of teachers is vital to their success. The magnitude that a teacher cares about children and his/her career drive the teacher to meet the needs of each individual child.

Cook and Cameron (2010) found four primary concerns of elementary educators about inclusive classrooms. First, teacher-initiated instruction was positively related to their concern ratings, meaning that the students the teachers were most *concerned* about received greater teacher-initiated instruction, which resulted in positive student academic performance. Second, negative remarks towards a student's behavior by the teacher resulted in lower teacher-initiated instruction or less instructional guidance from the teacher. Such interactions with students results in feelings of rejection by teachers and therefore an unsuccessful attempt at inclusion. Third,

teachers exhibited greater concern for students with varying disabilities than those without disabilities. This is a hopeful finding in that teachers who show concern are more likely to put forth the effort to provide appropriate services. Fourth, even though teachers show concern for students with disabilities, those with behavioral issues are more likely to be rejected by the teacher. This is primarily true for students with disabilities such as Attention Deficit/Hyperactivity Disorder (ADHD), where consistent class disruptions may cause the teacher to become frustrated and less likely to individualize instruction. These results are telling of the importance of teacher's views of varying disabilities and how they interact with children based on these preconceived notions.

Ross-Hill (2009) found that inservice teachers also expressed that they felt unequipped to teach children with disabilities. Lack of training could be in part why they feel inclusion is not successful. Teachers who are adequately trained feel more confident in their abilities to teach children with disabilities (Ross-Hill, 2009). Additionally, Copeland, Keefe, Calhoon, and Tanner (2011) researched the effects of teacher preparation and literacy; teachers who are taught outdated instructional strategies put their students at even greater risk of failing literacy goals once they become inservice teachers. As such, the content of preservice teacher preparation should be carefully considered. Leatherman and Niemeyer (2005) found in their qualitative study that teachers who felt well-equipped for inclusive education were more willing to allow students with disabilities to participate in class activities. These teachers also addressed the individual needs of the children in their classroom. These tactics are attributed to their experiences with inclusive classrooms during their undergraduate studies.

Attitudes of preservice educators. Burke and Sutherland (2004) found that preservice teachers felt more knowledgeable about inclusion than inservice teachers. This finding could

suggest that preservice teachers have more highly-supported classroom experiences than

inservice teachers due to their novice status, and in turn report feeling more knowledgeable.

These researchers also found that preservice teachers felt that inclusion had more positive

benefits than inservice teachers. This also could be attributed to their inexperience and possible

naiveté of inclusion classrooms. It has also been found that those furthest removed from the

inclusion classroom have the most positive view of inclusion (Lopes, Monteiro, Sil, Rutherford,

& Quinn, 2004).

As the aforementioned research suggests, exposing preservice teachers to appropriate

inclusion practices can promote positive outcomes for the students. Therefore, preservice

teachers should be provided with more opportunities to practice their skills in an inclusive

setting. Proper training and experiences that allow them to acquire such skills and promote

positive attitudes must be included in their educational background. The development of these

attitudes is rooted in positive, hands-on experiences in an inclusive classroom along with

theoretical knowledge of developmentally appropriate practices.

Professional Development and Its Effects on Attitudes and Self-Efficacy

Currently, preservice educators perceive a disconnect between their theoretical knowledge

of inclusion and the "real world" application found in their placements (Gehrke & Cocchiarella,

2013). This disconnect is most likely due to the lack of sufficient general education training

about inclusion. Preservice teachers are finding that the legislative intentions of the least

restricted environment (LRE) is not being carried out by current general educators. These

students observe teachers taking students with disabilities from the general education classroom

setting to a more restrictive environment (e.g., resource rooms, self-contained classrooms). These

same preservice teachers feel that they do not receive the supports from the university needed to

apply their theoretical knowledge base to the classroom setting in their placements. They struggle to see inclusion taking place in the classroom and how to effectively implement inclusive practices (Gehrke & Cocchiarella, 2013). Because preservice teachers typically do not feel equipped to implement inclusion, the next logical step would be to improve their confidence and provide the resources necessary for them to execute inclusion effectively.

As previously discussed, the self-efficacy of educators has been shown to impact their implementation of inclusion (Ross & Bruce, 2007). Dunst and Bruder (2014) discovered that as long as the teacher feels prepared for working with students with disabilities, they will have high self-efficacy. These feelings of preparedness typically stem from previous experiences in a classroom. They also found that teachers feel prepared regardless of their degree or type of education received as long as they have had positive, hands-on experiences with inclusion in their education. Similar findings were discovered by Atiles, Jones, and Kim (2012), as the ratio of children with disabilities to children without disabilities influenced the preservice teachers' self-efficacy for teaching children with disabilities. This suggests undergraduate students should be consciously placed in classrooms with high ratios of children with disabilities to those without, as this has the potential to build their confidence in teaching children with disabilities. Thus, providing an appropriate educational background and mindful field placements for preservice educators can foster their teaching efficacy.

In addition, those with high self-efficacy go the extra mile to reach each student's academic needs in contrast to those with low self-efficacy who do not. Brownell and Pajares (1999) found that self-efficacy can be improved by extensive preservice education rooted in the following dimensions: a) behavior and classroom management, b) understanding of students with disabilities' needs, and c) individualized instruction. Extensive research has found that

preservice education had a profound effect on teachers' self-efficacy of inclusion. These researchers suggested that more effort be placed in university undergraduate programs to incorporate meaningful inclusion curriculum (Allday, Neilsen-Gatti, & Hudson, 2013; Brownell & Pajares, 1999; Conderman & Johnston-Rodriguez, 2009; Dunst & Bruder, 2014).

Specifically, Ross & Bruce (2007) found that professional development (PD) significantly improved teacher self-efficacy in classroom management. The focus of their PD was to improve teacher success by teaching the educators to assess their own strategies and observe their effectiveness. This PD also targeted their abilities to handle student disruptions and redirect their efforts toward class work. The teachers improved their management skills by modeling, reflecting, and engaging their students in their work, along with applying the information they learned in the PD about inclusion. With emphasis on student construction of knowledge, this PD model also reshaped how teachers perceived student and teacher success. The PD also required that the participating teachers share their successful inclusion techniques in a group setting to improve other teachers' strategies for inclusion.

Further research has found that a comprehensive design of undergraduate coursework on inclusion would be most beneficial to its success. Lancaster and Bain (2010) found that applicable experiences, such as student teaching, are valuable to inclusion but alone cannot produce effective inclusion. Along with application there must also be a theoretical understanding of what is required for inclusion to be effective. For example, understanding different disabilities and the learning strategies that come with those challenges is essential. They discussed the importance of extensive feedback from professors on lesson plans that emphasize individualized instruction and integration of subject areas. In conclusion, they found that a more planned and supportive approach to undergraduate studies improved teacher self-efficacy

(Lancaster & Bain, 2010), which as previous research has established covaries with the success of inclusion. This covariation is also applicable to teacher attitudes and effective inclusive classrooms.

Research has shown there is a relationship between a teacher's preparedness and his/her attitude toward teaching in an inclusive classroom. Within this research, it has been found that teachers' attitudes toward teaching individualized instruction stems from their student teaching and practicum experiences as well as their theoretical knowledge base (Conderman & Johnston-Rodriguez, 2009; Jordan, Schwartz, & McGhie-Richmond, 2009). Practical, positive experiences are essential for a teacher's success in the classroom; having these types of experiences with children with disabilities are vital in order for a teacher to reach these students academically and socially (Burke & Sutherland, 2004). Building a strong foundation for a preservice teacher's positive attitude toward teaching children with disabilities shapes their future practice of inclusion and ultimately their ability to implement effective models of teaching (Niemeyer & Proctor, 2002).

Conderman and Johnston-Rodriguez (2009) observed that inservice teachers express the need for continued PD to improve their individualized instruction strategies and implementation of IEP requirements. These same teachers felt ill prepared for applying appropriate accommodations (providing additional resources for children with disabilities) to access the materials and modifications (providing modified or alternative lessons for students with disabilities), along with curriculum assessments for students with disabilities. All of these factors conclusively point toward the importance of preparation strategies and how they can affect the attitude a teacher has about inclusion (Conderman & Johnston-Rodriguez, 2009).

Previous research conducted by Sunradi, Maryadi, and Sugini (2014) provided encouraging results of a two-day PD program. They found that their PD program significantly improved teacher attitudes, knowledge, and competence for working in an inclusive classroom setting. This particular PD gave the teachers an informational handout before the course as a reading assignment. Once the course took place, they utilized hands-on activities and group assignments to reinforce the information learned. This demonstration of the effectiveness of PD for teachers has important implications for the current study, as the premise is to implement a PD for preservice educators targeted on inclusive classrooms.

Further, PD is vital to a teacher's attitude and execution of individualized teaching in inclusive classrooms. This PD must provide experiences that expose the preservice teacher to different models of teaching and develop positive attitudes towards inclusion. First and foremost, effective PD provides a teacher the opportunity to explore his/her own views of inclusion and confront the potential biases of such attitudes (Sunradi et al., 2014). Defining who is responsible for educating children with disabilities is imperative, as research has found that general education teachers tend to believe the special education teacher is the primary educator for students with disabilities. However, this is not an effective method of inclusion, as research has shown collaboration among the IEP team is essential to the success of inclusion (Jordan, Schwartz & McGhie-Richmond, 2009). Each member of the IEP team has an expertise that is required in order to provide the child with best opportunities. This includes the parents as well, as they are a vital part of the IEP meetings (Horn & Kang, 2012).

Another contributor to the student's academic needs is the paraprofessional, typically a non-degreed person hired by the public school system to assist the student with disabilities in daily school activities. Paraprofessionals find that they are given extensive responsibility in caring for,

and educating, students with disabilities, yet they receive minimal formal training (Downing, Ryndak, & Clark, 2000). Currently, according to the Oklahoma State Department of Education, a paraprofessional must have a high school diploma (or GED), and an associate's degree, or two years of higher education, or pass the Oklahoma General Education Test (OGET), or pass the Praxis Paraprofessional Assessment Test. Note the state does not specify what the degree or coursework must be in (e.g., related to education or not). It is important that the student develop close relationships with the teacher and the paraprofessional in order learn most effectively; however, it should be noted that students with greatest amount of need should receive the greatest amount of attention from paraprofessionals with greatest amount of resources or experience. Paraprofessionals are an important member of the team surrounding the child with disabilities, but it is not their duty to carry all of the responsibility of educating the student (Conderman & Johnston-Rodriguez, 2009; Downing et al., 2000). Further, Brock and Carter (2013) found that paraprofessionals who provide additional instructional support to the teacher help improve the student's academic and social outcomes. However, it must be a team effort and expectations should be made clear between the general education teacher and the paraprofessional. To improve upon the discrepancies in teacher expectations and effective inclusion, strategies for implementation must be discussed.

Utilizing the *Teacher Efficacy for Inclusive Practices (TEIP)* scale, Sharma, Loreman, and Forlin (2012) found three common skills associated with effective strategies of inclusion. Those three skills were: individualized instruction, classroom management, and collaborative skills for working with parents and allied health professionals (including paraprofessionals). These findings support previous research and reiterate the importance of these skills for effective inclusion. Even though these skills are not new to educational standards, it is important to

emphasize the significance of these particular skills for inclusion (Stafford & Green, 1996). The researchers also found that these skills were best practiced if they were included in the teacher's educational background.

With such a wide range of research revealing the importance of high self-efficacy and teacher attitudes, which are developed during their training, it is no question that more effort should be placed on professional development of future educators. During these professional development courses, teachers will begin to develop positive attitudes towards inclusion and become competent in the appropriate practices surrounding inclusion. This thesis served that purpose by implementing a one-time PD workshop that uses empirical research, hands-on activities, and small group work in an attempt to improve preservice teachers' understanding of effective inclusion. The model used strategies already taught to the preservice educators in their corresponding studies; however, the students learned to apply the strategies in an inclusive setting. This thesis explored the effects of the PD short-course on the preservice educators' self-efficacy and attitudes about inclusion, and how they vary between cohorts.

Research Questions

A short professional development workshop focusing on inclusive classroom practices was conducted through the Early Childhood Education undergraduate program at a university in the Midwest. This program uses a cohort model that consists of four blocks; Block 1 being the first semester in the education program, and Block 4 being the final student-teaching semester. This professional development included a pre and post survey of the preservice teachers' attitudes about, and self-efficacy towards, teaching in an inclusive classroom. Two, two-part research questions were explored in this study. Discovering the answers to these questions has

implications for preservice teachers' future inclusive practices, as research has shown that attitudes and self-efficacy shape a teacher's implementation of inclusion.

The first two-part research question is related to preservice teachers' self-efficacy towards inclusion and consists of the following questions: a) Does professional development impact preservice teachers' self-efficacy towards inclusion?; and b) Does preservice teachers' self-efficacy towards inclusion vary by cohort?

The second two-part research question is related to preservice teachers' attitudes about inclusion and consists of the following questions: a) Does professional development impact preservice teachers' attitudes about inclusion?; and b) Do preservice teachers' attitudes about inclusion vary by cohort?

CHAPTER IV

METHODOLOGY

The purpose of this study was to determine if an intentionally-designed preservice

professional development training would impact preservice teachers' attitudes about inclusion

and their ability to teach (self-efficacy). Additionally, differences among preservice teacher

cohorts on the aforementioned variables, attitudes and self-efficacy, were explored.

Participants

The participants in this study were preservice teachers enrolled in an undergraduate ECE

program at a Midwestern University during the fall 2015 semester. Once IRB approval was

obtained, convenience sampling was used to recruit students in this program by their instructors'

agreement to participate in the study. The program is divided into four "Blocks," with "Block I"

being the first semester in the professional education program, and each subsequent semester

after that is another "Block" in the program. Each "Block" contains extensive theoretical

education on effective early childhood practices along with applicable in-field practicums in

rural, suburban, and urban classroom settings with young children ranging in ages from birth to

third grade. The final semester, "Block IV," is the student teaching semester wherein the

undergraduate students are placed into a school full-time to teach alongside an inservice

educator. All of the undergraduate students invited to participate in this study chose to do so, for

Table 1.

Preservice Teacher Demographic Information (N=42)

Descriptor	n (%)
Current Field Placement	
Urban	11 (26.2%)
Suburban	22 (52.4%)
Rural	9 (21.4%)
Block	
Block 1	7 (16.7%)
Block 2	8 (19.0%)
Block 3	19 (45.2%)
Block 4	8 (19.0%)
Average Class Size	
1-10 Students	6 (14.3%)
11-20 Students	16 (38.1%)
21-30 Students	20 (47.6%)
Racial/Ethnic Background	
African American	1 (2.4%)
Native American	5 (11.9%)
Hispanic	1 (2.4%)
White	35 (83.3%)
Gender	
Male	0 (0%)
Female	42 (100%)
Age	
18-23 years	40 (95.2%)
24-29 years	2 (4.8%)

Table 1 Continued

Preservice Teacher Demographic Information (N=42)

Descriptor	n (%)
Total number of children with disabilities knowingly observed	
0 Students	3 (7.1%)
1 Student	2 (4.8%)
2-3 Students	13 (31.0%)
4-5 Students	6 (14.3%)
More than 5 students	18 (42.9%)
Observed disabilities	
Learning differences	31 (73.8%)
Behavioral differences	26 (61.9%)
Health or physical differences	13 (31.0%)
None of these	2 (4.8%)
Family members with a disability	
Yes	14 (33.3%)
No	27 (64.3%)
Significant interactions with a person with a disability	
Yes	24 (57.1%)
No	18 (42.9%)
Level of training educating students with disabilities	
None (0 credit hours)	3 (7.1%)
Limited (<9 credit hours)	38 (90.5%)
Considerable (9-39 credit hours)	1 (2.4%)
Knowledge of local legislation or policy about disabilities	
None	2 (4.8%)
Limited	25 (59.5%)
Average	13 (31.0%)
Good	2 (4.8%)
Level of confidence in ability to teach children with disabilities	
Very low	3 (7.1%)
Low	11 (26.2%)
Average	24 (57.1%)
High	4 (9.5%)

total of 42 participants; all were enrolled in the fall 2015 semester. The completed demographic information can be found in Table 1.

All of the participants in this study were female. The majority of the participants were 18-23 years old (95.2%), the majority were White (83.3%). In the above table, the "Average Class Size" refers to the average class size that the participants have observed in their field experiences. The participants in this study have observed a variety of different class sizes, with the majority observing 21-30 students (47.6%). The participants vary in their current field placement; 26.2% are in an urban setting, 52.4% in suburban, and 21.4% in rural placements. The majority of the participants were enrolled in Block 3 (45.2%); this class size is much larger in comparison to the other three Blocks.

As for experience with students with disabilities, many of the participants had knowingly observed more than five children with disabilities (42.9%). Of the different types of disabilities observed, 73.8% had worked with children with learning differences. Over 33 of the participants have a family member with a disability and 57.1% have had significant interactions with a person with a disability. Almost all of the participants had less than nine credit hours of training for educating students with disabilities (90.5%); this is not surprising, as at least two courses (one related to special education and one related to developmental disabilities) are required in their degree plan. However, 59.5% of students felt they had limited knowledge of local legislation or policy as it pertains to children with disabilities. Even with most feeling they had limited knowledge on legislation, the majority felt they had average confidence in their ability to teach children with disabilities (57.1%). However, many preservice teachers reported they had low confidence (26.2%) and 7.1% reported very low confidence.

Procedures

Once IRB approval was obtained (see Appendix A), the researcher and the instructors of the ECE program coordinated a date and time to implement the PD short course. On the agreed upon day, the researcher began with an introduction of herself and the purpose of the study from a script that was approved by IRB (see Appendix B). After the introduction, the researcher provided the participant information sheet (see Appendix C) with a brief description of the questionnaires used. The participants were given the opportunity to leave the room if they did not wish to participate. Next, the researcher handed out the two brief scales to determine each preservice teacher's self-efficacy and attitude toward inclusion (see Appendix D). Once the surveys were completed, the researcher collected the surveys and placed them securely in an envelope. The researcher then began a one hour and thirty minute hands-on presentation about appropriate inclusive practices in ECE. Once the presentation was completed, the participants were then given the same surveys to determine if there was any change over the course of the presentation. These surveys were also placed in a secured envelope and then taken to a locked filing cabinet where they were kept for data entry and analysis.

This research does contain a treatment, the presentation, and therefore is considered a quasi-experimental design. However, the grouping of the cohorts was the above-mentioned "Blocks," as this is important in determination of the differences in attitudes and efficacy across cohorts. The questionnaires and data were organized carefully by Block and by pre and post-test; the questionnaires were labeled numerically beginning with 101 and ending with 142 to protect the participants anonymity.

Presentation description. The presentation was one hour and thirty minutes in length, and contained various empirically-guided, hands-on activities to provide preservice educators

with practical knowledge of appropriate inclusive practices (see Appendix E). The presentation began with reflective activities to evoke internal understandings of disabilities and how it can affect families and students. The presentation then covered the extensive empirical research that supports inclusion and how to conduct it effectively. Utilizing the Universal Design for Learning (UDL) as the primary example of an effective approach to inclusion, the participants were given several examples of how to use these strategies in their future classrooms. The researcher also utilized the participants' previous coursework to assist in applying their previous knowledge toward effective inclusion. The purpose of the presentation was to give preservice educators practical knowledge of inclusion and demonstrate how it can be executed in the classroom. Throughout the undergraduate program, each Block's knowledge of child development and developmentally appropriate practice expands; thus, each Block received a professional development that reflected their position in the program. However, the presentation was designed to be beneficial to each Block. The focus of each professional development may have shifted slightly from one Block to the next. For example, Block 2 had many questions concerning different disabilities and the policies in place; much of that professional development was spent discussing the responsibilities of the teacher. Generally, each Block becomes more practicum-based; to compensate for this advancement, the professional development course was geared toward their current experiences, which provided an appropriate level of complexity for each Block. For example, some participants in Block 2 were scheduled to visit a Reggio Emilia approach school in a nearby city; consequently their professional development focused more on actively engaging students with disabilities with their peers and collaborating with colleagues to meet the child's needs. This is because of the Reggio Emilia approach they will be observing when they visit the school, which focuses on child-lead interactions and composite classrooms

(multiage). This led to this particular Block's interest during the PD in engaging students with disabilities as opposed to teaching them directly.

Measures

A demographic questionnaire captured the basic information about the students, including school placement, academic training in special education courses, Block number, number of classrooms observed, racial and ethnic background, gender, age and types of special education students observed in coursework. The following subsections describe the surveys that were used in this study.

Self-efficacy of inclusion. The scale *Teacher Efficacy for Inclusive Practices (TEIP),* first used by Sharma et al. (2012), contains survey items based on general self-efficacy research performed by Chen, Gulley, and Eden (2001). It is also rooted in known teacher self-efficacy research and implementations of inclusive practices (Gibson & Dembo, 1984; Hoy & Spero, 2005; Tschannen-Moran, Hoy, & Hoy, 1998). Sharma et al. (2012) found three core skill areas in their research that reflected effective inclusion practices: a) knowledge of content and pedagogy; b) managing classroom environment and behaviors; c) the ability to work collaboratively with parents and paraprofessionals. The original 35 item survey was geared to tap into the three core skill areas and contained a 5-point Likert-scale ranging from (1) Strongly Disagree to (5) Strongly Agree. However, after further research, many of the questions were thrown out, leaving an 18 item and 6-point Likert-scale survey. There are no neutral responses, as this gave the preservice teachers the opportunity to decide how they feel and respond accordingly. These items are all positively stated: "I am…," "I am confident…," and "I can…" No item focuses on a specific disability; rather, the focus is on the teachers' ability to include all students by using inclusive practices. For example, one item states, "I am able to calm a student who is disruptive

or noisy;" another item states, "I can collaborate with other professionals (e.g., itinerant teachers or speech pathologist) in designing educational plans for students with disabilities."

The validity of this measure was established by Sharma et al. (2012) by using experts in the field to validate the applicability of each item and its measurement of a construct. The overall reliability coefficient for the TEIP ranged from α=.84-.91 in various studies. This measure was included in the current study, both before and after the PD presentation, to determine if the independent variable, professional development, affected the dependent variable, self-efficacy, of preservice educators, and if this varied by cohort. However, it should be noted that one question was inadvertently omitted from the questionnaire used in this study. The eighteenth item, "I am able to provide an alternate explanation or example when students are confused" was the item omitted. Yet, even with this omission, Cronbach's alpha for the measure was.90 at pre-assessment and .94 at post-assessment.

Attitudes about inclusion. The *Sentiments, Attitudes and Concerns about Inclusive Education Revised (SACIE-R;* Forlin, Earle, Loreman, & Sharma, 2011*)* scale is a short, user friendly scale that assesses a preservice teacher's sentiments, attitudes, and concerns toward inclusion. The three constructs of this scale are divided equally among 15 questions. The instrument development study found that sentiments impact the manner in which preservice teachers interact with students with disabilities and ultimately how they are treated in the classroom (Forlin et al., 2011). The second construct of the SACIE-R, attitudes, which is one of the main constructs of this study, was found to be an indicator of inclusion success. The more positive a teacher's attitude is toward inclusion, the better they perform (Forlin et al, 2011). Lastly, concerns toward inclusion have also been found to be an indicator of inclusion success. Concerns are relevant, as currently there are many concerns about the practicality and efficacy of

inclusion (Forlin et al, 2011). Forlin et al.'s (2011)15-question measure uses a 4 point Likert-scale that ranges from. (1) Strongly Disagree to (4) Strongly Agree, with no neutral option. Cronbach's alpha of α= .74 was reported (Forlin et al., 2011)

In the current study, all 15 items from the SACIE-R were used to assess preservice teachers' attitudes toward inclusion. The items were scored to reflect higher scoring as positive dispositions toward inclusion, and lower scores were negative dispositions. The questions aimed to target the attitude of the participant and were scored as such; however, the other constructs were reversed scored. This survey were used to determine if there were differences in attitudes, a dependent variable, across cohorts, the independent variable, in the ECE program at the Midwestern University, as well as to explore changes in attitudes from pre to post. In the current study, this measure demonstrated reliability consistent with that reported by the authors of the measure (α=.74), with a Cronbach alpha of α=.84 at pre-assessment, and α=.78 at post assessment.

Data Analyses

Descriptive analyses including means, standard deviations, ranges, frequencies, and percentages, were conducted for all study variables using the *Statistical Package for the Social Sciences (SPSS)* software. The first research question pertains to preservice teachers' self-efficacy towards inclusion and contained two parts; the first part tapped into the relationship between professional development and its effects on self-efficacy; the second part tapped into differences in self-efficacy among preservice teachers as they progress through the program. The first question was: *Does professional development affect preservice teachers' self-efficacy towards inclusion*? To test for differences from pre to post (i.e., before and after the professional development workshop) and thereby explore changes in teacher self-efficacy towards inclusion,

paired-sample t-tests were conducted. To answer the second part of the two-part question, *Does preservice teachers' self-efficacy towards inclusion vary by cohort?*, an ANOVA was conducted to determine if there were differences in pre-service teachers' self-efficacy towards inclusion by cohort in the early childhood teacher education program (Block I vs. Block II vs. Block III vs. Block IV). A composite variable was created for the TEIP, representing a total score for all 17 items.

Recall that the second two-part research question included the question: *Does professional development affect preservice teachers' attitudes about inclusion?* To test for differences from pre to post (i.e., before and after the professional development workshop) and thereby explore changes in teacher attitudes about inclusion, paired-samples t-tests were conducted. The second part of the two-part question was: *Do preservice teachers' attitudes about inclusion vary by cohort?* An ANOVA was conducted to determine if there were differences in preservice teachers' attitudes towards inclusion by cohort (Block 1 vs. Block II vs. Block III vs. Block IV). A composite variable was created for the SACIE-R using the 15 items and representing a total score for pre- and post-assessment comparison. It was hypothesized that the professional development would improve the preservice teachers' self-efficacy and attitudes toward inclusion.

CHAPTER V

RESULTS

The purpose of the present research was to determine if a professional development workshop was related to changes in pre-service teacher self-efficacy and attitudes towards inclusion. Additionally, this research sought to detect differences in self-efficacy and attitudes among the four cohorts of pre-service early childhood teachers involved. The following chapter will detail the findings.

Preservice Teachers' Self-Efficacy

The participants stated their level of agreement with the 17 positive statements on the TEIP by selecting (1) "Strongly Disagree," (2) "Disagree," (3) "Disagree Slightly," (4) "Agree Slightly," (5) "Agree," or (6) "Strongly Agree". The descriptive statistics for the TEIP can be found in Table 2 for the pre-assessment and in Table 3 for the post-assessment. The two tables show each Block's mean total score, along with the total score mean for the entire sample. In the pre-assessment, Block 4 had the lowest mean with M=76.88, while the cohort with the highest mean was Block 3,M=85.16. The total sample mean was 82.50

Table 3 shows the descriptive statistics for the TEIP post-assessment. The means are more similar across blocks, yet the ranges are much greater than the pre-assessment. The Block

Table 2

Means, Standard Deviations, and Ranges for Teacher Efficacy for Inclusive Practices at Pre Assessment (N=42)

Sample	Mean	±SD	Range[*]
Total Sample	82.50	8.09	61-100
Block 1	83.29	3.81	76-88
Block 2	84.13	7.25	74-97
Block 3	85.16	9.81	61-100
Block 4	76.88	6.35	64-84

*1=strongly disagree; 2=disagree; 3=disagree slightly; 4=agree slightly; 5=agree; 6=strongly agree

Table 3

Means, Standard Deviations, and Ranges for Teacher Efficacy for Inclusive Practices at Post Assessment (N=40)

Sample	Mean	±SD	Range[*]
Total Sample	86.68	9.16	62-102
Block 1	89.71	8.09	82-102
Block 2	86.88	11.33	66-100
Block 3	86.88	9.77	62-101
Block 4	83.38	6.56	73-95

*1=strongly disagree; 2=disagree; 3=disagree slightly; 4=agree slightly; 5=agree; 6=strongly agree

Table 4

Paired Samples T-Tests of Changes in Preservice Teacher Efficacy for Inclusive Practice from Pre-Assessment to Post-Assessment (N=40)

	Pre-Assessment		Post-Assessment		
	Mean	±SD	Mean	±SD	t
TEIP total	82.50	8.09	86.68	9.16	-5.075[***]

***$p<.001$

with the lowest mean was Block 4 again ($M=83.38$). The highest mean was Block 1, $M=89.71$. The total sample for the post-assessment has a mean of $M=86.68$.

Changes in Preservice Teacher Self-Efficacy from Pre to Post

A paired samples t-test was conducted to examine changes in teacher self-efficacy toward teaching children with disabilities before and after the professional development. As shown in Table 4, the results indicated that self-efficacy for inclusive practices was significantly higher after the professional development than it was before the professional development , $t(1,41) = -5.075; p < .001$.

Comparison of Teacher Self-Efficacy by Block

A One-Way Analysis of Variance (ANOVA) was conducted to determine if there were significant differences in preservice teacher self-efficacy for inclusive practices by cohort. Two different ANOVAs were used, one for the pre-assessment and one for the post-assessment; Dunnett's *T3* was used to account for unequal cell sizes and assumed unequal variance. The ANOVA for the pre-assessment approached significance, $p=.127$ (see Table 5). Independent samples t-tests indicated that Block 4 reported significantly lower scores on the TEIP than Block 3 ($p<.05$), Block 2 ($p=.05$) and Block 1 ($p<.05$). The ANOVA for the post-assessment was not significant, as seen in Table 6.

Preservice Teachers' Attitudes

The participants stated their level of agreement with the 15 statements on the SACIE-R by selecting (1) "Strongly Disagree," (2) "Disagree," (3) "Agree," and (4) "Strongly Agree". The highest score possible was 60, resulting in positive attitudes, sentiments, and concerns about inclusive education. The descriptive statistics about these ratings can be found in Table 7 for the

Table 5

One-way Analysis of Variance Summary of Preservice Teacher Efficacy for Inclusive Practice at Pre-Assessment: Differences by Block (N=41)

Source	df	SS	MS	F
Between groups	3	399.08	133.02	2.044
Within groups	38	2473.70	65.09	
Total	41	2872.78		

Table 6

One-way Analysis of Variance Summary of Preservice Teacher Efficacy for Inclusive Practice at Post-Assessment: Differences by Block (N=39)

Source	df	SS	MS	F
Between groups	3	152.83	50.94	.587
Within groups	36	3132.94	86.77	
Total	39	3276.77		

Table 7

Means, Standard Deviations, and Ranges for Preservice Teacher Ratings of Sentiments, Attitudes, and Concerns about Inclusion Education - Revised at Pre Assessment (N=38)

Sample	Mean	±SD	Range[*]
Total Sample	45.81	4.78	38-56
Block 1	45.86	4.63	41-54
Block 2	47.88	5.24	42-56
Block 3	45.63	4.88	38-56
Block 4	44.57	4.35	39-52

*4=strongly disagree; 3=disagree; 2=agree; 1=strongly agree; except items 3, 6, 8, 12, and 15 were scored 1=SD to 4=SA

Table 8

Means, Standard Deviations, and Ranges for Preservice Teacher Ratings of Sentiments,
Attitudes, and Concerns about Inclusion Education - Revised at Post Assessment (N=40)

Sample	Mean	±SD	Range[*]
Total Sample	48.67	5.45	39-60
Block 1	49.71	5.99	44-57
Block 2	50.25	6.64	43-60
Block 3	48.17	5.15	39-56
Block 4	46.86	4.56	42-54

[*]4=strongly disagree; 3=disagree; 2=agree; 1=strongly agree; except items 3, 6, 8, 12, and 15 were scored 1=SD to 4=SA

pre-assessment and in Table 8 for the post-assessment. The two tables show each Block's mean total scores, along with the total sample mean score. In the pre-assessment, Block 4 had the lowest mean, *M*=44.57 whereas Block 2 had the highest mean of *M*=47.88 the total score mean for the entire sample was 45.81.

Table 8 shows the descriptive statistics for the post-assessment of the SACIE-R. The means, standard deviations, and ranges are all higher for the post-assessment in comparison to the pre-assessment. The lowest mean was scored by Block 4 once again (*M*=46.86). The highest mean score was found in Block 3, *M*=50.25. The entire sample had a total score mean of *M*=48.67.

Changes in Preservice Teachers' Attitudes from Pre to Post

A paired samples t-test was conducted to examine changes in teacher attitudes towards teaching children with disabilities before and after the professional development. As shown in Table 9, the results showed that participants rated their attitudes, sentiments, and concerns more favorably at the post-assessment in comparison to the pre-assessment, $t(1, 41) = -3.80$; $p = .001$.

Table 9

Paired Samples T-Tests of Changes in Preservice Teacher Ratings of Sentiments, Attitudes, and Concerns about Inclusion Education from Pre- to Post-Assessment (N=36)

	Pre-Assessment		Post-Assessment		
	Mean	±SD	Mean	±SD	t
SACIE-R					
total	45.81	4.780	48.67	5.451	-3.80[***]

[***]p=.001

Comparison of Teachers' Attitudes by Block

ANOVAs were conducted to determine if there were significant differences by block in preservice teachers' sentiments, attitudes, and concerns about inclusive education at pre-assessment and post-assessment. Neither the pre- nor post-assessment ANOVAs, which controlled for unequal cell sizes, were significant (see Tables 10 and 11).

Table 10

One-way Analysis of Variance Summary of Preservice Teacher Ratings of Sentiments, Attitudes, and Concerns about Inclusion Education at Pre-Assessment: Differences by Block (N=37)

Source	df	SS	MS	F
Between groups	3	44.69	14.89	.639
Within groups	34	793.19	23.32	
Total	37	837.89		

Table 11

One-way Analysis of Variance Summary of Preservice Teacher Ratings of Sentiments, Attitudes, and Concerns about Inclusion Education at Post-Assessment: Differences by Block (N=39)

Source	df	SS	MS	F
Between groups	3	55.08	18.36	.600
Within groups	36	1102.28	30.61	
Total	39	1157.37		

CHAPTER VI

DISCUSSION

The purpose of the present research was to explore changes in pre-service teacher self-efficacy and attitudes towards teaching in an inclusive classroom among individuals attending a professional development training focused on working with young children with developmental disabilities. Furthermore, differences in self-efficacy and attitudes among four cohorts of pre-service early childhood teachers were examined. The previous chapter detailed the results of the research; this chapter will discuss these findings and their implications.

Changes in Preservice Teacher Self-Efficacy from Pre to Post

The *Teacher Efficacy of Inclusive Practices* (TEIP; Sharma et al., 2012) scale demonstrated in the pre-assessment that the majority of the preservice teachers in this particular early childhood education program have relatively high self-efficacy toward inclusive practices. Specifically, Block 3 had the highest average self-efficacy, although not significantly different from the other blocks. This could be due to Block 3's additional coursework and field experience in comparison to Blocks 1 and 2. It may seem surprising that Block 3 would score higher than Block 4; however, Block 4 circumstances are far different from those in other blocks. Block 4 students were completing their student teaching internship during the time when the professional development workshop was held and data were gathered. As such, this "real-life" experience

could directly influence how prepared they feel for their future careers, which are on the horizon at the end of the semester, as indicated by their lower self-efficacy scores. In fact, Block 4 had the lowest mean self-efficacy score of all four cohorts. The stress of student teaching can often times cause an individual to question their choice in becoming a teacher or their undergraduate education that brought them to such a stressful situation. Even though there is limited research, Pigge and Marso (1987) found that over the course of the student teaching semester, the undergraduate students' level of anxiety decreased by the end of the term. Additionally, their concerns for choosing education as a career were high at the beginning of the semester but fell back to normal levels toward the end of the semester. Considering the current study, these assessments were conducted in the beginning of their student teaching semester (roughly weeks five and six); Block 4's low scores could simply have been a timing issue. This cohort scored low at the time of the assessments; however, by the end of the term they may feel more positively about inclusion and their future teaching practices.

As for the post-assessment, the pre-service teachers all indicated significantly higher self-efficacy scores than in the pre-assessment before the professional development, as hypothesized. The higher mean scores for each Block suggests that the professional development helped these students feel more confident in their abilities to teach children with disabilities. Ross and Bruce (2007) found that teachers who have high self-efficacy produce higher student achievement than those with low self-efficacy. As further discussed in the same research, teachers with high self-efficacy are more likely to implement effective classroom management techniques, tend to the needs of lower achieving students, and have persistence (Ross & Bruce, 2007). Even though the

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program at the university in the current study produces preservice teachers who have high self-efficacy as evidenced by their mean scores at the pre-assessment, these findings suggest that a professional development geared toward implementing appropriate inclusive practices helps improve these scores significantly, which can in turn affect their ability to meet the needs of children with disabilities.

Comparison of Self-Efficacy by Block

No significant differences in self-efficacy emerged among the four different Blocks of preservice teachers. Because all of the Blocks scored relatively high on the TEIP, it is perhaps not surprising that there are no significant differences. However, findings did reveal at pre-assessment that differences between Block 4 and the other Blocks approached significance. After further analysis, it became apparent that Block 4 scored significantly lower than Blocks 1, 2, and 3 on the pre-assessment. As previously discussed, this could be due to Block 4's current enrollment in their student teaching semester, therefore influencing their views on inclusion. In comparison to the other Blocks, they may have an "idea" of how they will teach children with disabilities; however, Block 4 may currently be teaching children with disabilities and feel inadequate in comparison to their other cohorts. Lopes et al. (2012) found that those furthest removed from the inclusive classroom have particularly positive views on inclusion. A parallel to this finding is seen in the current study, as the Block 4 students are in close proximity to inclusion, with less positive views than the other cohorts who are more distal. As previously found by Goddard et al. (2000), self-efficacy as a collective can also affect teachers' abilities to

teach children with disabilities. If this were the case for these preservice teachers, then perhaps their scores are low because their cooperating teachers are not demonstrating high self-efficacy, in turn influencing how their student teachers feel toward inclusion.

As found by several researchers, a preservice educator's experience with positive inclusive practices will influence him/her to implement these effective strategies in their own classroom as well as improve their self-efficacy toward inclusion (Newman-Thomas, 2014; Niemeyer & Proctor, 2002; Taylor & Ringlaben, 2012). It could be conjectured from the high mean scores found in Blocks 1, 2, and 3, that the preservice program at this university meets the requirements for positive experiences of inclusive education; however, the student teaching experience appears to lower their scores. The primary difference with the earlier Blocks as compared to Block 4 is the amount of time spent in the general education classroom and the decreased amount of time spent in the collegiate classroom. This difference of influence, as stated previously, could be the reason for their lower scores.

Changes in Preservice Teacher Attitude from Pre to Post

The *Sentiments, Attitudes, and Concerns, about Inclusive Education-Revised* (SACIE-R; Forlin et al., 2011) scale revealed promising scores after the professional development as well. As hypothesized, all of the cohorts scored significantly higher on the SACIE-R for the post-assessment in comparison to the pre-assessment. Interestingly, the Blocks who scored the highest on the SACIE-R in comparison to their TEIP scores are relatively the same. Specifically, Block 4 had the lowest mean score; however, Block 2 scored the highest on this scale. This could be due

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to the amount of time Block 2 had recently spent in an inclusive classroom at the University. Before the undergraduate students enter the Block system they spend several hours a week in an on-site child development lab, where approximately 26% of children have developmental delays; additionally, extensive supports by various health, speech, and occupational specialists are offered in this setting. Students spend time at the same inclusive lab program throughout Block 1 as well. Block 2 participants were also recently enrolled in a Special Education course, which could possibly influence their attitudes toward inclusion, influencing their self-efficacy. Lancaster and Bain (2010) stated that along with practicum experiences, undergraduate students also require a theoretical knowledge base and understanding of the various types of disabilities, policies, and individualized instructional approaches in order practice successful inclusion in their future careers. It is in the aforementioned special education course that these students are learning about the legalities, proper teaching techniques, and various disabilities they will most likely see and utilize in their teaching career. With these ideas being fresh in their minds for the professional development offered in the current study, it is perhaps not surprising that they have positive sentiments, attitudes, and concerns for working with children with disabilities. This is an ideal outcome for our future educators, as Bender, Vail and Scott (1995) found that negative teacher attitudes toward inclusion produce negative outcomes for the students. The positive attitudes found in the present research suggest that these teachers have the potential to be successful in implementing inclusion, according to previous research (Helm, 2006).

As found by Ross and Bruce (2007), professional development helped improve teachers' abilities to assess their own strategies, and learn new strategies for successful inclusion. These

ideas were used extensively in the professional development carried out in this research, resulting in similar increases from the pre- and post-assessments for both self-efficacy and attitudes toward inclusion.

Comparison of Preservice Teachers' Attitudes by Block

Similar to self-efficacy, students in the four cohorts did not differ significantly in their attitudes towards inclusion. Unlike self-efficacy, there were no groups that were even approaching significant differences in attitudes towards inclusion. This could suggest there is consistency in the teacher preparation program, promoting positive attitudes, sentiments, and concerns for teaching students with disabilities. The high mean scores overall not only suggest consistency, but positive effects of the program for these preservice educators. However, the significant improvement in attitudes from pre- to post-assessment during the professional development suggests that more time spent on appropriate inclusive practices may improve these attitudes even further.

Continuing this trend in positive development of preservice teacher attitudes toward inclusion will help these teachers with their future educational careers. As found in several research studies, preservice education has a great influence on a teacher's ability to individualize instruction and their attitude in doing so (Conderman & Johnston-Rodriguez, 2009; Jordan et al., 2009). Niemeyer and Procter (2002) also found that building a strong theoretical foundation for preservice teachers is vital to their future success in implementing effective inclusion teaching

strategies. These findings are rooted in the teacher's positive attitude toward inclusion, which stems from his/her experiences and knowledge base found in their undergraduate studies.

Limitations

There are a few limitations of this study, beginning with the cross-sectional design. The lack of significant differences among Blocks could be due to the cohorts not being assessed over time. If each group's responses were assessed again at a later date, research might show differences in their self-efficacy or attitudes towards inclusion that evolve over time. Future research could bring to light such differences among the cohorts longitudinally, and whether or not the coursework and practicum experiences influence their self-efficacy and attitude towards inclusion.

Another notable limitation is the timing of the professional development workshop for the Block 4 group. These preservice teachers were in the midst of their final semester and undergoing the stress of student teaching. The professional development workshop in the current study was offered to the Block 4 students after a long day's work, and in the middle of the week, wherein they also have many assignments to complete. These impending assignments plus the exhaustive nature of student teaching could have affected their scores on the self-efficacy and attitude scales. It was also noted by the researcher that this particular Block was not as engaged as the other Blocks. They exhibited little interest in the material and a few did not participate in the group discussions, which also could have affected the post-assessments in particular.

Importantly, the small sample size of this study is a limitation. Because of the small sample size, it is difficult to generalize the findings of this study. The undergraduate students involved in this study are all from the same university with instructors who share similar philosophies. These similarities will influence the preservice teachers' own teaching philosophies and attitudes toward inclusion; these may not be consistent with other undergraduate programs, in turn limiting the generalizability of the findings. As well, the unequal cell sizes should be noted. It is difficult to meaningfully compare a group of eight to a group of twenty-one. Even though appropriate efforts were made to control for the unequal sizes and significant findings were still evident, this limitation should be kept in mind.

Additionally, the inconsistency in terminology should be addressed. Within the demographic questionnaire provided by the SACIE-R, the questions used terms such as "intellectual/developmental disability" and "disability" seemingly interchangeably. Within the context of this paper, disability has referred to the 13 categories of disability as defined by the IDEIA. This confusion, even though it may have been overlooked by the participants, is an important limitation as it could have affected how the participants responded to those various questions. The definition of "disability" as used in this research was not defined for the participants until the presentation began, which was after they responded to the first questionnaire. As for the question pertaining to types of disability observed, the question itself identifies somewhat vague types of disability "learning", "behavioral", "health/physical", and "none of these". The percentages shown in the descriptive findings may be misleading, as these terms were not defined for the participants and could include children who are not diagnosed

with a disability but rather display characteristics of a disability. It should also be noted that even though a few participants marked "none of these," they did not clarify what disabilities they observed, if any.

Lastly, the missing item from the TEIP is a noteworthy limitation. The original measure was validated by Sharma et al. (2012) with eighteen items. However, because one item was inadvertently omitted from the questionnaire used in this study, the findings should be interpreted with caution. Importantly, the reliability of the 17-item measure in this study was tested and produced a reliable Cronbach's alpha, as discussed in Chapter IV. However, leaving out a scale item could have altered the overall scores of the measure. The statement omitted read, "I am able to provide an alternate explanation or example when students are confused." Even though this study did not analyze the participants' responses to each question, this question would have been beneficial in understanding the participants' ability to accommodate instruction in the classroom.

Reflection

This study was a valuable experience in more ways than one. Not only did my research produce similar, positive findings as other professional development research (e.g., Ross & Bruce, 2007), I also discovered my strengths and weaknesses as a researcher and professional development presenter. The end result of this study showed that undergraduate students' self-efficacy and attitude toward inclusion were significantly higher after the professional development. Discovering that my professional development potentially had a positive impact on

the participants was uplifting. The goal of implementing professional development is to influence the participants in a positive way, in turn affecting the children these preservice teachers will ultimately teach.

Overall, I was very pleased with the implementation of the professional development workshop. However, there are a few changes that could be made for future application. There could have been more hands-on activities in the presentation. Initially, I thought narratives, a sticky-note activity, and a few videos would be enough break from lecture to keep the participants engaged; however, this proved to not be the case. Even though most of the Blocks participated and gave positive feedback, by the end of the presentation the participants seemed disengaged or less engaged than in the beginning. Surprisingly, Block 4 seemed the most disengaged for the entirety of the professional development. As discussed in the limitations, this could have been due to the scheduling of the presentation. To avoid this, in the future I will be sure to select a time that is more conducive to their involvement, possibly on a day they do not have to report to their site and are well-rested.

Changes that could be made to the presentation itself include spending more time on the Universal Design for Learning (UDL). Even though I had time review the basic principles of the philosophy, I would like more time to discuss the classroom application of the philosophy. A few of the anecdotal reflections from the participants indicated they wanted to see a model classroom using UDL appropriately. Also, certain Blocks seem to show more interest in different areas of the presentation. For example, Block 1 asked several questions concerning the legislation

surrounding inclusion and the different categories of disability. Now that I am aware of the different interests of each Block, future presentations will vary greatly by Block based on these interests. Even though I did vary the presentation slightly for each Block, I could have had more individualization among the Blocks. To do so, I could have had meetings with various professors beforehand about their perceived levels of the participants' self-efficacy or attitudes on inclusion. These meetings would have included questions about the participants' interest in different areas of teaching children with disabilities and what concerns they have about inclusion. This would have allowed me individualize my presentation to meet the needs of each Block more precisely.

Each time I presented, I felt more confident in my ability to convey the information effectively. However, the level of confidence depended on the level of participation of the students. The first presentation was given to a group of Block 4 students and their level of participation was minimal in comparison to the other Blocks. Even though I received positive feedback from the participants, I left the meeting feeling like I did not make a difference. However both Blocks 1 and 2 were very cooperative and I had more experience presenting by that point in time, which gave me great confidence in my ability to present. I left those meetings feeling much more effective. Also, the anecdotal feedback I received from those Blocks was much more constructive in comparison to Block 4. The Block 3 students actively participated in the presentation as well; however, this was my last presentation and I felt somewhat burned out from repeating similar information four times previously. Again, this could have been avoided if I would have individualized the presentation more so than I did.

In summary, I thoroughly enjoyed the learning experience of creating and implementing a professional development workshop. I also enjoyed learning more about the research behind successful inclusion and the impact undergraduate studies have on future teachers. From the results of this study and the anecdotal feedback provided by the participants, this research was time and effort well spent by all involved.

Future Directions and Implications

Future studies should possibly remove the professional development and simply study the effects of the undergraduate program curriculum on students' efficacy and attitudes towards inclusion longitudinally. This research could demonstrate the true differences between cohorts as they progress throughout the program. Likewise, it would be interesting to see if these same cohorts score similarly on these same measures a year or two from now, comparing these scores to the current pre- and post-assessments. This could reveal in part whether or not the material in this particular professional development stood the test of time. In order to truly understand the impact of the professional development on preservice teachers' efficacy and attitudes, qualitative data would need to be a part of the research. This qualitative research might include interview questions that pertain to the valuable aspects of their undergraduate program and what was perceived as not beneficial to the undergraduate program. Specifically, what and how much practicum experience would have had greater impacts on their ability to implement effective inclusion? It could also be constructive for future early childhood education programs to

understand how their post-graduate students' classrooms operate by visiting their classrooms to observe practices.

Continuing with the idea of longitudinal research, a study that follows undergraduate students a year or two into their professional teaching careers could reveal any undergraduate coursework they wish they could have received or what courses benefited the students most. However, this research would still not be generalizable to many other undergraduate programs, but could become a model for successful academic programs in the future.

Additionally, future studies could analyze attachment theory and inclusion/special education. There is limited research on the bonds of teacher-child relationships and the outcomes for children with disabilities. As the research in Chapter II and III discuss, these bonds are important to child engagement in the classroom and ultimately children's academic success; however, studying these bonds can be very difficult and is time consuming (Sabol & Pianta, 2012). As the attachment literature was reviewed for the present study, few empirical articles were found that explored teacher-child bonds for students with disabilities. There is much research on teacher-child bonds and behavior outcomes, but it focuses heavily on children without disabilities. Forlin et al. (2011) found that teachers' concerns for students with disabilities could be an indicator of successful inclusion (along with attitudes and sentiments); this is one of the few links between teacher-bonds and inclusion success found in the literature, and it could be expanded through future research.

The implications of the present research begin with professional development and its impact on undergraduate students' conceptions of inclusion. Professional development has been found to be influential in a study conducted by Ross and Bruce (2007). Several studies have found that practical background knowledge and discussion help improve teachers' self-efficacy and attitudes toward inclusion (Conderman & Johnston-Rodriguez, 2009; Jordan et al., 2009). Because the professional development used in the present study was linked to increases in participants' self-efficacy and attitudes towards inclusion, there are some expansions that could be made to improve it. For example, more hands-on activities for the Universal Design for Learning (UDL) could be implemented. In order for the information to be consistent and the emphasis on self-empowerment to remain a strong focus, the professional development should be expanded to a two-day session. The length of time could remain the same (i.e., 90 minutes), as this was practical for the undergraduate students. The first day could focus on the research supporting inclusion, reflection on one's own biases toward inclusion, narratives of families of children with disabilities, and some self-reflection of teacher responsibilities for students with disabilities. The second day could focus entirely on accommodations, modifications, and UDL; the students noted in their anecdotal reflections that this would be beneficial. This professional development model could also be used for inservice teachers as well; however, the presentation would need to be altered to focus more heavily on classroom practices.

Conclusion

Legislation mandates that all children deserve free and appropriate education (FAPE) through the least-restrictive environment (LRE), which is typically the general education classroom. With such mandates, the value of inclusion has never been more important. Research has identified in part what makes inclusion successful, with high teacher self-efficacy and positive attitudes being two of many constructs (Hammond & Ingalls, 2003; Newman-Thomas, 2014). This study shed light on the potential impact professional development can have on these two important constructs.

Future research can determine how to increase the levels of self-efficacy and positive attitudes in preservice teachers while they are completing their teacher preparation program. This will help provide future educators with the tools necessary to implement effective inclusion. Appropriate and successful inclusion will not only help students with disabilities, but also those without (Litvack, Ritchie, & Shore, 2011), hopefully, creating a more diverse and accepting society in the United States.

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APPENDIX A
IRB APPROVAL

Oklahoma State University Institutional Review Board

Date: Tuesday, September 08, 2015

IRB Application No   HE1545

Proposal Title: Preparing preservice educators for the inclusive classroom

Reviewed and Processed as: Exempt

Status Recommended by Reviewer(s): Approved   Protocol Expires: 9/7/2018

Principal Investigator(s):

Carla Garrison

Stillwater, OK 74078

Amy Tate
1114 Main Hall, OSUTulsa
Tulsa, OK 74106

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

☐ The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval. Protocol modifications requiring approval may include changes to the title, PI advisor, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms
2. Submit a request for continuation if the study extends beyond the approval period. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of the research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Dawnett Watkins 219 Scott Hall (phone: 405-744-5700, dawnett.watkins@okstate.edu).

Sincerely,

Hugh Crethar, Chair
Institutional Review Board

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APPENDIX B
CLASSROOM SCRIPT AND OVERVIEW

Classroom Script & Overview

- The researcher (Carla Garrison) will attend the class at the agreed upon time with the course instructor(s) during the regular undergraduate course meeting time.

- The researcher will introduce herself and will explain the purpose of the project to the pre-service teachers in attendance. The following script will be read to the possible participants:

  - *We are conducting a study to better understand pre-service teacher preparation for the inclusive classroom (teaching children with disabilities in the general education classroom). Specifically, we are wanting to know what your current position (or attitude) is toward inclusion and how well you feel that you could teach children with disabilities. By understanding these views of pre-service teachers, we will be able to analyze the discrepancies of pre-service education and better prepare our future teachers for real-world application. Once you have completed the survey I will give a presentation on inclusion and appropriate inclusive practices that will take the remainder of the class time. I will ask you to complete a survey at the end of the presentation as well. Please know that you are not required to participate and there is no reward or penalty with participation. Thank you for your consideration and time.*

- Researcher will distribute the Participant Information Sheet and will give the possible participants a few minutes to read it and determine whether they have any additional questions and whether or not they are willing to participate.

- Researcher will distribute the questionnaires and will read the following:

  - *We realize that many of you may have limited to no experience with children with disabilities, and some may have vast experience. Do not worry if you are not exactly sure how to respond to a question. Please just use your best judgement and answer the questions as accurately as you can.*

- Participants will then have approximately 15 minutes to complete the surveys. I will be available to answer students' questions. Once the students have completed the pre-assessment questionnaires, they will place them in a folder at the front of the classroom. Once I have obtained all of the pre-assessment questionnaires, I will place the folder in my bag until after the professional development workshop is over. Then the researcher will begin the 90 minute presentation on inclusive education.

- Once the presentation has ended the researcher will then pass out the same questionnaires again, following the same procedure as before, for a post examination (for a total 120-125 minutes of class time).

- Once the investigator has obtained all of the questionnaires (same as before) she will thank the participants for their time and return the envelope to a locked filing cabinet.
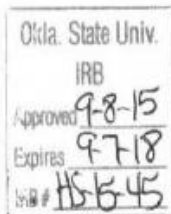
APPENDIX C
PARTICIPANT INFORMATION SHEET
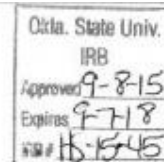
Participant Information Sheet
Oklahoma State University

Project Title: Preparing Preservice Educators for the Inclusive Classroom

Investigators: Carla Garrison, MS Candidate in HDFS-ECE at OSU
Dr. Amy Tate, ECE Program Coordinator at OSU

Purpose: This study will attempt to assess preservice educators' self-efficacy and attitudes toward inclusion, as well as offer professional development focusing on inclusive early childhood education.

Procedures: You will also be asked to participate in a 1.5 hour in-class professional development opportunity. You will be asked to provide demographic information and complete two sets of questionnaires, one set before and one set after the professional development. There is an anticipated completion time of about *10-15 minutes* for each set of questionnaires.

Risks of Participation: There are *no known risks* associated with this project which are greater than those ordinarily encountered in daily life.

Benefits: Ms. Garrison and Dr. Tate are hoping to enhance preservice education by: a) providing professional development; and b) gaining a better understanding of students' attitudes and efficacy toward inclusion. This understanding will help inform undergraduate curriculum in order to provide preservice teachers with meaningful information and experiences.

Confidentiality: Confidentiality protections the investigators plan to use include:
- Paper research records will be stored securely in a locked filing of the principal investigator and no one other than the principal investigator will have any access to the data obtained;
- Additionally, electronic research records will be stored on a password-protected computer belonging to the principal investigator
- Data files will be destroyed by May 1, 2017; and
- Data reported in any written results will be aggregated and statistically analyzed, and will not include information that will identify you.

There are no foreseeable risks in maintaining confidentiality.

Compensation: Compensation will not be offered for this research study.

Contacts: *Amy Tate, Ph.D.: (918) 594-8169, amy.tate@okstate.edu*
Carla Garrison, BS: (530) 774-4916, carlarg@okstate.edu
If you have any questions about your rights as a research volunteer, you may contact the IRB Office at 223 Scott Hall, Stillwater, OK 74078, 405-744-3377 or irb@okstate.edu.

Participant Rights: Participation is voluntary and subjects can discontinue the research activity at any time without reprisal or penalty. There are no risks to subjects who might withdraw. We hope that you will answer all questions as truthfully as you can.

I have read and fully understand the information sheet. I understand that all information I provide is strictly confidential and will be used for this research study purpose only. I also understand that I will remain anonymous throughout the course of this research study. I am free to discontinue participation during data collection at any time. **My agreement to participate in this research study is signified by my participation.**

APPENDIX D
QUESTIONNAIRE

BACKGROUND INFORMATION
(completed at pre-assessment only)

Please circle the most appropriate answer to each question.

A. Which of the following best describes the location of your current field placement school?

    1.   Urban

    2.   Suburban

    3.   Rural

B. Which of the following best identifies your teaching assignment for this year?

    1.   Block 1 – first semester in professional education

    2.   Block 2 – second semester in professional education

    3.   Block 3 – third semester in professional education

    4.   Block 4 – fourth semester in professional education

C. Which answer below best describes the average class size you have observed?

    1.   1-10 Students

    2.   11-20 Students

    3.   21-30 Students

    4.   31-40 Students

    5.   More than 40 Students

D. Which of the following BEST identifies your racial/ethnic background?

1.   Asian American

2.   African American

3.   Native American

4.   Hispanic

5.   White

6.   Other: _____

E. Select the total number of children with intellectual and/or developmental disabilities that you have knowingly observed in your field placements:

0.   0 Students

1.   1 Student

2.   2-3 Students

3.   4-5 Students

4.   More than 5 students

F. Select the number(s) that best describes the delay/disability most closely associated with children included in your field experiences.

1.   Learning differences

2.   Behavioral differences

3.   Health or physical differences

4.   None of these.

5.   Other: _____

G. Circle the statement that best describes you.

    1.   I do not have family member with an intellectual and/or developmental disability.

    2.   I do have a family member with an intellectual and/or developmental disability.

H. I am: 1. Male   2. Female

J. What is your age?

    1.   Younger than 18 years

    2.   18-23 years

    3.   24-29 years

    4.   30 years or older

K. I have had significant/considerable interactions with a person with a disability:

    1.   Yes

    2.   No

L. I have had the following <u>level of training</u> on educating students with disabilities:
1. None (0 credit hours)

2. Some (<9 credit hours)

3. Considerable (9-39 credit hours)

4. High (>40 credit hours)

M. My knowledge of the local legislation or policy as it pertains to children with disabilities is:

1. None

2. Limited

3. Average

4. Good

5. Very Good

M. My level of confidence in teaching students with disabilities is:

1. Very low

2. Low

3. Average

4. High

5. Very High

The Sentiments, Attitudes, and Concerns about Inclusion Education Scale Revised

(SACIE-R; Forlin, Earle, Loreman, & Sharma, 2011)

The following statements pertain to inclusive education which involves students from a wide range of diverse backgrounds and abilities learning with their peers in regular schools that adapt and change the way they work in order to meet the needs of all.

Please circle the response that best applies to you.

SD	D	A	SA
Strongly Disagree	**Disagree**	**Agree**	**Strongly Agree**

1	I am concerned that students with disabilities will not be accepted by the rest of the class.	SD D A SA
2	I dread the thought that I could eventually end up with a disability.	SD D A SA
3	Students who have difficulty expressing their thoughts verbally should be in regular classes.	SD D A SA
4	I am concerned that it will be difficult to give appropriate attention to all students in an inclusive classroom.	SD D A SA
5	I tend to make contacts with people with disabilities brief and I finish them as quickly as possible.	SD D A SA
6	Students who are inattentive should be in regular classes.	SD D A SA
7	I am concerned that my workload will increase if I have students with disabilities in my class.	SD D A SA
8	Students who require communicative technologies (e.g., Braille/sign language) should be in regular classes.	SD D A SA
9	I would feel terrible if I had a disability.	SD D A SA
10	I am concerned that I will be more stressed if I have students with disabilities in my class.	SD D A SA

11	I am afraid to look directly at a person with a disability.	**SD**	**D**	**A**	**SA**
12	Students who frequently fail exams should be in regular classes.	**SD**	**D**	**A**	**SA**
13	I find it difficult to overcome my initial shock when meeting people with severe physical disabilities.	**SD**	**D**	**A**	**SA**
14	I am concerned that I do not have the knowledge and skills required to teach students with disabilities.	**SD**	**D**	**A**	**SA**
15	Students who need an individualized academic program should be in regular classes.	**SD**	**D**	**A**	**SA**

Teacher Efficacy for Inclusive Practice Scale

(TEIP; Sharma, Loreman, & Forlin, 2012)

Please circle the number that best represents your opinion about each of the statements. Please attempt to answer each question.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Agree	Strongly Agree
1	2	3	4	5	6

1	I can make my expectations clear about student behavior.	1	2	3	4	5	6
2	I am able to calm a student who is disruptive or noisy.	1	2	3	4	5	6
3	I can make parents feel comfortable coming to school.	1	2	3	4	5	6
4	I can assist families in helping their children do well in school.	1	2	3	4	5	6
5	I can accurately gauge student comprehension of what I have taught.	1	2	3	4	5	6
6	I can provide appropriate challenges for very capable students.	1	2	3	4	5	6
7	I am confident in my ability to prevent disruptive behavior in the classroom before it occurs.	1	2	3	4	5	6
8	I can control disruptive behavior in the classroom.	1	2	3	4	5	6
9	I am confident in my ability to get parents involved in school activities of their children with disabilities.	1	2	3	4	5	6
10	I am confident in designing learning tasks so that the individual needs of students with disabilities are accommodated.	1	2	3	4	5	6

11	I am able to get children to follow classroom rules.	1	2	3	4	5	6
12	I can collaborate with other professionals (e.g., itinerant teachers, or speech pathologists) in designing educational plans for students with disabilities.	1	2	3	4	5	6
13	I am able to work jointly with other professionals and staff (e.g., aides, other teachers) to teach students with disabilities in the classroom.	1	2	3	4	5	6
14	I am confident in my ability to get students to work together *in pairs or in small groups*.	1	2	3	4	5	6
15	I can use a variety of assessment strategies (e.g., portfolio assessment, modified tests, performance-based assessment, etc.)	1	2	3	4	5	6
16	I am confident in informing others who know little about laws and policies relating to the inclusion of students with disabilities.	1	2	3	4	5	6
17	I am confident when dealing with students who are physically aggressive.	1	2	3	4	5	6

THANK YOU!

APPENDIX E
PRESENTATION MATERIALS

Agenda – Professional Development

Fall 2015

Blocks 1-4 of the Early Childhood Education program

- Introduction of myself and the study
- Pass out the Participant Information Sheet and discuss the rights of the participants
- Hand out questionnaires
    - Once completed, the questionnaires will be placed in a manila envelope for anonymity
- Begin presentation
    - Slide 1: Introduce the concept of inclusion
    - Slide 2: Discuss the importance of our career choice and the weight of that decision on children and the community
    - Slide 3: Discuss the stated quote and it's application to teaching and inclusion
    - Slide 4: Begin "Post-It Activity" – in this activity the participants will anonymously write down their fears of working with children with disabilities and cover them up with another post-it, then they will be place on the board
        - We will discuss common fears/concerns
    - Slide 5: Then I will pass out narratives written by different individuals perspectives on disability and how it has affected them
        - There will be 5 narratives for 5 different groups
        - They are relatively short, we should have time for each member of the group to read the narrative
        - Then the group will be given time to discuss the narrative amongst themselves
        - We will discuss the groups' perspectives on disability as a whole class
    - Slide 6: We will then discuss the observation of students with disabilities in the practicums (if appropriate). Such discussion points will include the following:
        - Have you noticed children with disabilities in your practicums?
        - How has the teacher handled the situation?
        - What would you do differently?
        - How many students with disabilities do you believe are included in the general education classroom?
        - By opening up this discussion we will begin to discuss the importance of understanding the value of inclusion
        - *If the students have not begun their practicums we will discuss these scenarios hypothetically

- Slide 7: We will discuss the laws in place that mandate the LRE and how the general education classroom fulfills that role
    - Including information on IEPs, which will be a major part of their career but is marginally discussed during their undergraduate studies
- Slide 8: Most importantly, we will discuss the prevalence of inclusion and how their career choice satisfies that role
    - We will discuss at length the statistical research that backs the prevalence of inclusion
    - This will lead to further discussion of how laws affect our careers
- Slide 9: The outcomes that have been found in schools that use inclusion appropriately are vital to this professional development and support it's contents
    - This is when I will begin the discussion of individualized instruction and what that may look like in the classroom
- Slide 10: The three primary ingredients of inclusion will be discussed:
    - Collaboration
    - Classroom Management
    - Individualized instruction
        - Introduction of the concept of Universal Design for Learning (UDL)
    - We will also discuss peer relationship development and how to be the driving force behind the IEP
- Slide 11: We will watch the 10 minute video on Including Samuel
- Slide 12: We will then discuss how we would include Samuel in our own classrooms
    - Further discuss the concept of UDL
- Slide 13: After defining UDL we will compare UDL to the traditional ways of teaching
    - This comparison will shed light on the practicality of individualized instruction and point out the importance of varied instruction to every student, not just those with disabilities
- Slide 14: The three principles of UDL will be discussed (as stated by http://iris.peabody.vanderbilt.edu/module/udl/)
    - We will briefly walk through the website and how to use the modules
    - This website will primarily be used as a tool for future reference, as they will explore the website in great detail for their SPED 3202 course (if they have not already taken it)
- Slide 15: There is an online website that has a great activity for UDL.
    - Depending on how much time we have we will walk through all 4 scenarios on the website and briefly discuss how to individualize instruction for each child

- If we are restricted on time, I will simply show them how to use the website and provide them with the link so they may explore at their own leisure
  - Slide 16: Fake it until you become it
    - This inspiring 17 minute Ted Talk is about the importance of believing in yourself to accomplish any task (such as teaching students)
    - This is important to the topic at hand because many times teachers are faced with difficult situations but must remain confident and competent. This video, in essence, discusses how to build self-efficacy
  - Slide 17: What comes next after learning all this new information?
    - I will provide the students with a brief checklist for their future (or current) lesson planning
    - This checklist will include important information on UDL and how to ensure they are implementing it properly
    - This checklist is meant to help new teachers train their brain to think universally
  - Slide 18: Reflection
    - The few questions I have posted will be answered individually on a sheet of paper and are meant for my own personal use
    - The responses to these reflection questions will help shape future lectures for other Blocks
  - Slide 19: References
- Once the students have turned in their brief reflections I will pass out the questionnaires again for pre/post comparison.
- Debrief the students and take the manila folders back to my office to be placed under lock and key.

PREPARING FOR THE INCLUSIVE CLASSROOM

Carla Garrison, B.S.
Graduate Student
Oklahoma State University
Human Development and Family Science – Early Childhood Education

Why are you here?

"The rights of children are not negotiable. Children have the right to be there, the right to learn, the right to be taught, the right to participate and the right to contribute." – Don Little (1989)

Post-It Activity

- Write down what worries/scares you the most about teaching children with disabilities.

Narratives

- Banking on Inclusion – Autism
- 2 Brief narratives on ADHD
- Deaf-Blind Narrative
- A Mother's Perspective on Down Syndrome
- Siblings with Cerebral Palsy

The invisible children

- Have you noticed children with disabilities in your practicums?
- How has your teacher handled children with disabilities?
- What would you do differently?
- If you were to give an educated guess, how many students with disabilities do you believe are educated in the general education classroom? (the majority of the day)

Basic info

- IDEIA - individuals with disabilities education improvement act
- FAPE - free and appropriate public education
  - These mandate that IDD be educated in the LEAST RESTRICTIVE ENVIRONMENT which begins in the general education classroom, when appropriate.
- IEP - a multi-disciplinary team which uses cooperation, coordination, and collaboration to provide the child with effective care.
  - Parents, gen ed, sped, a representative of local educational agency (principal), interpreter of evaluations (psychologist, rarely visits...about every 3 years or so...when necessary), other allied health professionals, and even the child when appropriate.

  - (Gartin & Murdick, 2005; Welch, 1998)

Why inclusive education is important

- 95% of children with disabilities are enrolled in general education classroom
  - 40% of those spend 80% or more of their time in gen ed classrooms
  - 2012-2013 academic year under the National Center for Educational Statistics.
- Head Start:
  - 12% of cumulative enrollment of children with disabilities as defined by IDEIA
  - "In comparison, nationally, about three percent of infants and toddlers and six percent of preschool-age children have identified disabilities. Head Start serves a greater percentage of children with disabilities than found in the overall population."
- CDL/Rise School:
  - As of the academic year 2014-2015, approximately 26% of students enrolled had known disabilities
- According to NCLB (2004), all children, including those with disabilities, must meet AYP in accordance with the state academic standards
- NCLB (2004) provides support services for students with disabilities, which make it easier for them to be included
- Because of this increased access to the general education classroom we need to be prepared

What are the outcomes?

- **Social**
  - 4 different types of friendships: 1) no relationship, 2) casual relationship, 3) academic helper, 4) friends who spent consistent time together "true friends"
  - Community & diversity
- **Academics**
  - Inclusion = 80th percentile
  - Segregated = 50th percentile
  - How does it affect students without disabilities?
- **Take home message**
  - Individualize instruction, provide cooperation between peers
- (Baker, Wang, & Walberg, 1995; Fisher, Roach, & Frey, 2002; Hunt & Goetz, 1997; Hsvock, Ritchie, & Shore, 2011; Vaughn, Elbaum, Schumm, & Hughes, 1998)

What makes inclusion successful?

- Collaboration
  - Be engaged in the IEP and have an open conversation between staff
- Classroom management
  - Establish a relationship
  - How you get respect is by giving it
- Individualized instruction
  - UDL
- Building relationships amongst peers
- Be the driving force at IEP meetings
  - Be the person fighting for that child's education
  - Communicate with parents

(Alday, Nielsen Gatti, & Hudson, 2013; Brownell & Pajares, 1999; Conderman & Johnston-Rodriguez, 2009; Downing, Ryndak, & Clark, 2000; Durst and Bruder, 2014; Cehiko & Coon Herdia, 2013; Jordon, Schwartz & McGhie-Richmond, 2009)

Including Samuel Preview

- https://youtu.be/Xfg1pswiQoM

How do we include Samuel?

- We must construct a lesson that involves every child in the classroom
- How do we do this?
- Universal Design for Learning (UDL)

Comparing tradition to UDL

Traditional Instruction	Universal Design for Learning (UDL)
• Teachers typically deliver content one way.	• Teachers deliver content in multiple ways.
• Students are passive learners who acquire information through memorizing, practicing, and taking tests.	• Students are active learners who engage and analyze the content to gain understanding.
• The learning environment encourages students to sit quietly and work on an identical task.	• The learning environment encourages students to explore the content based on personal interests, preferences, or abilities.
• Students' skills and knowledge of content are assessed using one method.	• Students are allowed to demonstrate their skills and knowledge of content using one of several methods.

Principles of UDL

• Principle 1: **Representation**
  • Presenting information and course content in multiple formats so that all students can access it
• Principle 2: **Action and Expression**
  • Allowing students alternatives to express or demonstrate their learning
• Principle 3: **Engagement**
  • Stimulating students' interests and motivation for learning in a variety of ways

http://iris.peabody.vanderbilt.edu/module/udl/

Online activity

- http://marylandlearninglinks.org/3816

What if I can't reach every child?

- Teaching isn't easy
- Fake it 'til you become it
- http://www.ted.com/talks/amy_cuddy_your_body_language_shapes_who_you_are

What's next?

- Lesson plan checklist
- This can be used as a tool to help you consider every student in your classroom
- Train your brain to think universally

Reflection Questions

- Do you still have the same worries you began this class with?
- What can be done to change your worry into confidence?
- What is one thing you wished you could have seen/learned today?
- Out of everything we discussed today, what spoke to you the most?

References

Universal Design for Learning (UDL) LP Guide

Fall 2015

- Are you flexible in the following areas? Is there a developmentally appropriate reason why you CANNOT be flexible?
  - Presentation – options for how they receive the content
    - Visual presentation
    - Enlarged print
    - Audio text support
    - Multimedia presentation (SmartBoard, Powerpoint, etc)
    - Manipulatives
  - Engagement – choices which will engage student interest
    - Audio/visual/hands on
    - Multimedia projects/exploration
    - Project-based inquiry
    - Cooperative learning projects (i.e. group work)
  - Expression of Assessment – choices for how they demonstrate their learning
    - Graphic tools
    - Keyboarding with spelling supports (if appropriate)
    - Drawings
    - Collages
    - Writing
    - Verbal
    - Observational assessment
- Is there a way to utilize technology in a meaningful way to children that are difficult to reach?
- What different types of materials could you utilize to reach the 8 different intelligences?
  - E.g. Counting to 100 – if you do any of these in small groups would also be helping those who are interpersonal, and possible intrapersonal.
    - Songs (linguistic, musical)
    - Rhymes (audio, maybe musical)
    - Counters (kinesethic, logical, naturalistic)
    - Charts (visual/spatial)
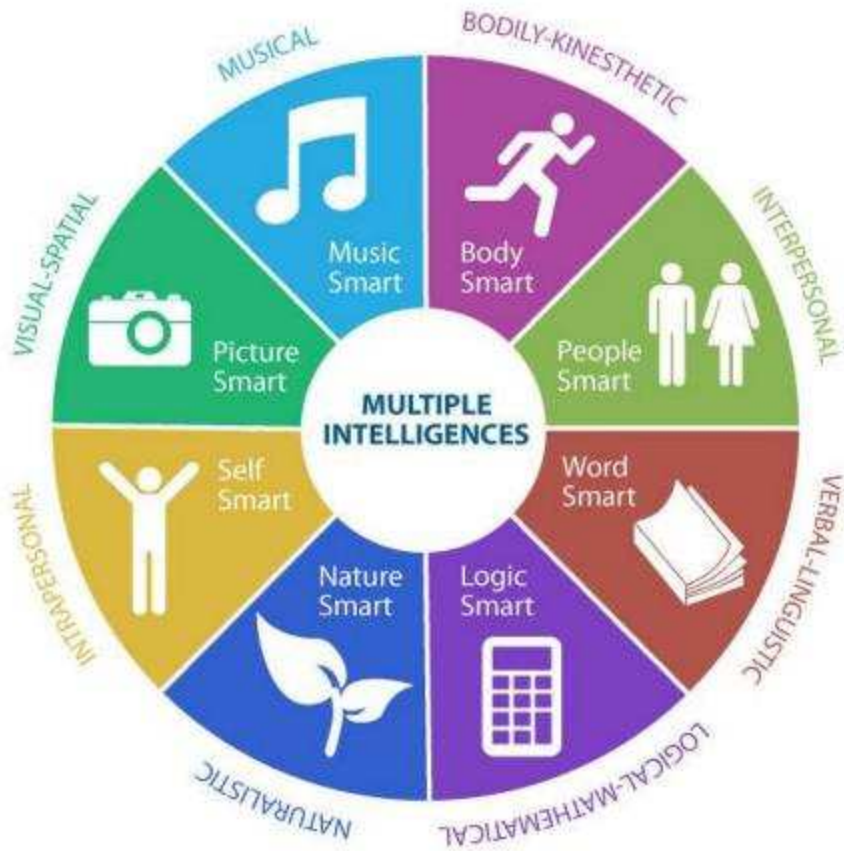
Universal Design for Learning Solutions

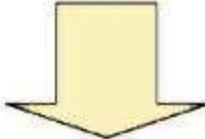| Areas of flexibility	Multiple Intelligences: Kinesthetic, linguistic, logical, interpersonal, intrapersonal, musical, visual/spatial, and naturalistic.	UDL Solutions How can you modify your lesson to reach each child?
Presentation	How do you plan to present?	
Engagement	How do you plan to engage?	
Expression of Assessment	How do you plan to assess?	
Technology	Will you use technology?	

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Page 2: UDL Principles

Many teachers use a traditional instructional approach that often addresses the learning needs of some, but not all, of their students. Because one of its primary objectives is to challenge and engage *all* students, UDL stipulates that teachers present information in a variety of ways, allow students options for learning and demonstrating their knowledge, and incorporate practices that maximize student engagement. In this way, UDL enables students with a range of abilities to access the content and skills taught in the general education classroom.

The researchers at CAST have developed three guiding principles for teachers to consider when designing lesson plans. The table below summarizes these principles and makes suggestions for how teachers can address each of them.

Representation Principle 1	Action and Expression Principle 2	Engagement Principle 3
Presenting information and course content in multiple formats so that all students can access it	Allowing students alternatives to express or demonstrate their learning	Stimulating students' interests and motivation for learning in a variety of ways
Examples	Examples	Examples
• Provide alternatives for accessing information (e.g., visual, auditory) • Provide or activate background knowledge in multiple ways (e.g., pre-teaching concepts, using advanced organizers)	• Provide options for responding (e.g., keyboard instead of pen to complete a writing assignment) • Provide options for completing assignments using different media (e.g., text, speech, film, music)	• Provide options that increase the relevance and authenticity of instructional activities (e.g., using money to teach math, culturally significant activities) • Provide options that encourage collaboration and communication (e.g., peer tutoring)

By using these three principles when they design their lesson plans, teachers can reduce or eliminate barriers that may interfere with students' learning or with their ability to demonstrate their learning.

David Rose
CAST founder; Chief Scientist,
Cognition & Learning

Most often, but not always, UDL utilizes technology as a primary method of offering flexible ways for students to access instruction and demonstrate their learning. Listen as David Rose discusses the role of technology in UDL (time: 0:49).

00:00
00:00
00:00

View Transcript

For Your Information

- It may not be reasonable or possible for teachers to incorporate all three of the UDL principles into every lesson plan. Rather, they are intended to guide instruction over time.
- Even when teachers apply the three principles, some students may need additional support. Consequently, teachers will sometimes have to make accommodations (e.g., allow the use of a spell checker) to meet an individual student's needs.

VITA

Carla Garrison

Candidate for the Degree of

Master of Science

Thesis: PREPARING PRESERVICE EDUCATORS FOR THE INCLUSIVE CLASSROOM

Major Field: Human Development and Family Science

Biographical:

Education:

Completed the requirements for the Master of Science in Human Development and Family Science at Oklahoma State University, Stillwater, Oklahoma in December 2015.

Completed the requirements for the Bachelor of Science in Human Development and Family Science at Oklahoma State University, Stillwater, Oklahoma in December 2013.

Experience:

Reading Tutor – Fifth Grade – Perkins Intermediate School - Perkins, Oklahoma – January-May 2014

Substitute Teacher – Pre-kindergarten-5th grade – Perkins Public Schools - Perkins, Oklahoma – November 2013-May 2014

Student Teacher – 1st Grade – Perkins Elementary School - Perkins, Oklahoma – August-December 2013

Credentials:

Early Child Education (Pre-K – 3rd) Valid until June 30, 2019

Elementary Launch Lead Teacher – Project Lead the Way June 24, 2015