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## NATIONAL TEACHER EDUCATION JOURNAL

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# National Teacher Education Journal

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# Faculty Perceptions Regarding the Inclusion of Military-Connected Children into Educator Preparation Curriculum

#### Brianna Conway Connie Schaffer

**Abstract:** The current study researched university faculty members' knowledge and perceptions regarding military-connected children in the public-school setting. Faculty members from seven departments at a local university participated in the study. Faculty members completed a short survey regarding general knowledge of military-connected children and their families, as well as their inclusion of information about this population of students into their curriculum. Results suggest faculty members at the university received little to no educational training regarding military-connected children in their pre-service education. Furthermore, many faculty members at the university did not include information on military-connected families in their coursework, but were open to adapting their curriculum to be more inclusive of this population of students.

About the authors: Brianna Conway is a graduate student at the University of Nebraska at Omaha (UNO) in the School Psychology program. She is also a graduate assistant under the supervision of Dr. Connie Schaffer in the Teacher Education Department. Dr. Connie Schaffer is an associate professor at UNO. She is also the assessment coordinator and Operation Educate the Educators liaison to the university.

Keywords: education, military-connected children, military families, mental health, deployment

#### INTRODUCTION

A military-connected child is defined as anyone between the ages of birth to 21 who has one degree of separation from a service member (Military Child Education Coalition, 2016). This can be through a biological, adoptive, or foster care relationship. There are over two million military-connected children in the U.S. who have a caregiver (a parent or someone serving in a parental role) who are Active Duty, Guard, or Reserve (MCEC, 2011). Of these two million children, 92% receive their education in the public school setting rather than a school located on a military installation (U.S. Department of Defense, 2011). This means nearly every school district in the U.S. has a population of military-connected students (MCEC, 2016).

#### LITERATURE REVIEW

According to the U.S. Department of Defense, over two million U.S. children have experienced periods in which one or both caregivers were deployed for a significant amount of time. (U.S. Department of Defense, 2011). Furthermore, military-connected children experience a rate of mobility three times higher than that of children from civilian families (MCEC, 2016). These stressors along with others that often coincide with belonging to a military family can impact children in the school setting.

Research has shown that children who are from active duty families, along with National Guard and Reserve families are being impacted by frequent moves, lengthy deployments, multiple deployments, and more frequent deployments. The impact of these separations can have a negative effect on children's behavioral and mental health, as well as their academic achievement (Geddes, 2011; Gorman, Eide, & Hisle-Gorman, 2010; Flake et al., 2009).

Studies have shown that children who have a caregiver deployed may be more likely to engage in problematic behavior because of stressors due to changes in routine, separation from the caregiver, and the level of parental stress of the remaining caregiver. These behaviors may include both internalizing and externalizing behaviors, such as anxiety, depression, aggression, and conduct problems (Geddes, 2011; Gorman, Eide, & Hisle-Gorman, 2010). These behaviors may be exacerbated when a family has the added stress of having a caregiver deployed to a combat zone (Flake et al., 2009).

Because children's mental and behavioral health is a prerequisite for academic learning, military-connected children who may be experiencing mobility or deployment may also experience academic difficulty (Richardson, 2011). Richardson et al. (2011) found that children who had a deployed caregiver had lower test scores on average and that this was more exaggerated for children experiencing longer deployments and a greater number of deployments (Richardson, 2011). Frequent moves and transitions can also lead to disruptions in education and curriculum content which may also be a cause for academic difficulties and lower test scores (MCEC, 2016).

The military lifestyle can also be stressful for the partner of the service member, regardless of their civilian status. When considering deployment and mobility, the child of the service member is not the only family member who experiences different emotions in response to these changes in routine. Research has shown that the stress level of the at-home caregiver impacts children and is a significant predictor of children's ability to adjust to deployments and transitions (Author, 2016; Flake et al., 2009).

Although the military lifestyle can be stressful for many families, children who belong to military families often have many adaptive behaviors as well. Mobility, routine change, and deployment can offer the opportunity to experience diversity, take on new roles within the family, and increase social skills and maturity within the family and community (Astor, Jacobson, Benbenishty, 2012; Paden & Pezor, 1993). Even though military families and children are often very resilient to difficulties because of their sense of pride and community they feel from belonging to the military, research shows this resiliency can be broken down due to the number of stressors they face. This is particularly true when there is no support system or other services available to the family or the child (Author, 2016).

Despite the importance of support systems, military

families may find it increasingly difficult to access or build these systems. In recent years, the number of individuals with no direct connection to a member of the military has risen. Decades of an all-volunteer military has narrowed military representation to fewer families. This is very different than in the past when nearly everyone had an immediate connection to a service member (Zucchino & Cloud, 2015). This gap may make it difficult for individuals, including teachers, to understand or empathize with military-connected students and their families.

Because of the amount of military-connected children being served in public schools, the amount of time in general children spend at school, and the potential impact stressors related to mobility, routine change, and caregiver separation can have on children, it is imperative that educators and other school professionals are aware of military-connected children in their schools and classrooms. Furthermore, it is important that preservice educators and other school professionals receive the appropriate education regarding military-connected children and their needs so this population of students is appropriately served and supported in the school setting.

The research studying educators' awareness and knowledge regarding military-connected children in the school setting has been limited. However, research determining university faculty members' knowledge and perceptions regarding this population of students is non-existent. In order for pre-service educators to receive educational training on this population of students and their families, faculty members within educator preparation programs must also be educated in this area. An increase in knowledge and awareness of military-connected children at the university level could potentially have a major impact on future educators' abilities to meet the needs of this population of students.

#### **Research Questions**

Currently, limited research exists on educators' preparation in regard to meeting the needs of military families. Furthermore, research geared toward answering what educator preparation programs are doing to prepare future educators is non-existent. This study attempted to answer the following questions:

- 1. How much do university faculty members know regarding military-connected children and their families?
- 2. How much do university faculty members

- include the topic of military families in their coursework with their students?
- 3. Are university faculty members interested in including military-connected students and families into their curriculum?

#### **METHODOLOGY**

#### Participants & Setting

Data collection for this study began in December of 2016 upon approval from the Institutional Review Board and ended in February of 2017. Participants were recruited from a university in the Midwest located near a military installation. Specifically, faculty members from seven different departments related to education were given information about the study. The sample of participants was a convenience sample based on faculty members who consented to participate in the study, and all participation was voluntary. Demographic information on each participant's involvement with the U.S. military and the department/college in which they were employed at the time of the study were collected. Researchers determined no other demographic information was necessary in order to answer the research questions. See Table 1

TABLE 1: Demographics of Participants

Dependent	Percentage
Yes	9%
No	91%
Current/Past Member of U.S. Military	
Yes	3%
No	97%
Department/College	
Counseling	6%
Educational Leadership	9%
Health & Kinesiology	11%
School Psychology	9%
Social Work	11%
Special Education & Communication Disorders	6%
Teacher Education	48%

#### Measures

Participants answered a 14 question survey created by the researchers. The survey contained multiple choice items asking participants to indicate their level of agreement and level of knowledge regarding statements related to military-connected children. The survey also included items asking participants about the amount of information regarding military-connected students currently included in their coursework.

#### **Data Analysis**

Thirty-five participants returned the surveys. Researchers calculated the percentages of the response options for each question to describe the level of knowledge of the respondents, as well as their current level of inclusion of military families in their curriculum. Researchers analyzed the results and examined the willingness of participants to adjust their curriculum to include military-connected children in future coursework.

#### Results

When asked how much time was spent discussing military-connected children in their own education and preparation, 51% of faculty members indicated very little time was spent focusing on this population, while 43% indicated no time was spent. Furthermore, only 9% of faculty indicated they knew a substantial amount of information regarding how the military culture/lifestyle might impact military-connected children's mental health and education. Finally, only 9% of participants were aware of specific resources related to supporting military-connected children and their families at the time the survey was given.

Faculty members were also surveyed regarding their knowledge of The Every Student Succeeds Act (ESSA) and the military student identifier requirement included in the 2015 legislation (MCEC, 2016). Only 20% of faculty indicated they were aware of the new federal legislation. Furthermore, only 14% of participants stated they currently include information regarding military-connected children into their semester coursework, while only 23% were aware of other faculty members who include information on this population of students into their coursework.

Finally, the survey contained items regarding participants' interest in adapting their curriculum to include information on military-connected children and their families. Most participants (80%) indicated they

were interested in making changes to their coursework to include this population of students in their educator preparation programs. Furthermore, 83% of faculty members understood the importance of including this population of students in educator preparation programs.

#### Discussion

The results of this study indicate, in general, educators and school professionals need more specific training regarding military-connected children and their families in their preparation programs. Faculty members at this particular university may not be prepared to provide this type of educational training without first engaging in professional development focused on military families. The majority of faculty members in the study indicated they received little-to-no training on military-connected children in their educational preparation, which limits their ability to provide training on this population of students in their current curriculum.

Although the results showed a lack of general knowledge regarding this population of students, faculty members at this university indicated they need and want to include more content regarding military-connected children and their families into their coursework so educators will be better prepared to relate to and understand the military lifestyle. This mindset is especially important for universities near military military installations where educators may be more likely to work in districts with high populations of military-connected students and families.

#### **Conclusion & Implications**

Many people describe military-connected children as resilient and even as heroes in their own right. As part of belonging to a military family, these children are able to travel the world, observe and experience diversity, and take on new roles within their families that build this resiliency. However, these children have unique stressors that impact them in and outside of school. Previous research has shown that military-connected children may experience more problem behavior and academic difficulties as compared to their civilian peers. Furthermore, certain variables such as the number of moves experienced, length of deployment, number of deployments, and stress-level in the home may exaggerate these difficulties. Educators can play a vital role in providing support to mitigate these stressors.

The fact that many civilians today no longer have an immediate connection to a U.S. service member may make it more difficult for educators to relate

to children from military families. Educators need to be prepared to identify students who are displaying mental health or educational concerns, and to adequately meet the needs of these students. It is necessary for educators to be aware of students in their buildings who belong to military families and to actively seek information to improve their knowledge of this population of students. Therefore, educator preparation programs should be providing focused training on the military lifestyle, benefits and difficulties that accompany the lifestyle, as well as ways in which military-connected children and their families can be supported in the school-setting. More research is needed to determine the level of preparation pre-service educators are receiving in working with military-connected children and how awareness and education in this area can be improved. Furthermore, research should continue to investigate educators' perceptions of their skill-set related to working with this population of students to inform changes in educator preparation programs. Building awareness within university faculty may be one way of improving the level of training regarding military families in educator preparation programs.

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#### REFERENCES

- Astor, R., Jacobson, L., & Benbenishty, R. (2012). The teacher's guide for supporting students from military families. New York, NY: Teachers College Press & Harker Heights, TX: Military Child Education Coalition.
- Flake, E., Davis, B. E., Johnson, P., & Middleton, L. (2009). The psychosocial effects of deployment on military children. Journal of Developmental & Behavioral Pediatrics, 30, 271-298.
- Geddes, J. (2011). Risk and resilience faced by children of deployed service members. (Unpublished doctoral dissertation). University of North Texas: Denton, TX.
- Gorman, G., Eide, M., & Hisle-Gorman, E. (2010). Wartime military deployment and increased pediatric mental and behavioral health complaints. Pediatrics, 125(6), 1058-1066.
- Military Child Education Coalition. (2011, March). Student identifier: A call for a student identifier. Retrieved from: http://www.militarychild.org/student-identifier

- Military Child Education Coalition. (2016, March). The vital addition of the military student identifier in the Every Student Succeeds Act (ESSA). On the Move, 10(1), 36.
- Paden, L. & Pezor, L. (1993). Uniforms and youth: The military child and his or her family. In F.W. Kaslow, The military family in peace and war (pp. 3-24). New York: Springer.
- Richardson, A., Chandra, A., Martin, L., Setodji C.M., Hallmark, B., Campbell, N., & Grady, P. (2011). Effects of soldier's deployment on children's academic performance and behavioral health. Santa Monica, CA: RAND Corporation.
- U.S. Department of Defense. (2011). Annual report to Congress on plans for the Department of Defense for the support of military family readiness. Washington, DC: Department of Defense. Retrieved from: http://www.militaryonesource.mil/12038/MOS/Reports/Report\_to\_Congress\_on\_Impact\_of\_Deployment\_on\_Military\_Children.pdf

### Appendix A

**Definition of a Military-Connected Student:** A child with one or both parents, caregiver, or family member serving in the military

1.	Are you the dependent of an active duty, National Guard, or reserve U.S. service member or a retired member?  o Yes o No						
2.	Are you currently or have you ever been a member of the U.S. military?  o Yes o No						
3.	In the course of your education and preparation to become a faculty member, how much time would you estimate has been spent on discussing and preparing you to work with and appropriately address the needs of military-connected children?  O None O Very Little O A Moderate Amount O A Substantial Amount O Almost all of my training has involved military-connected students in some way						
4.	In general, how much do you know regarding military-connected students, their families, and how their culture/lifestyle may impact their mental health and education?  o None o Very Little o A Moderate Amount o A Substantial Amount o I am well educated in this area						
5.	On a scale of 1-5, I feel as though have adequate knowledge in order to prepare pre-service teachers and other future school and mental health professionals in meeting the needs of military-connected children?  Strongly Disagree  Somewhat  Strongly Agree  1  2  3  4  5						
6.	On a scale of 1-5, I feel as though I am aware of specific resources related to military-connected students.  Strongly Disagree  Somewhat  Strongly Agree  1  2  3  4  5						
7.	I am a faculty member in the:  o School Psychology Program o Teacher Education Department o Grace Abbot School of Social Work o Counseling Department o Educational Leadership Department o Special Education and Communication Disorders Department o School of Health & Kinesiology (Health ,Physical Education, and Recreation) o Other:						

- 8. I would like to know more about how I can prepare my undergraduate and/or graduate students to meet the educational and mental health needs of military-connected students?
  - o Strongly Disagree
  - o Disagree
  - o Neither agree nor disagree
  - o Agree
  - o Strongly Agree
- 9. I feel as though military-connected students go through the same struggles as every non-military connected students and appropriately adapt to changes on their own. Therefore, I believe there is no reason to add content regarding military-connected children to my curriculum.
  - a. Strongly Disagree
  - b. Disagree
  - c. Neither agree nor disagree
  - d. Agree
  - e. Strongly Agree
- 10. I am aware the new federal legislation, the Every Student Succeeds Act (ESSA), requires PK-12 schools to formally identify students from military families.
  - o Yes
  - o No
- 11. As a faculty member preparing PK-12 teachers, school personnel, and administrators, I understand the importance of including military-connected children into my program curriculum.
  - o Strongly Agree
  - o Agree
  - o Neither agree nor disagree
  - o Disagree
  - o Strongly Disagree
- 12. I currently include information regarding military-connected children in courses I teach.
  - o Yes
  - o No
- 13. I am aware of colleagues within my program who include information regarding military-connected children in the courses they teach.
  - o Yes
  - o No
- 14. I am open to and interested in adapting my program curriculum to include topics related to military-connected children and their families.
  - o Strongly Agree
  - o Agree
  - o Neither agree nor disagree
  - o Disagree
  - o Strongly Disagree

# How Do We Manage? Classroom Management Strategies for Novice Teachers in High-Poverty Urban Schools

#### Abby L. Blake

**Abstract:** In diverse 21st century classrooms, teachers must remain current with effective classroom management strategies. Effective classroom management may reduce attrition rates among novice teachers in high-poverty schools and support student learning. This article considers the importance of classroom management in high-poverty schools, reviews current trends in attrition among novice teachers within high-poverty schools, and offers guiding recommendations for novice teachers in building effective classroom management strategies that will support teachers as they begin their professional career. Strategies discussed include: consistent expectations, movement within instruction, authentic teacher-student relationships, student leaders, elicited feedback, and positive classroom climate. Establishing a sound classroom management repertoire equips novice teachers with the tools they need to successfully launch their career.

**About the Author:** Abby Blake is a doctoral candidate in the Indiana University of Pennsylvania curriculum and instruction program and has been a public-school educator for twelve years. She has worked in primary and secondary grade levels within urban school settings.

**Keywords:** classroom management, novice teachers, poverty, urban education, attrition

#### INTRODUCTION

New teachers experience a multitude of struggles within their first professional years of teaching; however, one of the most prevalent and all-encompassing areas is classroom management (Edwards, 2013; Meister & Melnick, 2003; Strawn, Fox, & Duck, 2008). Classroom management is often an underdeveloped skill for new teachers, and therefore, can determine not only the level of success they experience in the beginning of their careers, but also whether students are able to learn.

Unfortunately, some new teachers who enter high-poverty urban schools often find establishing classroom management so demanding that they leave the teaching profession altogether (Ingersoll, 2012). Developing a solid repertoire of classroom management strategies for teachers in high-poverty schools can support a classroom where effective teaching and learning take place. In considering the ever-changing and diverse 21st century classrooms, novice teachers will benefit from evaluating their management plans to address unique student needs.

The purpose of this article is to consider the significance of effective classroom management strategies, review current trends in attrition among novice teachers within high-poverty urban schools, and offer guiding recommendations for novice teachers in building effective classroom management strategies that will increase the level of success they experience entering their career and ultimately reduce the likelihood of attrition.

# SIGNIFICANCE OF CLASSROOM MANAGEMENT

Novice teachers have many new demands particularly upon entering a high-poverty urban school, including "overcrowding, large class sizes, deteriorating conditions, and large numbers of students with unmet learning and mental health needs" (Shernoff et al., 2011). To combat these significant obstacles, teachers need solid, effective classroom management techniques. Classroom management is defined as a "thoughtful and

purposeful process consisting of actions teachers take to create an environment conducive to learning" (Garret, 2013, p. 47). Research indicated classroom management plays a significant role in both effective teaching and student achievement (Marzano, Marzano, & Pickering, 2003). Unfortunately, novice teachers may tend to concentrate more on disruptive behaviors, rely on punitive discipline strategies, and struggle to monitor simultaneous classroom challenges (Sabers, Cushing, & Berliner, 1991; Yoon, 2002). Building effective classroom management skills and authentic relationships with students is fundamental for urban educators, where "prevalence rates for disruptive behaviors are almost three times national estimates" (Tolan & Henry, 1996). One study demonstrated that when teachers in low-income schools focused on building effective classroom management and establishing relationships, the students' GPA scores increased significantly in just over the course of five months (Murray & Malmgren, 2005).

When students experience the success possible within a well-managed classroom, they are more likely to comply with established expectations and demonstrate work ethics that contribute to an effective learning environment. Therefore, teachers can support students in making connections between positive behaviors and academic success which may lead to fewer behavior problems during instruction. Setting a positive tone within the learning environment early in the school year is largely dependent on the teachers' acknowledgement of connections between classroom management and student learning.

#### PROBLEMS AND SOLUTIONS

Novice teachers can have difficulty adjusting to new teaching demands that challenge their practical skills, perseverance, and dedication to the field. New teachers secure positions in low-income schools at nearly double the rate as those at more affluent schools (Almy & Theokas, 2010). When new teachers are hired in lowincome schools, they are twice as likely to leave their position within five years as those in higher-income schools (National Center for Education Statistics, 2015). In fact, teacher attrition has grown by 50 percent over the past 15 years predominately in low-income, urban schools (National Commission on Teaching and America's Future, 2013). Novice teachers consider classroom management as one of the major problems encountered when entering the teaching profession. Often, they report feeling unprepared (Meister & Melick, 2003). Challenges with classroom management or lack

of experiences within teacher education programs may often lead teachers to search for alternative career paths (Ingersoll, 2012; Ukpokodu, 2007). Novice teachers may benefit from additional administrative support and opportunities to grapple with methods that work best for not only their personalities but also the academic, social, and cultural diversity in classrooms today. Many successful management experiences stem from teachers' innate willingness to adapt their teaching styles to connect with students. Although various management strategies have been widely accepted in education as a means to promote student success, perhaps specific classroom management strategies are more beneficial when working with students of low socioeconomic status. Some of the most influential strategies in creating a classroom that operates efficiently are illustrated in Figure 1.

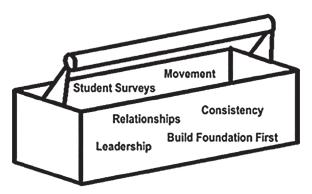


Figure 1: The Novice Teacher Strategy "Tool Box"

#### 1. Consistency is Key

Building consistency and routines within daily classroom management can be highly beneficial for all students. However, many students living in poverty experience turmoil and have lives that are anything but routine (Berliner, 2009). Their time in school may be the most secure and anticipated part of their day. Building consistency in all areas of the classroom is imperative, from scheduling, using and acquiring materials, getting the teachers' attention, and knowing when and how to request a bathroom break or obtain a pencil. There truly is no detail too small in a classroom to manage. Ultimately, management of minimal details will allow more instructional time and build student interdependence, all of which help support an environment conducive to learning.

While consistency will support students in making effective classroom decisions, it can also improve teachers' relationships with students. Following an anticipated classroom management plan for all students

demonstrates equality, and students understand their pivotal roles in contributing to the learning environment. Teachers can also gain significant respect by maintaining stability in their classroom management expectations. If teachers follow through with pre-established actions, it sends a central message of leadership and trust. Having consistency with classroom management expectations also prevents students from "testing the waters." When teachers display varying management procedures, students may be more likely to view expectations as though they can be altered.

#### 2. Move It!

Teachers across America are aware of the many benefits of embedding movement and physical activity into their instructional day. However, exercise can have an even larger impact on students from a low socioeconomic status (Basch, 2011). Unfortunately, many schools have eliminated recess and physical education in an effort to increase academic learning time and meet the needs of students within the achievement gap (Brusseau & Hannon, 2015). Inadvertently, placing restrictions on students' physical movement throughout their learning day contributes to a cycle of inactivity for a population at risk for becoming overweight (Burton & VanHeest, 2007).

Additionally, students who are inactive and confined to set spaces for extended time are more likely to display off-task behaviors that disrupt teaching and learning in the classroom. Brain Breaks or Energizer activities, as seen in Figure 2, can support focus, engagement, and behavior management when embedded into instructional time (Mahar, Murphy, & Rowe, 2006). Increasing physical activity provides tremendous benefits for students, even if it requires reducing instructional time. Emphasizing physical activity and designating regular and intentional time for Brain Breaks will build a positive classroom climate and encourage teamwork, both of which support the framework for effective classroom management (Burton & VanHeest, 2007).

Online resources that support many teachers in getting their students moving are found in Figure 2.

#### 3. Build Authentic Teacher-Student Relationships

Teachers have the potential to play a monumental role in the path students take throughout their educational experience. Learning environments that promote feelings of belonging, safety, and success can impact students' social, behavioral, and academic decisions. Establishing these positive feelings and decisionmaking skills is imperative for students' educational and ultimately employment experiences. Getting to know each student on an individual basis will demonstrate a teacher's sincerity and provide an opportunity to empathize with a student's perspective. Teachers can learn a surprising amount of information about students' lives outside of school that can support their engagement and management techniques. Holding daily or weekly class meetings and establishing time to speak with students about their lives outside of school can help teachers build supportive relationships. When teachers convey genuine interest in students' lives, the authenticity behind their classroom support is communicated.

Hamre and Pianta (2001) indicated students who have positive relationships with their teachers are more likely to develop greater academic and socio-emotional skills, all of which play vital aspects in their classroom behavior. Building positive relationships with students can transform classrooms into exciting places where students are eager to enter. Murray and Malmgren (2005) concluded students in low-income schools benefit from positive relationships with teachers even more than students in high-income schools due to the elevated risks associated with poverty.

Berliner (2009) shared significant consequences of students growing up in poverty and established that many issues in high poverty schools evolve from outside-of-school factors (OSFs). Teachers cannot control

Figure 2: Resources to Get Students Moving

https://brain-breaks.com/ www.gonoodle.com

https://chrome.google.com/webstore/detail/move-it/kopilngnmfklhhjocdfdlokmodibcbmk

http://www.energizingbrainbreaks.com/http://hopsports.com/

http://brainbreaks.blogspot.com/ http://www.movetolearnms.org/

http://witf.pbslearningmedia.org/collection/move-it/

the limited healthcare access attributing to low birth weights and behavior difficulties, the food insecurities impairing cognitive functioning, or the 3-10 million children witnessing family violence each year that leads to post-traumatic stress disorder, oppositional defiance, and conduct disorder (Berliner, 2009). The negative impacts of childhood poverty emphasize the need for teachers to foster relationships with each student and create a positive academic environment. Not only will teachers better understand students' lives outside of school, but they will be more capable of supporting students in a way that subsides the negative stresses students may carry into the classroom environment.

#### 4. Find the Leaders

Students can have a significant influence on one another that sometimes teachers struggle to replicate. As students connect with one another and develop relationships both in and outside the classroom, they can often influence one another's behavior. Teachers who have a deep understanding of their students' impact on one another can potentially support hard-to-reach students. For example, a teacher can re-direct an offtask student by inconspicuously asking a trusted peer to remind the student of in-class expectations. The trusted peer will gain leadership skills and self-esteem from helping the classroom community, and the re-directed student may be appreciative of the personalized support. When teachers are cognizant of the relationships forming within their classroom, they can employ students who demonstrate innate leadership qualities to help support peers that typically refrain from teacher support. Resources available to support both teachers and students in developing leadership qualities within the classroom can be found in Figure 3.

#### 5. Elicit Student Feedback

Often students desire reassurance from the teacher when working on classroom tasks. Although the teachers are the professionals in the room, to make the most of classroom management strategies, teachers must know how students feel about the way they manage the class. For example, teachers can gauge students' perspectives and feelings through brief anonymous surveys. Students can share whether they feel valued, supported, and safe, which can provide a tremendous amount of information teachers can use to alter their instructional and management techniques.

Research indicated there is a significant connection between positive student-teacher relationships and higher academic achievement (Murray & Malmgren, 2005). Montalvo, Mansfield, and Miller (2007) suggested that students will work harder and longer if they have a positive relationship with their teacher and feel like an important part of the class. Consequently, students' view of their teacher largely impacts their behaviors and learning abilities, all of which drive classroom management. If teachers truly want a well-managed classroom that is conducive to rigorous learning, they must acknowledge that students' beliefs and feelings absolutely matter. Surveys can also help teachers gauge the "temperature" within their classroom and provide a confidential self-evaluation of student-perceived management and instructional effectiveness. Utilizing surveys to support teacher self-reflection will facilitate revisions in teaching methods that correlate to the needs expressed directly from the students in their room.

Figure 3: Leadership Books for Teachers and Students

- · Most Likely to Succeed: Preparing Our Kids for the Innovation Era by Tony Wagner and Ted Dintersmith
- Monday Morning Leadership: 8 Mentoring Sessions You Can't Afford to Miss by David Cottrell and Alice Adams
- Body Language, Intuition & Leadership!: Surviving Primary School by Dr. Orly Katz
- Leadership Skills: Guide to Developing Leadership Skills or 7 Habits of the Leader in Me by Allan Green
- Coaching Your Kids to Be Leaders: The Keys to Unlocking Their Potential by Pat Williams and John Wooden
- The Leader in Me: How Schools and Parents Around the World Are Inspiring Greatness, One Child at a Time by Stephen R. Covey by Stephen R. Covey
- Peanut Butter Principles: 47 Leadership Lessons Every Parent Should Teach Their Kids by Eric Franklin

#### 6. Build Your Foundation First

Many effective educators spend countless hours organizing lesson plans and classroom curriculum for the first few weeks or months of the school year. However, taking an opportunity to establish clear, concise classroom management procedures while also practicing to work and communicate with one another can have a significant impact on the level of positivity in the classroom. Unal and Unal (2012) revealed that experienced teachers found establishing effective classroom management to be one of the most important goals during the first few weeks of school.

Postponing curricular implementation may raise concern to many teachers, especially when considering the high-stakes testing requirements in today's schools. However, many students returning to school in September exhibit a "summer slide" in their abilities to perform academically and transition to school behavior. Diving into rigorous curriculum without considering the consequences of time away from academics and school routines may initiate rebellious behavior. Therefore, allowing time in the beginning of the school year to define and practice classroom management expectations with students is crucial to set the foundation for a successful school year. Strategies adopted by novice teachers early in their careers have the potential to shape the students' learning environment and future experiences as 21st century educators.

#### **HOW DO WE MANAGE?**

While teacher attrition has impacted high-poverty education today, there are many established classroom management strategies that support novice teachers in addressing the diverse groups of students in classrooms. With the challenging management

demands new teachers in high-poverty urban education face, developing a "tool box" is essential for quality classroom management implementation. Maintaining consistency and providing opportunities for students to participate in physical activities will increase engagement, morale, and focus. Building authentic teacher-student relationships and uncovering natural leaders in the classroom can significantly impact the ability to support hard-to-reach students. Additionally, depth of curriculum implementation is maximized when students are assured that their thoughts and feelings are meaningful to their teacher. As teachers understand how students feel about their classroom environment and management approaches, valuable connections are established and learning opportunities are at their highest.

Fortunately, novice teachers have even more opportunities to expand their classroom management repertoire, as these strategies are only one aspect of constructing a solid foundation and long-lasting career. When novice teachers develop an natural desire to enhance their craft as educators, they will continue to search for ways to improve their learning environment. Novice teachers can strengthen their classroom management abilities by understanding the student population, reflecting on successes and weaknesses, researching innovative management approaches, and challenging themselves to try new methods and persist to see the full potential.

Novice teachers within high poverty schools have the potential to be extremely successful when they anticipate challenges they will encounter and have the confidence and skill set to address those challenges. Helping students internalize the learning opportunities within a well-managed classroom encourages ownership and sets both the students and teachers up for a successful launch into the school year.

#### **REFERENCES**

- Almy, S., & Theokas, C. (2010). Not prepared for class: High-poverty schools continue to have fewer in-field teachers. The Education Trust, 11(1), 1-6.
- Basch, C. E. (2011). Physical activity and the achievement gap among urban minority youth. Journal of School Health, 81(10), 626.
- Berliner, D. C. (2009). Are teachers responsible for low achievement by poor students? Education Digest, 75(7), 4-8.
- Brusseau, T. A., & Hannon, J. C. (2015). Impacting children's health and academic performance through comprehensive school physical activity programming. International Electronic Journal of Elementary Education, 7(3), 441-450.
- Burton, L. J., & VanHeest, J. L. (2007). The importance of physical activity in closing the achievement gap. Quest, 59(2), 212-218.
- Edwards, S. S. (2013). Preparing new teachers for contemporary middle grades schools. Middle School Journal, 44(4), 14-20.
- Garrett, T. (2013). Classroom management: It's more than a bag of tricks. Education Digest, 78(9), 45-49.
- Hamre, B. K., & Pianta, R. C. (2001). Early teacher-child relationships and the trajectory of the children's school outcomes though eight grade. Child Development, 72(2), 625-638.
- Ingersoll, R. (2012). Beginning teacher induction: What the data tell us. Phi Delta Kappan, 93(8), 47-51.
- Mahar, M. T., Murphy, S. K., & Rowe, D. A. (2006). Effects of a classroom-based program on physical activity and on-task behavior. Medicine & Science in Sport & Exercise, 38(12), 2086-2094.
- Marzano, R. J., Marzano, J. S., Pickering, D. J. (2003).

  Classroom management that works: Research based strategies for every teacher. Alexandria, VA: Association for Supervision and Curriculum Development.

- Meister, D. G., Melnick, S. A. (2003). National new teacher study: Beginning teachers' concerns. Actions in Teacher Education, 24(4), 87-94.
- Montalvo, G. P., Mansfield, E. A., & Miller, R. B. (2007). Liking or disliking the teacher: Student motivation, engagement and achievement. Evaluation and Research in Education, 20(3), 144-158. Retrieved from http://dx.doi.org/10.2167/eri406.0
- Murray, C., & Malmgren, K. (2005). Implementing a teacher-student relationship program in a high-poverty urban school: Effects on social, emotional, and academic adjustment and lesson learned. Journal of School Psychology, 43(2), 137-152.
- National Center for Education Statistics. (2015). Public school teacher attrition and mobility in the first five years: Results from the first through fifth waves of the 2007-2008 beginning teacher longitudinal study. Retrieved from http://nces.ed.gov/surveys/btls/
- National Commission on Teaching and America's Future. (2013). The high cost of teacher turnover. Retrieved from http://nctaf.org/wp-content/uploads/2012/01/NCTAF-Cost-of-Teacher-Turnover-2007-policy-brief.pdf
- Sabers, D. S., Cushing, K. S., & Berliner, D. C. (1991). Differences among teachers in a task characterized by simultaneity, multidimensionality, and immediacy. American Educational Research Journal, 28, 63-88.
- Shernoff, E. S., Maríñez-Lora, A. M., Frazier, S. L., Jakobsons, L. J., Atkins, M. S., & Bonner, D. (2011). Teachers supporting teachers in urban schools: What iterative research designs can teach us. School Psychology Review, 40(4), 465-485.
- Strawn, C. A., Fox, R. K., & Duck, L. (2008). Preventing teacher failure: Six keys to success in moving beyond the "Sink or Swim" mentality. The Clearing House: A Journal of Educational Strategies, Issues, and Ideas, 81(6), 271-277.

- Tolan, P. H., & Henry, D. (1996). Patterns of psychopathology among urban poor children: Comorbidity and aggression effects. Journal of Consulting and Clinical Psychology, 64, 1094-1099.
- Ukpokodu, O. (2007). Preparing socially conscious teachers: A social justice-oriented teacher education. Multicultural Education, 4(1), 8-15.
- Unal, Z., & Unal, A. (2012). The impact of years of teacher experience on the classroom management approaches of elementary school teachers. International Journal of Instruction, 5(2), 41-60.
- Yoon, J. S. (2002). Teacher characteristics as predictors of teacher-student relationships: Stress, negative affect and self-efficacy. Social Behavior and Personality, 30, 485-493.

# A Review of Function-Based Behavior Interventions for Young Children with Autism Spectrum Disorders: Teaching Appropriate Communication with Delayed Reinforcement as a Means of Decreasing Temper Tantrums

#### **Seungyeon Lee**

Abstract: Autism spectrum disorders (ASDs) are growing in prevalence throughout the country, and this increase has raised awareness of behavioral problems associated with ASDs. One of the most frequent problem behaviors in children with ASDs is temper tantrums (i.e., prolonged anger reactions in an infant or child). Moreover, temper tantrums are considered early indicators for future violent and antisocial behaviors. For this reason, the current review summarizes and evaluates the latest behavioral intervention treatments with a focus on temper tantrums in the context of behavioral science. Current behavioral interventions have been quite effective in reducing problem behaviors in children with ASDs, especially when delayed reinforcement is taught with function-based intervention. Although much progress has been made, there are numerous hurdles that have yet to be overcome. Future studies are needed to find relevant, developmentally based strategies associated with delayed reinforcement that will help children with ASDs become socially competent. Implication for educators and parents working with young children with ASDs are also discussed.

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**Keywords:** autism spectrum disorders (ASDs), delayed reinforcement, functional communication training (FCT), temper tantrums

#### INTRODUCTION

Autism spectrum disorders (ASDs) encompass one of the most prevalent diagnostic categories within the population of developmental disabilities in the United States (Matson et al., 2011; Matson & Sturmey, 2011). As of 2014, the Centers for Disease Control and Prevention (CDC) updated the estimate of autism prevalence in the United States to 1 in 68 children. Challenging behaviors (e.g., tantrums) often manifested in those with ASDs can threaten their physical and mental health and that of their families and can also result in negative social consequences (Harding et al., 2009; Matson & Sturmey, 2011; Patterson, 2002; Reichle et al., 2010). Because of

the far reaching impacts that ASDs have on children and those around them, all mental health and educational professionals working with children with ASDs are responsible for the course of behavioral strategies and for setting the agenda based on the child's and primary caregivers' needs. In addition, they also aim to discover the cause of dysfunctional behaviors (i.e., the target behaviors), teach and reinforce the use of appropriate behavioral skills, and build connectedness to parents or caregivers. The purpose of this paper is to review empirical studies of ASDs and evaluate investigatory strategies for determining the temper tantrums behaviors of young children with ASDs. The review will address limitations of the existing literature.

# Temper Tantrums as an Early Predictor for Future Problem Behaviors

Temper tantrums are generally understood as children's demonstrations of anger or frustration by aggressive physical movement (Mireault & Trahan, 2007). Typical examples of temper tantrum behaviors provided by different research teams include being grumpy, crying, screaming, yelling, whining, throwing things, head banging, and biting nails, among others (Belden et al., 2008; Giesbrecht et al., 2010; Green et al., 2011; Horner et al., 2002; Mancil, 2006; Potegal, Kosorok, & Davidson, 2003). Temper tantrums are particularly important to consider for the following reasons: (a) the temper tantrums of children with ASDs are often serious concerns for their primary caregivers and educators (Belden et al., 2008; Dominick et al., 2007; Horner et al., 2002; Mancil et al., 2006) and (b) recent studies have indicated that long, frequent, violent, and self-destructive temper tantrums not only indicate the presence of a developmental disorder but are also connected to the occurrence of other aggression and future antisocial behavior (Giesbrecht, Miller, and Müller, 2010; Green et al., 2011; Hartley et al., 2008).

Developmental stage, temperament, and behavioral or health condition (e.g., having ASDs) are considered major contributors to the occurrence of temper tantrums (Belden et al., 2008; Giesbrecht et al., 2010; Matson & Sturmey, 2011; Potegal & Davidson, 2003). The intensity and frequency of each child's temper tantrums vary, but developing children progress through typical stages of behaviors (Belden et al., 2008; Potegal & Davidson, 2003). In infancy, children use tempertantrum behaviors as their primary communication mode for emotional expression (Giesbrecht et al., 2010; Green et al., 2011; Potegal & Davidson, 2003). Between the ages of 18 months and 36 months, children throw temper tantrums as a means of gaining independence and power (i.e., to get what they want immediately). Around the age of 3 years old, temper tantrums still serve as a means of communication, but the violence of the previous stage fades away. (Green et al., 2011). By the age of 4, temper tantrums are more rare, and they are often interpreted as social anxiety or frustration when they occur (Potegal & Davidson, 2003). Some children throw more temper tantrums than others, especially if they are temperamentally more impulsive than others (Potegal & Davidson, 2003). Research has indicated that children with ASDs are more likely to have high rates of temper tantrum behaviors than other children because of poor self-control (Belden et al., 2008; Dominick et al., 2007). Overall, several factors can contribute to a child's tendency toward temper tantrums (Giesbrecht et al., 2010).

#### **REVIEW: Functional Communication Training and Delayed Reinforcement for Children with ASDs**

The rising prevalence of problem behaviors of those with ASDs has been a controversial topic debated by mental health and related professionals (Matson et al., 2011; Matson & Sturmey, 2011; Ringdahl, Kopelman, & Falcomata, 2009). The development of effective strategies to treat ASD-related behaviors can lead to a better understanding of this increased prevalence (Granpeesheh et al., 2010; Matson et al., 2011; Ringdahl et al., 2009; Virués-Ortega, 2010; Zachor & Ben Itzchak, 2010). Behavioral interventions have been shown to be highly effective in reducing problem behaviors displayed by individuals with ASDs (Mancil, 2006; Matson & Sturmey, 2011; Matson et al., 2011; Peter-Scheffer, Didden, Korzillius, & Sturmey, 2011; Virués-Ortega, 2010). To design behavioral interventions with high treatment efficacy, clinical psychologists and related professionals gather comprehensive information on the environmental variables associated with the occurrence of the problem behavior and the conditions that maintain the behavior to determine the cause of the problem behavior (Harding et al., 2009; Tiger, Fisher, Toussaint et al., 2009).

Behavioral interventions have continuously grown in popularity over time (Matson et al., 2007; Matson et al., 2009; Matson et al., 2011), and they are currently utilized to treat common symptoms of ASDs. Since 2000, a growing body of research has situated functional communication training (FCT) as the most prominent functional behavioral intervention technique, especially for use with children and adolescents with ASDs (Braithwaite & Richdale, 2000; Casey & Merical, 2006; Danov, Hartman, McComas, & Symons, 2010; Falcomata, Roane, Feeney, & Stephenson, 2010; Harding et al., 2009; Mancil, 2006; Heath, Ganz, Parker, Burke, & Ninci, 2015; Mancil & Boman, 2010; Matson et al., 2011). FCT has been recognized as a systematic practice for decreasing inappropriate behaviors and replacing them with socially acceptable behaviors (Heath et al., 2015; Tiger et al., 2008) that has been effective for individuals with ASDs and other developmental disabilities (Fisher et al., 1993; Fisher et al., 2000; Harding et al., 2009; Lalli et al., 1995; Mancil, 2006; Mancil & Boman, 2010). FCT treatment is based on the hypothesis that problem behaviors, like temper tantrums, typically serve a communicative function (Mancil & Boman, 2010; Tiger et al., 2008), and FCT is usually implemented after the function of the problem behavior has been identified. For instance, if the function of a temper tantrum behavior has been

identified as a way to gain a desired item (i.e., a tangibly motivated behavior), the child is taught how to request the item by speaking, gesturing, or pointing to a picture card that shows the item, which is a technique known as manding, rather than throwing a temper tantrum.

In the previous FCT literature, the majority of study participants (about 80%) were individuals with autism and PDD-NOS (Mancil, 2006) and two-thirds of the participants were males (Mancil, 2006; Mancil & Boman, 2010; Tiger et al., 2008; Wacker et al., 2005). The age range of the participants was from 2.7 to 14 years, with a mean age of 8 years (Mancil, 2006; Wacker et al., 2005). The age group between 3 and 7 years old has been frequently selected and examined by different researchers because research has shown that interventions are most effective when implemented in early childhood (Mancil, 2006; Mancil & Bowman, 2010; Matson et al., 2011).

Because FCT was first developed as a clinical intervention (Carr & Durand, 1985), most FCT research has been conducted in clinical settings (Fisher et al., 2000; Hagopian et al., 1998; Tiger et al., 2008). There is a growing awareness that conducting FCT in highly controlled settings results in a lack of social validity for the treatment (Tiger et al., 2008). Wacker et al. (2005) argued that, at the time, treatment efficacy of FCT in the clinical environment would not mirror effectiveness in the natural environment, so more studies were needed. Fisher et al. (1993) examined three variations of FCT procedures-FCT alone, FCT with extinction, and FCT with punishment—to determine which condition resulted in the most significant reductions of problem behavior. Four children with ASDs participated in the study. Two of them engaged in problem behaviors to escape demands, and the other two engaged in problem behaviors to gain access to their preferred items (tangible function). First, the FCT alone condition was implemented. The participants were allowed to either escape from demands or receive the item they wanted when they used the replacement behavior. When FCT with extinction was implemented, the participants were positively reinforced only when the problem behavior was not used and the replacement behavior was used. The third condition was FCT with punishment, and participants were unable to obtain positive reinforcement if the problem behavior was used at all. The FCTalone condition did not produce clinically significant reductions of the problem behavior, while the FCT with extinction and FCT with punishment conditions significantly reduced the problem behaviors to nearly zero (Fisher et al., 1993).

Hagopian et al. (1998) conducted a meta-analysis of the FCT literature to evaluate which variations of FCT procedures used in previous studies were effective. In 27 case studies, FCT with extinction resulted in an approximate 90% reduction of problem behaviors. By contrast, FCT alone resulted in an approximate 60% to 80% reduction. This again shows that using FCT with additional components (in this case, extinction) is more effective than using FCT alone.

The manner in which experimenters teach the communicative responses to participants also varies. Depending on the child's receptive language abilities, either verbal or nonverbal replacement behaviors can be taught. For teaching nonverbal responses, several studies have utilized the strategy called manding, which allows the child to use a picture card as a communicative response (Harding et al., 2009; Heath et al, 2015; Vollmer et al., 1999).

# Delayed Reinforcement as a Means of Increasing Impulse Control

Teaching delayed reinforcement along with FCT has drawn considerable attention from both developmental and behavioral scholars (Juanico, Dozier, Payne, Brandt, & Hirst, 2016; Kelley et al., 2011; Matson et al., 2011; Reichle et al., 2010; Vollmer et al., 1999). Some studies have suggested that using FCT with additional procedures that teaching delayed reinforcement by manipulating various cues might help children with ASDs to manage their aggressive behaviors (Fisher et al., 1993; Fisher et al., 2000; Fisher et al., 2005; Hagopian et al., 2005; Juanico et al., 2016; Lalli et al., 1995; Reichle et al., 2010; Taylor & Harris, 1995; Tiger et al., 2008). Nevertheless, to date, few ABA-based studies have systematically evaluated the effects of delays on children with ASDs when learning to communicate (Fisher et al., 2000; Kelley et al., 2011; Reichle et al., 2010; Vollmer et al., 1999).

Researchers in both clinical and developmental psychology have recently argued that evaluations of impulsivity and the ability to delay reinforcers may help children with ASDs avoid future problem behaviors (Feldman et al., 2011; Lee et al., 2008; Matson et al., 2011; Reichle et al., 2010). Impulsive behavior occurs when an individual favors immediate reinforcement over delayed reinforcement (Fisher et al., 2000; Lee et al., 2008; Vollmer et al., 1999), because the research has indicated that the ability to delay gratification in early life is closely related to one's self-control of emotion, which can be a predictor of positive social behavior in later life.

Time-delay methods have been used with meaningful results in several studies. Hagopian et al. (2005) showed that time delays could be used as a means of increasing on-task behavior. Two types of time-delayed procedures were introduced by the authors, which were progressive and constant time delays. Progressive time delay procedures are intended to teach the ability to wait. Constant time delay procedures specify certain lengths of time for delays between giving instructions to children so they can use their new skill (Hagopian et al., 2005). Constant time delay has often been used in clinical settings, whereas progressive time delay has more regularly been applied to educational settings (Elcore & Lattal, 2011; Juanico et al., 2016; Reichle et al., 2010; Taylor & Harris, 1995).

Three studies have demonstrated the effectiveness of time delays for children with autism when social skills were promoted. Charlop et al. (1985) conducted a study promoting verbal skills. With a progressive time delay, all the participants gradually learned how to communicate with others and made progress on their problem-solving strategies. Thus, after they had learned to request something from others, they applied the communication strategy in similar situations. Taylor and Harris (1995) also used the progressive time-delay method in an educational setting. When the delay was gradually increased, children with ASDs showed more communicative responses. Liber et al. (2008) conducted a study to evaluate how children with autism demonstrated their social skills with constant time-delay procedures, and the results indicated that participants were able to demonstrate their new skills through the intervention..

Reichle et al. (2010) recently conducted a study that examined how different ways of communicating delays (i.e., a delay cue) while teaching delayed gratification to children with ASDs can help self-regulate impulsiveness and increase learning abilities. Two different types of delay cues were used: general and explicit cues. General delay cues do not give the exact length of task conditions (e.g., "You're almost there! Hang on!"). Explicit delay cues make clear the precise amounts of time the participants need to continue with a task (e.g., "After two minutes, this task will be done."). By using general and explicit delay cues, the researchers found that the participants demonstrated increased task engagement with concurrent decreases in the problem behaviors for both delayed conditions, but the rate of academic engagement during the explicit delay cue condition was higher than that for the general delay cue condition. Thus, learning delayed reinforcement made the participants more goal oriented, and they sought

opportunities to further their progress.

One hurdle introduced during delayed reinforcement is that wait times can trigger inappropriate behaviors of children with ASDs (Lecavalier, Leone, & Wiltz, 2006; Lerman et al., 2006). To remedy these triggers, children with ASDs must learn how to understand time because it is as an abstract term (Grindle & Remington, 1995; Heath et al., 2015). While counting time can help children with normal development skills understand the concept of time and delay, there is a strong possibility that children with ASDs cannot understand the concept of time using the same method. Counting may not serve as a clear, visual stimulus to signal how long a wait will be. Thus, visual prompts have widely been used in teaching children with ASDs to self-regulate emotion (Athens & Vollmer, 2010). These visual enhancements may potentially be paired with time-delay procedures to teach delayed gratification, but doing so would require systematic training with a procedure with proven treatment efficacy.

#### **CONCLUSIONS**

Research has indicated that teaching children to wait for a larger reward makes FCT more effective and acceptable in a clinical setting (Fisher et al., 2000; Heath et al., 2015; Lee, 2015; Tiger, Fisher, Toussaint et al., 2009). Findings have shown that using delayed reinforcements provides a long-term benefit to children in terms of regulating their emotions because of how closely related delayed reinforcement is to self-control, which helps children with developmental disabilities significantly decrease problem behaviors in the long run. A common goal for treatment of children with ASDs is to train them to have better self-control in order to regulate their temper tantrums.

The ability to delay immediate gratification has played a central role in child development (Athens & Vollmer, 2010; Juanico et al., 2015; Reichle et al., 2010). For example, when a primary caregiver prevents a toddler from engaging in socially inappropriate behaviors (e.g., messing up a room), the child's immediate gratification is deferred. At that moment, the child may be faced with choosing one of the following two options: either return to his or her immediate satisfaction or accept the caregiver's request. If the child decides to meet the caregiver's needs, and thus delays gratification, it is a sign of social competency that can lead the child to later accept social expectations. Theoretically, a child's ability to delay reinforcement can be interpreted as a sign of maturity.

Studies have shown that children who demonstrated high levels of delayed reinforcement in their earlier life were capable of showing better social performance in later life (Cemore & Herwig, 2005; Hoerger et al., 2011; Mischel et al., 1989). Toddlers who showed tolerance for waiting were able to show more self-regulatory skills when they went to preschool (Feldman et al., 2011). Preschoolers who were able to forego immediate pleasures to receive more valued rewards demonstrated high levels of academic and emotional intelligence during adolescence (Cemore & Herwig; Hoerger et al., 2011). Because delay tolerance early in life has become a crucial factor for social-emotional aptitude, the use of strategically delayed procedures in child development has become fairly important. Delay tolerance is even more important for children with ASDs, because delayed reinforcement can foster the development of cognitive abilities and behavioral management (Juanico et al., 2015; Kelley et al., 2011; Lee, 2015).

When children with ASDs face difficult demands, it is common for them to display a variety of inappropriate behaviors such are aggression and noncompliance. In addition, they typically demonstrate higher levels of violent behavior than children with normal development (Potegal & Davidson, 2003). In most cases, these behaviors stem from a desire to escape the burden of expectations placed on them, that is, the demand (or escape) condition (Reichle et al., 2010). The disruptive behaviors are difficult for caregivers to handle because

children with ASDs have developmental delays. Teaching children with ASDs how to manage time delays requires a substantial amount of training for the child (Fisher et al., 2000; Fisher et al., 2005; Reichle et al., 2010), but fostering their social behaviors that depend on delayed gratification can significantly encourage child development (Felden et al., 2011; Hoerger, Quirk, & Weed, 2011; Reichle et al., 2010; Wilder, Nicholson, & Allison, 2010).

The ways in which young children effectively regulate their emotions can strongly impact their future learning and positively promote socially acceptable behaviors. Teaching children with ASDs how to control emotion to wait for a desired goal is an important behavioral skill that can decrease challenging behaviors, such as aggression and SIB. In addition, once they learn to delay gratification, behavioral treatments may work more effectively. Early initiation of behavioral intervention if found to be effective—will help parents and related professionals develop tailored behavioral interventions for children with ASDs (Lee, 2015). Overall, research has exposed the need to understand the developmental dynamics of children's cognition and emotional regulation, which represent the broader spectrum of self-control. Future studies are needed to find relevant. developmentally based strategies associated with delayed reinforcement that will help children with ASDs become socially competent outside of the clinical setting.

#### REFERENCES

- American Psychiatric Association (2013). Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision. Washington, DC, American Psychiatric Association.
- Athens, E. S., & Vollmer, T. R. (2010). An investigation of differential reinforcement of alternative behavior without extinction. Journal of Applied Behavior Analysis, 43(4), 569-589.
- Belden, A. C., Thompson, N. R., & Luby, J. L. (2008). Temper tantrums in healthy versus depressed and disruptive preschoolers: Defining tantrum behaviors associated with clinical problems. The Journal of Pediatrics, 152(1), 117-122.
- Betz, A., Higbee, T. S., & Reagon, K. A. (2008). Using joint activity schedules to promote peer engagement in preschoolers with autism. Journal of Applied Behavior Analysis, 41, 237-241.
- Braithwaite, K. & Richdale, A. (2000). Functional communication training to replace challenging behaviors across two behavioral outcomes. Behavioral Interventions, 15, 21-36.
- Carr, E. G., & Durand, V. M. (1985). Reducing behavior problems through functional communication training. Journal of Applied Behavior Analysis, 18, 111-126.
- Casey, S. D., & Merical, C. L. (2006). The use of functional communication training without additional treatment procedures in an inclusive school setting. Behavioral Disorders, 32, 46-54
- Cemore, J. J., & Herwig, J. E. (2005). Delay of gratification and make-believe play of preschoolers. Journal of Research in Childhood Education, 19 (3), 251-266.
- Center for Disease Control and Prevention. (2011).

  DC-Diagnostic Criteria, Autism Spectrum
  Disorders. Retrieved from April 10, 2011, from
  http://www.cdc.gov.ncbddd/autism/.
- Dominick, K. C., Davis, N. O., Lainhart, J., Tager-Flusberg, H., Folstein, S. (2007). Atypical behaviors in children with autism and children with a history of language impairment.

- Research in Developmental Disabilities, 28, 145-162.
- Dunlap, G., & Fox, L. (2011). Function-based interventions for children with challenging behavior. Journal of Early Intervention, 33, 333-343.
- Durand, M., & Merges, E. (2001). Functional communication training: A contemporary behavioral analytic intervention for problem behaviors. Focus on Autism and Other Developmental Disabilities, 16(2), 110-119.
- Elcore, M., & Lattal, K. A. (2011). Effects of unsignaled delays of reinforcement on fixed-interval schedule performance. Behavioral Processes, 88, 47-52.
- Feldman, R., Dollberg, D., & Nadam, R. (2011). The expression and regulation of anger in toddlers: Relations to maternal behavior and mental representations. Infant Behavior & Development, 34, 310-320.
- Fisher, W. W., Piazza, C. C., Cataldo, M. Harrell, R., Jefferson, G., & Conner R. (1993). Functional communication training with and without extinction and punishment. Journal of Applied Behavior Analysis, 26(1), 23-36.
- Fisher, W. W., Kuhn, D. E., & Thompson, R. H. (1998). Establishing discriminative control of responding using functional and alternative reinforcers during functional communication training, Journal of Applied Behavior Analysis, 31(4), 543-560.
- Fisher, W. W., Thompson, R. H., Hagopian, L. P., Bowman, L. G., & Krug, A. (2000). Facilitating tolerance of delayed reinforcement during functional communication training. Behavior Modification, 24(1), 3-29.
- Fisher, W. W., Adelinis, J. D., Volkert, V. M., Keeney, K. M., Neidert, P. L., Havanetz, A. (2005). Assessing preferences for positive and negative reinforcement during treatment of destructive behavior with functional communication training. Research in Developmental Disabilities, 26, 153-168.

- Granpeesheh, D., Dixon D. R., Tarbox, J., Kaplan, A. M., & Wilke, A. E. (2010). The effects of age and treatment intensity on behavioral intervention outcomes for children with autism spectrum disorders. Research in Autism Spectrum Disorders, 3, 1014-1022.
- Green, J. A., Whitney, P. G., & Potegal, M. (2011). Screaming, yelling, whining, and crying: Categorical and intensity differences in vocal expressions of anger and sadness in children's tantrums. Emotion, 11(5), 1124-1133.
- Grindle, C. F., & Remington, B. (2005). Teaching children with autism when reward is delayed:

  The effects of two kinds of marking stimuli.

  Journal of Autism and Developmental Disorders, 35(6), 839-850.
- Hagopian, L. P., Fisher, W. W., Sullivan, M. T., Acquisto, J. A., & LeBlanc, L. A. (1998). Effective of functional communication training with and without extinction and punishment: A summary of 21 inpatient cases. Journal of Applied Behavior Analysis, 31(2), 211-235.
- Hagopian, L. P., Kuhn, S. A., Long, E. S., & Rush, K. S. (2005). Schedule thinning following communication training: Using competing stimuli to enhance tolerance to decrements in reinforce density. Journal of Applied Behavior Analysis, 34, 17-38.
- Hanley, G. P., Iwata, B. A., & McCord, B. E., (2003). Functional analysis of problem behavior: A review. Journal of Applied Behavior Analysis, 36, 147-185.
- Harding, J. W., Wacker, D. P., Berg, W.K., Lee, J. F., & Dolezal, D. D. (2009). Conducting functional communication training in home settings:

  A case study and recommendations for practitioners. Behavior Analysis in Practice, 2(1), 21-35.
- Hartley, S. L., Sikora, D. M., & Mccoy, M. (2008). Prevalence and risk factors of maladaptive behavior in young children with autistic disorder. Journal of Intellectual Disability Research, 52(10), 819-829.
- Heath, A. K., Ganz, J. B., Parker, R., Burke, M., & Ninci, J. (2015). A meta-analytic review of functional communication training across

- mode of communication, age, and disability. Review Journal of Autism and Developmental Disorders, 2(2), 155-166.
- Hoerger, M., Quirk, S. W., Weed, N. C. (2011).

  Development and validation of the delaying gratification inventory. Psychological Assessment 23(3), 725-738.
- Horner, R. H. (1994). Functional assessment: Contributions and future directions. Journal of Applied Behavior Analysis, 27, 401-404.
- Horner, R. H., & Carr, E. G. (1997). Behavioral support for students with severe disabilities: Functional assessment and comprehensive intervention. Journal of Special Education, 31, 84-104.
- Horner, R. H., Carr, E. G., Strain, P. S., Todd, A.W., & Reed, H. K. (2002). Problem behavior interventions for young children with autism: A research synthesis. Journal of Autism and Developmental Disorders, 32(5), 423-446.
- Ingvarsson, E. T., & Hollobaugh, T. (2010). Acquisition of intraverbal behavior: Teaching children with autism to mand for answers to questions. Journal of Applied Behavior Analysis, 43, 1-17.
- Iwata, B. A., & Doizer, C. L. (2008). Clinical application of functional analysis methodology. Behavior Analysis in Practice, 1, 3-9.
- Iwata, B. A., Dorsey, M. F., Slifer, K. J., Bauman, K. E., & Richman, G. S. (1994). Toward a functional analysis of self-injury. Journal of Applied Behavior Analysis, 27, 197-209. (Reprinted from Analysis and Intervention in Developmental Disabilities, 2, 3-20, 1982).
- Iwata, B. A., Pace, G. M., Dorsey, M. F., Zarcone, J. R., Vollmer, T. R., Smith, R.G., Rodgers, T. A., Lerman, D. C., Shore, B. A., Mazaleski, J. L., Goh, H., Cowdery, G. E., Kalsher, M. J., & Willis, K. D. (1994). The functions of self-injurious behavior: An experimental-epidemiological analysis. Journal of Applied Behavior Analysis, 41, 83-96.
- Juanico, J. C., Dozier, C. L., Payne, S. W., Brandt, J. A., & Hirst, E. S. J. (2015). An evaluation of toy quality for increasing self-control in typically developing preschool children. Journal of Applied Behavior Analysis, 49(3), 1-12.

- Kelley, M. E., Lerman, D. C., Fisher, W. W., Roane, H. S., & Zangrillo, A. N. (2011). Reinforcement delay fading during differential reinforcement of communication: The effects of signals on response maintenance. Journal of the Experimental Analysis of Behavior, 96(1), 107-122.
- Kurtz, P. F., Boelter, E. W., Jarmolowicz, D. P., Chin, M. D., & Hagopian, L. P. (2011). An analysis of functional communication training as an empirically supported treatment for problem behavior displayed by individuals with intellectual disabilities. Research in Developmental Disabilities, 32, 2935-2942.
- Kuttler, S., Myles, B. S., & Carlson, J. K. (1998). The use of social stories to reduce precursors to tantrum behavior in a student with autism. Focus on Autism and Other Developmental Disabilities, 13(3), 176-182.
- Lalli, J. S., Casey, S., & Kates, K. (1995). Reducing escape behavior and increasing task completion with functional communication training: Extinction, and response chaining. Applied Behavior Analysis, 28, 261-268.
- Lecavalier, L., Leone, S., & Wiltz, J. (2006). The impact of behavior problems on caregiver stress in young people with autism spectrum disorders. Journal of Intellectual Disability Research, 50(3), 172-183.
- Lee. S. (2015). Educating children with autism spectrum disorders (ASDs) to delay gratification in the context of temper tantrums. The Advocate, 22(2), 1-9.
- Lee, P., Lan, W., Wang, C., & Chiu, H. (2008). Helping young children to delay gratification. Early Childhood Education Journal, 35(6), 557-564.
- Lerman, D. C., Addison, L. R., & Kodak, T. (2006). A preliminary analysis of self-control with aversive events: The effects of task magnitude and delay on the choice of children with autism. Journal of Applied Behavior Analysis, 39(2), 227-232.
- Lord, C., Risi, S., Lambrecht, L., Cook, Jr., E. H., Leventhal, B. L., DiLavore, P. C., Pickles, A., & Rutter, M. (2000). The autism diagnostic observation schedule—generic: A standard

- measure of social and communication deficits associated with the spectrum of autism. Journal of Autism and Developmental Disorders, 30(3), 205-223.
- Leung, C., Mak, R., Lau, V., Cheung, J., & Lam, C. (2010). Development of a preschool developmental assessment scale for assessment of developmental disabilities. Research in Developmental Disabilities, 31, 1358-1365.
- Liber, D. B., Frea, W. D., & Symon, J. B. G. (2008). Using time-delay to improve social play skills with peers for children with autism. Journal of Autism and Developmental Disorders, 38(2), 312-323.
- Mancil, R. G. (2006). Functional communication training: A review of the literature related to children with autism. Education and Training in Developmental Disabilities, 41(3), 213-224.
- Mancil, R. G., & Bowman, M. (2010). Functional communication training in the classroom: A guide for success, Preventing School Failure, 54(4), 238-246.
- Matson, J. L., Dempsey, T., & Fodstad, J. C. (2009). The effect of autism spectrum disorders on adaptive independent living skills in adults with severe intellectual disabilities. Research in Developmental Disabilities, 30, 1203-1211.
- Matson, J. L., Matson, M. L., & Rivet, T. T. (2007) Social-skills treatments for children with Autism spectrum disorders: An overview. Behavior Modification, 31, 682-707.
- Matson, J. L., Turygin, N. C., Beighley, J., Reiske, R., Tureck, K., & Matson, M. L. (2011). Applied behavior analysis in autism spectrum disorders: Recent developments, strengths, and pitfalls. Research in Autism Spectrum Disorders, 6(1), 144-150.
- Mireault, G., & Trahan, J. (2007). Tantrums and anxiety in early childhood: A pilot study. Early Childhood Research & Practice, 9(2). Retrieved from http://ecrp.uiuc.edu/v9n2/mireault.html.
- Patterson, G. R. (2002). Etiology and treatment of child and adolescent antisocial behavior. The Behavior Analyst Today, 3(2), 133-145.

- Peters-Scheffer, N., Didden, R., Korzillius, H., & Sturmey, P. (2011). A meta-analytic study on the effectiveness of comprehensive ABA-based early intervention programs for children with autism spectrum disorders. Research in Autism Spectrum Disorders, 5, 60-69.
- Piazza, C. C., Roane, H. S., Keeney, K. M., Boney, B. R., & Abt, K. A., (2002). Varying response effect in the treatment of pica maintained by automatic reinforcement. Journal of Applied Behavior Analysis, 35, 233-248.
- Potegal, M., & Davidson, R. J. (2003). Temper tantrums in young children: 1. Behavioral composition. Journal of Developmental and Behavioral Pediatrics, 24(3), 140-147.
- Potegal, M., Kosorok, M. R., & Davidson, R. J. (2003). Temper tantrums in young children: Tantrum duration and temporal organization. Journal of Developmental and Behavioral Pediatrics, 24(3), 148-154.
- Reichle, J., Johnson, L., Monn, E., Harris, M. (2010). Task engagement and escape maintained challenging behavior: Differential effects of general and explicit cues when implementing a signaled delay in the delivery of reinforcement. Journal of Autism and Developmental Disorders, 40, 709-720.
- Ringdahl, J. E., Kopelman, T., & Falcomata, T. S. (2009).

  Applied behavior analysis and its application to autism and autism spectrum disorders. In J. L. Matson (Eds.), Applied Behavior Analysis for Children with Autism Spectrum Disorders (pp. 15-31). New York, NY: Springer.
- Taylor, B. A., & Harris, S. L. (1995). Teaching children with autism to seek information: Acquisition of novel information and generalization of responding. Journal of Applied Behavior Analysis, 28(1), 3-14.
- Tiger, J. H., Fisher, W.W., Toussaint, K. A., & Kodak, T. (2009). Progressing from initially ambiguous functional analyses: Three case examples. Research in Developmental Disabilities, 30, 910-926.
- Tiger, J. H., Hanley, G. P., & Bruzek, J. (2008). Functional communication training: A review and practice guide. Behavior Analysis in Practice, 1, 16-23.

- Virués-Ortega, J. (2010). Applied behavior analytic intervention for autism in early childhood: Meta-analysis, mega-regression and dose-response meta-analysis of multiple outcomes. Clinical Psychology Review, 30, 387-399.
- Vollmer, T. R., Borrero, J. C., Larri, J. S., & Daniel, D. (1999). Evaluating self-control and impulsivity in children with severe behavior disorders. Journal of Applied Behavior Analysis, 32(4), 451-465.
- Vollmer, T. R, Northup, J., Ringdahl, J. E., LeBlank, L. A., & Chauvin, T. M. (1996). Functional analysis of severe tantrums displayed by children with language delays: An outclinic assessment. Behavior Modification, 20(1), 97-115.
- Wacker, D. P., Berg, W. K., Harding, J. W., Barretto, A., Rankin, B., & Ganzer, J. (2005). Treatment effectiveness, stimulus generalization, and acceptability to parents of functional communication training. Educational Psychology: An International Journal of Experimental Educational Psychology, 25(2-3), 233-256.
- Wacker, D. P., Steege, M. W., Northup, J., Sasso, G. M., Berg, W., Reimers, T. (1990). A component analysis of functional communication training across three topographies of severe behavior problems. Journal of Applied Behavior Analysis, 23, 417-429.
- Wilder, D. A., Nicholson, K., & Allison, J. (2010). An evaluation of advance notice to increase compliance among preschoolers. Journal of Applied Behavior Analysis, 43(4), 751-75.
- Zachor, D. A., & Ben Itzchak, E. (2010). Treatment approach, autism severity and intervention outcomes in young children. Research in Autism Spectrum Disorders, 4, 425-432.

# **Exploring English Learners' Learning Opportunities in Gifted Programs**

#### Arlene M. Costello

**Abstract:** This study was conducted to explore the influence of culture in the implementation of state gifted identification policies within the four sample schools on English Learners' limited learning opportunities. The study utilized the data analysis spiral approach (Creswell, 1998) in order to examine data derived from interviews, field notes, and observations of 66 sample population, as well as archived public documents and other written sources. Seven significant themes emerged in the findings of the study. As the EL population in the United States continues to grow, this study recommends a sense of urgency to create, devise, fund and implement state and district policies that would minimize ELs' limited learning opportunities in gifted programs.

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Keywords: English Learners, opportunities, culture, policies, implementation, giftedness, equity

#### INTRODUCTION

The Florida Consent Decree (1990) was meant to ensure ELs' equitable opportunities in all educational programs in the public school system. However, English Learners' (ELs) learning opportunities in K-12 gifted programs remain limited (Gagne, 2011; Callahan, 2005; Berliner, 2002). Many unidentified gifted ELs who do not experience the benefits of enriched learning opportunities in gifted programs could leave lasting implications in the possibility of achieving academic excellence, as well as the probability of being involved in higher levels of thinking activities (Aguirre-Munoz & Amabisca, 2010). This qualitative ethnographic study explored the influence of culture in the implementation of state gifted identification policies on ELs' limited learning opportunities within the four sample schools in Florida. The data were analyzed and reported primarily by themes.

# THEORETICAL FRAMEWORK, RESEARCH PROBLEM AND QUESTIONS

#### Research Problem

Educating English Learners (ELs) is contentious and complex (Lee & Buxton, 2008). Florida is among a group of states that experienced a growth in EL population from 6.0 to 9.9% (USDOE NCIES, 2014). School leaders and educators in many school districts in Florida continue to search for ways to address the linguistic and cognitive needs of this group of learners. The general problem of this study focused on exploring the influence of culture in the implementation of state gifted identification policies on ELs limited learning opportunities within the four sample schools in Florida. Gifted and talented children have outstanding abilities, possess potential for high performance, and require special programs and services to maximize their contributions to society. However, Caucasians who participate in gifted education outnumber language minority students (Borland, 2004). This inequality leads to disproportionality in the identified language minority population and limited representation of ELs in gifted programs (Baldwin, 2005). Research associating culture, policies, heritage language, and

experiences to the gifted identification procedures have been conducted (Brennan, 2003; Harris, Plucker, Rapp, & Martinez, 2009; Perez & Beltran, 2011). Future research could produce more meaningful data to inform education leaders and stakeholders with ways to address or mitigate factors contributing to the limited opportunities of ELs in gifted programs.

The key research question that guided the study was: How does culture in the implementation of state gifted identification policies within the culture of the four sample schools influence ELs' limited learning opportunities in gifted programs in Florida? In addition, two more research questions guiding this study were:

1) How do the cultures of ELs in the implementation of state gifted identification policies within the culture of the four sample schools influence ELs limited learning opportunities in gifted programs? 2) How do cultures of district and school administrators, teachers, guidance counselors, and other educators in the implementation of state gifted identification policies within the culture of the four sample schools influence ELs' limited learning opportunities in gifted programs?

One benefit of the study is in assisting educators to identify ELs' giftedness which is difficult to recognize because of language barrier and cultural characteristics (Briggs, Reis, Sullivan, 2008). Policy makers could enact policies related to instruction of ELs (Short, 2013). See Figure 1.

#### Literature Review

The study falls under the scope of instructional leadership for ELs. The theoretical framework included intellectual, cultural, linguistic, and instructional theories that could influence the resolution of the

problem of limited learning opportunities for ELs in gifted programs (Ford, Harris, Tyson & Trotman, 2000).

#### Culture

Researchers believe that culture affects almost every aspect of schooling, including curriculum, content, assessment, and identification for ELs for gifted programs (Kitano & Pederson, 2002). Trimbuli, Rothstein-Fisch, & Greenfield (2000) associated the link between socio-economic status and schooling. Poor economic conditions and low socio-economic status of ELs and their families may result from the number of individuals in a household, which includes extended family members, according to Borland (2004). Cooper & Denner's (1998) description of the individualcollectivism, social, and multiple worlds' theories of culture amplified the values and norms of each cultural group and how ELs are able to access resources and support for the family's benefit. Further, these culture theories provided the structure for understanding the challenges ELs and family members of ELs face within the context of the school, community, and peer environment (Phelan, Davidson, & Yu, 1991). DuPraw and Axner (1997) associated immigrants with more schooling and higher socioeconomic status with greater individualism, independence, and a focus of cognitive skills, positive self-esteem, and oral expression. Ramos (2010) posited that teachers and other educators should be sensitive and aware of the tremendous amount of cultural diversity within any specific ethnic group in order to plan for ELs' optimal learning and interaction in the classroom. The National Association for Gifted Children (2010) issued position papers and task force reports that recognized culture, language, and poverty as factors that influence the development and expression of abilities and talents of ELs.

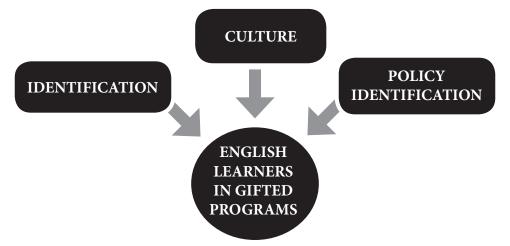


Figure I. Variables to English Learners' Learning Opportunities on Gifted Programs in the Four Sample Schools

#### Language

ELs come from diverse backgrounds. In Florida, more than 250 languages are spoken among ELs (Florida Department of Education, 2016). The levels of language proficiency may vary from entering to reaching (WIDA, 2012). Matthews (2006) indicated in his work with English Learners who are high performers in their heritage language and exceed academic performance expectations based on their language proficiency levels deserve a chance to enrich their learning opportunities through the gifted programs. Webb (2008) emphasized that these learning opportunities occur only when teachers and stakeholders take into consideration the theoretical foundations underlying the education of ELs.

#### Instructional theories

Kaplan and VanTassel-Baska (2011) examined the dilemmas teachers expressed in the effort to address and accommodate the economic, linguistic, and cultural diversity of gifted students in urban environment. How different cultures value giftedness, underachievement due to lack of motivation, and communicating clearly the standards of performance in gifted programs to students confront teachers in schools with EL population. An important challenge to teachers is acquiring sufficient training in recognizing different norms of cultural and social behaviors of students from diverse backgrounds that may be gifted, according to Karhtigeyan & Nirmala (2013). Elhoweris (2008) and VanTassel-Baska (2011) considered the recognition of these challenges as a first step to assisting teachers and school leaders in meeting the needs of gifted and talented ELs.

#### Intelligence

Gardner (1983) asserted that the traditional notion of intelligence based on IQ is far too limited. Gardner (2009) developed and proposed nine different intelligences that would expand the potential in adults and in children to achieve and excel. ELs with different kinds of intelligences display giftedness in ways more productive to their unique mind (Gardner, 1983). Sternberg (1984) developed the triarchic theory of intelligence. Sternberg (1985) defined intelligence as the ability or behavior to achieve success in life by how well individuals capitalize on the strength to balance their analytical, creative, and practical faculties. According to Bracken (2008), ethnicity, language, and country of origin do not describe nor diminish an individual's intelligence.

The views on giftedness and intelligence which Gardner

(1983) and Sternberg (1984) championed recognized language, socioeconomic conditions, and culture as factors to consider when identifying ELs for gifted programs.

#### Literature Gap

Studies have been conducted around underrepresentation of minority groups and low socioeconomic groups but few have focused on culture, policy implementation, and learning opportunities of gifted ELs (Olszewski-Kibilius & Clarenbach, 2012). In addition, areas that need reexamination include policies that address redefining giftedness, enriching educator's understanding of the role of culture, poverty, and language barriers in identifying giftedness.

#### Contributions and Implication of the Study

The results of this study could have significant influence on instructional leadership. Policymakers, school leaders, and teachers are responsible for implementing and maintaining the integrity of the regulations and policies of each state's Department of Education (Brown, et.al. 2005). The findings of this qualitative study are significant to leadership as the analysis of the collected data could provide pathways and steps to expand ELs' learning opportunities in gifted programs (Duncan, 2014). Further, the analysis of the results of the study adds to the body of knowledge related to policies and instructional leadership. Literature and studies regarding policies that influence ELs' learning opportunities in gifted programs are rare (Mongiello, 2011). Reforming state policies could help eliminate barriers to ELs learning opportunities (Pfeiffer, 2002).

#### **METHODOLOGY**

#### Research Method

The qualitative research method was used to address the research problem by gathering data from educators who work closely with ELs at four sample schools in Florida. "Qualitative studies are best at contributing to a greater understanding of perceptions, attitudes, and processes" (Glesne, 2006, p. 29). The process and the product were closely observed and paid attention to (Patton, 2002). The use of qualitative research allowed for the exploration of the problem by using open-ended questions in collecting evidence from study participants while seeking to understand the complexity of the problem (Pereira & Oliviera, 2015; Tsai & Wen, 2005; Bowen, 2005; Pokinghorne, 2005; Szyjka, 2012).

In order to address the research questions, various techniques were used to provide participants opportunities to present various perspectives and perceptions about the problem in a natural setting (Denzin & Lincoln, 2005; Szyjka, 2012). Individually or by groups, study participants participated in face-toface interviews, observations, and mini focus groups where the data obtained provided the best understanding of the sites and the people (Burnard, 2004). Open-ended questions were worded carefully for each participant. In addition, archived public documents were reviewed that generated relevant information to the study. The method's techniques also involved making sense of and finding meanings of the complexity of the group's shared cultural attitudes, beliefs, behaviors, language, and ideas (Klopper, 2008; Sale, 2008; Toloie-Eshlaghy et al., 2011).

#### Sample

The sites and population for this study were selected based on the total number of ELs, the district's plan to increase efforts in identifying gifted ELs, the total gifted student population, and the percentage of ELs in gifted programs. In addition, districts' approval to grant access to the schools and the district offices to conduct this ethnographic study was a major consideration for the geographic selections. School districts' willingness to provide access to collect intense data through observation, interviews, and focus groups during the onsite ethnographic study also influenced the selection of the sample (Polkinghorne, 2005). School districts with no ELs in the gifted program based on the reports from the FLDOE (2011c, 2012a), but which had submitted plans to the FLDOE to increase ELs' representation in gifted programs, were also considered as potential sample sites for this ethnographic study. Finally, school districts that did not respond to the researcher's request for permission to conduct an on-site ethnographic study on identifying ELs for gifted programs were excluded from the list of sample population.

Based on these selection techniques, two schools from a large urban school district and two schools a medium-size urban school district in Florida were considered the sites of the study. The first school district, District A, was a large urban district that had made strides in identifying gifted ELs. Among the school districts in Florida, District A had the highest percentage enrollment gain in EL students, from 6.8% in the 2011-2012 school year to 13.6% in the 2012-2013 school year (FLDOE, 2011a). In the 2010 and 2012 school year, gifted ELs represented .41% of the gifted population in District A. The second school district, District B, was a medium-

size urban school district and ELs comprised 1.2% of the total student population. District B has reported no gifted ELs but had submitted to FLDOE a district plan to increase the identification of ELs for gifted programs (FLDOE, 2010a). See Figure 2.

#### Sampling techniques

The purposeful homogenous sampling technique was used to recruit participants for the study. Participants in a natural setting who have shared beliefs and thinking were intentionally chosen (Burnard, 2003). The natural settings for this study were the sample schools that were selected based on the total number of ELs, the total gifted student population, and the percentage of ELs in the gifted program.

Sixty-five participants from the four sample schools in District A and B in Florida had given consent to participate in the study. Participants were specifically selected based on individuals' years in the field of education, higher education degree, experience related to teaching ELs, as well as their capabilities and expertise to provide rich accounts and stories about events and behaviors in their professional communities (Fetterman, 2010). Participants' accounts of their experiences "bring refinement and clarity to understanding an experience" (Polkinghorne, 2005, p. 140). The population the researcher had chosen for this ethnographic study consisted of district gifted and ESOL program coordinators, school administrators, guidance counselors, a school psychologist, professional support personnel, and past or current teachers who work with ELs and gifted students. Also included in the sample participants were teachers of gifted education, five general education teachers who were grade level teacher leaders, and resource teachers who had indicated willingness to share cultural attitudes, beliefs, behaviors, language, and ideas towards gifted ELs and articulate their stories about the topic. Participants from School 1 District A included ten females and one male participant. In School 2 District A, three males and 12 female educators participated in the interview. In School 1 District B, one male and 15 female educators participated in the study. In School 2 District B, participants included nine males and 14 females. The teaching and leadership experiences of the project participants ranged from three years to 47 years. The teaching experiences of the ESOL teachers ranged from three years to 17 years.

#### **Data Collection Procedures**

The data collection process for this study were guided by

the research questions, the purpose, and the scope of the study that were built upon existing literature concerning culture, policy, and identification of ELs for gifted programs. The methods that were used to collect data in this study consisted of observations, semi-structured interviews administered during 20 to 30 minute face-to-face audio-recorded sessions, mini focus groups, and a review of archived public documents from the previous school year. Participants signed the informed consent form prior to collecting data. The signed PRN form made access to school sites and district offices straightforward and helped the sample population have confidence in the collection process.

#### **Observation**

Observation is a means of collecting data and information by observing first-hand the study participants' cultural orientation (Polkinghorne, 2005). The observation process was structured due to some limitations imposed by the school administrator in order to preserve academic instruction and conform to the school's safety procedures. Observations were conducted continuously. Observations of interactions in the classrooms, hallways,

or wherever the interactions could occur were recorded by the researcher. Observations which occurred during interactions with gifted and ESOL coordinators and school administrators were also recorded. For example, field notes contained descriptions of the setting and profiles of participants and notes of teacher and student interactions in classrooms where ELs attended. In addition, observation data from listening to formal and informal conversations were also recorded as they provided multiple data about the target population's shared beliefs, behaviors, and language that could expand upon existing literature concerning identification of ELs for gifted programs (Walcott, 1997). These types of data were important to the study because observation notes had added to the study participants' perspectives on the influence of culture on ELs' learning opportunities in gifted programs.

#### Interviews and Mini Focus Groups

Face-to-face interviews and mini focus groups provided useful information the researcher could not glean from observations or surveys (Fetterman, 2010). Two validated data collection instruments were used in conducting

Figure 2. A Table of the Sample Population Demographics

Sample Population Demographics

District/ School	Gender M/F	Teachers	Administrators	Guidance Counselors	Years in Education	Levels In Education
A / 1	1 / 10	6	4	0	4 - 22	M -5 B -6
A / 2	3 / 12	10	3	3	3 - 30	D – 1 M – 7 B – 7
B / 1	1 / 15	12	3	1	4 – 30+	S-1 M-7 B-8
B / 2	9 / 14	18	2	2	3 - 25	D - 1 S - 1 M - 14 B - 6
						M – Masters B – Bachelors D - Doctorate

informal or semi-structured interview and mini focus groups. The first instrument, Revised Semi-structured Interview Protocol (Harris et. al, 2009), consisted of a slightly modified version of a semi-structured interview protocol from a case study on identifying gifted ELs. This instrument was chosen because the questions were intended to generate honest, extensive responses.

The instrument was an appropriate tool for this study because the questions spurred conversations about the beliefs of study participants at each sample work sites. Thoughtful perspectives and thorough descriptions of participants' views demonstrated credibility, transferability, and trustworthiness of participants' responses to the questions (Golafshani, 2003).

Focus groups and interviews were held before school started in a designated room at each sample school or in another natural setting and lasted from 30 to 90 minutes. Participation was voluntary. A \$20.00 gift card was offered to participants for their participation in the interview or focus groups beyond school hours. The data from the interviewees were important because their responses generated different results that "could help shed light on the answers to the research question" (Le Compte, 2010, p. 21).

The instrument was an appropriate tool for this study because the questions spurred conversations about the beliefs of study participants at each sample work sites. Thoughtful perspectives and thorough descriptions of participants' views demonstrated credibility, transferability, and trustworthiness of participants' responses to the questions (Golafshani, 2003). The second validated instrument that was used to gather data a questionnaire entitled, Why Do We Indentify So Few Gifted Children from Economically Disadvantaged (ED) and Limited English Proficient (LEP) Backgrounds (Frasier et al., 1995, p. 35). The researcher chose this instrument because of the high degree of validity and reliability. The instrument was a component of a professional development model that was field tested nationally among 750 educators (Frasier et al., 1995). The researchers used the questionnaire to gather data on teachers' views and perception concerning the identification of gifted students from limited English proficient and economically disadvantaged backgrounds. Most ELs are classified as under-represented ethnic minorities and economically disadvantaged (FLDOE, 2002).

# Review of Archived Public Documents and Other Written Resources

Archived public documents are vital and rich sources of information (Le Compte, 2010). In this study, archived public documents and other written sources from the past school year included official memos, letters, manuals, and directives in print or electronic forms such as district and school websites that were specific to the identification process and program services to identify trends and patterns of the influence of culture in the implementation of the state gifted identification policy on ELs' learning opportunities in gifted programs. Because public documents usually have been reviewed and edited before publication, no further transcription was required (Fetterman, 2010). LeCompte and Preissle (1993) wrote that public documents are ready for analysis and also reveal the culture of the time.

#### Overview of the analysis of data

The analysis of the data derived from interviews, mini focus groups, observation notes, and reviews of archived public documents from the past school year adhered to the steps associated with Creswell's (1998) data analysis spiral approach. The method is described below. The first step involved the organizing the data by using index cards and a word processed database. This stage entailed reading the transcribed data line by line. Large bodies of text were divided into smaller groups or units in the form ofsentences, captions, or words.

Participants' identifying information to maintain anonymity was removed. The coding system for participants consisted of letters and numbers such as PE1 or PMD1. The letter "P" stood for participants and the letters "E" or "M" described whether the school is an elementary or middle school level. The letter "D" meant district level personnel. The numeric numbers indicated the order of the participant in interviews or in mini focus groups.

For example, PE1 could be read as participant number 1 from District A elementary and School 1. PM1 could also be read as participant number 1 from District A middle school and School 2. For District B participants, a letter B was added to each participant code. For example, PBE1 could be read as participant number 1 from District B elementary school and School 1. PBM1 meant participant number 1 from District B middle school and School 2. PBD1 could be read as participant number 1 from District B district level. Coding participants' identity maintained their anonymity, which was a part of the confidentiality agreement.

An examination of all collected data to get an overview of the document as a whole was the next step. These data were generated from the responses to interview and focus group questions, observation notes, and highlighted passages during the researcher's review of archived public documents to acquire an overview of the documents' contents. This process also included segmenting the data into meaningful units and coding them. Open coding was used to classify and organize meaningful segments into common themes. A few examples of ways the researcher segmented thoughts, ideas, and possible themes included highlighting, symbols, descriptive words, or category names.

A master list of inductive codes was developed during the coding process which provided a bank of codes to use and apply to the appropriate segment. The initial coding of themes continued until the researcher has coded all the segments.

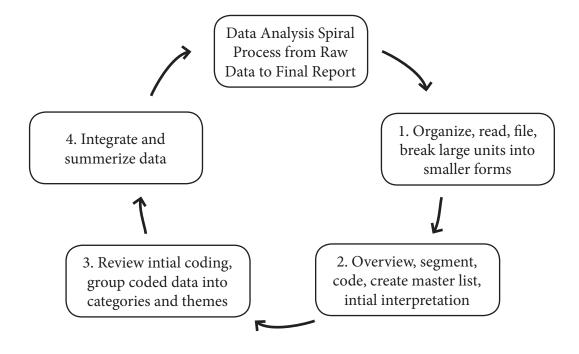
The third step involved a review of the initial coding in case new themes had evolved during the second examination of the transcribed data. Language barrier and ELs' learning opportunities in gifted programs had emerged as a new theme that was added to the initial list of themes. During this stage of the data analysis process, the researcher had classified and grouped the coded data

into categories or themes. The themes were arranged in order of major categories and close to the story data. Responses that did not meet the validity test and were not relevant to the study were removed. In this manner, relationships among categories were evident and had enabled the researcher to get a sense of what the data means. Triangulation of data also had occurred when various perspectives from different sources clarified conflicting information as well as ideas and themes that had converged to formulate the study's conclusions. The final step consisted of integrating and summarizing the data. The conclusions or relationships among categories or themes were expressed through text, tables, and figures. Figure 3 illustrates the data analysis spiral approach.

#### **FINDINGS**

The general problem of this study focused on exploring the influence of culture in the implementation of state gifted identification policies on ELs limited learning opportunities within the four sample schools in Florida. The responses of the participants influenced the results of this qualitative ethnographic study. The study involved face-to-face interviews, mini focus groups, observations, and reviews of archived public documents

Figure 3: Illustration of Data Analysis Spiral Approach (Creswell, 1998).



from the past school year. Seven themes with subthemes evolved from the data analysis.

## Theme one: State policies and initiatives for identifying gifted ELs

The researcher's review of documents revealed that the state policies for the identification of gifted underrepresented groups are delineated in the Technical Assistance Paper for Assessing Limited English Proficient Students for Eligibility for Gifted Programs and SR 6A-6.0319 Eligible Special Programs for Exceptional Students. Public school districts were provided an opportunity to develop and submit to the FLDOE an alternative plan, Plan B, to identify gifted students from these subgroups was a state initiative issued to school districts. Participants claimed that the state and the school districts placed less emphasis on the implementation of the state gifted identification policy for ELs because of the focus on raising students' academic achievement test scores.

## Theme two: Local policies and initiatives for identifying gifted ELs

Results of the interviews indicated that school and program administrators complied with district policies and initiatives when identifying gifted ELs. Interview participants believed that state policies guide school districts when writing district policies for identifying gifted ELs. Consideration of EL's participation in the ESOL and bilingual program and the availability of bilingual psychologists during gifted screening were considered as testing and evaluation best practices which are appropriate for ELs and would produce the best results as far as student success in the screening and evaluation stage.

#### Theme three: Cultures and giftedness of ELs

Study participants believed traditional cultural practices tend to mask giftedness, therefore, cultures of ELs must be a consideration in identifying them as gifted.

## Theme four: Language barrier, identification, and learning opportunities

Study participants considered language barrier as a factor which makes identification of gifted characteristics in ELs difficult. In addition, majority of interviewees thought language barrier holds back identification of gifted ELs and could be a roadblock to identifying gifted ELs. Participants considered gifted identification process very limiting.

## Theme five: Teacher's background knowledge, training, and misconceptions

Participants believed teacher's background knowledge and training are critical to identifying gifted ELs. Background knowledge and training minimize stereotyping and discrimination. Teachers' misconceptions related to identification of gifted EL may have added to the culture of deficit thinking among educators about ELs. Traditional views of giftedness and how gifted characteristics are exhibited in the classroom inhibited most teachers from nominating ELs for the gifted programs.

## Theme six: The importance of a support system for ELs

All study participants agreed that a support system was vital to ELs' learning opportunities in gifted programs. However, they attested that the levels of support provided by peers, teachers, and other school professionals to ELs varied.

## Theme seven: Parent knowledge, awareness, and understanding of gifted programs and services

Participants believed that parent awareness and understanding of gifted programs and services was problematic. In addition, families of ELs possess limited knowledge about the available educational services available to all students in the district and in the schools where ELs attend.

#### DISCUSSION

Federal and state laws require protection of ELs' rights to equal educational opportunities in the public school system. This study found that giftedness of ELs could be manifested in and out of the classroom in many non-traditional ways that educators who work or teach ELs may not recognize. In addition, giftedness comes from all cultural and linguistic backgrounds regardless of the levels of English language proficiency, but often is not often recognized by the host culture. The themes that surfaced from the responses of study participants underscored the importance of a support system and sound state policies and initiatives that address increased possibilities for ELs to be referred for the gifted program. In addition, study participants connected ELs' limited learning opportunities in gifted programs to parent awareness and understanding of educational programs in school, teacher training, culture, and language barriers.

#### Policies, Initiatives and Implementation

The commitment of the state to provide the underserved population, which includes ELs, access to gifted programs is delineated in the Technical Assistance Paper for Assessing Limited English Proficient Students for Eligibility for Gifted Programs and SR 6A-6.0319 Eligible Special Programs for Exceptional Students. However, results of data analysis indicated several barriers to district implementation of state gifted policies. First, while services to Plan A of gifted programs is mandatory, submission of Plan B for underserved student population is not. Second, study participants reported that communicating district policies and initiatives on identifying gifted ELs to education stakeholders is always a challenge, although the sample schools complied with directives from the district. As a result, a lack of knowledge in identifying gifted ELs district policies would amount to ELs missing learning opportunities without state policies to guide school districts.

Since only two participants in District B were familiar with the state policies and process for identifying gifted students, all participants of four sample schools hope that the state and the school district develop a better and more effective system of disseminating information to teachers responsible for nominating students, including ELs, during the screening process. Dissemination of the policies on the identification of gifted ELs could help facilitate the identification of those students, improve ELs' learning, and afford better opportunities to help them advance in classes more quickly rather than hinder their academic progress.

To carry out this goal, gifted district leaders recommended the restoration of Working on Gifted Issues (WOGI) network or create a similar state initiative as an avenue to communicate and discuss gifted issues with district leadership in gifted education across the state as a priority of the state Gifted Education Bureau. WOGI members focused on the continuous inclusion of English Learners in Plan B for gifted education.

Many of the study participants were not aware of a push for identifying gifted ELs and felt that not enough is being done for ELs in this area. School leaders vowed to make every effort to inquire about the Plan B gifted identification policy which they felt district ESOL personnel should share. In addition, screening procedures, evaluation instruments and practices appropriate for ELs vary between District A and District B. In school 1 District A, participation in the ESOL and Bilingual programs and the availability

of bilingual psychologists during gifted screening positively influenced the number of ELs identified for gifted programs. Participants reported that although the emphasis of district and state policies lie more in raising students' achievement scores than in identifying ELs for gifted programs, majority of teacher participants would like to see state policies that consider language differences and considerations for English Learners that are similar to those for low socio-economic levels.

#### Culture

Most school staff members and educators reported that they would like some assistance in recognizing cultural practices and behaviors that might make recognition of giftedness a little bit less difficult and eliminate bias and stereotyping when identifying gifted ELs. Cultural behaviors such as these enumerated below and which were suggested by ESOL endorsed teachers tend to mask giftedness and as a result, hinder teachers' identification of ELs' gifted characteristics.

- 1) ELs from other cultures sit and listen quietly in the classroom. Outspokenness is frowned upon in other cultures, especially in the Asian culture.
- 2) Answering questions correctly is looked down upon because some cultures consider it as bragging. Individuals are not supposed to be boastful. This practice may be a particular norm of a cultural group, especially the Hispanic and the Middle Eastern cultures. A teacher who is unaware of these characteristics may not receive a full picture or the true abilities of ELs. Schools with bilingual teachers recognize and understand the culture of ELs.

Cultural practices and behaviors in some ELs should not be overlooked by educators

and must be a consideration during the nominating process.

# Language barrier, identification, and learning opportunities

Educators considered language barrier as a roadblock to the lengthy identification process of student's giftedness, including ELs. Most study participants believed that language barrier makes the teacher's task of identifying gifted ELs difficult, and therefore, limits the chances of gifted ELs to be identified and participate in the learning opportunities offered in gifted programs. Data also showed misconception exists that teachers cannot identify ELs as gifted if ELs do not speak the English language. To expand teachers' knowledge of

ELs language and culture, opportunities for in-service and a variety of professional development activities related to diverse cultures and language should be implemented. This way, teachers can provide ways for ELs to show their talents in their home languages to mitigate the language barrier and asses the language proficiency of the first language. Furthermore, states must require districts to provide gifted services with native language support to ELs who are placed in gifted programs.

## Teachers' background knowledge, training and misconceptions

Majority of study participants reported that they have limited knowledge of how to identify gifted ELs and the legal implications of not providing ELs access to gifted programs. Most study participants view giftedness as being smart, highly verbal, motivated to achieve, is mature, displays leadership qualities, and thinks out of the box. This is the traditional thinking of how giftedness is exhibited in the classroom. A change in teachers' misconceptions of ELs' abilities and skills should occur soon. A state of status quo would result in lost learning opportunities for ELs. Training in ESOL and gifted issues must be a part of in-service requirements for teachers and pre-service teachers of ELs. Language acquisition, traditional and nontraditional characteristics of giftedness, and cultural competence must be a part of the training curriculum for all teachers and staff.

#### Support system

Study participants expressed concerns regarding the degree and kinds of support ELs receive from their peers, teachers, administrators, other professionals and parents. Suggested ways to ensure ELs success in gifted, advanced, and enrichment programs can be adopted in any district or school, namely: a dedicated staff member as an ESOL curriculum resource teacher (CRT), a school-based gifted program and gifted teacher, flexibility in scheduling, and an environment where language and culture are respected. This support system is vital to eradicate ELs' limited learning opportunities in gifted programs.

# Parent knowledge, awareness, and understanding of gifted programs and services.

Parents of ELs possess limited knowledge and understanding of gifted programs and services which can be attributed to language and cultural barriers. Study participants worried that parents were unsure if

the gifted program was appropriate for their children. Multiple suggestions were offered by study participants, such as formation of parent support group, organization of a parent advisory group, evening English classes for parents, and family cultural activities to foster pride in native culture. Because study participants reported that communicating with parents who are non English speakers is challenging, all materials sent home should be provided in a language parents understand. Parent awareness and knowledge of gifted programs could determine if ELs participate or not in gifted programs.

#### **IMPLICATIONS**

The results of the study created numerous implications to education, leadership, and future research. Gifted ELs are a part of a large segment of the next generation's leaders in education, politics, science, and technology. Study participants were concerned that not enough is being done to identify gifted ELs. To provide ELs equal access to all educational programs, the state could create and devise an educational system that would better serve the needs of each child or groups of students, such as the ELs. To accomplish this goal, the state should explore every possibility to secure funding to support gifted programs and initiatives.

Education policy makers and leaders who cling to the traditional views of giftedness contribute to the limited educational opportunities for ELs (Aguirre, 2003). This study could be significant to leadership because the results of the study may lead state, district, and school leaders to increase their awareness of the needs of ELs. In addition, the awareness of students' language and cultural nuances in relation to instruction and improved teachers' and school leaders' sensitivity to the needs of gifted ELs' culturally and linguistically diverse backgrounds are contributions to the body of literature in the area of leadership (Ford & Grantham, 2003).

#### Implications for future study

The results of the study have created numerous possibilities for future research. First, a case study on the practical and theoretical barriers as well as the types of support system of gifted ELS who became accomplished or not so successful in schooling could highlight the importance of this ongoing controversial topic in gifted education (Harris, et al, 2009). In addition, researchers should listen to the narratives or stories of the 26 identified gifted ELs and the teachers who nominated them for screening in School 1 District A to investigate the factors surrounding their giftedness.

Real stories are reliable sources of information and data (Freeman, 2010).

The powerful voices of these individuals could change the positions of those policy makers and educators who do not believe that giftedness runs through all cultures and languages. Professional development related the identification of ELs would lead to the elimination of the limitations to learning opportunities of ELs in gifted programs (Olszewski-Kubilius & Clarenbach, 2012).

Second, the roles and influence of advocacy in securing funding for gifted services to match program models with the type of giftedness is crucial to serving the diverse cognitive and social needs of gifted ELs. Financial and human resources support and guidance from state gifted leaders is a step to ensure teacher training on recognizing giftedness in ELs (Fenner, 2014). Third, a study to explore the correlation between teacher development programs and professional development on the identification of gifted ELs can inform training providers on ways to eliminate the limitations of EL's limited learning opportunities in gifted programs (Olszewski-Kubilius & Clarenbach, 2012). Finally, a study on the correlation between beliefs of parents from diverse backgrounds regarding children's education and learning opportunities that vary based on race, gender,

and culture (Olszewski-Kubilius & Clarenbach, 2012) and the identification of gifted ELs could unlock the keys to EL's learning opportunities in gifted programs.

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#### REFERENCES

- Aguirre, N. (2003). ESL students in gifted education. In J. A. Castellano (Ed.), Special populations in gifted education: Working with diverse gifted learners (pp. 17-27). Boston, MA: Allyn & Bacon.
- Baldwin, A. (2005). Identification concerns and promises for gifted students of diverse populations. Theory Into Practice, 44(2), 105-115.
- Berliner, D. (2002). Educational research: The hardest science of all. Educational researcher. 31(8). 18-20.
- Borland, J. (2004). Issues and practices in the identification and education of gifted Students from underrepresented groups. The National Research Center on the Gifted and Talented, University of Connecticut, Storrs, CT.

- Bracken, B. (2008). Nontraditional strategies for indentifying nontraditional gifted and talented students. In J. L. VanTassel-Baska (Ed.), Alternative assessments with gifted and talented assessments (pp. 17-41). Waco, TX: Prufrock.
  - Brenan, R. (2003). Coefficient and indices in generalizability theory in measurement and assessment. Paper presented at the Annual Meeting of the American Statistical Association, San Francisco, CA.
- Briggs, C., & Reis, S., & Sullivan, E. (2008). A national view of promising programs and practices for culturally, linguistically, and ethnically diverse gifted and talented students. Gifted Child Quarterly, 52(2), 131-145.

- Brown, S., Chen, C., Gubbins, E., Renzulli, J., & Zhang, W. (2005). Assumptions underlying the identification of gifted and talented students. Gifted Child Quarterly, 49(1), 68-79.
- Burnard, P. (2004). Writing a qualitative research report. Nurse Education Today.24, 174-175. intl.elsevierhealth.com/journals/nedt.
- Callahan, R. (2005). Tracking and high school English learners: Learning opportunity to learn. American Educational Research Journal. 42(2). 305-328
- Consent Decree, League of United Latin American Citizens et al. v. State Board of Education (No. 90-193, Fl, 1990). Retrieved from www. FLDOE.org/aala/lulac.asp
- Cooper, C., & Denner, J. (1998). Theories linking to culture and psychology: Universal and community-specific processes. Ann. Rev. Psychol. 49. 559 584.
- Creswell, J.W. (1998). Qualitative inquiry and research design: Choosing among five traditions. Thousand Oaks, CA. Sage.
- Denzin, N. & Lincoln, Y. (Eds) (2005). Introduction: The discipline and practice of qualitative research. In N. Denzin & Y. Licoln (Eds). Handbook of Qualitative Research. Sage. 1-32. London: Sage.
- Diaz-Rico, L. (2008). A course for teaching English language learners. Upper Saddle River, NJ: Pearson.
- Duncan, A. (2014). Increasing educational opportunity through equity. Remarks at the Congressional Hispanic Caucus Institute, Tri-Caucus Plenary Session. http://www.ed.gov/news/speeches/increasing-educaional-opportunity-through-equity
- DuPraw, M., & Axner, M. (1997). Working on common cross-cultural communication challenges. A More Perfect Union Guide. Retrieved from www.pbs.org/ampu/crosscilt.html
- Elhoweris, H. (2008). Teacher judgment in identifying gifted/talented students. Multicultural Education, 15(3), 35-39.

- Fenner, D. (2014). Advocating for English learners: A guide for educators. Thousand Oaks, CA: Corwin.
- Fetterman, D. (2010). Ethnography. Step by step (3rd ed.). Applied Social Research Methods Series, Vol. 17. Thousand Oaks, CA: Sage.
- Florida Department of Education. (1998). Assessing limited English proficient students for eligibility for gifted programs. A technical assistance paper. Paper Number FY 1999-6.
- Florida Department of Education (2010a). Florida's plan for K-12 gifted education. Bureau of Curriculum and Instruction. Retrieved from http://www.FLDOE.org/bii/Gifted\_Ed/pdf/StateGiftedPlan.pdf
- Florida Department of Education (2011a). Statistics.

  Bureau of Student Achievement through

  Language Acquisition. Retrieved from SALA.

  FLDOE.org
- Florida Department of Education. (2011b). Gifted students by English language learners' status.

  Totals and percentages report. A report from the Florida Department of Education Student Achievement through Language Acquisition.
- Florida Department of Education (2011c). Count of ELLs by native language. Bureau of Student Achievement Through Language Acquisition. Retrieved from www.FLDOE/sala/demographics
- Florida Department of Education. (2014). NCLB technical assistance. Retrieved from http://www.FLDOE.org/NCLB/2008nclbta site.asp
- Ford, D., Grantham, Y., Tarek, C., & Whiting, G. (2008). Culturally and linguistically diverse students in gifted education. Exceptional Children, 74(3), 289-306.
- Ford, D. Y., Harris, J. J., III, Tyson, C. A., & Trotman, M. F. (2000). Beyond deficit thinking: Providing access for gifted African American students. The Roeper Review, 24(2), 52-58.
- Frasier, M. M., Hunsaker, S. L., Lee, J., Finley, V., Frank, E., Garcia, J., & Martin, D. (1995). Educators' perceptions of barriers to the identification of gifted children from economically

- disadvantaged and limited English proficient backgrounds. The National Research Center on the Gifted and Talented. University of Connecticut, Storrs.
- Gagné, F. (2011). Academic and talent development and the equity issue in gifted education. Talent Development and Excellence. International Research
- Gardner, H. (1983). Frames of mind. The theory of multiple intelligences. New York, NY: Basic Books.
- Gardner, H. (1999). Intelligence reframed. Multiple intelligences for the 21st century. New York, NY: Basic Books.
- Gardner, H. (2009). Nine types of multiple intelligences.

  Retrieved from http://skyview.vansd.
  org/lschmidt/Projects/The%20Nine%20
  Types%20of%20Intelligence.htm
- Golafshani, N. (2003, December). Understanding reliability and validity in qualitative research. The Qualitative Report, 8(4), 597-607.
- Glesne, C. (2006). Becoming qualitative researchers: An introduction. (3rd. Ed). Boston, MA. Pearson Education, Inc.
- Harris, B., Plucker, J., Rapp, K., & Martinez, R. (2009). Identifying gifted and talented language learners: A case study. Journal for Gifted Education, 32(3), 368-393.
- Kaplan, S. &VanTassek-Baska, J. (2011). Gifted teachers in urban centers: The perspectives of teachers and students. Gifted Child Today. 34(1). 5-6
- Klopper, H. (2008, December). The qualitative research proposal. Curationia, 31(4), 62-72.
- Lee, O. & Buxton, C. (2008). Science curriculum and student diversity: A framework for equitable learning opportunities. The Elementary Science Journal. 109(2). University of Chicago. 123-137.
- LeCompte, M.D. & Preissle, J (1993). Ethnography and qualitative design in educational research (2nd ed). New York. Academic Press.

- Matthews, M. (2006). Working with gifted English language learners. The practical strategies series in gifted education. Waco, TX: Prufrock Press.
- Mongiello, J. (2011). The future of the equal educational opportunities act after Horne v. Flores: Using no child left behind proficiency levels to define appropriate action towards meaningful educational opportunity, Harvard Latino Law Review, 14, 211-241.
- National Association for Gifted Children. (2010).

  Redefining giftedness for a new century:
  Shifting paradigm (Position Paper).
  Washington, DC. Retrieved from http://
  www.nagc.org/sites/default/files/Position%20
  Statement/Redefining%20Giftedness%20
  for%20a%20New%20Century.pdf
- Olszewski-Kibilius, P., & Clarenbach, J. (2012). Unlocking emergent talent: Supporting high achievement of low income, high ability students. National Association for Gifted Education, Washington, D.C. Retrieved from www.nagc.org/resources-publications/.../keyreports-gifted-education
- Patton, M.Q. (2002). Qualitative research and evaluation methods. (3rd. Ed.) Thousand Oaks: CA. Sage Publications, Inc.
- Pereira, N. & Oliviera, L. (2015). Meeting the linguistic needs of high potential English language learners. What teachers need to know. Teaching Exceptional Children.
- Pérez, L., & Beltran, J. (2011). Minorities and giftedness. A commentary on F. Gagné: Academic talent development and the equity issue in gifted education. International Research Association for Talent Development and Excellence, 3(1), 3-22.
- Pfeiffer, S. (2002). Identifying gifted and talented students: Recurring issues and promising solutions. Journal of Applied Psychology, 19(1), 31-50.
- Phelan, P., Davidson, AL., & Yu, HC (1991). Students' multiple worlds: Navigating the borders of family, peer, and school cultures. In Cultural Diversity: Implications for Education. Eds. Phelan, P., Davidson, AL. 52-58. New York Teachers College Press.

- Polkinghorne, D. (2005). Language and meaning: Data collection in qualitative research. Journal of Counseling Psychology, 52(2), 137-145.
- Ramos, E. (2010). Let us in: Latino underrepresentation in gifted talented programs. Journal of Cultural Diversity, 17(4), 151-153.
- Renzulli, J. (2011). What makes giftedness? Reexamining a definition. Kappan, 92(8), 81-88.
- Sale, J. (2008). How to assess rigor...or not in qualitative papers. Journal of Evaluation in Clinical Practice. 14, 912-913.
- Siegle, D., & McCoach, B. (Eds.) (2010). The first word: A letter from the co-editors: Redefining gifted. Journal for Advanced Academics, 22(1), 5-8.
- Sternberg, R. (1984). What should intelligence test? Implications of a triarchic theory of intelligence for intelligence testing. Educational Researcher, 13(1), 5-15.
- Sternberg, J. (2004). Introductions to definitions and conceptions of giftedness. In J. Sternberg, & S. Reis (Eds.), Definitions and conceptions of giftedness. Thousand Oaks, CA: Corwin
- Szyjka, S. (2012). Understanding research paradigms: Trends in science education research. Problems of Education in the 21st Century, 43, 110-118.
- Toloie-Eshlaghy, A., Chitsaz, S., Karimian, L., & Charkhchi, R. (2011). A classification of qualitative research methods. Research Journal of International Studies, 20, 106-123.
- Trimbuli, E., Rothstein-Fisch, C., & Greenfield, P. (2000). Bridging cultures in our schools: New approaches that work. A WestEd Knowledge Brief. Retrieved from www.wested.org/resources/bridging-cultures-in-our-schools-new

- Tsai, C., & Wen, M. L. (2005). Research and trends in science education from 1998 to 2002: A content analysis of publication in selected journals. International Journal of Science Education. 27 (1). 3-14.
- U. S. Department of Education, National Center for Education Statistics (2012). The condition of education 2011 (NCES 2011-045. Indicator 6. Retrieved from http://nces.ed.gov/fastfacts/display.asp?id=96
- VanTassel-Baska, J. (Ed.). (2008). Alternative assessments with gifted and talented students. Waco, TX: Prufrock.
- Walcott, H. (1997). Ethnographic research in education. In R. Jaeger (Ed.). Complementary methods for research in education (pp. 187-249). Washington, DC: American Educational Research Association.
- Webb, K. (2008). Drawing on multiple intelligences to teach special populations. In Y. Freeman, D. Freeman, R. & Ramirez (Eds.), Diverse learners. Portsmouth, NH. Heinman.
- World-Class Instructional Design and Assessment [WIDA] (2011). WIDA can do descriptors by grade level clusters. Madison: University of Wisconsin. Retrieved from www.wida.us/standards/CAN\_Dos/

# Influence of Instructor's Attitudes, Gender, and Technology Training When Implementing Blended Learning

## Consuelo Villalon Nat Rasmussen

**Abstract:** Instructors with lack of experience and negative attitudes with technology might experience difficulties when implementing the blended learning method. This study explored the relationships between instructors' attitudes toward implementing blended learning and instructors' self-reported hours of technology training and differences in attitudes toward blended learning by gender. The results demonstrated a statistically significant (r = 0.45, p = 0.01) relationship between instructors' degree of technology training and the use of multimedia resources; and a statistically significant (r = 0.36, p = 0.05) relationship between instructors' degree of technology training and the instructor communication knowledge when using online learning activities. The study concluded the importance of instructors' technology training, expertise with technology, and knowledge of course content for the implementation of the blended learning courses. The results of the study may be significant to leadership by providing insightful information on instructors' best practice to implement a successful blended learning method.

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**Keywords:** blended learning, instructors' attitudes, technology training, gender

#### INTRODUCTION

The blended learning method is a combination of different learning environments that allow students to learn and instructors to teach more effectively. Allen and Seaman (2014) explained that the blended learning method, also known as hybrid learning methodology, combines the use of technology and face-to-face instruction to meet students' learning needs.

The blended learning method has emerged as an answer to higher education by allowing students to take advantage of flexible class schedules, network development, collaborative work with peers, active and reflective learning through the use of technology. The blended learning method provides instructors with the ability to connect academically and socially with their students. The implementation of the blended learning method requires a successful instructor's technology training program and the collaboration of instructors who have experience with the blended learning method (Deutsch, 2010; Ernest et al., 2013; Napier, Dekhane, & Smith, 2011). Technology training programs are

planned events designed to advance the instructors' understanding, attitudes, and abilities in their e-learning role (Reilly, Vandenhouten, Gallagher-Lepak, & Ralston-Berg, 2012). Instructors' attitudes toward blended learning method may influence implementation and use of the method differently. This research project analyzed the relationships between the six domains of instructors' attitudes toward implementing blended learning and the instructors' self-reported hours of technology training, the difference in the six domains of attitude toward the implementation of blended learning between females and males, and the difference in the instructors' self-reported hours of technology training for blended learning between female and male.

# CONCEPTUAL FRAMEWORK: RESEARCH QUESTIONS

The blended learning method could transform the way instructors teach, and students learn by giving the flexibility to create learning environments outside the classroom, such as students' homes or while traveling (Garrison & Vaughan, 2013; Imbriale, 2013). Exposure to different learning environments allows instructors to engage and interact with students with different learning styles (Dziuban, Hartman, Cavanagh, & Moskal, 2011). A review of the literature revealed that meaningful data are needed to acknowledge institutions about the importance of increasing instructor's competence with technology to implement a successful blended learning method. The quantitative study investigated the relationships and differences in instructors' attitudes toward implementing blended learning, and instructors' degree of technology training for blended learning by gender in a university located in the southwest region of the United States.

The following research questions guided the study: What is the relationship between instructors' attitudes toward implementing blended learning and instructors' degree of technology training for blended learning? What is the difference in the attitude toward the implementation of blended learning between female and male instructors? What is the difference of instructors' self-reported degree of technology training for blended learning between female and male instructors?

The constructivist approach has the potential to assist instructors with implementing the blended learning method. Administrative leaders must boost departmental collaboration with their peers to achieve and maintain a successful implementation of the blended learning method. Departments' collaboration potentially enhances program enrichment, cost avoidance, cost reduction, and the combination of different talents from instructors (Poon, 2012).

#### **METHODOLOGY**

#### Research Design

The quantitative correlational design was used for this study. Data were analyzed using bivariate correlations, analysis of variance (ANOVA) test, and independent samples t-test to address the research questions. A bivariate correlation was conducted to examine the relationship between instructors' degree of technology training in blended learning based on the number of self-reported training hours and the six domains of instructors' attitudes toward implementing blended. The six domains of instructors' attitudes toward implementing blended learning were (a) use of a variety of multimedia resources, (b) interface and collaboration, (c) instructors/facilitators, (d) understanding and

implementing, (e) research-based, and (f) assessment and evaluation (Douglas-Faraci, 2008). An ANOVA test was conducted to examine the difference in the attitude toward the implementation of blended learning (dependent variable) between female and male instructors (independent variable). The independent samples t-test was used to find if there was a significant difference between the instructors' self-reported hours of technology training (dependent variable) and female and male (independent variable). The independent variable was gender, and the dependent variable was the instructors' self-reported hours of technology training for blended learning.

#### Data Source

Participants in this research were instructors from a university situated in the southwest region of the United States, who had taught blended learning courses and completed the survey. The study received forty-seven unidentified instructors' responses to the survey, but incomplete responses were not used. The 33 completed responses were the only responses that were included in the current research study. The participants' gender demographic information was transformed into numerical values, number one for female and number two for male. See Table 1 for the participants' demographic data.

#### Participants and Data Collection Procedures

Participants in this research were instructors from a university situated in the southwest region of the United States, who had taught blended learning courses and completed the survey. The instructors meeting the criteria for the study received an electronic email invitation that included a web link to participate in the study. The instructors who agreed to participate in the study opened the SurveyMonkey link that included the consent form. If the participants chose to sign the consent form, the survey did open, if declined, did not open. Permission to use the E-Learning Professional Development Survey was obtained from the author. The modified survey designed by Douglas-Faraci (2008) assessed the relationships and differences in instructors' attitudes toward implementing blended learning and instructors' degree of technology training for blended learning by gender. After seven days, a reminder was sent to all participants to increase the number of completed responses.

Table 1: Participants' Demographic Data

Variable	Category	N	%	
Gender	Female	19	57.6	
	Male	14	42.4	
Age	26 - 38	8	24.24	
	39 - 51	8	24.24	
	52 - 64	13	39.39	
	65 - 72	4	12.13	
Highest Education Degree	Master's Degree	8	24.24	
	Doctoral Degree	25	75.76	
Full-time Instructor	Yes	25	75.78	
	No	8	24.24	
Number of BL Courses Taught	1 - 10 11 -21 22 -32 33 -43 missing	27 2 2 1 1	81.82 6.06 6.06 3.03 3.03	
Number of instructors who received training before teaching BL	Yes	18	54.5	
	No	15	45.5	
Number of taken technology training programs for BL	0	8	24.24	
	1.00 - 2.00	18	54.54	
	3.00 - 4.00	6	18.19	
	5.00 - 6.00	1	3.03	
Self-reported hours of technology training for BL	0 - 10.0 11.0 - 21.0 22.0 - 32.0 33.0 - 43.0 44.0 - 54.0 54.0 - 64.0 65.0 - 75.0	10 8 7 2 3 0 1 1	30.3 24.24 21.21 6.06 9.10 0 3.03 3.03 3.03	

**Note.** N = number of participants in each group; BL = blended learning

#### Data Analysis

Data analyses were conducted using Statistical Package for Social Sciences (SPSS) Version 24.0. Data results obtained from data collection were organized and coded before testing the hypothesis (Creswell, 2013). Data were analyzed and reported using correlation and inferential statistic measures. The instructors' self-reported hours of technology training for blended learning were used for the data analysis of variable instructors' degree of technology training. The scores of the 5-point Likert-type scale were used in the analysis of the instructors' attitudes toward implementing blended learning. The study used a total score for each of the six domains that included (a) use of a variety of multimedia resources, (b)

interface and collaboration, (c) instructors/facilitators, (d) understanding and implementing, (5) research-based, and (f) assessment and evaluation. For the first and sixth domain, scores were ranging from three to 15. For the second and third domain, scores were ranging from four to 20. For the fourth and fifth domain, scores were ranging from two to 10. For the negatively worded items, the study reversed the codes. Descriptive statistical techniques such as mean and standard deviation were used to describe the demographic data. The standard deviation was used to describe the variability of the six domains of instructors' attitudes toward implementing blended learning and instructors'

degree of technology training for blended learning. The completion of the Pearson correlation coefficient (r) test was used to analyze the relationships between the six domains of instructors' attitudes toward implementing blended learning and the instructors' self-reported hours of technology training for blended learning. The participants' demographic information was transformed into numerical values. The variable, instructors' degree of technology training for blended learning, was reported using hours as a numerical value. For the variable attitude toward the implementation of blended learning, the sum of the 5-point Likert-type scale scores obtained for each of the six domains was used for data analysis. The level of significance was a p-value of 0.05. An ANOVA test was conducted to examine the difference in the six domains of attitude toward the implementation of blended learning (dependent variable) between female and male instructors (independent variable). The attitudes toward the implementation of blended learning were divided into six domains including (a) use of a variety of multimedia resources, (b) interface and collaboration, (c) instructors/facilitators, (d) understanding and implementing, (e) research-based, and (f) assessment and evaluation (Douglas-Faraci, 2008). The independent-samples t-test was used to explore the difference between the instructors' selfreported hours of technology training for blended learning between females and males. The independent variable was gender, and the dependent variable was instructors' self-reported hours of technology training for blended learning.

#### **RESULTS**

The standard deviation was used to describe the variability of the six domains of instructors' attitudes toward implementing blended learning and instructors' degree of technology training for blended learning by gender. The instructors' self-reported number of hours of technology training in blended learning was used for the data analysis of the instructors' degree of technology training for blended learning. The total scores of the 5-point Likert-type scale were used in the analysis for each of the six domains of instructors' attitudes toward implementing blended learning. Table 2 represents the descriptive statistics for the self-reported hours of technology training for blended learning and the six domains of instructors' attitudes toward implementing blended.

#### **Research Question 1**

The Pearson correlation coefficient test was used to examine the relationship between instructors' attitudes toward implementing blended learning and instructors' degree of technology training for blended learning. The results showed a moderate relationship between instructors' degree of technology training and domain one: use of a variety of multimedia resources. The correlation was significant at (p = .01), 2-tailed. In addition, the results showed a moderate relationship between instructors' degree of technology training and

Table 2: Frequency Counts for the Self-reported Hours of Technology Training for Blended Learning and the Six Domains of Instructors' Attitudes Toward Implementing Blended Learning

Variable	M	SD	N	Minimum	Maximum
Self-reported hours of technology training for blended learning	17.54	23.32	33	0	100
Domain 1: use of a variety of multimedia resources	12.90	1.51	32	10	15
Domain 2: interface and collaboration	19.06	1.26	32	15	20
Domain 3: instructors/facilitators	17.33	2.13	33	12	20
Domain 4: understanding and implementing	8.24	1.56	33	4	10
Domain 5: research-based	8.34	1.45	32	4	10
Domain 6: assessment and evaluation	13.67	1.6	31	8	15

**Note.** M = mean; SD = standard deviation; N = number of valid responses.

domain three: instructor/facilitator knowledge and communication in learning activities, instructions, threaded discussions, and email. The correlation coefficient was significant at (p = 0.05), 2-tailed. The results showed no relationship between instructors' degree of technology training and domain two; interface and collaboration, domain four; understanding and implementing, domain six; assessment and evaluation, and domain five; research based. Therefore, the result of the research study provided support to reject the null hypothesis and failed to reject the alternative hypothesis. Table 3 presents the Pearson correlation coefficients for the variables instructors' degree of technology training and the six domains of instructors' attitudes toward implementing learning.

Table 3: Pearson Correlation Coefficients for the Variable Instructors' Degree of Technology Training and the Six Domains of Instructors' Attitudes Toward Implementing Learning

Six domains of it attitudes toward im	Domain 1	Domain 2	Domain 3	Domain 4	Domain 5	Domain 6	
Instructors' degree	r	.45**	.21	.36*	.30	.02	.26
of technology training for <i>BL</i>	Sig (2-tailed)	.01	.26	.04	.09	.90	.16
	N	32	32	33	33	32	31

**Note.** BL = Blended Learning; r = correlations coefficients; p = \*\*correlation is significant at p = 0.01, 2-tailed; P = \*correlation is significant at p = 0.05, 2-tailed; P = number of valid responses.

#### **Research Question 2**

An ANOVA test was conducted to examine the difference in the six domains of attitude toward the implementation of blended learning (dependent variable) between female and male instructors (independent variable). The attitudes toward the implementation of blended learning were divided into six domains including (a) use of a variety of multimedia resources, (b) interface and collaboration, (c) instructors/facilitators, (d) understanding and implementing, (e) research-based, and (f) assessment and evaluation (Douglas-Faraci, 2008). The significance levels for all the six domains of attitude toward the implementation of blended learning between male and female were (p > 0.05) level indicating that there is no statistically significant difference in attitudes held by male and female instructors. Table 4 will represent the results of the ANOVA test. (Next Page)

Table 4: Results of the One-way ANOVA Test for the Six Domains of Instructors' Attitudes Toward Implementing Learning between Female and Male Instructors

		Sum of		Mean		
		Squares	df	Square	F	Sig.
Use of Multimedia Resources	Between Groups	.07	1	.07	.03	.85
	Within Groups	70.64	30	2.35		
	Total	70.71	31			
Participant Interface	Between Groups	1.88	1	1.88	1.17	.28
and Collaboration	Within Groups	47.99	30	1.60		
	Total	49.87	31			
Instructor/	Between Groups	3.98	1	3.98	.87	.35
Facilitator	Within Groups	141.35	31	4.56		
	Total	145.33	32			
Understanding and	Between Groups	1.61	1	1.61	.65	.42
Implementing	Within Groups	76.44	31	2.46		
and Collaboration  Instructor/ Facilitator  Understanding and	Total	78.06	32			
Use of Research	Between Groups	2.58	1	2.58	1.23	.27
	Within Groups	62.63	30	2.08		
	Total	65.21	31			
	Between Groups	3.57	1	3.57	1.41	.24
Evaluation	Within Groups	73.19	29	2.52		

**Note.** Sum of Squares = sum of the squares of the deviations of all the observations, from their mean; df = degrees of freedom;  $Mean\ Square$  = division of the sum of squares by the respective degrees of freedom; F = ratio of two variances; A B = significance level.

Table 5: Independent T-Test for Instructors' Self-reported Degree of Technology Training for BL between Female and Male Instructors

	Gender	N	Mean	SD	SE Mean
Self-reported Degree of Technology Training for BL	Female	19	20.15	26.29	6.03
between Femal and Male Instructors	Male	14	14.00	18.91	5.05

**Note.** N = number of participants by gender; Mean = mean of hours of technology training in BL within last five years; SD = standard deviation; SE Mean = standard error mean.

#### **Research Question 3**

This study used the independent-samples t-test to find if there was a significant difference between the instructors' self-reported hours of technology training for blended learning between females and males. The independent variable was gender, and the dependent variable was instructors' self-reported hours of technology training for blended learning by gender. To ensure equivalency, the t-test of independent samples used (p < 0.05) as the level of significance to compare the instructors' self-reported degree of technology training for blended learning between female and male instructors. Table 5 presents the group statistics for instructors' self-reported degree of technology training for blended learning between female and male instructors.

Table 6 includes the results of the Independent sample t-test. According to the Levene's test results, the t value selected was 0.74, assuming equal variance. The significance levels for the instructors' self-reported degree of technology training for blended learning between female and male instructors were p > 0.05 level indicating that there is no statistically significant difference in instructors' self-reported degree of technology training for blended learning held by female and male instructors.

Table 6: Independent Samples T-test by Gender for Self-reported Hours of Technology Training Towards Blended Learning

Levene's Test for Equality of

Variances t-test for Equality of Means

						Sig. 2-	Mean	Std. Error	95% Confidence Interval of the Difference		
		F	Sig	t	df	tailed	Difference	Difference	Lower	Upper	
Self-reported hours of technology training towards blended learning	Equal variances assumed	.35	.55	.74	31	.46	6.15	8.27	-10.71	23.02	
	Equal variances not assumed			.78	30	.44	6.15	7.87	-9.89	22.21	

**Note.** F = is the statistic test of Levene's test; Sig = p-value; t = result of the independent sample t-test; df = degrees of freedom; Sig. 2- tailed = value of the two variables means that show if they are statistically different;  $Mean\ Differences = difference$  of the two independent variables means; Std.  $Error\ Difference = Difference$  between the two standard errors of the two variables; 95% Confidence Interval of the Difference = significance test results.

#### CONCLUSIONS AND IMPLICATIONS

The Pearson correlation coefficient result (r = 0.45) showed a moderate relationship between instructors' degree of technology training and domain one: use of a variety of multimedia resources. The correlation was significant at (p = 0.01), 2-tailed. In addition, the Pearson correlation coefficient result (r = 0.36) showed a moderate relationship between instructors' degree of technology training and domain three: instructor/ facilitator knowledge related to communication in learning activities, instructions, threaded discussions, and email. The correlation coefficient was significant at (p = 0.05), 2-tailed. The results showed no relationship between instructors' degree of technology training and domain two; interface and collaboration, domain four; understanding and implementing, domain six; assessment and evaluation, and domain five; research based. The current research study supports the research findings of Garrison and Vaughan (2013) who found that the instructors' attitudes on implementing the blended learning method might differ according to their level of knowledge in technology. The case study found the importance of institution leaders to include faculty-technology-training programs for the implementation or redesign of blended learning courses. This study also supports the findings of Deutsch (2010) global qualitative phenomenological study that explore instructors' experiences when implementing technology in blended learning. The study found that instructors who do not understand the use of technology would face challenges in designing courses, accurately assessing course effectiveness, and performing course evaluation. In addition, the current study supports the interpretation of Moukali (2012) who found that the instructors with more technology experience were a significant contributor to the positive attitude toward implementing blended learning. Reilly et al. (2012) conducted a literature review of instructors' development of online learning platforms. The findings of the study were that some contributors to the negative attitudes toward implementing online learning were the change of instructors' role, limited face-to-face contact with students, increased workloads, and time to learn the technology skills (Reilly et al., 2012). Johnson-Martin's (2013) quantitative descriptive study that used a survey to collect data and the constructivist approach. The aim of the study was to assess the technology training on career and technical education. The study found that 70% of instructors who received technology training develop positive perceptions on technological practices and computer self-efficacy. At the same time, Blanchette (2016) found that the instructors' technology training helped instructors develop a positive attitude toward the implementation of technology in the blended learning environment. It is important for instructors to acknowledge the influence of their perceptions in the blended learning course development. Instructors need to be aware of the advantage of the blended learning modalities to improve the attitude toward the facilitator role and the blended learning method (Blanchette, 2016). However, instructors who belong to learning communities are willing to venture into new teaching method because they have the support and collaboration of their peers that share the same endeavors (Ikhwan, 2011). Instructors working in a professional learning community share best practices, evaluation methods, and enhance their confidence when reaffirming consistency between colleagues and classes (Adams & Vescio, 2015). Education leaders can foster the formation of instructors' communities of practice to improve collaboration, collective inquiry, and dialogic exchanges (Ikhwan, 2011). The results of the one-way ANOVA test showed that the significance levels for all the six domains of attitude toward the implementation of blended learning between male and female were (p > 0.05) indicating that there is no statistically significant difference in attitudes toward implementing blended learning held by male and female instructors. In a mixed method research study, Brooks (2009) conducted a mixed method study that examined the attitude toward blended learning about the online component and the traditional face-to-face interface. Brooks (2009) found that instructors with positive perceptions toward educational technology have a positive attitude toward blended learning method. The female instructors tend to have a more positive attitude toward blended learning than male. The current research study supported Moukali (2012) mixed method that found that females and males had a positive attitude toward the blended learning method. In addition, this study supports Harb, Abu Bakar, and Krish's (2014) quantitative study that identified gender differences in attitudes using technology to learn language skills. The study found that there is no difference in attitudes towards language learning using technology mode. Both genders reduced the anxiety by the end of the course. The analysis of the independent sample t-test found that the significance levels for all the instructors' self-reported degree of technology training for blended learning between female and male instructors were (p > 0.05). The analysis indicated that there is no statistically significant difference in instructors' self-reported degree of technology training for blended learning held by male and female instructors. The following studies will provide valuable information about instructors' degree of technology training as a challenge for blended learning implantation without taking into consideration the gender. Welch (2011) conducted a qualitative phenomenological study to examine the instructors' technology training received to teach in a blended learning environment. The study found that instructors could commit to adopting new technology when they receive the appropriate training. Welch found that (100%) of the instructors participating in the course program development were willing to adopt new technology within one year. However, the study found that instructors needed comprehensive training that included technology, teaching skills, and pedagogical development (Welch, 2011). Conti (2012) conducted a study with the purpose to investigate the needed skills and best practices for instructors' success in the online environment. The study used a mixed method Delphi and an internet-based survey to collect data following the social constructivism and connectives theories to find that instructor required effective integration of new and existing technology to manage the virtual classrooms. The study found important the collaborative interface among students and instructors and personalized learning (Conti, 2012).

The following studies will provide valuable information about instructors' degree of technology training as a challenge for blended learning implantation taking into consideration the gender. Khechine et al. (2014) conducted a quantitative study that included the collection of information from participating instructors, using a seven-point Likert-type scale questionnaire. The purpose of the study was to evaluate a blended learning course using a particular webinar system, including the effectiveness by gender. The study outcome did not find differences in gender. The analysis of the information provided practical awareness by reflecting that the major reason for instructors taking the blended course using webinar was the efficient academic performance, easy access, and use. Teo et al. (2015) qualitative study that used a questionnaire for data collection. The participants were 339 pre-service instructors attending a professional development program. The purpose of the study was to find gender differences in the technology acceptance. The study found no gender differences in perceived usefulness, attitudes toward technology use, and intentions to technology use. The literature review revealed that the degree of technology training by gender as a challenge for implementing blended learning indicated that there are no gender differences in the perceived usefulness and intentions to technology use. Based on the results, one could conclude the instructors' degree of technology training revealed the importance of continual and systematic technology training. The technology training programs will support instructors during their role shift from lecturer to facilitator. In addition, the study acknowledged that it is important to take into consideration the instructor's expertise with technology and the knowledge of course content for the implementation of the blended learning course (Maloney et al., 2015).

#### **Generalizations**

The findings of this study could not be generalized because the results were obtained from instructors who taught blended learning courses in one university that was in the southwest region of the United States, which may be inapplicable to other geographical areas. The information shared by participants was specific to the current study and was not generalizable to a larger population. The study was limited to the number of instructors who teach blended learning courses and were willing to participate. The second limitation was the participants' ability and willingness to respond openly and honestly to the survey questions. The third and final limitation was the participants' selection bias. There was no assurance that the sample participants had the same characteristics as the ones that did not participate.

#### Implications of the Study to Leadership

The study has significant implications for education administrators, instructional leaders, information system designers, and developers of technology training courses. Administrators may use the results of this study to justify the extra expenses of technology training developmental courses to archive the best practice for blended learning. In addition, administrators may be able to use findings to help justify the technical support expense for instructors developing and teaching the blended learning courses. Instructors who received continuing technical assistance may feel more assertive during the implementation of blended courses. All supportive administrative efforts with the instructors' master the technology skills will contribute to students' success. By the achievement of best practice for blended learning, students will have flexible class schedules, network development, collaborative work with their peers, and active and reflective learning with technology (Chitanana, 2012; Nagel, Maniam, & Leavell, 2011). Moreover, leaders in educational institutions can use the findings from this study to enhance positive changes such as increased instructors' technology training to enhance the use of a variety of multimedia resources and the instructor/facilitator knowledge related to communication in learning activities, instructions, threaded discussions, and email.

#### Implications for Future Study

One recommendation could be that educational leaders can schedule periodic surveys to measure the instructors' level of confidence with technology and the attitudes toward the blended learning. The study outcomes open the opportunity to more researchable questions. The first recommendation is that the current study included surveys but not interviews. Future studies may consider a mixed method study. The addition of qualitative data could enhance the outcomes of the current quantitative research study by exploring the attitudes toward implementing blended learning and instructors' experience with the technology training received. The second recommendation is to conduct a quantitative study with a larger sample. The new quantitative study could involve other educational institutions with a higher number of instructors teaching blended learning to enhance the generalizability of the research findings. The third recommendation is that future studies explore the relationship between instructors' attitudes toward teaching blended learning and students' attitudes toward taking blended learning. The outcomes of the study could corroborate the finding of blended learning, allowing students to take advantage of flexible class schedules, network development, collaborative work with peers, and reflective learning with the use of technology (Chitanana, 2012; Nagel et al., 2011). The fourth recommendation is the inclusion of the differences between attitudes toward implementing blended learning and technology training by full-time and parttime instructors in addition to gender. The data analysis found that the participants in the current study reported that (75.8%) were full-time and (24.2%) were part-time instructors. The instructors who have taught one or two blended learning courses were (34.4%). Almost (50%) of the instructors start teaching blended learning within one year, and (54.5%) did not receive training before they started teaching blended learning. The outcomes showed that (24.2%) of the participants had taken zero hours of technology training. This percentage concurs with the percentage of part-time instructors, but this study cannot assure that faculty that reported zero hours of technology training were part-time instructors. The fifth recommendation is the replication of the current quantitative correlational study but having a specific question of each of the different multimedia resources. The specificity of the multimedia resources may provide the opportunity to explore which of all the multimedia resources has a relationship with the self-reported hours of technology training in blended learning.

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## REFERENCES

- Adams, A., & Vescio, V. (2015). Tailored to fit: Structure professional learning communities to meet individual needs. Journal of Staff Development, 36(2), 26. Retrieved from http://eric.ed.gov/?id=EJ1059933
- Allen, I. E., & Seaman, J. (2014). Grade change: Tracking online education in the United States. Retrieved from http://www.utc.edu/learn/pdfs/online/sloanc-report-2014.pdf
- Blanchette, K. (2016). Investigating faculty management of shifting roles in blended learning environments (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 10102202)
- Brooks, L. (2009). An analysis of factors that affect faculty attitudes toward a blended learning environment (Doctoral dissertation, Trident University International). Retrieved from http://search.proquest.com/docview/288446337?accountid=4488
- Chitanana, L. (2012). A constructivist approach to the design and delivery of an online professional development course. International Journal of Instruction, 5(1), 23-48. Retrieved from http://www.e-iji.net/dosyalar/iji\_2012\_1\_2.pdf
- Conti, M. J. (2012). The online teaching skills and best practices of virtual classroom teachers: A mixed method delphi study (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3429155)
- Deutsch, N. (2010). Instructor experiences with implementing technology in blended learning courses in higher education (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3429155)
- Douglas-Faraci, D. (2010). A correlational study of six professional development domains in e-learning teacher professional development. MERLOT Journal of Online Learning and Teaching, 6(4), 754–766. Retrieved from http://jolt.merlot.org/vol6no4/douglas-faraci\_1210.pdf
- Dziuban, C., Hartman, J., Cavanagh, T., & Moskal, P., (2011). Blended courses as drivers of

- institutional transformation. Blended Learning Across Disciplines: Models for Implementation, 2, 17-37. doi:10.4018/978-1-60960-4790
- Ernest, P., Guitert Catasús, M., Hampel, R., Heiser, S., Hopkins, J., Murphy, L., & Stickler, U. (2013). Online teacher development: Collaborating in a virtual learning environment. Computer Assisted Language Learning, 26(4), 311-334. doi:10.1080/09588221.2012.667814
- Garrison, D. R., & Vaughan, N. D. (2013). Institutional change and leadership associated with blended learning innovation: Two case studies. Internet and Higher Education, 18, 24-28. doi:10.1016/j. iheduc.2012.09.001
- Harb, J., Abu Bakar, N., & Krish, P. (2014). Gender differences in attitudes towards learning oral skills using technology. Education and Information Technologies, 19, 805-816. doi:10.1007/s10639-013-9253-0
- Ikhwan, S. N. (2011). A qualitative ethnographic study of how teachers who participate in professional learning communities construct knowledge (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3451133)
- Johnson-Martin, P. (2013). The effect of training on teacher's computer self-efficacy and technology practices: A descriptive study (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3538844)
- Khechine, H., Lakhal, S., Pascot, D., & Bytha, A. (2014).

  UTAUT model for blended learning: The role of gender and age in the intention to use webinars.

  Interdisciplinary Journal of E-Learning and Learning Objects, 10(1), 33-52. Retrieved from http://www.ijello.org/Volume10/IJELLOv10p033-052Khechine0876.pdf
- Maloney, S., Nicklen, P., Rivers, G., Foo, J., Ooi, Y. Y., Reeves, S., Walsh, K., & Illic, D. (2015). A cost-effectiveness analysis of blended versus face-to-face delivery of evidence-based medicine to medical students. Journal of Medical Internet Research, 17, 182. doi:10.2196/jmir.4346

- Moukali, K.H (2012). Factors that affect faculty attitudes toward adoption of technology-rich blended learning (Doctoral dissertation, University of Kansas). Retrieved from https://www.learntechlib.org/p/124756/
- Nagel, S. L., Maniam, B., & Leavell, H. (2011). Pros and cons of online education for educators and students. International Journal of Business Research, 11(6), 136-142. Retrieved from http://www.freepatentsonline.com/article/International-Journal-Business-Research/272485035.html
- Napier, N. P., Dekhane, S., & Smith, S. (2011). Transitioning to blended learning: Understanding students and faculty perceptions. Journal of Asynchronous Learning Networks, 15(1), 20-32. Retrieved from http://eric.ed.gov/?id=EJ918216
- Poon, J. (2013). Blended learning: An institutional approach for enhancing students' learning experiences. Journal of Online Learning and Teaching, 9, 271. doi:10.1108/02637471311295405
- Reilly, J., Vandenhouten, C., Gallagher-Lepak, S., & Ralston-Berg, P. (2012). Faculty development for e-learning: A multi-campus community of practice (COP) approach. Journal of Asynchronous Learning Networks, 16, 99-110. Retrieved from http://eric.ed.gov/?id=EJ971047
- Teo, T., Fan, X., & Du, J. (2015). Technology acceptance among pre-service teachers: Does gender matter. Australasian Journal of Educational Technology, 31, 235-251. doi:10.14742/ajet.1672
- Welch, J. (2011). The influence of blended learning faculty development on traditional teaching practices (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3467484)

# Twitter as a Professional Development Tool for Teachers and Aspiring Teachers: A Review of Literature

## **Christine Reilly**

Abstract: Social media has become a common method to communicate in today's society. The widespread use of these communication tools has permeated the education profession. Both teachers and future teachers collaborate and share their expertise through sites such as Facebook, Pinterest, and Twitter. Twitter's platform allows educators from around the world to collaborate and contribute their expertise related to various educational topics. This literature review begins to explore what the research says about how teachers and aspiring teachers use Twitter to contribute to their professional learning. With the ubiquitous nature of Twitter, future teachers' education should include current practices that could benefit them as they begin their journey into this ever-changing field. Current research is limited on the impact that Twitter has on teacher candidates' learning and academics. Future research is needed to determine the ways aspiring teachers use Twitter as they are made aware of how this social media tool can contribute to and inform their continuous professional development.

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Keywords: Twitter, Professional, Development, Pre-Service Teachers, Social Media, Technology

#### INTRODUCTION

Social networking sites can be defined as "web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system" (Ellison & Boyd, 2007, p. 211). Sites, such as Facebook, Pinterest, YouTube, Twitter, Ning, and Educators PLN, are beginning to be used as a resource for teachers and teacher candidates. These sites provide opportunities for educators to connect and collaborate with others from around the globe. Connections can be made based on interests, grade levels, subject areas, and other criteria. Teachers and teacher candidates also use sites such as these to find ideas that can help them plan and teach lessons. Current trends in education are discovered within these sites, which invite educators to use them in their classroom. The National Education Technology Plan Update (2017) calls for social networking sites to play a central role in the preparation and ongoing development of teachers. The plan emphasizes that collaborating with educators can

now expand past their own school's walls to educators across the country. By using social networks, teachers' professional development can be considered an ongoing activity that can be a vehicle to expand communication with mentors, peers, and colleagues.

Hur and Brush (2009) attribute participation in such networks to sharing the many emotions associated with teaching, having a safe place to communicate situations that may be uncomfortable to discuss in school, combat isolation, explore teaching resources and strategies, and to experience a sense of camaraderie. Teachers are interacting with learners that share their same interests and may share their same concerns or issues. Teachers are able to seek other professionals in the field that can support them and be a resource as they navigate their teaching responsibilities. This type of self-directed learning allows for the much needed and sometimes lacking type of professional development. These social media sites provide the catalyst for educators to develop relationships with those that share the same passions. Educators begin to seek out Personal Learning Networks (PLN), sometimes referred to as a "Professional" Learning Networks, which are always available.

Beginning to make connections through these networks allows professional development opportunities to grow and evolve. No longer do these opportunities require scheduled times and limited topics, but are now made just as available as a Google search.

## TEACHERS: PROFESSIONAL LEARNING VIA TWITTER

One such site that could provide professional learning opportunities is Twitter. Twitter, founded in 2006, is an online social networking service that enables users to send and read 280-character messages called "tweets" (Twitter, n.d.). This information-networking tool is a forum to post a topic or discussion (Bista, 2015). These messages can contain text, photos, videos, and links to websites. Their mission is to give everyone the power to create and share ideas and information instantly, without barriers. Users can also share a tweet, favorite a tweet and retweet. In addition, users can also use hashtags, a way to label and organize tweets, within their tweets and also follow hashtags and fellow users based on interests. Conducting a search using a hashtag allows users to find the specific information they are looking for. They can also participate in a chat related to their interests where users can collaborate with others that share the same interests. As of June 2016, there were 313 million active users with 79% accounts located outside the US (Twitter, n.d). This social media site allows teachers to make connections both locally and globally. Educators are beginning to see the benefits of connecting virtually as a form of professional development.

Teachers using this social media site have the opportunity to interact with their peers that share their same interests. They may even share their same concerns or issues they are faced with. Using such networks allow connections to be made that are supportive and timely. Teachers are able to seek other professionals in the field that can support them and be a resource as they navigate their teaching responsibilities. This type of self-directed learning allows for the much needed and sometimes lacking kind of professional development that is seen as continuous and collaborative.

The professional learning that takes place within Twitter is not bound by the limitations of traditional professional development. Experts from the field can be reached quickly, questions can be answered in a timely manner, and resources can be found on a network available in different parts of the world. Professional development is no longer limited by distance or time (Carpenter & Krutka, 2014; Chesbro & Boxler, 2010).

Twitter also allows teachers to go beyond their current school district for advice and support, peer mentoring, and collaboration (Riser, 2013). Riser (2013) found that the teachers' networks primarily consisted of distant teachers, teachers that were outside of their school and district. Since educators are not bound by time and place, teachers exercise their autonomy to select when and where they will participate. The idea is that educators have the opportunity to make decisions for their own learning based on their specific needs. Since teachers may not have control of the professional development that they attend, school administrations and school districts will hopefully begin to see the benefits of this type of teacher learning with teachers involving themselves with topics that are of value to them. Twitter is considered a "bridging mechanism among largely isolated/fragmented educator networks" (Forte, Humphries, & Clark, 2012, p. 112). A benefit to this type of professional development is that the individual can control the level of interaction and the amount of learning that results from it (Holmes, Preston, Shaw, & Buchanan, 2013). Holmes et al. (2013) found this type of professional development to be effective because it is continuous. This continuous and collaborative professional learning is most effective that that which happens in isolation (Carpenter & Krutka, 2014; Holmes et al., 2013). Twitter was described as being superior to traditional professional development (Carpenter & Krutka, 2014).

Studies have shown that that professional use of Twitter has had an impact on classroom practice (Visser, Evering, & Barrett, 2014). Visser et al.'s (2014) mixed-methods study found that teachers used Twitter primarily for professional use rather than personal use. Teachers within this study used Twitter, particularly for professional development. Forty-one percent of the teachers reported using Twitter multiple times a day for professional use. Additionally, in a study by Forte et al. (2012), the idea of teachers building connections with those they collaborated with through Twitter correspondence was explored. Teachers expressed that Twitter was "a source for new ideas and a way of keeping abreast of educational technologies in particular" (p. 110). Many found Twitter users to be "reform-minded, open to change, and interested in restructuring their local communities environment to include web-based and social media tools" (Forte et al., 2012, p. 110). Twitter is a place where educators are receiving information that is current and may be groundbreaking in their field. By following leaders in the field, a network of educators, in addition to current and relevant teaching materials being made available (Holmes et al., 2013), an ongoing, proactive professional learning atmosphere is available.

Veletsianos' (2011) findings indicate that within Twitter leaders in our field seek help from this network while having a forum to share their academic work.

### TEACHER CANDIDATES: PROFESSIONAL LEARNING VIA TWITTER

While most research studies focus on in-service teachers connections with Twitter, there are a few that include teacher candidates' use. These studies indicated how the use of Twitter can create a sense of community and allow for professional learning opportunities.

Sense of community. Studies have shown that teacher candidates have been able to increase their sense of community within their classes via Twitter (Lemon, 2015; Preston, Jakubiec, Jones & Earl 2015; Wright 2010; Carpenter, 2015). Lemon (2015) found that the participants could see the unlimited learning possibilities that were available as their network of professionals were extended beyond the classroom. "The intertextuality of Twitter supports multiple learning dispositions through its capacity to place written text and visual media (images and/or video) side by side to represent meaning making" (Lemon, 2015, p. 209). Conversations inspired by classroom interactions were continued via Twitter. Lemon (2015) found that varying perspectives that were seen within tweets were integrated into the delivery of the course. A sense of community was built as these students engaged in their reflection through their microblog and engaged through the class hashtag. Similarly, Preston, et al. (2015) found that Twitter enhanced teacher candidates' community as well as their collaboration and communication. While students were initially hesitant about using this tool to communicate with the instructor and other students, their attitudes changed. Twitter was found to help students stay engaged with assignments with tweets becoming topics of discussion. Students were active in their learning, which led to an increased feeling of community. In a study by Carpenter (2015), students felt the same sense of community while they connected to the experts in the field. Teacher candidates found that connections to other educators can easily be made as they are interacting with the tool through daily tweets and participating in chats. This interaction extended conversations that took place during class. Furthermore, these students saw Twitter as a place where professional growth can take place (Carpenter, 2015). Wright (2010) explored the benefits of Twitter for self-reflection during teacher candidates' teaching practicum. reported that because of Twitter's character limitation, their reflective thinking was refined as they composed

their tweets. As a result, a sense of community was fostered, as they all were required to tweet three times a day. The content of their tweets was usually related to how their lessons went in the field, which was relatable to everyone.

Professional learning opportunities. In addition to building community, studies have shown teacher candidates realize Twitter's informal professional learning opportunities that are available (Bista, 2015; Carpenter, 2015; Mills, 2014). A study by Bista (2015) focuses on pre-service teachers' use of Twitter for professional development opportunities as they transition to becoming teachers. These students, forty-two in all, did not initially see the benefits of using Twitter as a learning tool and to support their class assignments, they later found that using Twitter provided a forum for learning (Bista, 2015). This study found that Twitter participants shared their positive views regarding the usage of Twitter for developing a professional network. Similarly, Mills (2014) reported preservice teachers during their internship recognized the benefits of this informal professional development. Twitter was incorporated into classroom pedagogy as a place to go to encounter professional development opportunities where students could share resources on pedagogy, current educational technology and also possible job openings. While these students only interacted with the students within this class, the findings indicated that the main benefit of Twitter was learning about resources in the classroom, learning about new classroom strategies, and learning about new technologies. Although their tweets were protected and the instructor made the decision as to the information that was posted via the tweets, the topics related to the class content was discussed with the students. These students considered Twitter to be an inspiration. This study sought to encourage professional learning, even though the content was somewhat controlled. In a study by Lin, Hoffman, & Borengasser (2013), Twitter was used as a supplement to online and face-to-face classes. Since Twitter was used to voluntarily share information with classmates related to the course material, students were not as motivated to interact with this forum since the content did not go beyond the class.

#### **CONCLUSION AND FUTURE STUDIES**

While some may use Twitter's social media platform for personal reasons they may not realize the opportunities Twitter has for educators. Future studies should examine teacher candidates' use of Twitter and its' various tools when given strategies to use this social media platform

to inform their professional learning. While Twitter has been used to build community and provide professional learning opportunities, more research is needed to understand how this collaborative approach to learning can benefit teacher and teacher candidates' knowledge and how that is applied. This author is currently conducting a study, which will determine if and how teacher candidates use this popular social media tool to inform their personal learning.

## REFERENCES

- Bista, K. (2015) Is Twitter an effective pedagogical tool in higher education? Perspectives of education graduate students. Journal of the Scholarship of Teaching and Learning, 15(2), 83-102.
- Carpenter, J. (2015). Preservice teachers' microblogging:
  Professional development via Twitter.
  Contemporary Issues in Technology and
  Teacher Education, 15(2), 209-234.
- Carpenter, J. P., & Krutka, D. G. (2014). How and why educators use Twitter: A survey of the field. Journal of Research on Technology in Education, 46(4), 414-434.
- Chesbro, P., & Boxler, N. (2010). Weaving the fabric of professional development in the 21st century using technology. Journal of Staff Development, 31(1), 48-53.
- Ellison, N. B., & Boyd, D. (2007). Social network sites: Definition, history, and scholarship.
- Forte, A., Humphreys, M., & Park, T. (2012). Grassroots professional development: How teachers use Twitter. Retrieved from http://www.aaai.org/ocs/index.php/ICWSM/ICWSM12/paper/view
- Holmes, K., Preston, G., Shaw, K., & Buchanan, R. (2013). "Follow" me: Networked professional learning for teachers. Australian Journal of Teacher Education, 38(12), 55-65.
- Hur, J. W., & Brush, T. A. (2009). Teacher participation in online communities: Why do teachers want to participate in self-generated online communities of k–12 teachers?. Journal of Research on Technology in Education, 41(3), 279-303.
- Lemon, N. (2015). Pre-Service Teachers Engaging with Twitter as a ProfessionalOnline Learning Environment. In Student-Teacher Interaction in Online Learning Environments (p. 204-234). IGI Global.
- Lin, M. F. G., Hoffman, E. S., & Borengasser, C. (2013). Is social media too social for class? A case study of Twitter use. TechTrends, 57(2), 39.

- Journal of Computer-Mediated Communication, 13(1), 210-230.
- Mills, M. (2014). Effect of faculty member's use of Twitter as informal professional development during a preservice teacher internship. Education, 14(4), 451 467.
- Preston, J. P., Jakubiec, B. A., Jones, J., & Earl, R. (2015). Twitter in a Bachelor of Education course: Student experiences. LEARNing Landscapes, 8(2), 301-317.
- Risser, H. S. (2013). Virtual induction: A novice teacher's use of Twitter to form an informal mentoring network. Teaching and Teacher Education, 35, 25-33.
- Ross, C.R., Maninger, R.M., LaPrairie, K.N, & Sullivan, S. (2015). The use of Twitter in t h e creation of educational professional learning opportunities. Administrative Issues Journal: Connecting Education, Practice, and Research, 5(1), 55-76.
- Twitter. (n.d.). Retrieved October 15, 2 0 1 5, from https://twitter.com/US Department of Education. (2017).
- Reimaging the Role of Technology in Education: 2017 National Education Technology Plan Update. Retrieved from http://tech.ed.gov.
- Veletsianos, G. (2012). Higher education scholars' participation and practices on Twitter. Journal of Computer Assisted Learning, 28(4), 336-349.
- Visser, R. D., Evering, L. C., & Barrett, D. E. (2014). #
  Twitterforteachers: The implications of Twitter
  as a self-directed professional development
  tool for k–12 teachers. Journal of Research on
  Technology in Education, 46(4), 396-413.
- Wright, N. (2010). Twittering in teacher education: Reflecting on practicum experiences. Open Learning, 25(3), 259-265.