

Electronic Theses and Dissertations, 2004-2019

2019

Utilizing Asynchronous Online Modules to Educate Preservice Teachers to Address Bullying Behaviors for Elementary Students with Autism Spectrum Disorder

Jaime Best University of Central Florida

Part of the Special Education and Teaching Commons
Find similar works at: https://stars.library.ucf.edu/etd
University of Central Florida Libraries http://library.ucf.edu

This Doctoral Dissertation (Open Access) is brought to you for free and open access by STARS. It has been accepted for inclusion in Electronic Theses and Dissertations, 2004-2019 by an authorized administrator of STARS. For more information, please contact STARS@ucf.edu.

STARS Citation

Best, Jaime, "Utilizing Asynchronous Online Modules to Educate Preservice Teachers to Address Bullying Behaviors for Elementary Students with Autism Spectrum Disorder" (2019). *Electronic Theses and Dissertations*, 2004-2019. 6721.

https://stars.library.ucf.edu/etd/6721



UTILIZING ASYNCHRONOUS ONLINE MODULES TO EDUCATE PRESERVICE TEACHERS TO ADDRESS BULLYING BEHAVIORS FOR ELEMENTARY STUDENTS WITH AUTISM SPECTRUM DISORDER

by

JAIME L. BEST B.S. Bridgewater State University, 2005 M.S.Ed Simmons College, 2014

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the College of Community Innovation and Education at the University of Central Florida

Orlando, Florida

Fall Term 2019

Major Professor: Eleazar Vasquez

© Jaime Best 2019

ABSTRACT

Due to social and communication deficits, individuals with Autism Spectrum Disorder (ASD) are targeted for school bullying more than other populations. With an increased number of individuals with ASD being served in general education classrooms, teachers are at the front line of defense for this vulnerable population. Many teachers and preservice teachers lack experience and self-confidence when dealing with situations related to individuals with ASD in their inclusive classrooms. While research on educating preservice teachers to deal with bullying behaviors is limited, the importance of providing high-quality teacher preparation programs for upcoming teachers remains at the upmost importance. The purpose of this study was to examine the effects of three online modules on preservice teachers' ability to identify and respond appropriately to situations of bullying involving individuals with ASD in their classroom. This study utilized an experimental group design to determine the impact of the modules for participants in the treatment group compared to participants in the control group who received a prerecorded lecture on the topic of bullying in schools. The researcher found this intervention to have a positive change between the pre-test and the post-test for participants receiving the modules; however, the results were not statistically significant.

This dissertation is dedicated to my loving and supportive husband, Cory, and our three boys, Parker, Spencer, and Drew. Your love, sacrifice, and support are what carried me through this journey. Thank you for being my compass and never letting me lose sight of my dreams.

Also, to my mom, Angela, my pillar of strength who taught me and my siblings the value of hard work and commitment and the importance of setting personal goals and striving each and every day to reach them. Thank you for being an extraordinary example and the wind beneath our wings. I love you.

ACKNOWLEDGMENTS

To my Heavenly Father to which I owe everything.

To my encouraging and devoted husband, Cory, and our three boys, Parker (14), Spencer (10) and Drew (11 months). This journey was not only mine, but ours, and I couldn't have done it without any of you. I love you all so much.

To my sister, Tara- in ordinary circumstances the younger sister looks up to the older sister and wants to tag along and follow in her footsteps; however, for as far back as I can remember, I have admired you. Thank you for giving me a role model to look up to and for setting the bar high when it comes to overcoming obstacles and not letting anything stand between you and your dreams. You're an inspiration and I love you.

To my brother, Craig- from kindergarten through high school you always paved the way for me. As I got older and you weren't there to clear my path, I secretly missed you. I remember the night before ninth grade, you stayed awake and answered all my questions and calmed all my freshman fears—the little things I didn't completely appreciate in the moment, but years later realize how important they were. Thank you for being a great big brother and paving the way to where I am today. I love you.

To my family, parents, and in-laws- your love, time, and dedication made this an endurable journey. Thank you for always offering a helping hand (and ear) and never letting us go hungry. It definitely "takes a village" and I feel so blessed to have each and every one of you in ours. I love you.

To Elaine and Melanie- leaving Drew in loving arms made this journey as a mother and scholar endurable. It was a comfort to know he was surrounded by people who cared for him and loved him as their own. I am forever grateful for your loving hearts.

To Morgan- thank you for being my lifeline on so many occasions. It was reassuring to have a buddy, who not only got me, but could make me understand statistics better than anyone in the world. Thank you for never being too busy and for always making time for my statistical dilemmas. You're the best.

To my chair, Dr. Eleazar Vasquez-You have a positive way of pushing me out of my comfort zone, while making me strive for excellence. Thank you for believing in me and encouraging me through this journey.

To my committee members, Dr. Lisa Dieker, Dr. Matt Marino, and Dr. Chad Rose-Thank you for sharing your knowledge and expertise with me. I feel privileged to have had the opportunity of knowing you and learning from you. This experience was truly a blessing. Thank you for believing in me and partaking in one of my greatest endeavors. I am forever grateful.

TABLE OF CONTENTS

LIST OF FIGURES	ix
LIST OF TABLES	x
CHAPTER 1: INTRODUCTION	1
Background and Study Significance	
Types and Topographies of Bullying	
School Bullying	
Bullying Dynamic	
Interventions/Approaches to Address Bullying	
Bullying Interventions	
Multimedia Supports	
Video Modeling	
Bug-in-Ear Coaching	
Wearable Technology	
Simulation and Social Skills	
Teachers and Bullying	
Theoretical Framework	
Purpose Statement	
Research Question	
List of Terms and Definitions	
Organization of the Dissertation	16
CHAPTER 2: LITERATURE REVIEW	
Chapter Overview	
Introduction	
Purpose	19
Research Questions	19
Methods	19
Criteria	19
Data Sources	20
Search Procedures and Study Selection	20
Results	
Results of Individual Studies	
Discussion	
Limitations	
Conclusions	
CHAPTER 3: METHODOLOGY	
Introduction/Statement of the Problem	33
Research Question	
Method	
Participants	
Instrumentation	

Setting	41
Materials	
Dependent Variable	
Procedural Fidelity	
Pre-Study	
During Intervention Phase	
Reliability	
Interobserver Agreement	
Data Analysis Procedures	
CHAPTER FOUR: RESULTS	
Reliability	55
Treatment Fidelity	55
Social Validity	
Summary of Results	58
CHAPTER 5: DISCUSSION	60
Summary and Discussion of Results	60
Social Validity	
Implications of Analysis	
Limitations/Challenges	
Implications for Future Research	
Conclusion	
APPENDIX A IRB EXEMPTION DETERMINATION	
APPENDIX B IRB EXEMPTION DETERMINATION (FALL 2019)	71
APPENDIX C CONSENT FORM (SUMMER 2019)	73
APPENDIX D CONSENT FORM (FALL 2019)	75
APPENDIX E DEMOGRAPHIC SURVEY	77
APPENDIX F PRE-POST TEST MEASURE	79
APPENDIX G MODULE 1 POST ASSESSMENT	83
APPENDIX H MODULE 2 POST ASSESSMENT	85
APPENDIX I MODULE 3 POST ASSESSMENT	87
APPENDIX J SOCIAL VALIDITY SURVEY	89
APPENDIX K PRE AND POSTTEST ANSWER KEY	91
DEEEDENCES	07

LIST OF FIGURES

Figure 1. The Transformation of the Person Through Experience (on the basis of Jarvis, 2006).	
Adapted from "Toward a Comprehensive Theory of Human Learning," by P. Jarvis, 2006, p. 10	6.
	14
Figure 2. Screenshot of Written Narration in Video	36
Figure 3. DSM-5 Autism Characteristics in TeachLivE TM Avatar, Martin (Bousfield, 2017)	
Reprinted with permission.	38
Figure 4. Screenshot of Martin, the TeachLivE TM avatar, as he appears in the videos in the	
current research project	39
Figure 5. Screenshot of CJ (bully), the TeachLivE TM Avatar, as she appears in the videos in the	i '
current research project	40
Figure 6. Treatment for Participants in Control Group	41
Figure 7. Module 1 Learning Objectives	43
Figure 8. Module 2 Learning Objectives	44
Figure 9. Module 3 Learning Objectives	44
Figure 10. Example of a "Check-in" in Online Modules	45
Figure 11. Example of Teaching Tips From Online Module	45
Figure 12. Example of Reminder to Play Audio Recording	46
Figure 13. Screen Shot of the Protocol for Treatment Group	48
Figure 14. Screen Shot of the Protocol for the Control Group	49
Figure 15. Screenshot of Photo from Monitored Test	49
Figure 16. Profile Plot for the Interaction Effect Between the Variables	53

LIST OF TABLES

Table 1 Results of Review of Literature	22
Table 2 Summary of Literature on Bullying and Teacher Preparation or Teacher	er Education or
Preservice Teacher	28
Table 3 Summary of Literature on Bullying and Autism	29
Table 3 Summary of Literature on Bullying and Autism	30
Table 4 One-way ANOVA statistics for treatment and control group	55
Table 5 Social Validity Results	57
Table 6 Pre and Posttest Results with Duration Spent in Modules	59

CHAPTER 1: INTRODUCTION

Background and Study Significance

School bullying has been a part of school culture for centuries. Bullying in schools is a severe societal and public health concern affecting children in the United States (Swearer, Wang, Maag, Siebecker, & Frerichs, 2012; Zablotsky, Bradshaw, Anderson, & Law, 2013). The harmful effects of bullying not only impact the victims, but also friends, family, neighborhoods and the safety and well-being of schools (Kane, 2013). Students who are victimized may isolate themselves or even drop out, causing a deficit in school funding for public education systems. Nationally, public schools lose approximately \$2.5 billion in revenue each year due to bullying and student absenteeism (Ryoo, Wang, & Swearer, 2015). The effect on the school and community is harmful, but students with disabilities often are the most vulnerable and often the most targeted.

School-aged children with disabilities are a vulnerable population who are prone to becoming victims of bullying (Cappadocia, Weiss, & Pepler, 2012; Hebron, Oldfield, & Humphrey, 2017). According to The National Center for Education Statistics (NCES), approximately 30% of school children report being bullied at school (Lessne & Harmalkar, 2013; National Center for Education Statistics, 2016) with the most commonly reported reasons being race/ethnicity, gender, disability, religion, and sexual orientation (Zhang, Wang, Zhang, & Oudekerk, 2017). Children on the autism spectrum are one of the top disability classes affected by school bullying (Rose, Swearer, & Espelage, 2012). Individuals with Autism Spectrum Disorder (ASD) are bullied twice as often as their neurotypical peers (Anderson, 2012; Zeedyk, Rodriguez, Tipton, Baker, & Blacher, 2014) and due to their social delays, often, do not know they are being

targeted. According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), individuals with ASD are said to have:

Persistent deficits in social communication and social interaction across multiple contexts, as manifested by the following, currently or by history (examples are illustrative, not exhaustive; see text):

- Deficits in social-emotional reciprocity, ranging, for example, from abnormal social approach and failure of normal back-and-forth conversation; to reduced sharing of interests, emotions, or affect; to failure to initiate or respond to social interactions.
- 2. Deficits in nonverbal communicative behaviors used for social interaction, ranging, for example, from poorly integrated verbal and nonverbal communication; to abnormalities in eye contact and body language or deficits in understanding and use of gestures; to a total lack of facial expressions and nonverbal communication.
- 3. Deficits in developing, maintaining, and understanding relationships, ranging, for example, from difficulties adjusting behavior to suit various social contexts; to difficulties in sharing imaginative play or in making friends; to absence of interest in peers. (American Psychiatric Association, 2013, p. 50)

The term "hidden" disability often refers to students with ASD, meaning individuals with this disorder may physically appear the same as their typically developing peers; however, socially and behaviorally, they present as different. Students with ASD often struggle with engaging socially and behaviorally with the environment around them, causing their neurotypical peers to struggle to understand the social and behavioral aspects of this disorder

(American Psychiatric Association, 2013). A peers' lack of understanding makes individuals with ASD the perfect target for bullying (Chen & Schwartz, 2012). The behaviors and characteristics displayed by individuals with ASD often put them at risk for a variety of social challenges (e.g., bullying and victimization; Blake, Lund, Zhou, Kwok, & R Benz, 2012); however, their behaviors are not the only factors putting them at risk. Due to social deficits, individuals with ASD often lack friendships, which increases the risk of being bullied due to the lack of protection that comes along with having friends (Schroeder, Cappadocia, Bebko, Pepler, & Weiss, 2014). Researchers also found individuals with behavior problems and students with less support from school staff (e.g., taught in inclusive settings) are more likely to be victimized by bullies (Hebron & Humphrey, 2014; Hebron et al., 2017). These students who are bullied are then impacted in a multitude of ways.

Bullying has an immense impact on a child's social, health, financial, and educational outcomes. Victims of bullying are 12.9% more likely to experience health-related problems, 11% more likely to struggle financially, 19.9% more likely to live in poverty, and 22.5% more likely to not finish high school, compared to peers who were not victimized (Feldman et al., 2014; Rose, Simpson, & Moss, 2015). These issues add up and affect victims well past the bullying incident.

Types and Topographies of Bullying

To understand how to go about combating bullying, an understanding of what bullying is and how it presents itself to and in our youth is needed. According to Olweus (1993), in order for true bullying to occur, three criteria must be present: repeated behavior, the intent to cause physical or emotional harm, and an imbalance of power. If situations arise and one of the components are nonexistent, then the instance cannot be labeled as "bullying".

According to the Center for Disease Control and Prevention (CDC) (2014), two modes of bullying exists (e.g., direct and indirect) and four main categories: (a) physical, (b) verbal, (c) relational, and (d) damage to property. Direct bullying are "aggressive behavior(s) that occur in the presence of the targeted youth" (Gladden, Vivolo-Kantor, Hamburger, & Lumpkin, 2014, p. 7). Examples of direct bullying include face-to-face exchanges or written or verbal exchanges directed at the victim (Gladden et al., 2014). Indirect bullying is "aggressive behavior(s) that are not directly communicated to the targeted youth. Examples of indirect aggression include but are not limited to spreading false and/or harmful rumors or communicating harmful rumors electronically" (Gladden et al., 2014, p. 7).

Physical Bullying

Physical bullying is "the use of physical force by the perpetrator against the targeted youth. Examples include but are not limited to behaviors such as hitting, kicking, punching, spitting, tripping, and pushing" (Gladden et al., 2014, p. 7).

Verbal Bullying

Verbal bullying is "oral or written communication by the perpetrator against the targeted youth that causes him or her harm" (Gladden et al., 2014, p. 7). Examples of verbal bullying include, but are not limited to taunting, threats, inappropriate written messages, or gestures, etc. (Gladden et al., 2014).

Relational Bullying

Relational bullying is:

behaviors by a perpetrator designed to harm the reputation and relationships of the targeted youth. Direct relational bullying includes but is not limited to efforts to isolate the targeted youth by keeping him or her from interacting with their peers

or ignoring them. Indirect relational bullying includes but is not limited to spreading false and/or harmful rumors, publicly writing derogatory comments, or posting embarrassing images in a physical or electronic space without the target youth's permission or knowledge (Gladden et al., 2014, p. 7).

Damage to Property

Damage to property is a "theft, alteration or damaging of the target youth's property by the perpetrator to cause harm" (Gladden et al., 2014, p. 8). Examples of this type of bullying include destroying the victim's belongings, getting rid of data or work on an electronic device, or stealing someone's property and refusing to return it to its rightful owner (Gladden et al., 2014).

Cyberbullying

Cyberbullying involves the use of an electronic platform to bully an individual (Kowalski, Giumetti, Schroeder, & Lattanner, 2014). According to Smith et al. (2008) cyber bullying is "an aggressive act carried out by a group or individual using electronic forms of contact, repeatedly over time against a victim who cannot easily defend him or herself" (p. 376). The definition includes the same three criteria as traditional bullying outlined by Olweus (1999): (1) repetition, (2) intent to cause harm, and (3) power imbalance; however, a single act of posting a derogatory message or picture online may cause the person continued and repeated humiliation (Dooley, Pyzalski, & Cross, 2009). Indirect relational bullying includes behaviors similar to cyberbullying where the perpetrator "publicly writes derogatory comments" (Gladden et al., 2014, p. 7) or posts "embarrassing images in an electronic space without the youth's permission or knowledge" (Gladden et al., 2014, p. 7). Cyberbullying may often be lumped into indirect or direct relational bullying and not considered one of the four main categories of bullying, according to the CDC (Gladden et al., 2014).

School Bullying

Bullying behavior has been a common problem for centuries. The word was first used in the seventeenth century to mean *sweetheart* and later evolved to mean *harasser of the weak* (Nunn, 2013). School bullying first appeared in literature in 1857. *Tom Brown at Rugby, School Days at Rugby* is a novel about a young boy who was brutally bullied by a group of upperclassmen (Hughes, 1870). The bullying dynamic in this story aligns with the weaker individual being preyed upon by the stronger classmate, which is a common characteristic in bully/victim relationships (Olweus, 2010).

The topic of school bullying has continued to gain popularity with researchers for decades, especially in European countries (Espelage & Swearer, 2003, 2004; Patton, Hong, Patel, & Kral, 2017). Olweus (1977, 2010) began conducting research on bullying in the early 1970s. Due to the high level of bullying occurring in today's schools and society, the research on this topic continues to evolve, along with student behaviors and characteristics of bullying.

In the 1990s, researchers and policy makers in the United States renewed their focus on school bullying after a string of school shootings (Espelage & Swearer, 2004; Olweus, 2010; Patton et al., 2017). No anti-bullying laws in the United States existed until the events at Columbine High School took place in 1999, where two armed students opened fire on the school killing multiple victims (Limber & Olweus, 2010). Although this incident was not a direct result of students being bullied, the world took notice and began discussing the need to decrease bullying in our schools. Today, all 50 states have adopted anti-bullying laws (ABLs; Sabia & Bass, 2017), protecting students from being victimized at school; however, not all teachers effectively know how to respond to bullying behaviors or how to identify them when they occur.

Bullying Dynamic

The definition of the word *bullying* has evolved over the years; however, the components of the bullying dynamic have remained the same (Rose, Monda-Amaya, & Espelage, 2011).

Consistent with previous studies in this area, the bullying dynamic includes three components:

(a) the bully, (b) the victim, and (c) the bystander (Olweus, 1993; Marini, Fairbairn, & Zuber, 2001; Walker, Ramsey, & Gresham, 2004; Rose, Monda-Amaya, & Espelage, 2011). According to Swearer et al. (2012), students may take on dual roles in the bully/victim dynamic, sometimes acting as the bully and other times the victim or bully-victim (an individual who bullies and who also is bullied) (Jimerson, Swearer, & Espelage, 2010).

Bullying is considered a dynamic process and those involved in the process (i.e., the bully, the victim, and the defender) alternate depending on the situation (Espelage, Holt, & Henkel, 2003; Salmivalli, 2010). Students are continuously moving in and out of these roles (Rose, Stormont, et al., 2015; Salmivalli, 2010), making the root problem harder to identify and the solution further from reach. Nevertheless, even if roles are situational and fluid (Hong & Espelage, 2012; Rose, Stormont, et al., 2015; Salmivalli, 2010), teachers often base their knowledge of bullying on their own personal experiences and their personal perceptions of what they see in the dynamic (Rose, Monda-Amaya, & Preast, 2018). The aim of the current project is to mitigate existing barriers teachers face when addressing bullying situations, specifically for students with ASD.

<u>Interventions/Approaches to Address Bullying</u>

A critical need exists for effective interventions and responses to school bullying in general and special education settings. Unfortunately, previous bullying interventions/programs have been unsuccessful at reducing bullying behaviors in United States' schools (Pergolizzi et al.,

2009). Today, the majority of schools continue to approach bullying with zero tolerance policies (Bauman & Del Rio, 2006) or by utilizing disciplinary principles (Lereya et al., 2016), which may be worsening the problem (Lang, Greenwald, Bradley, & Hamm, 1993; National Academies of Sciences, Engineering, and Medicine, 2016). While teachers and school staff still have a lot to learn when it comes to combating the bullying epidemic, some approaches have led to success. Teachers can participate in professional development and adapt their classrooms and instruction to mitigate bullying, while students engage in social and communication skills training to learn how to recognize and combat bullying behaviors.

The implementation of social skills instruction and classroom management strategies are just a few factors used to combat bullying behaviors (Horner, Sugai, & Anderson, 2010). Currently, teachers receive professional development in mixed-reality simulators and coaching (e.g., bug-in-ear feedback) to strengthen classroom management strategies (Pas et al., 2016), while students use technologies to strengthen their abilities in school environments (Sahin, Keshav, Salisbury, & Vahabzadeh, 2018). Instead of only focusing on punishing the bully, many schools are now incorporating programs focusing on developing ways for peers to stand up and protect those who are being bullied (e.g., Bringing in the Bystander Program, See It, Stop It, and Hollaback!: I've Got Your Back!). By accessing professional development trainings and using innovative technology, teachers are also learning how to navigate through the bullying process.

Bullying Interventions

Existing bullying prevention programs have made little progress in decreasing bullying behaviors among school-aged children in the United States (Pergolizzi et al., 2009). More schools must consider incorporating social skills instruction to teach the entire student body how to accept differences, and teacher preparation programs should assist teachers in navigating

through the process of identifying bullying behaviors and taking action when they occur. First, students and school staff need to learn school policy and expectations. Next, they need to know what bullying behavior looks like and what their role is as an educator when it occurs.

Technology has the ability to assist teaching students and teachers the skills they need to identify and combat bullying, as well as enhance communication and social skills for individuals with ASD.

Below is a short list of specific technologies impacting the way students with ASD are being taught social skills in schools.

Multimedia Supports

According to Mayer (2002), multimedia learning takes place when a mental connection is formed by the simultaneous presentation of a word and a picture. The picture can show up in a variety of formats, including "static graphics such as photos, drawings, maps, charts, figures, and tables or dynamic graphics such as video or animation" (Mayer, 2002, p. 85). Multimedia instruction and Serious games are used to assist individuals with disabilities to improve their social interactions with peers (Grossard et al., 2017). Social stories, role play, and video modeling also are effective ways to teach school-aged children with autism how to identify bullying behaviors (Prince, 2012). Social skills curriculum also can be appropriately modified to prepare students with disabilities how to appropriately respond when bullying occurs (Chen & Schwartz, 2012). Although multimedia learning has positive impacts on preservice teacher learning, information is limited about multimedia learning to increase understanding of bullying for students with ASD.

Video Modeling

Web-based video modeling (WBVM) is an example of how teachers are preparing to meet professional learning goals in their classrooms (Every Student Succeeds Act, 2015). In the 1960s, Albert Bandura was the first documented person to successfully use video modeling (VM) to teach new behaviors (Bandura, Ross, & Ross, 1963). Video modeling includes an individual watching a video of a model performing a task or behavior (Miltenberger & Charlop, 2015). The repetition of the skill being demonstrated aids in teaching the skill. Children with autism have used video modeling to sharpen their verbal skills (Rex, Charlop, & Spector, 2018); specifically how to be assertive when they are communicating with their peers (Charlop, Dennis, Carpenter, & Greenberg, 2010).

Bug-in-Ear Coaching

Because immediate feedback is a key component of virtual coaching (Artman-Meeker, Rosenberg, Badgett, Yang, & Penney, 2017), bug-in-ear (BIE) coaching may be one technology teachers and students can utilize to address how individuals with autism interact with their peers. In BIE coaching, the individual (teacher or student) wears a wireless earpiece and gains real-time feedback from a coach located in a second location (Artman-Meeker et al., 2017). The BIE technology has the ability to offer students and teachers assistance when working through difficult social situations in the classroom.

Wearable Technology

Many individuals with ASD struggle with navigating and engaging with the social world around them (American Psychiatric Association, 2013), and those who have average to above average cognitive abilities often experience difficulties in school, navigating through social situations with peers (Stichter et al., 2010). The sensors in wearable technology have recently

been used to monitor student behavior and send an alert when they are in need of self-calming strategies (Kinnunen et al., 2016). The Fitbit Charge 2 is one of the many wearable technology devices to offer the user reminders of when breathing patterns are changing and when to take deep breaths. Wearable technology has the capability to make profound changes to the special education field, specifically in the way students manage their disability while interacting with the world around them (Sandall, 2016).

Simulation and Social Skills

Recently, social robots have been used to increase social engagement in children with autism (Coeckelbergh et al., 2016), and simulated classroom environments are used to coach teachers in a mixed-reality setting before performing strategies in the classroom environment (Pas et al., 2016). TeachLivETM is a mixed-reality classroom environment made up of virtual students, controlled by the Human in the Loop (HIL), or interactor, to respond in real time. An interactor is an individual "trained in acting, improvisation, and human psychology" (Dieker, Hynes, Hughes, & Smith, 2008, p. 11). The interactor often uses a script to control the avatar's behaviors in real-time, making the avatars appear as realistic students. The avatars are used to train teachers or improve teacher performance (Dieker, Hughes, Hynes, & Straub, 2017) before working with live students in the classroom. TeachLivETM avatars also are used by students to develop and strengthen social skills (Barmaki, 2016) or practice tasks before performing them in real-life.

Teachers and Bullying

Students spend the majority of their day in the classroom environment, and teachers often are the first line of defense when bullying behavior occurs. There a lot of factors that go into the way teachers view and react to bullying situations (Blain-Arcaro, Smith, Cunningham, Vaillancourt,

& Rimas, 2012), and often, these factors are based on teachers' perception of the severity of the occurrence (Ladd & Pelletier, 2008) or weigh heavily on the influences of school administration (Rose et al., 2018). Teachers are more likely to intervene when they witness students being physically bullied rather than verbally or socially bullied (Blain-Arcaro et al., 2012), but teachers who lack education in bullying are less likely to intervene at all (Bauman, Rigby, & Hoppa, 2008).

Although bullying behavior often is underestimated by a majority of school staff (Bradshaw, Sawyer, & O'Brennan, 2007), it may be overlooked on a greater level by preservice teachers who lack a clear understanding of bullying behaviors and the effects they have on children (Kahn, Jones, & Wieland, 2012). According to Boulton and collegues (2014), preservice teachers have very little experience working directly with students in bullying situations. Undertrained staff often cause students to feel uneasy or unsafe when disclosing bullying situations, as they fear the problem will not be resolved (Newman & Murray, 2005) or actually make the situation worse if their problem is disclosed. Researchers suggest teachers ignoring students' complaints about being bullied or dismissing their concerns may cause students to feel belittled, thus not creating a desired, positive school climate for students (Evans & Smokowski, 2016). According to bullying experts, "Promoting proactive schoolwide interventions can create positive school climates, encourage social awareness and decrease bullying perpetration" (Rose, Monda-Amaya, & Espelage, 2011, p. 125).

Based on this argument, classroom teachers, particularly those who are new to the classroom, need to learn appropriate strategies to identify and intervene when bullying behaviors occur. According to Carlson and colleagues (2002), teachers who rated their preservice teacher preparation experiences as "exceptional" felt they were more capable while teaching in the

classroom, thus, highlighting on the importance of offering high quality teacher preparation programs for teachers prior to them stepping foot in the classroom. According to Evans and Smokowski (2016), to make a meaningful impact on bullying behavior in schools, school personnel as well as the community must unite and dedicate their time to promoting the antibullying mission.

Theoretical Framework

The theoretical framework used to guide the analysis of this study is Jarvis's Existential Learning Theory. Jarvis's learning theory is similar to other prominent learning theorists (e.g., Dewey and Kolb) who based their learning models on the importance of learning by experience or learning by doing (Lin & Williams, 2017). Dewey (1938) believed in using experiences from past interactions with physical activities (hands-on activities such as service learning projects and interactive learning activities) and social environments (community and family) as a way to shape future learning experiences (Dewey, 1938; Margaret Schmidt, 2010). Jarvis (1987) shared these beliefs; however, he also believed learning not only occurs during educative experiences, but during the "mis-educative" (Merriam, Caffarella, & Baumgartner, 2007, p.100) experiences, as well. "Learning always commences with experience, and the process of transforming that initial experience is the process of learning" (Jarvis, 1987, p. 164). Jarvis believed learning occurs when an individual is faced with a 'disjuncture' where an individual is forced to stop and think about a situation in order to give meaning to it (Jarvis, 2004). When the individual finds an answer to the problem, they can put it into practice (Jarvis, 2012).

When teachers face emotional experiences in the classroom, (e.g., bullying situation they do not feel prepared to deal with) they may trigger emotional discomfort. The episode prompts the teacher to think about the situation and reflect on the event. During the reflection process, the

training). The emotional experience prompted learning. Jarvis believed everything builds on a previous experience (Merriam et al., 2007) and "experiential learning... either involves participation or emotive involvement" (Jarvis, 1987, p. 164). Jarvis's learning model is a reminder that behavioral and emotional components are just as important to the learning process as the cognitive ones (Brown, 2015).

Opportunities to apply the learning strategies from Jarvis's Experiential Learning principles are present in the current project.

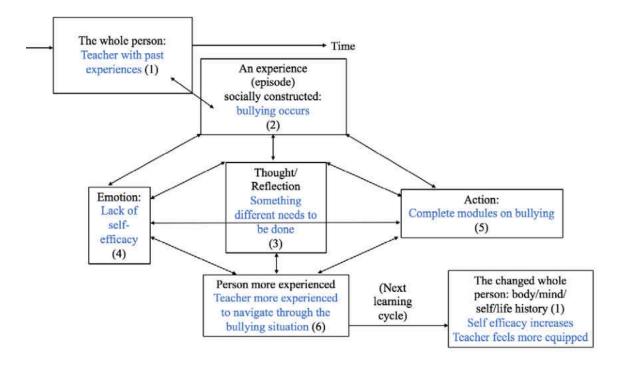


Figure 1. The Transformation of the Person Through Experience (on the basis of Jarvis, 2006).

Adapted from "Toward a Comprehensive Theory of Human Learning," by P. Jarvis, 2006, p. 16.

Purpose Statement

The purpose of this dissertation is to examine the impact of three modules on the impact of preservice teachers' ability to identify and resolve bullying situations for students with ASD, compared to a control group of preservice teachers who do not receive the modules. These skills will be examined in pre- and post-assessments of preservice teacher ability to address bullying behavior in videos prerecorded in the TeachLivETM simulator.

Research Question

This researcher aims to answer the following research question:

(1) To what extent do three, asynchronous online modules increase the percentage correct of identifying and responding to bullying situations for preservice service teachers, working with an elementary student with ASD, as compared to a control group of preservice teachers who did not receive the modules?

List of Terms and Definitions

Adobe PremiereTM: video editing software.

Asynchronous modules: Modules controlled by a protocol, set up through an online learning platform. The format enables learning to occur at a students' personal pace (Elliott, 2017).

Bullying: When an individual is subjected to negative behavior by one or more than one individual on a reoccurring basis (Olweus, 1993). A true bullying situation must include three criteria: Repetition, an imbalance of power, and an intent to cause physical and emotional harm (Olweus, 1993).

Canvas[™]: a learning management platform, often used by colleges and universities to deliver online instruction.

Maya 3DTM: animation software, offering a production platform for creating 3D computer animation, modeling, simulation, rendering and compositing.

MotionBuilderTM: a software for creating realistic movements for 3D animated characters.

TeachLivETM: is a mixed-reality, simulated classroom environment used for individualized learning in real time (Bousfield, 2017).

Organization of the Dissertation

This dissertation is divided into five chapters. Chapter 1 provides the background and purpose for the study. Chapter 2 is a systematic literature review on bullying and preservice teachers/teacher preparation, bullying and autism spectrum disorders and bullying and asynchronous modules. Chapter 3 describes the methodology of the study. The results of the study are discussed in Chapter 4. Chapter 5 is where the author discusses the challenges and limitations of the study and suggestions for future research.

CHAPTER 2: LITERATURE REVIEW

Chapter Overview

In this chapter, the researcher presents the results of a systematic literature review on the intersection of bullying, autism, and preservice teacher preparation. The researcher provides a detailed summary of the literature on (1) bullying and Autism Spectrum Disorder (ASD), (2) bullying and preservice teacher preparation, and (3) bullying and asynchronous modules.

Introduction

Autism Spectrum Disorder (ASD) often is characterized by deficits in social and communication skills as well as perseverations and the need for consistency in routine, activities and behavior (Dewey, 1938). There was a noticeable increase in the rates of children diagnosed with ASD in the past ten years (Elmore, Bruhn, & Bobzien, 2016) with the most recent numbers reaching 1 in 45 children (Zablotsky, Black, Maenner, Schieve, & Blumberg, 2015). According to Buescher and colleagues (2014), an estimated 3.5 million people in the United States have been diagnosed with this disorder and the numbers continue to rise (U.S. Department of Education, 2016).

In 2015, 5.8 million children received special education services under the Individuals with Disabilities Education Improvement Act (IDEA 2004), and approximately 480,000 of the students served under IDEA were diagnosed with ASD (U.S. Department of Education, 2016).

Educators have the challenging task of cultivating a supportive and inclusive learning environment for each individual student in their classroom; however, with the increasing number of students with disabilities being served in general education classrooms, this task can be rather daunting. Teachers not only have the challenging task of academically supporting each learner, but also the affirmative duty to disclose instances of suspected or disclosed abuse or neglect-

this includes suspected or disclosed bullying situations, as well. Teachers have a legal obligation to create a safe and healthy learning environment for each student, regardless of their ability level. This task can seem challenging for new and experienced teachers alike.

According to the National Education Association (Bradshaw, Waasdorp, O'Brennan, Gulemetova, & Henderson, 2011), 2,177 of 5,064 surveyed teachers and school staff thought bullying to be a moderate to major issue in schools; however, many of the same educators failed to intervene when they witnessed bullying behaviors or take preventative measures to prevent bullying from occurring (Banas, 2014). One of the primary reasons for a teachers' lack of involvement in bullying situations related to individuals with disabilities is the absence of confidence in dealing with situations related to bullying (Yoon, 2004) or individuals with ASD (Able, Sreckovic, Schultz, Garwood, & Sherman, 2015).

Many general education teachers feel they are not equipped with the knowledge and training when it comes to meeting the needs of students with ASD in the inclusive setting (Able et al., 2015; Finke, McNaughton, & Drager, 2009). Furthermore, there are a handful of general education teachers who do not feel supported (Ross-Hill, 2009) or prepared to implement interventions with students with autism (Able et al., 2015). Similarly, preservice teachers feel they need more training before applying instructional or behavioral strategies in their classrooms with their students with disabilities (Able et al., 2015). When preservice teachers were asked to report on obstacles they face during teacher training programs, "student behavior" was the highest ranked obstacle reported (Ching, 2011).

<u>Purpose</u>

The purpose of this review was to identify the existing literature at the intersection of bullying, ASD, and preservice teacher preparation. This review was guided by the following research questions.

Research Questions

The review was driven by the following research questions:

Research Question: To what extent are bullying interventions represented in the literature, specifically on preparing preservice teachers to teach elementary-aged students with ASD how to identify and respond to bullying situations?

<u>Sub-question 1</u>: What empirical literature is available on bullying and teacher preparation, teacher education or preservice teachers?

<u>Sub-question 2</u>: What empirical literature is available on bullying and elementary students with ASD?

<u>Sub-question 3</u>: What empirical literature is available on bullying and the use of asynchronous modules?

Methods

Criteria

The selection of articles included in this review were articles meeting the following inclusion criteria: published as empirical studies in peer-reviewed journals in 2008 or later that contained the search term "bullying," and one of five other search terms (i.e., teacher preparation, teacher education, preservice teachers, autism, and asynchronous modules). Next, the identified articles were hand-coded to exclude studies that (a) were duplicates from other databases and not completed in the United States, (b) were not empirical (e.g., book chapters,

literature reviews, rejoinders, editorials and brief reports) or did not involve an intervention (i.e., manipulating an independent variable), and (c) did not have preservice teachers or elementary students with autism as the primary participants (e.g., studies on training nursing students to respond to bullying scenarios in the workplace). These inclusion criteria were chosen because the purpose of the systematic literature review was to identify and review research on the topic of bullying in the following areas: preservice teacher preparation, Autism Spectrum Disorder, and asynchronous modules.

Data Sources

The researcher began the search by selecting two databases through the University of Central Florida's Library System. The search included peer-reviewed journal articles from ERIC and ScienceDirect.

Search Procedures and Study Selection

The following search terms were used to complete the search: (a) bullying and teacher preparation or preservice teachers, (b) bullying and autism, and (c) bullying and asynchronous modules. Table 1 displays the total number of articles found in each database and each phase of the search. The first column represents the number of articles initially retrieved from the electronic search or "Initial Search." Following the initial search phase, this collection of articles was screened to eliminate those that were published prior to 2008, duplicated, not conducted in the United States or did not meet the above criteria. A total of six articles met the inclusion criteria for the review once the initial search and hand-coding phases were complete.

Results

A systematic literature review was conducted to recognize the existing, empirical literature intended to examine bullying and preservice teachers or teacher preparation, bullying

and elementary students with autism spectrum disorder and bullying interventions through the use of asynchronous modules.

Table 1

Results of Review of Literature

	Bullying and ("teacher preparation" OR "teacher education" OR "preservice teachers")		Bullying AND Autism		Bullying AND asynchronous modules	
Database	ERIC	Science Direct	ERIC	Science Direct	ERIC	Science Direct
Phase 1:	210	332	83	1112	1	37
Initial Search						
Phase 2:		295	1017		27	
Excluded studies that						
were published before						
2008						
Phase 3:						
Excluded duplicates and	215		757		14	
studies not completed in					- ·	
the US		0		70		2
Phase 4:	8		72		3	
Excluded studies that						
were not empirical or						
did not include an intervention						
Phase 5:		2		4		0
Excluded studies that did		2		4		U
not have pre service						
teachers OR elementary						
students with Autism as						
participants						

Results of Individual Studies

Bullying and Teacher Preparation for Preservice Teachers

Research on bullying and preservice teacher preparation has focused on two subtopics, including: learning exercises aligned with professional standards to increase preservice teachers' self-efficacy to perform bullying prevention tasks, and a curriculum infusion (CI) model to increase the confidence of preservice teachers in addressing real-life issues with their students (see Table 2).

Preservice Teachers' Self-Efficacy

Banas (2014) looked at the impact of authentic learning exercises, aligned with health education professional standards, and the effects they have on preservice teachers' self-efficacy to perform bullying prevention activities. The researchers used an electronic survey as a pre- and post-assessment. The paired samples t-test showed the learning exercises made a significant increase in the pre and post scores for all five of the professional standards.

Beyda-Lorie, Kritikos, and Messerer (2011) looked at using the CI model in three, higher education courses to determine if it increased special education preservice teachers' confidence addressing issues relating to bullying, substance abuse, social ostracism, and HIV/AIDS. They were interested in determining if the CI training model changed preservice teachers' beliefs about their roles in preventative education. The researchers used a questionnaire as a pre- and post-test to determine what the preservice teachers knew about the real-life issues, prior to and after, receiving a module relating to the above issues. The repeated measures analysis of variance (ANOVA) was used to measure the preservice teachers' knowledge from pre-test to post-test and showed a significant increase in how much they thought they should be expected to use evidence-based practices to develop prevention curricula for bullying. There was also a

significant increase from pre- to post-test scores in their confidence to teach research-based prevention strategies; however, when asked if they felt confident in integrating prevention content in their classrooms, they showed a slight increase in confidence, but not a significant one F(1,36) = 3.845, p = .058 (Beyda-Lorie et al., 2011).

Bullying and Elementary School Students with ASD

Bullying happens twice as often to children with ASD than bullying to neurotypical children (Anderson, 2012; Rex, Charlop, & Spector, 2018). Students with learning disabilities and students with other, non-observable disabilities describe equivalent levels of victimization as their typically developing peers (Swearer et al., 2012).

Leaf et al. (2009) looked at the effectiveness of a teaching package on skill acquisition of four social skills (play skills, conversation skills, emotional skills, and selection skills) for three, elementary school-aged students with ASD. The teaching package consisted of three components: a Teaching Interaction (TI) procedure, reinforcement, and priming of participants to perform social skills. Researchers utilized a multiple baseline across skills, replicated across participants, designed, and implemented a pre- and post-test to measure the outcomes of the teaching package on the participants' play and communication skills. The results show that the teaching package was an effective tool in teaching all three participants skills in the areas of play, conversation, emotion and choosing a peer. During pre- and post-test assessments, all three participants increased conversation skills and rate of play with their peers. This research supports further exploration of the use of the TI procedure for teaching social skills to young students with ASD.

According to Ranick, Persicke, Tarbox, and Kornack (2013), individuals with autism have notable deficits in comprehending non-literal language, including sarcasm (Pexman et al.,

2011), metaphors (Adachi et al., 2004), humor (Emerich, Creaghead, Grether, Murray, & Grasha, 2003), and deception (Hala, Chandler, & Fritz, 1991; Happé, 1995; Sodian & Frith, 1992). Persicke, Tarbox, Ranick, and St. Clair (2013) also looked at the effectiveness of a training package to teach three, young children (ages 6 to 7 years old) with ASD to accurately detect and appropriately respond to sarcasm. The training package consisted of rules, and *in vivo* multiple exemplar training. Researchers used a multiple baseline across participants model to measure percent of correct responses across all four phases of the study (baseline, rules and video, *in vivo* and post-training). They found all three participants were able to respond appropriately to sarcasm and generalize the skill with novel people and environments and through a variety of exemplars. The results of this study provide evidence the deficits children with autism have in detecting and responding to sarcasm can be corrected using multiple exemplar training and behavioral teaching strategies.

Ranick et al. (2013) evaluated a multiple exemplar training package to teach three children (ages 6 to 9 years old) with autism how to detect and resist deceptive statements. To participate in the study, the participants must have either completed or almost completed the following lessons from the Skills© curriculum: (1) thinking, (2) sensory perspective-taking, (3) cause and effect, (4) knowing, and (5) beliefs. The training packages utilized rules, modeling, practice and feedback. Sessions took place in the participants' home and occurred 1-2 times per week for an hour at a time. The researchers used a multiple baseline across participants model to measure the percent of correct responses to deceptive statements during play. Examples of deceptive statements included comments excluding participants from activities and deceptive statements spoken to gain access to tangible items. The researcher found all participants learned how to detect and respond to deceptive statements through multiple exemplar training and

generalize the skill to novel statements and peers. According to Ranick et al. (2013), a strength in teaching perspective-taking skills, such as detecting deception, as a learned operant behavior through applied and examined teaching procedures.

Rex, Charlop, and Spector (2018) developed a video modeling intervention to teach six children (8 to 13 years old) with ASD to appropriately respond to bullying situations. Inclusion criteria for participants in the study consisted of children with ASD who had the ability to speak in up to five-word phrases, a comprehension level of a 4-year old, and those who previously complained to parents that they had been bullied. Six scenarios were created from Skill Acquisition Assessment Session (SAAS) video scripts to imitate bullying in the form of exclusion, physical bullying, and verbal bullying. Each video had a set of four, corresponding questions (three questions pertaining to how the child would react to each scenario and a fourth questions asking if the participant would inform their mother if anything similar happened to them). The responses to the questions were scored on a 4-point scale, and responses were coded as either appropriate (1 point) or inappropriate (0 points). Researchers used a non-concurrent, multiple baseline across participants design to analyze the number of appropriate responses each participant made to the bullying scenarios.

The researchers found all six children learned to use assertive responding after viewing videos demonstrating physical, verbal, and social exclusion, and reporting the situations to their mothers if they were bullied in a similar way. Results of this study provide further evidence that learning occurs rapidly with video modeling interventions (Charlop & Milstein, 1989; Miltenberger & Charlop, 2015; Rex et al., 2018). The current study provides a suggestion for using video modeling in assertive response training (Rex et al., 2018).

Bullying and Teaching through Modules

Based on the search results and inclusion criteria for this review, this is the first time this topic has been addressed. No articles with the terms "bullying and modules" made it to the final stage of the literature review search (see Table 1).

Table 2
Summary of Literature on Bullying and Teacher Preparation or Teacher Education or Preservice Teacher

Citation	Participants	Age/Grade	n	Design/Method	Variables	Duration	Analysis	Notable Results
Banas (2014)	Health education preservice teachers 54.7% Males 43.8% Females	18 to 22 years old (35.9%) 23 to 27 years old (42.2%) 28 to 32 years old (15.6%)	60	Quasi- experimental design Pre and posttest	IV: 8 learning exercises DV: Self- efficacy	3 consecutive semesters between 2011 and 2012	SPSS Version 20 Paired samples t-test Means and standard deviations	Preservice teachers' self- efficacy to perform all 5 standard-related activities increased from pre to posttest.
Beyda- Lorie et al. (2011)	Undergraduate students 31 females 11 males (N=19, N=13) Graduate students in special education (N=10)	25 years old or below (47.6%) 26 to 35 years old (31%) 36 years old or older (21.4%)	42	Pre and posttest	IV: Curriculum infusion (CI) model DV: confidence of special education teachers in addressing real life issues	1 semester	Repeated measures ANOVA Means and standard deviations from pretest to posttest	Preservice teachers showed a change in their attitudes from pre-test (M=3.39, SD .679) to posttest (M=3.68, SD= .610) for developing bullying prevention curricula. The CI methodology did change preservice teachers' beliefs about their responsibility for addressing real life issues in their classrooms.

Table 3
Summary of Literature on Bullying and Autism

Citation	Participants	Age/Grade	n	Design/Method	Variables	Duration	Analysis	Notable Results
Leaf et al. (2009)	3 male children with high functioning autism	5-7 years old	3	Multiple baseline across skills design	IV: Teaching package: Teaching Interaction procedure, reinforcement and priming DV: social skills/communication	Session length: 30 mins for 8 consecutive weeks	Visual analysis	The teaching package taught play, conversation and emotional skills for all 3 participants. All 3 participants were able to demonstrate the target behaviors when the teaching package was implemented.
Persicke et al. (2013)	Children with autism receiving 2- 10 hours per week of in- home behavior therapy	6-7 years old	3	Single case design (Multiple exemplar training)	IV: Rules and videos and In-Vivo training DV: Percent correct responses to sarcastic comments	2-3 sessions per week. Training sessions were 30 minutes and baseline sessions were 1 hour.	Visual analysis	Rules, video clips and in vivo training successfully taught all 3 children to detect and respond to sarcastic comments.
Ranick et al. (2013)	3 male children diagnosed with autism	6-9 years old	3	Single case design (Multiple exemplar training)	IV: Adapted teaching procedure from activities in the "deception" lesson of the Skills© curriculum DV: Percent correct responses to deceptive statements	1-2 times per week for no longer	Visual analysis	All 3 children were able to respond to deceptive statements through the multiple exemplar training. Generalization occurred to novel exemplars and peers. All participants maintained accurate responding when feedback was withheld.

Table 4
Summary of Literature on Bullying and Autism

Citation	Participants	Age/Grade	n	Design/Method	Variables	Duration	Analysis	Notable Results
Rex et al. (2018)	6 children with autism spectrum disorder 2 females 4 males	8-13 years old	6	Non concurrent multiple baseline across participants	IV: video modeling DV: assertive responses to bullying scenarios Dependent measures: 4-point scale	Abby: 4 BSL sessions Justin: 6 BSL sessions Jack: 7 BSL sessions Nick: 9 BSL sessions Jill: 10 BSL sessions Alex: 12 BSL sessions	Visual analysis	All 6 children learned to assertively respond when viewing videotaped scenarios of physical, verbal and social exclusion, and reported that they would disclose the incidents to their mothers if they were bullied.

Discussion

The results of this systematic literature review support further research on the use of evidence-based practices to teach skills to preservice teachers (Banas, 2014; Beyda-Lorie et al., 2011) and elementary students with ASD (Leaf et al., 2009; Persicke et al., 2013; Ranick et al., 2013; Rex et al., 2018). A void in the literature exists for teaching preservice teachers in identifying and addressing bullying situations, specifically for individuals with ASD.

While researchers have shown an increase in educating preservice teachers to address real-life issues for students with disabilities, nothing exists in the literature demonstrating the use of online modules to teach tactics to preservice teachers working with elementary students with autism. This study is being conducted to support further investigation of the use of online modules as an instructional tool to teach preservice teachers how to identify and respond to bullying situations for elementary students with ASD.

Limitations

Several limitations occurred in this systematic literature review. When reviewing the article selection stage, the researcher found some studies were incorrectly characterized. The researcher used hand-coding to control for this limitation.

The results of the literature review also posed a few limitations. First, only four studies including the terms "bullying" and "autism spectrum disorder" met the qualifications for inclusion in the review. Second, only two studies with the terms "bullying" and "preservice teachers" met the qualifications for inclusion in the review. Third, no studies regarding module use—specifically "asynchronous" modules, to teach preservice teachers how to respond to bullying behaviors met the qualifications. Lastly, female children with ASD and male preservice teachers were underrepresented in the research.

Conclusions

Due to the vast number of students reporting being bullied in American schools, the epidemic continues and something drastic needs to be done to change this ongoing problem. The reduction of all types of bullying is a necessity, and teachers and administration are the main constituents of combating these unwanted behaviors in our schools. At present, the current bullying interventions are not meeting the needs of general education students or students with disabilities. Additionally, traditional teacher preparation programs are not providing novice teachers the training they need to face the complex behaviors they will face in their future classrooms (Ching, 2011).

Before effective bullying interventions can be implemented, teachers and administrators need to be properly trained in identifying and addressing such behaviors. This literature review provides further evidence of the gap in the research pertaining to preservice teachers receiving training to address and navigate through bullying situations. One way we can meet the demand for the lack of trained preservice teachers is to offer a variety of modalities of instruction (e.g., face-to-face, online, and mix-mode instruction). Offering specific trainings for preservice teachers in teacher preparation programs is just one step in the right direction in making fundamental differences for our students and school systems.

CHAPTER 3: METHODOLOGY

Introduction/Statement of the Problem

The results of a systematic literature review support further investigation of the use of professional development to teach novice teachers to identify bullying behaviors and provide support in the classroom environment. Preservice teachers need essential skills to identify and respond to bullying behaviors in their future classrooms or school environments. The purpose of this study is to address the void in the research and explore the impact of asynchronous online modules as an intervention to teach preservice teachers how to identify and respond to bullying situations concerning elementary students with ASD.

Online synchronous learning is a popular mode of adult learning; however, synchronous learning confines students to learning at a specific time and pace. Synchronous learning limits learners because each student must participate at the same time as the instructor and other students to partake in the learning. Synchronous learning may be restrictive for students with fast-paced, busy lives; however, some may argue that the online environment is beneficial for learners who do not enjoy face-to-face meetings and those who need a stress-free atmosphere to learn (Khodaparast & Ghafournia, 2015). The modules in this study were *asynchronous*, meaning the content was not only available online, but available at the learners' convenience. The primary researcher set aside a week for the participants in the treatment group to access the modules. The participants could access the content of the modules at any time during the seven days.

Research Question

Research Question 1: To what extent do three, asynchronous online modules increase the percentage correct of identifying and responding to bullying situations for preservice teachers, working with an elementary student with ASD, as compared to a control group of preservice teachers who did not receive the modules?

Method

Participants

Participants in this experimental group design were elementary/secondary education undergraduate students (preservice teachers), (*N*=15). Students were from a large university in the southeastern United States. Inclusion criteria for this study were: (a) traditional undergraduate students enrolled in an introduction to Exceptional Education course, (b) no more than six months of formal classroom teaching experience, and (c) no prior training implementing bullying interventions. University students enrolled in a section of an introduction to Exceptional Education course in the summer and fall of 2019 were selected through random assignment, using a random number generator to illicit responses, and assigned to either the control (i.e., prerecorded lecture covering similar content) or treatment group (i.e., bullying curriculum through three, asynchronous online modules).

The sample size was determined using G*Power 3.1 (Faul, Erdfelder, Buchner, & Lang, 2009) and an F-test to determine the interaction within and between the two factors, with an effect size of 0.5, alpha of 0.05 and a statistical power of 0.80 (Cohen, 1988). There were two groups (i.e., control and treatment) and two measures (pretest and posttest for control and treatment groups). The correlation among repeated measures was 0.376. Total sample size was calculated at 20 participants, and approximately 20% attrition was added (Goodrich & St. Pierre,

1979). After planning for possible attrition, the final sample size was determined at N=24. Nineteen participants met inclusion criteria and only fifteen participated in the study.

Instrumentation

Screening Instrument

A brief survey of demographics was developed by the researcher and completed prior to baseline data collection (see Appendix E). Items on this survey included: age, education track (traditional students in elementary education track only), teaching experience (participants with no more than 6 months of formal classroom teaching experience), and prior bullying intervention training (participants with no prior bullying intervention training or experience). This survey was used to establish inclusion into the study.

Video Development

The videos used in this study were created using TeachLivETM avatars. The avatars were chosen because they were age appropriate and already fully developed. A digital animator used MotionBuilderTM to animate the avatars based on the scripts created by the researcher, then exported the skeletal facial animation prior to putting them into MayaTM for rendering. Adobe PremiereTM then was used to add titles and the written, narrated descriptions at the start of each video (see Figure 2). The narrations were essential because they provided the viewer with important information that would otherwise be difficult to capture in the short video segment (e.g., passing of time, or previous environmental conditions), but necessary for the viewer to determine if bullying was present.

Martin has a habit of chewing on his shirt. For the past 3 days, CJ has humiliated him in front of all of his classmates for drool marks on his shirt.

Figure 2. Screenshot of Written Narration in Video

Child actors were also cast to provide dialog and to act out various scenes in the motion capture space. MotionBuilderTM was used, again, to add audio clips from the children actors. Lip-synching, facial expressions, and finger animations were done by hand in order to make the interactions between the characters appear believable. The digital animator also created extra textures for each character to wear a different article of clothing in the video as a way to show time lapse in the videos that took place across multiple days (e.g., "Wet Shirt" & "Weirdo").

The goal of the videos was to create a tool for preservice teachers to witness lifelike bullying scenarios and practice navigating through each scenario in the role of a teacher, prior to stepping foot in a classroom setting. Initially, TeachLivETM was intended as a mixed-reality, simulated classroom environment used for individualized learning in real time (Bousfield, 2017); however, this study utilizes TeachLivETM in a different way—instead of preservice teachers being immersed in a simulated experience, the avatars were used as characters in videos to teach preservice teachers what bullying behaviors could look like in their future classrooms.

Preservice teachers will eventually advance into full-fledged teachers and be faced with similar situations in their classroom. Since the target audience was elementary school teachers, the researcher wanted to ensure the characters in the videos were age appropriate. With the help of a digital animator and interactor, the virtual students resembled typical elementary students, and Martin's character resembled an individual with autism with behaviors aligning with the Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM-V). See Figure 4 for a screenshot of Martin as he appears in the videos for the current research project. The avatars in the videos portray personalities of elementary-aged students (see Figures 4 and 5 for screenshots of avatars, Martin and CJ, as they appear in the videos). The original "Martin" character was intended to resemble a middle school student with ASD. See Figure 3 for the original

TeachLivE[™] avatar, Martin, and how the characteristics of his behaviors aligned with the ASD definition in the DSM-V (Bousfield, 2017).

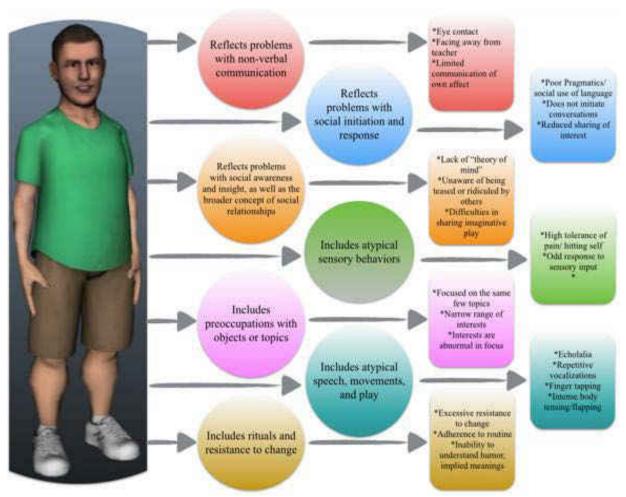


Figure 3. DSM-5 Autism Characteristics in TeachLivETM Avatar, Martin (Bousfield, 2017) Reprinted with permission.

$TeachLivE^{TM}$ Characters Used in Videos

Martin:

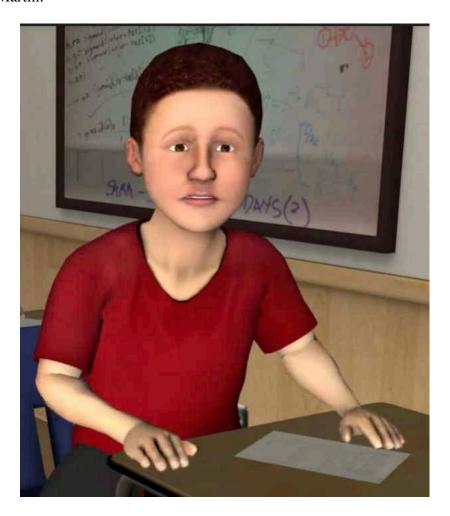


Figure 4. Screenshot of Martin, the TeachLivETM avatar, as he appears in the videos in the current research project



Figure 5. Screenshot of CJ (bully), the TeachLivETM Avatar, as she appears in the videos in the current research project

Control Group: Pre-recorded Lecture

A YouTubeTM video labeled "Current Issues in Education: Bullying (morning session)" https://www.youtube.com/watch?v=euDAMc6NGjc was published on March 30th, 2011.

Dorothy Espelage was the guest speaker for Boston University's School of Education on March 16th, 2011 and her lecture was recorded. The video was 87 minutes in length. During the lecture, Espelage highlights her research and topics addressing bullying and youth aggression. The

lecture was used as the standard treatment for the participants in the control group (see Figure 6).

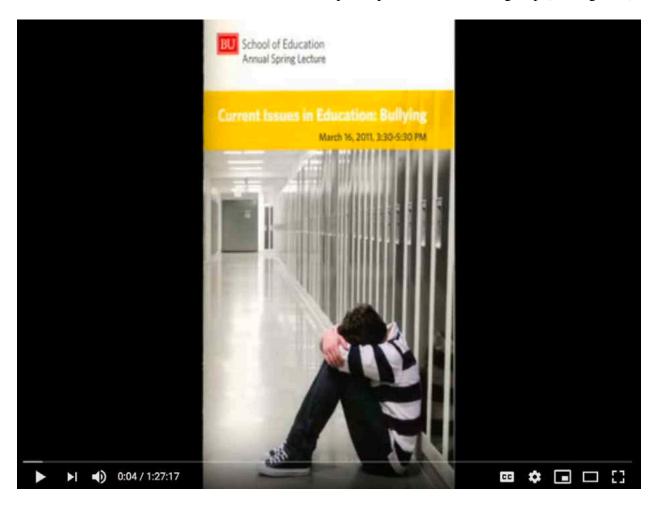


Figure 6. Treatment for Participants in Control Group

Setting

The setting for the two semesters was an online, undergraduate level, exceptional education course designed for general education teachers, in the summer and fall of 2019. The students could only access the course online through a web-based learning platform called CanvasTM. The two courses were only offered online—no face-to-face classes were offered for these sections. The undergraduate course focused on the development and practice of effective teaching strategies for elementary and secondary classroom teachers to use while working with students

with mild disabilities. This research project was presented during the summer and fall 2019 semesters, as part of the Classroom Management unit. Participants in the control and treatment group were awarded 10 points for completing the assignments.

Materials

Pre-Post Test Measure

The Preservice Teacher Evaluation Checklist is a researcher developed assessment of preservice teachers' ability to address and respond to bullying behaviors for students with ASD (see Appendix F). This checklist included six assessment questions (four multiple choice and two multiple answer). Participants were assigned the pretest measure after the viewing the videos. This tool measured baseline abilities (prior to treatment) and learning outcomes of the modules. The assessment was created in Canvas as a graded quiz. The assessment settings were as follows: (a) shuffled answers, (b) 30-minute time limit, (c) one attempt, (d) participant not able to view responses, (e) view one question at a time, (f) no access to quiz results, (g) webcam required, and (h) questions remained unlocked after answering. All participants were able to complete the assessments within the prescribed settings.

Videos recorded in the TeachLivETM simulated elementary classroom environment were used as a pre and post measure to determine baseline and the effectiveness of the modules. There were eight videos in total; four included bullying behaviors and four did not. Each participant viewed a series of eight scenarios (two verbal, one physical, one social, and four non-bullying scenarios) in the pretest phase and the same eight videos were viewed in the posttest phase. Ideas for the scenarios were taken and modified from the Rex et al. (2018) study.

Intervention

A series of three non-sequential asynchronous modules were developed by the researcher

using Microsoft™ PowerPoint. The titles of the three modules were (a) Recognize, (b) Respond, and (c) Report. The idea for the modules was taken and modified from four modules created by Rose in 2017 as a required training for teachers. For purposes of this dissertation, the modules were intended to teach preservice teachers how to identify and respond to bullying situations, specifically related to elementary students with ASD. Each module included a lesson objective (see Figure 7, 8, and 9), audio recordings of essential information, check-ins to repeat important information (example displayed in Figure 10), tips for teaching students with autism (see Figure 11 for example) and module-specific assessment questions (see Appendices, G, H, and I). On the slides containing the audio recordings, the researcher included a green arrow pointing towards a play button. The arrow served as a visual prompt to remind the user to listen to the audio recording, as it included vital information (see Figure 12 for example). The following topics were addressed in the modules:

Module 1: How to **RECOGNIZE** or identify bullying

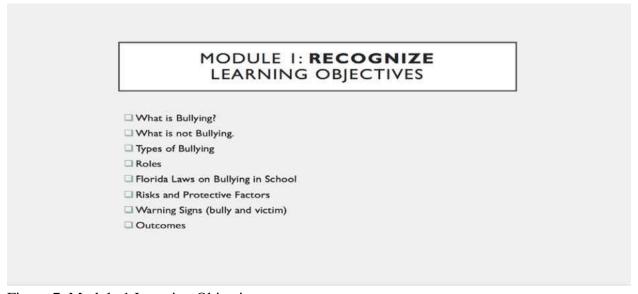


Figure 7. Module 1 Learning Objectives

Module 2: How to RESPOND to bullying behavior

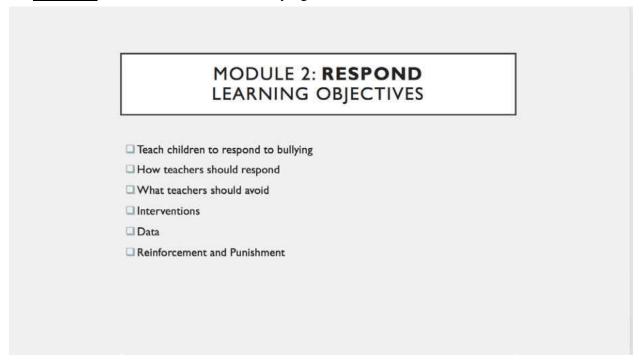


Figure 8. Module 2 Learning Objectives

Module 3: How to REPORT bullying behavior

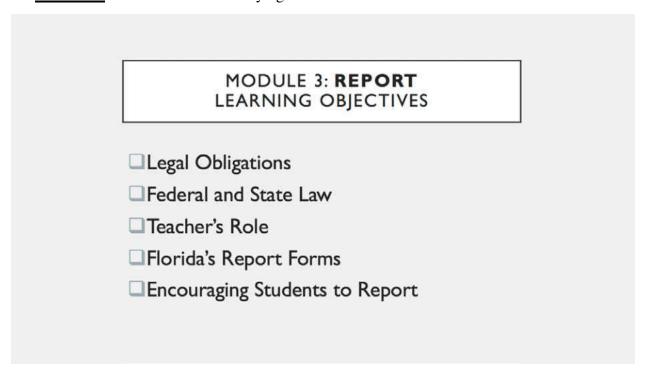


Figure 9. Module 3 Learning Objectives

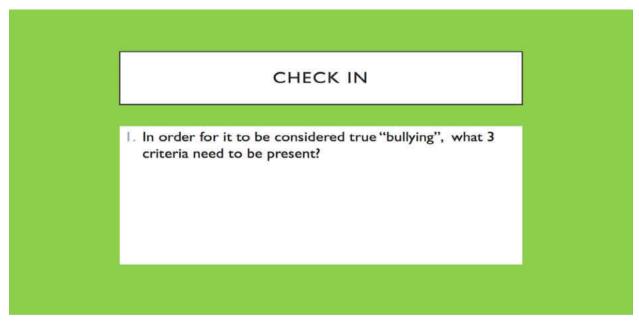


Figure 10. Example of a "Check-in" in Online Modules

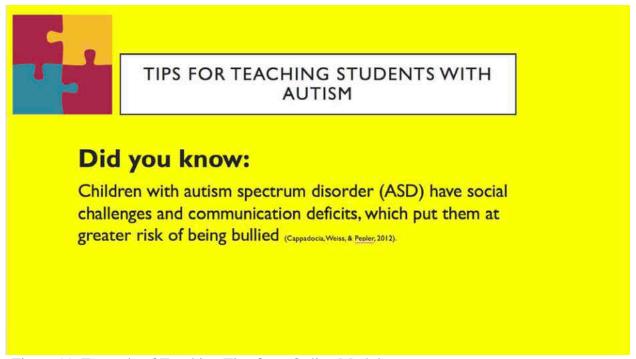


Figure 11. Example of Teaching Tips from Online Module

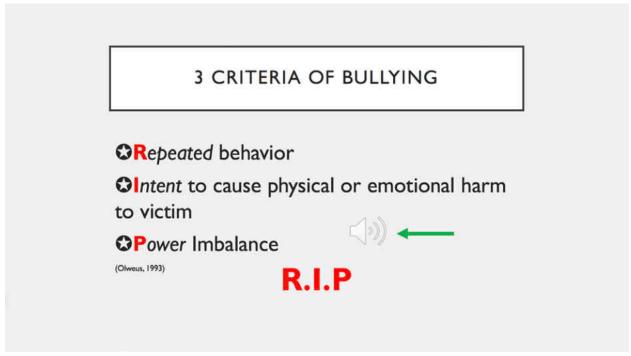


Figure 12. Example of Reminder to Play Audio Recording

The researcher developed the modules. The content of the modules was reviewed by two experts in the field (one bullying expert and one BCBA-D who specializes in ASD). Feedback from the experts was considered and used in the development of the final product. The researcher obtained consent and demographic information for all participants in the study (see Appendices C and D). The preservice teachers were assigned to the three modules (treatment group) or a prerecorded lecture on bullying (control group).

Control Group

Participants in the control group viewed the pre-recorded videos (the same eight videos as the treatment group) and took a pretest (see Appendix F) to measure their ability to identify and respond to bullying behaviors. Immediately following the pretest, the participants watched the prerecorded lecture (see Figure 6) and viewed the videos for a second time. Once the participants viewed the videos for the second time, they took the posttest (see Appendix F).

Preservice teachers in the control group had access to the videos, pre-recorded lecture, and pre and posttests for one week (the same week the treatment group received the modules).

Dependent Variable

The dependent variable was the percent of correct responses. A response was scored as correct if the participant watched the videos and correctly identified 1) a bullying scenario occurred in the video and 2) was able to identify how the students or teachers should respond to the scenario. Pre and post test questions were developed and reflective of questions based on the content from the modules, which were previously reviewed by two experts in the field.

Procedural Fidelity

Pre-Study

The scenarios were predetermined and reviewed by one expert in the field, and a TeachLivETM interactor was given a script on how to make the avatars behave in each scenario. These scenarios were transformed into a video prior to participant viewing. All participants in control and treatment groups received the same videos.

During Intervention Phase

To control for threats to internal validity, the participants in the treatment group were invited, by the lead researcher, to take part in a Non-Academic Special Programs Course titled "Teaching Preservice Teachers to Respond to Bullying Behaviors." This course was separate from the exceptional education course, and the invitation kept participants in the control group from accessing the modules. The only way to access the modules was by invitation from the lead researcher (which was only given to the participants in the treatment group).

The participants in both groups completed their procedures in sequential order. Each step was a prerequisite to unlock the next step. The online platform was set up so the participants could

not advance in the process unless each step was completed in a prescribed order (see Figure 13 for the steps of the control group).

The steps for the treatment group were as follows (see Figure 13):

- 1. View eight videos
- 2. Take pre-test
- 3. View module 1 (Recognize)
- 4. Take Module 1 Assessment (see Appendix G)
- 5. View Module 2 (Respond)
- 6. Take Module 2 assessment (see Appendix H)
- 7. View Module 3 (Report)
- 8. Take Module 3 Assessment (see Appendix I)
- 9. View 8 videos (a second time)
- 10. Take post-test
- 11. Take Social Validity Survey (see Appendix J)

TO DO:

Welcome to the research study. Thank you for your participation.

You will complete the contents of this module in sequential order.

- 1. Watch 8 short videos
- 2. Take a Pre Test (6 questions) (proctored)
- 3. View Module 1
- 4. Take Module 1 Assessment (4 questions) (proctored)
- 5. View Module 2
- 6. Take Module 2 Assessment (4 questions) (proctored)
- 7. View Module 3
- 8. Take Module 3 Assessment (4 questions) (proctored)
- 9. View 8 videos again
- 10. Take a Post Test (6 questions) (proctored)
- 11. Take Social Validity Survey

View modules 1, 2, and 3 in their entirety and listen to each audio recording on the slides (important information is in the audio). Note taking is encouraged.

Figure 13. Screen Shot of the Protocol for Treatment Group

TO DO:

Welcome to the research study. Thank you for your participation.

You will complete the contents of this module in sequential order (you must complete one to unlock the next).

- 1. Watch 8 short videos
- 2. Take a Pre Test (6 questions) (proctored)
- 3. Watch YouTube video (Current Issues in Education: Bullying)
- 4. View 8 videos again
- 5. Take a Post Test (6 questions) (proctored)

Figure 14. Screen Shot of the Protocol for the Control Group



Figure 15. Screenshot of Photo from Monitored Test

Each assessment (module assessment for the participants in the treatment group and the pre and post-test assessments for both groups) was monitored by the webcam on the participant's computer. The monitored test included a series of photos taken every few seconds by the participant's webcam (see example in Figure 15). At the end of the assessment, the photos were combined to form a time lapse video for the researcher to view the participant's test taking behavior. The online platform only had the ability to video the participants taking the assessments; however, the participants were not video recorded while they viewed the modules.

Reliability

Interobserver Agreement

The pre and post assessments were scored automatically through the online testing platform. A second and third independent observer hand scored the participant's responses for 30% of sessions to calculate interobserver agreement (IOA); What Works Clearinghouse, 2017). This procedure was completed to ensure no computation or human error occurred during the input or scoring process. The IOA was calculated using a trial-by-trial method. A second and third observer coded all correct responses by dividing the number of trial item agreements by the total of trials, then multiplying by 100.

Social Validity

Each participant in the treatment group received a social validity survey. Participants were asked to complete the survey noting their thoughts on the following: (a) the goals of the intervention, (b) the acceptability of the procedures used in the modules, and (c) the importance of the effects of the modules (What Works Clearinghouse, 2017). The survey was made up of eight items on a Likert scale (i.e., strongly disagree, disagree, neutral, agree, and strongly agree). The researcher used a modified version of Kazdin (1980) Treatment Evaluation Inventory – Short Form.

Data Analysis Procedures

A two-way mixed Analysis of Variance (ANOVA) was used to compare the mean pre and post scores for the treatment and control groups. IBM SPSS Statistics Version 25 was used to analyze the data.

CHAPTER FOUR: RESULTS

In this chapter, the researcher presents the results of this experimental group design study. The purpose was to determine if three online modules taught preservice teachers how to identify and respond to bullying behaviors, for students with Autism Spectrum Disorder, when compared to a group of preservice teachers who received a prerecorded lecture on bullying. The researcher aimed to answer the following research question:

Research Question 1: To what extent do three, asynchronous online modules increase the percentage correct of identifying and responding to bullying situations for preservice service teachers, working with an elementary student with ASD, as compared to a control group of preservice teachers who did not receive the modules?

- Independent variable: three, asynchronous online modules used to teach preservice teachers how to identify and respond to bullying situations involving an elementary student with ASD.
- Dependent variable: the percent correct of identifying and responding to bullying situations as measured by a pre and posttest assessment created by the researcher.
- Alternative Hypothesis: Preservice teachers in the treatment group, receiving the three
 online modules, will increase their test scores from pre to post when compared to those in
 the control group who did not receive the modules.
- Null Hypothesis: There is no significant difference in the participants' pre and post-test scores when compared to the control group who did not receive the modules.

There were originally 19 participants who met the inclusion criteria for this study. One participant from the treatment group did not complete the protocol, so her data could not be used. A second participant chose not to participate in the study, leaving eight participants in

the treatment group. In addition, two participants in the control group chose to withdraw from the study, leaving seven participants in the control group, (N=15).

Fifteen preservice teachers participated in the study. Twelve participants (80%) were between the ages of 18 and 25 and three participants (20%) were between the ages of 26 and 35. Data were entered into IBM SPSS Statistics 25, and a two-way mixed ANOVA was conducted to calculate statistical significance and answer the research question. Because the interaction of the two-way ANOVA was not significant, a one-way ANOVA also was conducted to determine the main effect of the treatment and control groups.

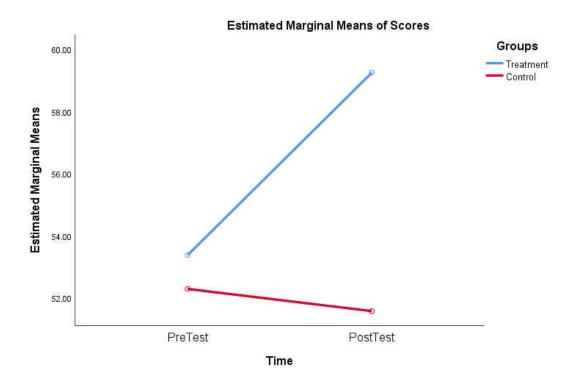


Figure 16. Profile Plot for the Interaction Effect Between the Variables

The assumption of normality was violated for both the treatment and the control groups for the pretest, as well as the treatment group for the post-test. The control group for the posttest

met the assumption of normality as measured by the Shipiro-Wilk's test (Shapiro & Wilk, 1965). The pretest scores for the treatment group were normally distributed (SW(8) = .823, p = .05), and the posttest scores for the control group were also met (SW(7) = .835, p = .089) This was not true for the pretest control group (SW(7) = .751, p =.013) and the posttest for the treatment group (SW(8) = .636, p < .01. Regardless of the violation of assumptions, the researcher made the decision to continue using the ANOVA. According to Laerd Statistics, (2015) an ANOVA is "fairly robust to deviations from normality" (p. 12). The assumption of outliers was violated, as assessed by boxplot; however, the researcher decided to include the outliers in the analysis because when they were removed, the results were not noticeably affected (Laerd Statistics, 2015). The assumption of homogeneity of variance was met, as assessed by Levene's test of equality (F (1, 13)=.002, p = .968 pretest and F (1,13)=3.048, p =.104 posttest). The assumption of sphericity was not assessed as it was not necessary with only two groups.

There was not a statistically significant interaction between the control and treatment group on pre and posttest scores, F(1, 13) = 1.974, p = .186, partial $n^2 = 0.130$ (see Figure 16). There was not a statistically significant main effect in the bullying test scores overtime, F(1,13) = 1.194, p = .294, partial $n^2 = .084$. Also, there was not a statistically significant main effect in bullying test scores between the control group and the treatment group, F(1, 13) = 2.084, p = .173, partial $n^2 = 0.138$. Although there was not a statistically significant interaction at .05, there was a large effect size ($n^2p = .130$).

Bullying test scores for the treatment group increased from pretest (n = 8, M = 53.37, SD = 3.29) to posttest (n = 8, M = 59.25, SD = 12.95), and bullying test scores for participants in the control group decreased from pretest (n = 7, M = 52.28, SD = 4.68) to post-test (n = 7, M = 51.57, SD = 3.05) (see Table 4).

Table 5

One-way ANOVA statistics for treatment and control group

Time	Group	N	Mean	Std. Deviation	Std. Error Mean
Pretest	Treatment	8	53.37	3.29	1.16
	Control	7	52.28	4.68	1.77
Posttest	Treatment	8	59.25	12.94	4.58
	Control	7	51.57	3.05	1.15

Reliability

The pre and post tests were initially scored by the computer through the online platform. Two doctorate level students were the second and third scorers. They recoded 30% of the pre and post assessments by hand to ensure no computational errors. Inter observer agreement (IOA) was determined by dividing the number of agreeing trials by the total number of trials, then multiplying by 100. A rate of 97.5% IOA was achieved.

Treatment Fidelity

For purposes of this study, scenarios were given to TeachLivETM interactors, and the avatars were programmed to behave in the simulated classroom environment, resembling real students in an elementary classroom setting. The bullying situations were turned into videobased scenarios, and every participant in the control and treatment group received the same videos prior to taking the pretest and posttest.

All assessments were recorded by the participants' computer camera to ensure fidelity; however, due to the video proctoring feature being limited to exams or online quizzes, the researcher was unable to record the participants viewing the modules. This left the researcher

uninformed on whether the participants were viewing the modules as intended (reading slides and listening to the audio recordings).

The researcher created a separate course for the treatment group to reduce the contamination of the participants in the control group and keep them from having access to the modules. A feature in the separate course allowed the researcher to see the duration of time each participant spent viewing and interacting with the modules. This information was important because, without the video proctoring feature, it was difficult to determine if the slides were actually being viewed or if the participants were quickly flipping through the slides as a means to end the assignment. To account for this variable, the researcher had two, doctorate level graduate students complete the protocol in the prescribed order and compared their times and scores with the participants' in the treatment group. The first doctorate student scored a 76% on the pretest and a 76% on the posttest. He spent a duration of 70 minutes completing the modules. The second doctorate student scored a 57% on the pretest and an 86% on the posttest. She spent 80 minutes completing the modules. Although the doctorate students' overall pre and posttest scores were higher than most of the participants in the treatment group, neither doctorate student was video proctored during the pre and posttest exams, also the doctorate students both had more than six months of teaching experience. Neither had previous bullying intervention training. These factors may have had an effect on their scores.

Social Validity

The social validity questionnaire was given to the participants in the treatment group. The questionnaire measured the goals, procedures, and outcomes of the intervention. The response rate was 77%. In general, the preservice teachers had a positive experience with the modules.

Table 6
Social Validity Results

	Strongly Disagree or Disagree	Neutral	Agree or Strongly agree
I find the modules to be an acceptable tool for addressing my student's bullying concerns.	Biougree		Preservice Teacher: 7
I would be willing to use the procedures discussed in the modules if I had to change my approach to responding to bullying situations.			Preservice Teacher: 7
I like the content discussed in the modules.			Preservice Teacher: 7
I believe the modules are likely to be effective.			Preservice Teacher: 7
I believe my students will experience discomfort if I follow the protocol of the modules.	Preservice Teacher: 5	Preservice Teacher: 1	Preservice Teacher: 1
I believe the modules are likely to result in permanent improvement.		Preservice Teacher: 2	Preservice Teacher: 5
I believe it would be acceptable to use the modules with individuals who cannot make decisions for themselves.	Preservice Teacher:1	Preservice Teacher: 1	Preservice Teacher: 5
Overall, I have a positive reaction to the modules.			Preservice Teacher: 7

All participants liked the content discussed in the modules and felt the intervention served as an acceptable tool for addressing their bullying concerns. All participants either agreed or strongly agreed they would be willing to use the procedures discussed in the modules when responding to bullying situations in their classrooms. All participants believed the modules were

likely to be effective and either strongly disagreed or disagreed that the modules would cause discomfort to the students. Five of the seven participants believed strongly that the modules would result in permanent improvement and that the modules would be acceptable to use with individuals who cannot make decisions for themselves. All in all, each participant in the treatment group had a positive reaction to the modules (see Table 5).

Summary of Results

In the analysis based on the research question, there were some assumptions not met. The assumption of normality and the assumption of outliers was not met; however, the researcher decided to continue regardless of the violations. The researcher attempted to remove the outliers; however, once removed, they had little to no effect on the overall results of the analysis—there was still no significant interaction between the control and treatment pre and post scores with the outliers missing. The research protocol was implemented with high fidelity and the two IOA scorers were in 97.5% agreement on the pre and post assessment scores for the participants in the control and treatment groups.

Table 7

Pre and Posttest Results with Duration Spent in Modules

Participant Number	Age Range in Years	Group	Pre- test Scores	Module 1 Assessment Score	Module 2 Assessment Score	Module 3 Assessment Score	Post- test Scores	Total Duration Spent in Module
1	26-35	Treatment	-	-	-	-	-	-
2	18-25	Treatment	52%	50%	100%	75%	52%	50 min 35 s
3	18-25	Treatment	52%	83%	75%	50%	52%	1 hr 14 min 17 s
4	26-35	Treatment	57%	83%	100%	100%	57%	1 hr 29 min 51 s
5	26-35	Treatment	57%	100%	100%	100%	90%	2 hr 55 min 54 s
6	18-25	Treatment	57%	83%	75%	100%	57%	2 hr 7 min 47 s
7	26-35	Control	52%	n/a	n/a	n/a	52%	n/a
8	18-25	Control	62%	n/a	n/a	n/a	52%	n/a
9	18-25	Control	-	n/a	n/a	n/a	-	n/a
10	18-25	Control	48%	n/a	n/a	n/a	52%	n/a
11	18-25	Control	-	n/a	n/a	n/a	-	n/a
12	18-25	Treatment	52%	83%	75%	75%	62%	1 hr 41 min
								8 s
13	26-35	Treatment		50%	100%	75%		36 min 53 s
14	18-25	Treatment	52%	50%	100%	50%	52%	55 min 27 s
15	18-25	Treatment	48%	100%	100%	75%	52%	1 hr 20 min
								35 s
16	18-25	Control	48%	n/a	n/a	n/a	48%	n/a
17	18-25	Control	52%	n/a	n/a	n/a	52%	n/a
18	18-25	Control	52%	n/a	n/a	n/a	57%	n/a
19	18-25	Control	52%	n/a	n/a	n/a	48%	n/a

CHAPTER 5: DISCUSSION

The purpose of this study was to determine the extent to which three, asynchronous online modules taught preservice teachers to identify and respond to bullying scenarios, viewed in eight prerecorded videos, pertaining to individuals with Autism Spectrum Disorder when compared to a control group who received a prerecorded lecture on the topic of bullying in schools.

Summary and Discussion of Results

Improving preservice teacher preparation programs in the area of bullying intervention continues to be a need to prepare teachers before they enter the classroom. Teachers play a significant role in the lives of their students and they are often a student's first line of defense when dealing with problems in the school environment. Educators are to ensure teachers are prepared to assist students when they have a need or if one manifests itself in their presence. A teacher's inconsistency in responding to bullying situations may cause students to believe their teachers are incompetent in handling the situation, or the lack of teacher training may even make the situation worse. Researchers show preservice teachers have the ability to correctly identify bullying situations when given video-based scenarios; however, they often incorrectly label aggressive situations as bullying when it does not meet the criteria to be considered true bullying (i.e., imbalance of power, intent to cause harm, repetition of behavior; Hazler, Miller, Carney, & Green, 2001).

The researcher in this study made the attempt to prepare preservice teachers to correctly decipher true bullying from other forms of peer aggression, while assisting students with autism as they navigate through those situations. Although the results of the modules did not have the desired effect on the treatment group over time, they were a step in the right direction as a means to support novice teachers in understanding bullying to fight this growing epidemic. Although

researchers show a one-time training is not likely to change a teachers' behavior (Darling-Hammond, Hyler, & Gardner, 2017), this investigation was meant to aid in determining the effectiveness of the three modules in hopes for future use, in part, with a larger professional development for preservice teachers.

Social Validity

The preservice teachers in the treatment group completed the social validity survey, noting their thoughts on the goals of the intervention, the acceptability of the procedures, and the importance of the effects of the three online modules. All in all, the participants had a positive reaction to the modules.

Implications of Analysis

Analyses revealed that the test scores from the preservice teachers in the treatment group slightly increased from pretest to posttest and slightly decreased for the control group between pretest and posttest scores (see Figure 16). Such results may cause one to believe the modules used by the participants in the treatment group improved the test scores; however, this statement may be premature due to a number of statistical assumptions that were violated.

There was a very small sample size for this research project. The researcher ran a power analysis and results showed if there were at least 20 participants in the study, there may have been a significant interaction between time and groups. With only 15 participants, the study was under powered. The initial conclusions were based on hypothesis testing, and when the researcher reran the analysis considering effect size, the results were also not significant. While this study showed no statistically significant effect of the modules from pre to posttests for the treatment group, the small sample size may have been the ultimate cause. Regardless of the insignificant results, there was a large effect size—showing there was a possibility of an

interaction; however, with the small sample size, this was difficult to determine. The researcher used a two-way mixed ANOVA to determine if an interaction between the control and treatment group's test scores across time existed. The researcher did not receive desired results. A one-way ANOVA was then used to determine whether there was a significant difference in the pre and posttest scores of the participants in the treatment group when compared to the control group who received the prerecorded lecture. The results of the one-way ANOVA were not statistically significant. This finding could be due to the small sample size and or insufficient power in the study. Nonparametric tests were not conducted following the violations to the two-way mixed ANOVA, as there are no tests to compare the statistical results of the two-way mixed ANOVA (Laerd Statistics, 2015).

The instruments located in Appendices F,G, H, and I were all created, presented, and graded in CanvasTM. IOA was needed to hand code the first two questions in the Preservice Evaluation Checklist (Appendix F). The first two questions were unique from the rest of the assessment questions as they were multiple answer and not multiple choice. While grading the pre and posttest assessments and after completing IOA data, the researcher noticed a variation in the time the participants in the treatment group were spending in the modules to complete the protocol. After closely examining the data, the researcher noticed one particular student in the treatment group scored a 57% on the pretest and a 90% on the posttest. This student was the only one who showed substantial growth over time. It is important to note the time this participant spent in the modules (2 hours and 55 minutes) was considerably higher than the rest of the participants in the treatment group. The insignificant change in pre and posttest scores for participants in the treatment group may have been due to the way the assessments were

presented. It may have been beneficial for the videos to be presented one at a time with video, and specific multiple choice questions given immediately following each video.

The data gathered from the social validity surveys were positive, and these preservice teachers were in favor of the modules. The results will assist researchers in determining if the modules can be used again in future teacher preparation courses.

Limitations/Challenges

Limitations are present in all research studies; however, some limitations affect the results of a study more than others. Limitations in this study included (a) small sample size, (b) participants were a convenience sample, as they were the researchers' students, (c) researcher developed intervention and assessments, (d) no feedback or generalizability component and (e) assumptions of the analysis were violated.

The researcher was the instructor of record for a small, introduction to exceptional education course in the summer 2019 semester. To compensate for the small sample size obtained from this class, the researcher ran the study a second time in the fall 2019 semester and disaggregated the data from semester one and two. Regardless of the study being conducted during two consecutive semesters, the results of the study are limited due to an insufficient sample size. A minimum of 24 participants was needed to validate the findings.

The lack of validity and reliability of the modules and assessment questions are two major limitations of this study. The researcher developed the modules and assessments. The modules were not thoroughly field tested before they were used in the course. According to Roberts (2010), researchers should consult with at least five to 10 experts in the field to test and make judgement on the self-developed instrument prior to implementation. The content of the modules was reviewed by two experts in the field, and the feedback was used to revise and develop the

final version; however, in the future, a tool that is self-created should be adequately tested by multiple experts before it can be considered a "valid" instrument. To limit bias, the researcher had the assessments distributed and graded through an online computer platform.

The intervention did not have a feedback component. Although it is known that feedback is an important component in the assessment process (Darling-Hammond et al., 2017), at the time of the study, the researcher was most interested in determining the effectiveness of the modules and only included a social validity survey as a feedback component. In the future, it would be beneficial for a feedback component to be added to the modules. Feedback provides the participants a way to learn from mistakes and the opportunity to correct errors before applying the skills in the classroom with live students.

Since there were only eight participants in the treatment group, the findings may not be generalizable and/or be a good representation of all preservice teachers in exceptional education programs. Videos of TeachLiveTM avatars were used to demonstrate what real-life bullying situations may look like in the classroom; however, some may argue that the videos may not present life-like scenarios and may be difficult for the skills learned to be transferred over to a natural setting. It will be worthwhile to add a generalizability component to ensure the skills learned using the modules/videos will carry over to a larger sample and a natural teaching environment. Although the results cannot be generalized to a larger audience, they do emphasize the need for further investigation into the topic.

Based on the limitations of this study, the following recommendations are made for future research opportunities.

Implications for Future Research

There continues to be a need for the evaluation of how preservice teachers view bullying situations in regard to their understanding of and how to respond to bullying when they occur (Rose et al., 2018). The results of the present study provide insight on using this type of intervention as a tool to teach teachers in elementary and possibly secondary school systems how to identify true bullying situations and how to respond appropriately when bullying affects their students—specifically those students with autism or other related disorders. Additional studies regarding the use of modules to teach preservice teachers, as well as new and seasoned teachers, are necessary. Children, with and without autism, and parents, may benefit from the modules—as the modules may serve as a training tool to provide information and boost understanding of bullying. The modules may also serve as a training tool for individuals with disabilities to identify when they are being bullied and how to navigate through the process.

The participants in this study were undergraduate level preservice teachers; however, it would be beneficial for the modules to be extended to include preservice teachers in secondary and post-secondary programs, novice and experienced teachers. A larger and more diverse sample would allow one to generalize the results of this study. The modules in this study were specific to the Florida Department of Education's bullying laws and regulations; however, future research should focus on other states and their prescribed laws and regulations.

Asynchronous learning offers learners the freedom to access content at a personal pace. While the three modules were only available for one week, the learners had the convenience to access the modules and work at their discretion within that time frame. According to Darling-Hammond, Hyler, and Gardner (2017), "Though research has not yet identified a clear threshold for the duration of the effective PD models, it does indicate that meaningful professional learning

that translates to changes in practice cannot be accomplished in short, one-off workshops" (p. 15). Although the preservice teachers only had access to the module for one week, if proven to be effective in teaching the targeted objectives, the goal is to eventually include the modules in a larger professional development training. The TeachLivETM videos included examples and non-examples of social, physical, and verbal bullying; however, none of the scenarios represented cyber bullying. In the future, scenarios including all types of bullying will be beneficial if the goal is to thoroughly train teachers to deal with bullying, as these situations arise in all settings.

Participants in the treatment group, who spent less than 60 minutes in the modules, did not show improvement from pre to posttest scores; however, half of the participants in the treatment group who spent 120 minutes or more in the modules increased their scores from pretest to posttest by at least 4%. Another observation made was that participants in the control and treatment group, taking the pre and posttests, selected all possible options for the multiple answer questions. The researcher was unsure why they did this, but can speculate that this may have been done to progress through the modules quickly, or due to the lack of interest or motivation to complete the modules as intended. In the future, the researcher would consider adding an incentive component (e.g., offering a gift card for post scores higher than 80%, etc.) in hopes that the participants will attend to the modules and complete the protocol with fidelity. Further analysis is necessary to determine the effectiveness of the modules and the videos.

Regardless of the limitations, the results were promising and a step in the right direction to developing an effective training to assist preservice teachers in responding to bullying situations prior to becoming teachers and working with children in the classroom setting. The researcher hopes this project enlightened educators to the need for professional development,

specific to assisting new and seasoned teachers, to help those students who are at risk of being easy targets for bullies.

Conclusion

The researcher sought to use asynchronous online modules to educate preservice teachers to first identify and then respond to bullying situations, specifically related to elementary students with autism. The researcher also examined preservice teachers' attitudes on the goals, procedures, and outcomes of the three modules. In the following paragraphs, conclusions for the study will be discussed.

The study of instructing teachers to navigate through bullying situations, related to individuals with autism, is scarce. What is known is the likelihood of an individual with autism being bullied is greater than that of typically developing peers (Anderson, 2012) and when bullied, individuals with autism show poor methods of responding (Rex et al., 2018). With more and more individuals with autism being served in general education classrooms, teachers—particularly preservice teachers, must learn how to help the students when they are faced with bullying situations in school and through online platforms.

First, the ability to identify when bullying behaviors occur is difficult, and if and when a situation is identified, getting an untrained teacher to respond appropriately can be unlikely. Teachers who are not properly trained to deal with bullying situations either do not respond or respond inappropriately—possibly making the situation worse for everyone involved. With proper training, teachers have a better chance of implementing the programs with efficacy over time, and possibly changing the bullying epidemic in schools. Researchers researching the use of professional development in the United States found that most of the professional learning opportunities available devote minimal time to specific topics (no more than eight hours) and

have become a replacement for professional learning opportunities that address topics on a deeper level (Wei, Darling-Hammond, & Adamson, 2010).

The present study served as the initial exploration into using online modules to teach preservice teachers how to identify and respond to bullying situations. Online learning continues to increase in popularity and impact adult learners and students in higher education. Due to the obvious convenience of the online platform, online (asynchronous) learning offers learners the flexibility of acquiring knowledge at a personal pace with the option of replaying information when needed (Wynants & Dennis, 2018). Online learning has become a highly preferred method of delivering instruction for adults trying to further their education (Allen & Seaman, 2007).

A recommendation is that school staff receive professional development (PD) to further the development of their skills in the area of helping students navigate through bullying situations—both with typically developing students and students with disabilities. After all, bullying is not just a school problem, but an epidemic society needs to address, wholly. The magnitude of the professional learning is an important factor when selecting the correct PD; however, the quality of the PD also makes a significant difference. It is important to increase the confidence and self-efficacy of preservice teachers as they prepare to work in the classroom setting—as they are the number one advocate, and often first line of defense for our students, both with and without disabilities. One way of doing this is to offer convenient modalities and richer professional development opportunities as a means to create more equipped and better trained teachers to advocate for and protect our students.

APPENDIX A IRB EXEMPTION DETERMINATION (Summer 2019)



UNIVERSITY OF CENTRAL FLORIDA

Institutional Review Board FWA00000351 IRB00001138 Office of Research 12201 Research Parkway Orlando, FL 32826-3246

EXEMPTION DETERMINATION

May 2, 2019

Dear Jaime Best:

On 5/2/2019, the IRB determined the following submission to be human subjects research that is exempt from regulation:

Type of Review:	Initial Study, Category 1
	UTILIZING ASYNCHRONOUS ONLINE MODULES TO EDUCATE PRESERVICE TEACHERS TO ADDRESS BULLYING BEHAVIORS FOR ELEMENTARY STUDENTS WITH AUTISM SPECTRUM DISORDER
Investigator:	Jaime Best
IRB ID:	STUDY00000416
Funding:	None
Grant ID:	None

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made, and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request so that IRB records will be accurate.

If you have any questions, please contact the UCF IRB at 407-823-2901 or irb@ucf.edu. Please include your project title and IRB number in all correspondence with this office.

Sincerely,

Racine Jacques, Ph.D. Designated Reviewer

Page 1 of 1

APPENDIX B IRB EXEMPTION DETERMINATION (Fall 2019)



UNIVERSITY OF CENTRAL FLORIDA

Institutional Review Board

FWA00000351 IRB00001138 Office of Research 12201 Research Parkway Orlando, FL 32826-3246

EXEMPTION DETERMINATION

August 30, 2019

Dear Jaime Best:

On 8/30/2019, the IRB determined the following submission to be human subjects research that is exempt from regulation:

Type of Review:	Modification / Update, Category 1	
Title:	UTILIZING ASYNCHRONOUS ONLINE MODULES TO EDUCATE PRESERVICE TEACHERS TO ADDRESS BULLYING BEHAVIORS FOR ELEMENTARY STUDENTS WITH AUTISM SPECTRUM DISORDER	
Investigator:	Jaime Best	
IRB ID:	MOD0000432	
Funding:	None	
Grant ID:	None	

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made, and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request so that IRB records will be accurate.

If you have any questions, please contact the UCF IRB at 407-823-2901 or irb@ucf.edu. Please include your project title and IRB number in all correspondence with this office.

Sincerely,

Racine Jacques, Ph.D. Designated Reviewer

Page 1 of 1

APPENDIX C CONSENT FORM (Summer 2019)



Title of Project: Utilizing Asynchronous Online Modules to Educate Pre-service Teachers to Address Bullying Behaviors for Elementary Students with Autism Spectrum Disorder

Principal Investigator: Jaime Best

Other Investigators: N/A

Faculty Supervisor: Eleazar Vasquez

You are being invited to take part in a research study. Your participation in this study is voluntary. You are free to withdraw your consent and discontinue participation in this study at any time without prejudice or penalty. Your decision to participate or not participate in this study will in no way affect your continued enrollment, grades, employment or your relationship with the individuals who may have an interest in this study.

Inclusion criteria: 1) traditional undergraduate student enrolled in an intro to Exceptional Education course, 2) have no more than 6 months of formal classroom teaching experience, and 3) have no prior training implementing bullying interventions.

University students enrolled in a section of an intro to Exceptional Education course in the Summer of 2019 will be selected through random sampling using a random number generator to illicit responses and will be assigned to either the control (i.e., pre-recorded lecture that covers the same content) or treatment group (i.e., bullying curriculum through three online modules).

The purpose of this dissertation is to examine the impact of three online modules on the impact of pre-service teachers' ability to identify and resolve bullying situations for students with Autism Spectrum Disorder (ASD), compared to a group of pre-service teachers who do not receive the modules. These skills will be examined in pre- and post-assessments of pre-service teachers' ability to identify and address bullying behaviors in videos prerecorded in the TeachLivETM simulated classroom.

The modules will be a part of the online course and included in the Behavior Management section. Each participant will be asked to complete the modules and complete an assessment at the end. The modules will be available for up to one week. The content for each module will be available to participants online through UCF webcourses.

You must be 18 years of age or older to take part in this research study.

Study contact for questions about the study or to report a problem: If you have questions, concerns, or complaints: Jaime Best, Graduate Student, Exceptional Education Doctorate Program, College of Community Innovation and Education, (508)-245-9715 or Dr. Eleazar Vasquez, Faculty Supervisor, by email at eleazar.vasquez@ucf.edu. IRB contact about your rights in this study or to report a complaint: If you have questions about your rights as a research participant, or have concerns about the conduct of this study, please contact Institutional Review Board (IRB), University of Central Florida, Office of Research, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901, or email irb@ucf.edu.

APPENDIX D CONSENT FORM (Fall 2019)



Title of Project: Utilizing Asynchronous Online Modules to Educate Pre-service Teachers to Address Bullying Behaviors for Elementary Students with Autism Spectrum Disorder

Principal Investigator: Jaime Best

Other Investigators: N/A

Faculty Supervisor: Eleazar Vasquez

You are being invited to take part in a research study. Your participation in this study is voluntary. You are free to withdraw your consent and discontinue participation in this study at any time without prejudice or penalty. Your decision to participate or not participate in this study will in no way affect your continued enrollment, grades, employment or your relationship with the individuals who may have an interest in this study.

Inclusion criteria: 1) traditional undergraduate student enrolled in an intro to Exceptional Education course, 2) have no more than 6 months of formal classroom teaching experience, and 3) have no prior training implementing bullying interventions.

University students enrolled in a section of an intro to Exceptional Education course in the Fall of 2019 will be selected through random sampling using a random number generator to illicit responses and will be assigned to either the control or treatment group.

The purpose of this dissertation is to examine the impact of three online modules on the impact of pre-service teachers' ability to identify and resolve bullying situations for students with Autism Spectrum Disorder (ASD), compared to a group of pre-service teachers who do not receive the modules. These skills will be examined in pre- and post-assessments of pre-service teachers' ability to identify and address bullying behaviors in videos prerecorded in the TeachLivETM simulated classroom.

The modules will be a part of the online course and included in the Behavior Management section. Each participant will be asked to complete the modules and complete an assessment at the end. The modules will be available for up to one week. The content for each module will be available to participants online through UCF webcourses.

You must be 18 years of age or older to take part in this research study.

Study contact for questions about the study or to report a problem: If you have questions, concerns, or complaints: Jaime Best, Graduate Student, Exceptional Education Doctorate Program, College of Community Innovation and Education, (508)-245-9715 or Dr. Eleazar Vasquez, Faculty Supervisor, by email at eleazar.vasquez@ucf.edu. IRB contact about your rights in this study or to report a complaint: If you have questions about your rights as a research participant, or have concerns about the conduct of this study, please contact Institutional Review Board (IRB), University of Central Florida, Office of Research, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901, or email irb@ucf.edu.

APPENDIX E DEMOGRAPHIC SURVEY

DEMOGRAPHIC SURVEY

Participant #_____

Please complete this brief survey. Circle the best answer.

- 1. Age?
 - a. 18-25
 - b. 26-35
 - c. 36-45
 - d. 46-56
- 2. Are you currently enrolled in an intro to Exceptional Education course?
 - a. Yes
 - b. No
- 3. Are you a preservice teacher in the Elementary Education track?
 - a. Yes
 - b. No
- 4. How much formal classroom teaching experience do you have?
 - a. 6 months or less
 - b. More than 6 months
- 5. Do you have prior bullying intervention training/experience?
 - a. Yes
 - b. No

APPENDIX F PRE-POST TEST MEASURE

Preservice Teacher Evaluation Checklist

Circle	one: Pre-Test Post-Test
Date _	
Partici	pant #
	Bullying occurred in the following videos? (select all that apply) Cry baby
b)	Shoes My Seat
e)	Birthday Weirdo Martin
g) h)	Martin Wet Shirt High Five Bullying did not occur in any of the videos
2.	What type of Bullying occurred? (select all that apply)
a)	The video labeled "Weirdo" where CJ calls Martin a "weirdo" is an example of Verbal Bullying
b)	The video labeled "Cry Baby" where CJ is encouraging peers to call Martin a "crybaby" is an example of Verbal Bullying
c)	The video labeled "Shoes" where CJ tells Martin she doesn't like his shoes is and example of Verbal Bullying
d)	The video labeled "Wet Shirt" where CJ embarrassed Martin about his wet shirt is an example of Social/Relational Bullying
e)	The video labeled "Martin" where CJ kicks Martin is an example of Physical Bullying
f)	The video labeled "Birthday", where CJ deliberately leaves Martin out of the birthday invite is an example of Social/Relational Bullying
g)	The video labeled "High Five" where CJ offers high fives to everyone except Martin is an

h) The video labeled "My Seat" where CJ pushes Martin onto the ground in the attempt to

example of Social/Relational Bullying

take her seat back is an example of Physical Bullying

- 3. What advice would you give Martin (the alleged victim)? (choose one)
- a) Your classroom will be changed to avoid future bullying episodes
- b) It is your responsibility to immediately meet with the bully and repair the relationship.
- c) First you need to find a trusted adult and tell him/her what happened. Now we will meet with the person who bullied you and see if we can find a solution.
- d) Review the definition of bullying and review a social story on bullying behavior. "If you believe you were a victim of bullying, I encourage you to report the incident in writing. I will help you".
- 4. After meeting with Martin and initiating the bullying report form, what is the next thing you, as the teacher, should do? (choose one)
- a) Consider suspending the bully, after all, no one should be treated the way he/she treated
 Martin.
- b) Inform the parents/guardian of all students involved in the situation.
- c) Send the students home until the investigation is complete.
- d) Gather the alleged bully, victim, and bystanders in one room and discuss the details of the situation.
- 5. If there were bystanders present during the bullying situation, what advice would you give them? (choose one)
- a) No advice is needed unless they were actively participating in the situation
- b) Your parents will be informed of your involvement in the bullying situation
- c) Do not encourage the bully, but tell him/her to stop. If they do not, tell a trusted adult.
- d) Although it is not required, I encourage you to fill out a witness form.

- 6. As a new teacher, you may feel nervous about contacting a student's parent to inform them of a bullying situation, so you should: (choose one)
- a) Teachers/School staff are not required to contact the student's parent.
- b) Have another teacher or administrator do it
- c) Take your time and rehearse what you will say. You have a period of 5 days before you have to report the incident to the parents/guardian.
- d) Use the Guidance for Notifying Parents form to practice your sample script
- e) Fill out the online anonymous report informing them there was a bullying incident involving their child

APPENDIX G MODULE 1 POST ASSESSMENT

1. What are the 3 criteria of bullying which must be present for a behavior to be considered true bullying?

- a) Imbalance of protection, Intent to disrupt society, Repetition of behaviors (I.I.R)
- b) Repetition of bullying behaviors over time, Intent to cause physical or emotional harm to victim, Power imbalance (R.I.P)
- c) Improper use of force, Disruption of social skills, Targeting of a weaker individual (I.D.T)
- d) Improper use of power, Targeting the weak, Seeking the most vulnerable (I.T.S)

2. What are the types of bullying?

- a) Physical, verbal, social, damage to property and cyberbullying
- b) Pinching, yelling, jostling, cyberbullying, instrumental aggression
- c) Destruction of property, jostling, retaliatory aggression, instrumental aggression and cyberbullying

3. Select all that are NOT considered bullying:

- a) Jostling
- b) Instrumental Aggression
- c) Retaliatory Aggression
- d) Repeated, intentional, physical harm to an individual with a disability

APPENDIX H MODULE 2 POST ASSESSMENT

1. Who are Tier 1 supports available to?

- a) School wide supports for the entire student body
- b) Small groups of individuals who are frequently targeted by bystanders
- c) Small groups of individuals who are frequently targeted by bullies
- d) School staff and administration

2. What is an effective intervention strategy for students with autism who are frequently bullied?

- a) Home school
- b) Virtual school
- c) Social narratives/social stories to review what to do when faced with a bullying situation
- d) Teaching them to tattle when they want to get the bully to stop bothering them

3. What is one way to protect students with autism from being bullied in secluded areas?

- a) A buddy system
- b) guide dog
- c) Don't allow the student out of an adult's sight
- d) Virtual school

4. When the investigation process begins, teachers should:

- a) Question the victim and the alleged bully at the same time. This way no one can lie.
- b) Separate the kids involved and question them separately.
- c) Publicly address the bystanders to ask them what they saw. They are less likely to lie if they are in a group of other bystanders.
- d) Encourage the victim and the alleged bully to patch up the relationship, as soon as possible.

APPENDIX I MODULE 3 POST ASSESSMENT

1. Currently, how many states have anti-bullying laws?

- a) 49, but Georgia is in the process of getting them.
- b) All 50
- c) 47, Georgia, Colorado and Alaska do not
- d) Most of the United States public schools have them, but they are not required in some states in North America

2. After assisting the victim, what is the very next thing school staff should do?

- a) Collect witness statements
- b) Provide immediate notification to all parents/guardians of the alleged victim and bully
- c) Find the bystanders and immediately form a group to discuss what they saw
- d) Suspend the bully

3. If 3 bystanders were present during the bullying incident, how many witness statements should you collect?

- a) Three
- b) One is enough if it is done collaboratively
- c) None. It is not mandatory to get a witness statement
- d) What is a witness statement?

4. What phone number would you give an individual in the Orange County School District if they wanted to make an anonymous report?

- a) The Speak Out Hotline: 1-800.423.TIPS
- b) Anonymous Reporting: 1-800-NOT-SEEN
- c) You cannot make an anonymous report in Florida
- d) The Florida Department of Education 1-800-FLD-FDOE

APPENDIX J SOCIAL VALIDITY SURVEY

	Strongly	Disagree	Neutral	Agree (4)	Strongly
	disagree (1)	(2)	(3)		agree (5)
I find the modules to be an					
acceptable tool for					
addressing my students'					
bullying concerns.					
I would be willing to use					
the procedures discussed in					
the modules if I had to					
change my approach to					
responding to bullying					
situations.					
I like the content discussed					
in the modules.					
I believe the modules are					
likely to be effective.					
I believe my student will					
experience discomfort if I					
follow the protocol of the					
modules.					
I believe the modules are					
likely to result in					
permanent improvement.					
I believe it would be					
acceptable to use the					
modules with individuals					
who cannot make decisions					
for themselves.					
Overall, I have a positive					
reaction to the modules.					

Modified Treatment Evaluation Inventory- Short Form (Kazdin, 1981)

APPENDIX K PRE AND POSTTEST ANSWER KEY

Preservice Teacher Pre and Post Test

ANSWER KEY

Circle one: Pre-Test Post-Test
Participant #
Score/21
1) Bullying occurred in the following videos?/9
*Cry baby
*Shoes
*My Seat
*Birthday
*High Five
*Bullying did not occur in any of the videos
*Weirdo
*Martin
*Wet Shirt
2) What type of bullying occurred?/8
*The video labeled "Weirdo" where CJ calls Martin a "weirdo" is an example of Verbal Bullying
*The video labeled "Cry Baby" where CJ is encouraging peers to call Martin a "crybaby" is an example of Verbal Bullying
*The video labeled "Shoes" where CJ tells Martin she doesn't like his shoes is and example of Verbal Bullying
*The video labeled "Wet Shirt" where CJ embarrassed Martin about his wet shirt is an example of Social/Relational Bullying
*The video labeled "Martin" where CJ kicks Martin is an example of Physical Bullying

*The video labeled "Birthday", where CJ deliberately leaves Martin out of the birthday invite is an example of Social/Relational Bullying

*The video labeled "High Five" where CJ offers high fives to everyone except Martin is an example of Social/Relational Bullying

*The video labeled "My Seat" where CJ pushes Martin onto the ground in the attempt to take her seat back is an example of Physical Bullying

3) What advice would you give Martin (the alleged victim)? ___/1

- a) Your classroom will be changed to avoid future bullying episodes
- b) It is your responsibility to immediately meet with the bully and repair the relationship.
- c) you need to find a trusted adult and tell him/her what happened. Now we will meet with the person who bullied you and see if we can find a solution.
- d) *Review the definition of bullying and review a social story on bullying behavior. "If you believe you were a victim of bullying, I encourage you to report the incident in writing. I will help you".

4) After meeting with Martin and initiating the bullying report form, what is the next thing you, as the teacher, should do? ____/1

- a) Consider suspending the bully, after all, no one should be treated the way he/she treated
 Martin.
- b) *Inform the parents/guardians of all students involved in the situation.
- c) Send the students home until the investigation is complete.
- d) Gather the alleged bully, victim, and bystanders in one room and discuss the details of the situation.

5) If there were bystanders present during the bullying situation, what advice would you give them? _____/1

- a) No advice is needed unless they were actively participating in the situation
- b) *Your parents will be informed of your involvement in the bullying situation
- c) Do not encourage the bully, but tell him/her to stop. If they do not, tell a trusted adult.

d) Although it is not required, I encourage you to fill out a witness form.

6) As a new teacher, you may feel nervous about contacting a student's parent to inform them of a bullying situation, so you should: ____/1

- a) Teachers/School staff are not required to contact the student's parent.
- b) Have another teacher or administrator do it
- c) Take your time and rehearse what you will say. You have a period of 5 days before you have to report the incident to the parents/guardian.
- d) *Use the Guidance for Notifying Parents form to practice your sample script
- e) Fill out the online anonymous report informing them there was a bullying incident involving their child

Module 1 Assessment: RECOGNIZE

Score: ____/6_

- 1. What are the 3 criteria which must be present for a behavior to be considered true bullying?
- a) Imbalance of protection, Intent to disrupt society, Repetition of behaviors (I.I.R)
- b) *Repetition of bullying behaviors over time, Intent to cause physical or emotional harm to victim, Power imbalance (R.I.P)
- c) Improper use of force, Disruption of social skills, Targeting of a weaker individual (I.D.T)
- d) Improper use of power, Targeting the weak, Seeking the most vulnerable (I.T.S)

2. What are the types of bullying?

- a) *Physical, verbal, social, damage to property and cyberbullying
- b) Pinching, yelling, jostling, cyberbullying, instrumental aggression
- c) Destruction of property, jostling, retaliatory aggression, instrumental aggression and cyberbullying

3. Select all that are NOT considered bullying:

- a) *Jostling
- b) *Instrumental Aggression
- c) *Retaliatory Aggression
- d) Repeated, intentional, physical harm to an individual with a disability
- 4. Students with Autism experience bullying at a higher rate than any other disability class.

- a) True
- b) *False. Students with Emotional and Behavioral Disorders (EBD) experience bullying at a higher rate (35.3%) than any other disability class. Students with Autism experience it at 33.9%.

Module 2 Assessment: RESPOND

Score: ______/4

1. Who are Tier 1 supports available to?

- a) *School wide supports for the entire student body
- b) Small groups of individuals who are frequently targeted by bystanders
- c) Small groups of individuals who are frequently targeted by bullies
- d) School staff and administration

2. What is an effective intervention strategy for students with autism who are frequently bullied?

- a) Home school
- b) Virtual school
- c) *Social narratives/social stories to review what to do when faced with a bullying situation
- d) Teaching them to tattle when they want to get the bully to stop bothering them

3. What is one way to protect students with autism from being bullied in secluded areas?

- a) *A buddy system
- b) Guide dog
- c) Don't allow the student out of an adult's sight
- d) virtual school

4. When the investigation process begins, teachers should:

- a) Question the victim and the alleged bully at the same time. This way no one can lie
- b) *Separate the kids involved and question them separately.
- c) Publicly address the bystanders to ask them what they saw. They are less likely to lie if they are in a group of other bystanders.
- d) Encourage the victim and the alleged bully to patch up the relationship, as soon as possible.

M	lubo	e 3 A	Assessment:	REPO	RT
IV I	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	C .) /			,,,

Score: /4

1. Currently, how many states have anti-bullying laws?

- a) 49, but Georgia is in the process of getting them.
- b) *All 50
- c) 47, Georgia, Colorado and Alaska do not
- d) Most of the United States public schools have them, but they are not required in some states in North America

2. When a bullying situation occurs, what is the very next thing school staff should do after assisting the victim?

- a) Collect witness statements
- b) *Provide immediate notification to all parents/guardians of the alleged victim and bully
- c) Find the bystanders and immediately form a group to discuss what they saw
- d) Suspend the bully

3. If 3 bystanders were present during the bullying incident, how many witness statements are you required to collect?

- a) *Three
- b) One is enough if it is done collaboratively
- c) None. It is not mandatory to get a witness statement
- d) Why would a bystander be considered a witness?

4. If an individual in Orange County Public Schools wants to submit an anonymous report what phone number would you give them?

- a) *The Speak Out Hotline: 1-800.423.TIPS
- b) Anonymous Reporting: 1-800-NOT-SEEN
- c) You wouldn't provide them with a number because you cannot make an anonymous report in Florida.
- d) The Florida Department of Education 1-800-FLD-FDOE

REFERENCES

- Able, H., Sreckovic, M. A., Schultz, T. R., Garwood, J. D., & Sherman, J. (2015). Views from the trenches: Teacher and student supports needed for full inclusion of students with ASD. *Teacher Education and Special Education*, *38*(1), 44–57. https://doi.org/10.1177/0888406414558096
- Adachi, T., Koeda, T., Hirabayashi, S., Maeoka, Y., Shiota, M., Charles Wright, E., & Wada, A. (2004). The metaphor and sarcasm scenario test: A new instrument to help differentiate high functioning pervasive developmental disorder from attention deficit/hyperactivity disorder. *Brain and Development*, 26(5), 301–306. https://doi.org/10.1016/S0387-7604(03)00170-0
- Allen, I., & Seaman, J. (2007). Making the grade: Online education in the United States, 2006.

 The Sloan Consortium.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (DSM-5) (5th ed.). Arlington: American Psychiatric Association Publishers.
- Anderson, C. (2012, March 26). IAN research report: Bullying and children with ASD. Retrieved November 18, 2017, from IAN Comminity Scientific Liason Kennedy Krieger Institute website:
 - https://www.iancommunity.org/cs/ian_research_reports/ian_research_report_bullying
- Artman-Meeker, K., Rosenberg, N., Badgett, N., Yang, X., & Penney, A. (2017). The effects of bug-in-ear coaching on pre-service behavior analysts' use of functional communication training. *Behavior Analysis in Practice*, 10(3), 228–241. https://doi.org/10.1007/s40617-016-0166-4

- Banas, J. R. (2014). Impact of authentic learning exercises on preservice teachers' self-efficacy to perform bullying prevention tasks. *American Journal of Health Education*, 45(4), 239–248.
- Barmaki, R. (2016). Improving social communication skills using kinesics feedback. *Conference on Human Factors in Computing Systems Proceedings*, 86–91.
- Bauman, S., & Del Rio, A. (2006). Preservice teachers' responses to bullying scenarios:

 Comparing physical, verbal, and relational bullying. *Journal of Educational Psychology*, 98(1), 219–231.
- Bauman, S., Rigby, K., & Hoppa, K. (2008). US teachers' and school counsellors' strategies for handling school bullying incidents. *Educational Psychology*, 28(7), 837–856. https://doi.org/10.1080/01443410802379085
- Beyda-Lorie, S., Kritikos, E., & Messerer, J. (2011). Preparing special educators to infuse real life issues into the k-12 curriculum. *Learning Disabilities: A Multidisciplinary Journal*, 17(1), 5–15.
- Blain-Arcaro, C., Smith, J. D., Cunningham, C. E., Vaillancourt, T., & Rimas, H. (2012).
 Contextual attributes of indirect bullying situations that influence teachers' decisions to intervene. *Journal of School Violence*, 11(3), 226–245.
 https://doi.org/10.1080/15388220.2012.682003
- Blake, J., Lund, E., Zhou, Q., Kwok, O.-M., & R Benz, M. (2012). National prevalence rates of bully victimization among students with disabilities in the United States. *School Psychology Quarterly*, 27(4), 210–222. https://doi.org/DOI: 10.1037/spq0000008
- Boulton, M. J., Hardcastle, K., Down, J., Fowles, J., & Simmonds, J. A. (2014). A comparison of preservice teachers' responses to cyber versus traditional bullying scenarios: Similarities

- and differences and implications for practice. *Journal of Teacher Education*, 65(2), 145–155. https://doi.org/10.1177/0022487113511496
- Bousfield, T. (2017). An examination of novice and expert teachers' pedagogy in a mixed-reality simulated inclusive secondary classroom including a student avatar with autism spectrum disorders. *Electronic Theses and Dissertations*, 219.
- Bradshaw, C. P., Sawyer, A. L., & O'Brennan, L. M. (2007). Bullying and peer victimization at school: Perceptual differences between students and school staff. *School Psychology**Review, 36(3), 361–382.
- Bradshaw, C. P., Waasdorp, T. E., O'Brennan, L. M., Gulemetova, M., & Henderson, R. D. (2011). Findings from the National Education Association's nationwide study of bullying: Teachers and education support professionals' perspectives. 58.
- Brown, K. (2015). Theorizing learning process: An experiential, constructivist approach to young people's learning about global poverty and development. *International Journal of Development Education and Global Learning*, 7(1), 53–70. https://doi.org/10.18546/IJDEGL.07.1.04
- Buescher, A. V. S., Cidav, Z., Knapp, M., & Mandell, D. S. (2014). Costs of autism spectrum disorders in the United Kingdom and the United States. *JAMA Pediatrics*, *168*(8), 721–728. https://doi.org/10.1001/jamapediatrics.2014.210
- Cappadocia, M. C., Weiss, J. A., & Pepler, D. (2012). Bullying experiences among children and youth with autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 42(2), 266–277. https://doi.org/10.1007/s10803-011-1241-x
- Cardinal, J. R., Gabrielsen, T. P., Young, E. L., Hansen, B. D., Kellems, R., Hoch, H., ... Knorr, J. (2017). Discrete trial teaching interventions for students with autism: Web-based video

- modeling for paraprofessionals. *Journal of Special Education Technology*, *32*(3), 138–148. https://doi.org/10.1177/0162643417704437
- Carlson, E., Brauen, M., Klein, S., Schroll, K., & Willig, S. (2002). SPeNSE: Study of personnel needs in special education key findings. Retrieved from https://education.ufl.edu/spense/files/2013/06/Key-Findings-_Final_.pdf
- Charlop, M. H., & Milstein, J. P. (1989). Teaching autistic children conversational speech using video modeling. *Journal of Applied Behavior Analysis*, 22(3), 275–285. https://doi.org/10.1901/jaba.1989.22-275
- Chen, P.-Y., & Schwartz, I. S. (2012). Bullying and victimization experiences of students with autism spectrum disorders in elementary schools. *Focus on Autism and Other Developmental Disabilities*, 27(4), 200–212. https://doi.org/10.1177/1088357612459556
- Ching, C. P. (2011). Preservice teachers' use of educational theories in classroom and behavior management course: A case based approach. *Procedia Social and Behavioral Sciences*, 29, 1209–1217. https://doi.org/10.1016/j.sbspro.2011.11.355
- Coeckelbergh, M., Pop, C., Simut, R., Peca, A., Pintea, S., David, D., & Vanderborght, B. (2016). A survey of expectations about the role of robots in robot-assisted therapy for children with ASD: Ethical acceptability, trust, sociability, appearance, and attachment. *Science and Engineering Ethics*, 22(1), 47–65. https://doi.org/10.1007/s11948-015-9649-x
- Cohen. (1988). Statistical power analysis for behavioral sciences. New York, NY: Routledge Academic.
- Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Palo Alto, CA: Learning Policy Institute.

- Dewey, J. (1938). *Experience and education*. New York: Macmillan, 1938. (CMC General Collection 370 Kap).
- Dieker, L. A., Hughes, C. E., Hynes, M. C., & Straub, C. (2017). Using simulated virtual environments to improve teacher performance. *School-University Partnerships*, 10(3), 62–81.
- Dieker, L., Hynes, M., Hughes, C., & Smith, E. (2008). Implications of mixed reality and simulation technologies on special education and teacher preparation. *Focus on Exceptional Children*, 40(6), 1.
- Dooley, J., Pyzalski, J., & Cross, D. (2009). Cyberbullying versus face-to-face bullying: A theoretical and conceptual review. *ECU Publications Pre.* 2011. https://doi.org/10.1027/0044-3409.217.4.182
- Elliott, J. C. (2017). The evolution from traditional to online professional development: A review. *Journal of Digital Learning in Teacher Education*, *33*(3), 114–125.
- Elmore, J. L., Bruhn, A. M., & Bobzien, J. L. (2016). Interventions for the reduction of dental anxiety and corresponding behavioral deficits in children with autism spectrum disorder.

 *Journal of Dental Hygiene, 90(2), 111–120.
- Emerich, D. M., Creaghead, N. A., Grether, S. M., Murray, D., & Grasha, C. (2003). The comprehension of humorous materials by adolescents with high-functioning autism and asperger's syndrome. *Journal of Autism and Developmental Disorders*, *33*(3), 253–257. https://doi.org/10.1023/A:1024498232284
- Espelage, D. L., Holt, M. K., & Henkel, R. R. (2003). Examination of peer–group contextual effects on aggression during early adolescence. *Child Development*, 74(1), 205–220. https://doi.org/10.1111/1467-8624.00531

- Espelage, D. L., & Swearer, S. M. (2003). Research on school bullying and victimization: What have we learned and where do we go from here? *School Psychology Review*, *32*(3), 365–383.
- Espelage, D. L., & Swearer, S. M. (2004). *Bullying in American schools: A social-ecological*perspective on prevention and intervention. Mahwah, N.J.: Lawrence Erlbaum Associates

 Publishers.
- Evans, C. B. R., & Smokowski, P. R. (2016). Theoretical explanations for bullying in school:

 How ecological processes propagate perpetration and victimization. *Child and Adolescent Social Work Journal*, *33*(4), 365–375. https://doi.org/10.1007/s10560-015-0432-2
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41(4), 1149–1160.
- Feldman, M. A., Ojanen, T., Gesten, E. L., Smith-Schrandt, H., Brannick, M., Totura, C. M. W., ... Brown, K. (2014). The effects of middle school bullying and victimization on adjustment through high school: Growth modeling of achievement, school attendance, and disciplinary trajectories. *Psychology in the Schools*, *51*(10), 1046–1062. https://doi.org/10.1002/pits.21799
- Finke, E. H., McNaughton, D. B., & Drager, K. D. R. (2009). All children can and should have the opportunity to learn: General education teachers' perspectives on including children with autism spectrum disorder who require AAC. *Augmentative and Alternative Communication (Baltimore, Md.: 1985)*, 25(2), 110–122. https://doi.org/10.1080/07434610902886206

- Gladden, R., Vivolo-Kantor, A., Hamburger, M., & Lumpkin, C. (2014). *Bullying surveillance among youths: Uniform definitions for public health and recommended data elements, version 1.0.* Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention and U.S. Department of Education.
- Goodrich, R. L., & St. Pierre, R. G. (1979). Opportunities for studying later effects of follow through. Cambridge, MA: ABT Associates.
- Grossard, C., Cohen, D., Grynspan, O., Jouen, A.-L., Bailly, K., & Serret, S. (2017). Serious games to teach social interactions and emotions to individuals with autism spectrum disorders (ASD). *Computers & Education*, *113*, 195–211.
- Hala, S., Chandler, M., & Fritz, A. S. (1991). Fledgling theories of mind: Deception as a marker of three-year-olds' understanding of false belief. *Child Development*, 62(1), 83–97.
- Happé, F. G. E. (1995). The role of age and verbal ability in the theory of mind task performance of subjects with autism. *Child Development*, 66(3), 843–855. https://doi.org/10.1111/j.1467-8624.1995.tb00909.x
- Hazler, R., Miller, D., Carney, J., & Green, S. (2001). Adult recognition of school bullying situation. *Taylor and Francis*, 43(2), 133–146.
 https://doi.org/10.1080/00131880110051137
- Hebron, J., & Humphrey, N. (2014). Exposure to bullying among students with autism spectrum conditions: A multi-informant analysis of risk and protective factors. *Autism: The International Journal of Research and Practice*, 18(6), 618–630.
- Hebron, J., Oldfield, J., & Humphrey, N. (2017). Cumulative risk effects in the bullying of children and young people with autism spectrum conditions. *Autism: The International Journal of Research and Practice*, 21(3), 291–300.

- Hong, J., & Espelage, D. (2012). A review of research on bullying and peer victimization in school: An ecological system analysis. *Aggression and Violent Behavior*, 17, 311–322. https://doi.org/10.1016/j.avb.2012.03.003
- Horner, R. H., Sugai, G., & Anderson, C. M. (2010). Examining the evidence base for school-wide positive behavior support. *Focus on Exceptional Children*, 42(8), 1–15.
- Hughes, T. (1870). School Days at Rugby. Fields, Osgood, & Company.
- Jarvis, P. (1987). Meaningful and meaningless experience: Towards an analysis of learning from life. Adult Education Quarterly, 37(3), 164–172. https://doi.org/10.1177/0001848187037003004
- Jarvis, P. (2004). *Adult education and lifelong learning: Theory and practice* (3rd ed.). London: RoutledgeFalmer.
- Jarvis, P. (2006). *Toward a comprehensive theory of human learning* (1st ed.). London: Routledge.
- Jarvis, P. (2012). *Learning from everyday life* (Vol. 1). Guildford, Surrey: Humanities and Social Sciences Research Programme.
- Jimerson, S. R., Swearer, S. M., & Espelage, D. L. (2010). Handbook of bullying in schools: An international perspective. Retrieved from https://www.routledge.com/Handbook-of-Bullying-in-Schools-An-International-Perspective/Jimerson-Swearer-Espelage/p/book/9780805863932
- Kahn, J. H., Jones, J. L., & Wieland, A. L. (2012). Preservice teachers' coping styles and their responses to bullying. *Psychology in the Schools*, 49(8), 784–793.
 https://doi.org/10.1002/pits.21632

- Kane, M. T. (2013). Validating the interpretations and uses of test scores. *Journal of Educational Measurement*, 50(1), 1–73. https://doi.org/10.1111/jedm.12000
- Khodaparast, F., & Ghafournia, N. (2015). The effect of asynchronous/synchronous approaches on English vocabulary achievement: A study of Iranian EFL learners. *English Language Teaching*, 8(4), 117–127. https://doi.org/10.5539/elt.v8n4p117
- Kinnunen, M., Mian, S. Q., Oinas-Kukkonen, H., Riekki, J., Jutila, M., Ervasti, M., ...

 Alasaarela, E. (2016). Wearable and mobile sensors connected to social media in human well-being applications. *Telematics and Informatics*, *33*(1), 92–101. https://doi.org/10.1016/j.tele.2015.06.008
- Kowalski, R. M., Giumetti, G. W., Schroeder, A. N., & Lattanner, M. R. (2014). Bullying in the digital age: A critical review and meta-analysis of cyberbullying research among youth.
 Psychological Bulletin, 140(4), 1073–1137. https://doi.org/10.1037/a0035618
- Ladd, B., & Pelletier, M. E. (2008). Teachers' views and beliefs about bullying: Influences on classroom management strategies and students' coping with peer victimization. *Journal of School Psychology*, 46(4), 431–453. https://doi.org/10.1016/j.jsp.2007.07.005
- Laerd Statistics. (2015). Two-way mixed ANOVA using SPSS statistics: Statistical tutorials and software guides. Retrieved from Laerd Statistics website: https://statistics.laerd.com/
- Lang, P. J., Greenwald, M. K., Bradley, M. M., & Hamm, A. O. (1993). Looking at pictures:

 Affective, facial, visceral, and behavioral reactions. *Psychophysiology*, *30*(3), 261–273.
- Leaf, J. B., Taubman, M., Bloomfield, S., Palos-Rafuse, L., Leaf, R., McEachin, J., & Oppenheim, M. L. (2009). Increasing social skills and pro-social behavior for three children diagnosed with autism through the use of a teaching package. *Research in Autism Spectrum Disorders*, *3*, 275–289. https://doi.org/10.1016/j.rasd.2008.07.003

- Lereya, S. T., Wolpert, M., Deighton, J., Humphrey, N., Patalay, P., Bohnke, J. R., & Macdougall, A. (2016). The student resilience survey: Psychometric validation and associations with mental health. *Child and Adolescent Psychiatry and Mental Health*, 10(1), 44.
- Lessne, D., & Harmalkar, S. (2013). Student reports of bullying and cyber-bullying: Results from the 2011 school crime supplement to the national crime victimization survey. web tables.

 NCES 2013-329.
- Limber, S. P., & Olweus, D. (2010). Bullying in school: Evaluation and dissemination of the olweus bullying prevention program. *American Journal of Orthopsychiatry*, 80(1), 124–134.
- Lin, K.-Y., & Williams, P. J. (2017). Two-stage hands-on technology activity to develop preservice teachers' competency in applying science and mathematics concepts.
 International Journal of Technology and Design Education, (1), 89.
 https://doi.org/10.1007/s10798-015-9340-1
- Margaret Schmidt. (2010). Learning from teaching experience: Dewey's theory and preservice teachers' learning. *Journal of Research in Music Education*, 58(2), 131–146.
- Marini, Z., Fairbairn, L., & Zuber, R. (2001). Peer harassment in individuals with developmental disabilities: Towards the development of a multi-dimensional bullying identification model. *Developmental Disabilities Bulletin*, 29, 170–195.
- Mayer, R. E. (2002). Multimedia learning. In *Psychology of Learning and Motivation* (Vol. 41, pp. 85–139). https://doi.org/10.1016/S0079-7421(02)80005-6
- Merriam, S., Caffarella, R., & Baumgartner, L. (2007). *Learning in adulthood: A comprehensive guide* (3rd ed.). San Francisco, CA: Jossey-Bass.

- Miltenberger, C. A., & Charlop, M. H. (2015). The comparative effectiveness of portable video modeling vs. Traditional video modeling interventions with children with autism spectrum disorders. *Journal of Developmental and Physical Disabilities*, 27(3), 341–358. https://doi.org/10.1007/s10882-014-9416-y
- National Academies of Sciences, Engineering, and Medicine. (2016). *Preventing Bullying Through Science, Policy, and Practice*. https://doi.org/10.17226/23482
- National Center for Education Statistics. (2016). *Indicators of school crime and safety: 2015*.

 Retrieved from https://nces.ed.gov/fastfacts/display.asp?id=719
- Newman, R. S., & Murray, B. J. (2005). How students and teachers view the seriousness of peer harassment: When is it appropriate to seek help? *Journal of Educational Psychology*, 97(3), 347–365.
- Nunn, N. (2013, April 25). Old-school sweetheart to modern-day menace: The history of the word bully. Retrieved February 11, 2018, from /blog/old-school-sweetheart-modern-day-menace-history-word-bully
- Olweus, D. (1993). *Bullying at school: What we know and what we can do*. Oxford, UK: Blackwell.
- Olweus, D. (2010). Bullying in schools: Facts and intervention. *Kriminalistik*, 64, 1–29.
- OSEP's annual reports to congress on the implementation of the individuals with disabilities education act (IDEA) [Reports]. (2016, January 8). Retrieved November 6, 2016, from http://www2.ed.gov/about/reports/annual/osep/index.html
- Pas, E., Johnson, S., Larson, K. E., Brandenburg, L., Church, R., & Bradshaw, C. (2016).

 Reducing behavior problems among students with autism spectrum disorder: Coaching

- teachers in a mixed-reality setting. *Journal of Autism & Developmental Disorders*, 46(12), 3640–3652. https://doi.org/10.1007/s10803-016-2898-y
- Patton, D. U., Hong, J. S., Patel, S., & Kral, M. J. (2017). A systematic review of research strategies used in qualitative studies on school bullying and victimization. *Trauma*, *Violence*, & *Abuse*, *18*(1), 3–16. https://doi.org/10.1177/1524838015588502
- Pergolizzi, F., Richmond, D., Macario, S., Gan, Z., Richmond, C., & Macario, E. (2009).

 Bullying in middle schools: Results from a four-school survey. *Journal of School Violence*, 8(3), 264–279.
- Persicke, A., Tarbox, J., Ranick, J., & St. Clair, M. (2013). Teaching children with autism to detect and respond to sarcasm. *Research in Autism Spectrum Disorders*, 7(1), 193–198.
- Pexman, P. M., Rostad, K. R., McMorris, C. A., Climie, E. A., Stowkowy, J., & Glenwright, M. R. (2011). Processing of ironic language in children with high-functioning autism spectrum disorder. 41(8), 1097–1112.
- Prince, K. (2012, August 22). How to teach a child with autism to identify bullying. Retrieved June 20, 2017, from http://help.bcotb.com/blog/how-to-teach-a-child-with-autism-to-identify-bullying/
- Ranick, J., Persicke, A., Tarbox, J., & Kornack, J. A. (2013). Teaching children with autism to detect and respond to deceptive statements. *Research in Autism Spectrum Disorders*, 7(4), 503–508. https://doi.org/10.1016/j.rasd.2012.12.001
- Rex, C., Charlop, M. H., & Spector, V. (2018). Using video modeling as an anti-bullying intervention for children with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 48(8), 2701–2713. https://doi.org/10.1007/s10803-018-3527-8

- Roberts, C. M. (2010). *The dissertation journey: A practical and comprehensive guide to*planning, writing, and defending your dissertation (2nd ed.). Thousand Oaks, California:

 Corwin: a SAGE Company.
- Rose, C. A., Monda-Amaya, L. E., & Espelage, D. L. (2011). Bullying perpetration and victimization in special education: A review of the literature. *Remedial and Special Education*, 32(2), 114–130. https://doi.org/10.1177/0741932510361247
- Rose, C. A., Monda-Amaya, L. E., & Preast, J. L. (2018). Pre-service special and general educators' perceptions of bullying. *Exceptionality Education International*, 28(2), 33–54.
- Rose, C. A., Simpson, C. G., & Moss, A. (2015). The bullying dynamic: Prevalence of involvement among a large-scale sample of middle and high school youth with and without disabilities. *Psychology in the Schools*, (5), 515–531.
 https://doi.org/10.1002/pits.21840
- Rose, C. A., Stormont, M., Wang, Z., Simpson, C. G., Preast, J. L., & Green, A. L. (2015).

 Bullying and students with disabilities: Examination of disability status and educational placement. *School Psychology Review*, 44(4), 425–444. https://doi.org/10.17105/spr-15-0080.1
- Rose, C. A., Swearer, S. M., & Espelage, D. L. (2012). Bullying and students with disabilities:

 The untold narrative. *Focus on Exceptional Children*, 45(2), 1–10.
- Ross-Hill, R. (2009). Teacher attitude towards inclusion practices and special needs students.

 Journal of Research in Special Educational Needs, 9(3), 188–198.

 https://doi.org/10.1111/j.1471-3802.2009.01135.x
- Ryoo, J. H., Wang, C., & Swearer, S. M. (2015). Examination of the change in latent statuses in bullying behaviors across time. *School Psychology Quarterly: The Official Journal of the*

- Division of School Psychology, American Psychological Association, 30(1), 105–122. https://doi.org/10.1037/spq0000082
- Sabia, J., & Bass, B. (2017). Do anti-bullying laws work? New evidence on school safety and youth violence. *Journal of Population Economics*, 30(2), 473–502. https://doi.org/10.1007/s00148-016-0622-z
- Sahin, N. T., Keshav, N. U., Salisbury, J. P., & Vahabzadeh, A. (2018). Second version of google glass as a wearable socio-affective aid: Positive school desirability, high usability, and theoretical framework in a sample of children with autism. *JMIR Human Factors*, 5(1), e1. https://doi.org/10.2196/humanfactors.8785
- Salmivalli, C. (2010). Bullying and the peer group: A review. *Aggression and Violent Behavior*, 15(2), 112–120. https://doi.org/10.1016/j.avb.2009.08.007
- Sandall, B. K. (2016). Wearable technology and schools: Where are we and where do we go from here? *Journal of Curriculum, Teaching, Learning and Leadership in Education*, *I*(1), 1–11.
- Schroeder, J. H., Cappadocia, M. C., Bebko, J. M., Pepler, D. J., & Weiss, J. A. (2014).

 Shedding light on a pervasive problem: A review of research on bullying experiences among children with autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 44(7), 1520–1534. https://doi.org/10.1007/s10803-013-2011-8
- Shapiro, S. S., & Wilk, M. B. (1965). An analysis of variance test for normality (complete samples). *Biometrika*, 591–611, 22.
- Smith, P. K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008).

 Cyberbullying: Its nature and impact in secondary school pupils. *Journal of Child*

- *Psychology and Psychiatry, and Allied Disciplines*, *49*(4), 376–385. https://doi.org/10.1111/j.1469-7610.2007.01846.x
- Sodian, B., & Frith, U. (1992). Deception and sabotage in autistic, retarded and normal children.

 *Journal of Child Psychology and Psychiatry, 33(3), 591–605.

 https://doi.org/10.1111/j.1469-7610.1992.tb00893.x
- Stichter, J. P., Herzog, M. J., Visovsky, K., Schmidt, C., Randolph, J., Schultz, T., & Gage, N. (2010). Social competence intervention for youth with asperger syndrome and high-functioning autism: An initial investigation. *Journal of Autism and Developmental Disorders*, 40(9), 1067–1079. https://doi.org/10.1007/s10803-010-0959-1
- Swearer, S. M., Wang, C., Maag, J. W., Siebecker, A. B., & Frerichs, L. J. (2012).

 Understanding the bullying dynamic among students in special and general education. *Journal of School Psychology*, 50(4), 503–520. https://doi.org/10.1016/j.jsp.2012.04.001
- Walker, H. M., Ramsey, E., & Gresham, F. M. (2004). *Antisocial behavior in school: Evidence-based practices* (2nd ed.). Belmont, CA: Thomson/Wadsworth.
- Wei, R., Darling-Hammond, L., & Adamson, F. (2010). Professional development in the United States: Trends and challenges. *Dallas, TX: National Staff Development Council*, 28.
- What Works Clearinghouse. (2017). Procedures and Standards Handbook Version 4.0.

 Retrieved from

 https://ies.ed.gov/ncee/wwc/Docs/referenceresources/wwc_standards_handbook_v4.pdf
- Wolf, M. M. (1978). Social validity: The case for subjective measurement or how applied behavior analysis is finding its heart. *Journal of Applied Behavior Analysis*, 11(2), 203–214. https://doi.org/10.1901/jaba.1978.11-203

- Wynants, S., & Dennis, J. (2018). Professional development in an online context: Opportunities and challenges from the voices of college faculty. *Journal of Educators Online*, *15*(1), 13. https://doi.org/10.9743/JEO2018.15.1.2
- Yoon, J. S. (2004). Predicting teacher interventions in bullying situations. *Education & Treatment of Children*, 27(1), 37.
- Zablotsky, B., Black, L. I., Maenner, M. J., Schieve, L. A., & Blumberg, S. J. (2015). *Estimated prevalence of autism and other developmental disabilities following questionnaire changes in the 2014 National Health Interview Survey* (No. 87). Hyattsville, MD: National Center for Health Statistics.
- Zablotsky, B., Bradshaw, C. P., Anderson, C., & Law, P. A. (2013). The association between bullying and the psychological functioning of children with autism spectrum disorders.

 Journal of Developmental & Behavioral Pediatrics, 34(1), 1–8.

 https://doi.org/10.1097/DBP.0b013e31827a7c3a
- Zeedyk, S. M., Rodriguez, G., Tipton, L. A., Baker, B. L., & Blacher, J. (2014). Bullying of youth with autism spectrum disorder, intellectual disability, or typical development:
 Victim and parent perspectives. *Research in Autism Spectrum Disorders*, 8(9), 1173–1183. https://doi.org/10.1016/j.rasd.2014.06.001
- Zhang, A., Wang, K., Zhang, J., & Oudekerk, B. A. (2017). Indicators of school crime and safety: 2016. *National Center for Education Statistics*, 261.