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Tiered Behavior Support to Promote Preservice Special Education Teachers' Use Of Behavior Specific Praise

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TIERED BEHAVIOR SUPPORT TO PROMOTE PRESERVICE SPECIAL EDUCATION TEACHERS' USE OF BEHAVIOR SPECIFIC PRAISE

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ABSTRACT

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Strong classroom management skills are the foundation of effective teaching and learning. However, most teachers enter the field unprepared to manage classroom behavior. Many teacher preparation programs offer preservice teachers limited coursework and fieldwork experiences focused on developing classroom management practices. The lack of training in classroom management is particularly concerning for preservice special education teachers who not only teach students with high rates of challenging behavior, but also consult, train, and support administrators and colleagues with implementation of classroom management practices.

The purpose of this study was to evaluate the impact of tiered behavior support on preservice special education teachers' rates of behavior specific praise. Tiered behavior support included goal setting, brief prompts, and visual performance feedback. A multiple baseline across participants design was used to determine if a functional relation existed between tiered behavior support and increased delivery of behavior specific praise. The participants included three preservice special education teachers in an elementary school practicum setting. The results of this study demonstrated that there is a functional relation between tiered behavior support and preservice teachers' increased use of behavior specific praise. For each participant the mean delivery rate of behavior specific praise increased following the introduction of tiered behavior

support. The results of this study suggested that tiered behavior support was an effective method for developing preservice special education teachers' classroom management practices. Including tiered behavior support in teacher preparation programs could support the development of classroom management practices for preservice special education teachers.

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CHAPTER I

INTRODUCTION

What does it mean to be an effective teacher? The answer to that question will vary depending on who is asked. A student may say an effective teacher is funny and patient, while a parent may say an effective teacher is communicative and responsive. A school administrator may identify an effective teacher as organized and structured, and a colleague may say they are collaborative and supportive. Meanwhile, teacher evaluation tools and rubrics most often assess a teacher's effectiveness by rating their instructional delivery, assessment methods, and students' academic growth (Gilmour, Majeika, et al., 2019). While all these skills and attributes are important, strong classroom management practices are the foundation of effective teaching (Hulac & Briesch, 2017). Strong classroom management skills are a core component of high-quality instruction, student engagement, and positive academic and social outcomes (Gage, Scott, et al., 2018). Given the importance of classroom management, it should be a primary focus of teacher preparation programs, yet research has found that classroom management has often been taught as a secondary skill embedded within courses about academic instructional methods (Cooper & Scott, 2017). Understandably, more than half of new teachers have reported feeling unprepared to handle classroom management issues (Bowsher et al., 2018). This has particularly been concerning given the link between strong classroom management, academic achievement, and positive academic and social outcomes for students.

Challenging Behavior in Schools

Students with challenging behavior can be found in every classroom at every grade level throughout a school. Due to the wide range of behaviors that may be considered challenging, it would be difficult to provide an explicit definition of challenging behavior. In the simplest terms, challenging behavior can be defined as any behavior that impedes learning. Challenging behaviors can range from low intensity behaviors such as calling out answers, talking with peers during instruction, moving around the room without permission, or not completing assignments to high intensity behaviors such as tantrums, cursing, work refusal, or aggression. Managing challenging behavior can be difficult for both general education and special education teachers. Struggles with classroom management have been correlated with higher levels of emotional stress and burnout for teachers (Gilmour, Sandilos, et al., 2022). Difficulty managing student behavior has been one of the most common factors in a teacher's decision to leave their position (Hester et al., 2020).

Challenging behavior has always been an issue in schools, however, following the recent COVID-19 pandemic and associated school closures in the 2020 and 2021 academic years, schools have reported an uptick in challenging student behavior (U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2022). Data reported by the U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics (2022) have shown that almost 60% of public schools have reported an increase in classroom disruptions due to challenging student behavior, including acts of disrespect towards educators, use of phones and electronics when not prohibited, misbehavior in hallways and school common areas, and skipping class. Approximately 35% of schools have also reported increases in more serious challenging behavior, including bullying, verbal abuse of

teachers, and physical attacks between students (U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2022). Fortunately, empirically supported, effective, evidence-based classroom management practices have been identified for reducing challenging behavior, increasing positive behaviors, and increasing student engagement in the classroom (Simonsen, Fairbanks, et al., 2008). When teachers have used average to above average rates of evidence-based classroom management practices, students have demonstrated higher levels of engagement in classroom activities resulting in better academic and social outcomes (Gage, Scott, et al., 2018). Additionally, teachers who have used higher levels of evidence-based classroom management strategies there were reported lower levels of emotional exhaustion and burnout (Gilmour, Sandilos, et al., 2022).

While this has sounded promising, as previously noted, more than half of new teachers have not been receiving adequate preparation in classroom management practices (Bowsher et al., 2018). Teachers have struggled to implement evidence-based classroom management practices consistently and accurately when they have not had sufficient opportunities to develop competency in these practices during their preservice coursework (Myers, Sugai, et al., 2017). To further exacerbate this issue, the COVID-19 pandemic and associated school closures not only impacted the education of kindergarten through high school students, but it also halted in-person and field-based learning experiences for preservice teachers (Choate et al., 2021). Field-based experiences have been the primary opportunity for preservice teachers to practice and develop their classroom management skills (Putman & Walsh, 2021). Consequently, new teachers entering the field after 2020 have not been able to fully engage in important teacher preparation practices such as teaching practicums, fieldwork, and student teaching (VanLone et al., 2022). Given the rise of challenging behavior in schools, on top of the already limited exposure to

classroom management course content, the lack of field-based teacher preparation experiences for new teachers have created an even greater gap in teachers' knowledge and ability to manage challenging behaviors.

Special Educator's Role in Supporting Students with Challenging Behavior

Special education teachers have functioned in many different roles depending on the requirements of the school and population they serve. Special educators have provided a continuum of academic, behavioral, and functional services to students with disabilities across several different teaching settings (Vaughn et al., 2018). For example, a special educator may be teaching in a co-teaching, inclusion, resource room, or self-contained classroom setting. Providing services in a variety of settings have allowed students with disabilities to access an education that was individualized and provided maximum educational benefit in the least restrictive environment that was appropriate to meet their academic, behavioral, and functional needs (Yell, 2019). On one end of the least restrictive environment continuum has been an inclusion or co-teaching setting in which special educators teach students with and without disabilities alongside a general education teacher in a general education classroom. Most often students with disabilities who have low support needs would be taught in an inclusion or co-teaching setting (Friend & Bursuck, 2019). On the other end of the continuum has been a self-contained classroom setting in which a special educator teaches the same group of students with disabilities for most of the school day. Students with more intensive high support needs have been most often taught in self-contained classrooms (Turnbull et al., 2020). Between these two ends of the continuum have been other settings and teaching models with varying settings and levels of support.

In addition to their role as teachers of students with disabilities, special educators have often taken on other consultation and support roles in schools. Special education teachers may be members or leaders of grade level teams, behavior and academic support teams, evaluation teams, and school climate teams. In these roles, special education teachers have functioned as consultants or mentors to other members of their school community. In exploring the roles of special education teachers, Bagley and Tang (2018) found that teachers and administrators often viewed special educators as the experts when a student had challenging behavior and when a teacher was having difficulty with classroom management. As the experts on behavior and classroom management issues, school communities may look to their special education teachers to provide professional development training on classroom management, model evidence-based classroom management practices for other teachers, coach, or mentor new or struggling teachers on classroom management practices and provide general strategies and tips on classroom management to teachers (Bagley & Tang, 2018).

Special education teachers' primary responsibility has been to instruct and support the development of academic, behavioral, social, and functional skills in students with disabilities. Developing strong classroom management skills have been important to supporting students with disabilities. Students with disabilities have engaged in higher rates of challenging behavior than their peers without disabilities. While it has been difficult to quantify an exact number of students with disabilities who engage in challenging behavior, studies have estimated that 30% to 50% of students diagnosed with learning disabilities, attention deficit hyperactivity disorder, intellectual disabilities, and autism spectrum disorder also have comorbid behavior issues (Simo-Pinatella et al., 2019). In addition to behavior issues associated with the previously listed disabilities, approximately 6% of all students with disabilities have been identified as students

with an emotional disturbance (U.S. Department of Education, 2020). Students identified with emotional disturbance have been instructed and supported by special education teachers. Teachers of students with emotional disturbance have reported the highest levels of burnout, emotional exhaustion, and highest attrition rates indicating that special education teachers were not adequately prepared with the classroom management skills needed to support students with emotional and behavioral disorders (Gilmour & Wehby, 2019).

Legal Obligations of Special Education Teachers

Students with disabilities have had specific educational rights that have been legally protected by the federal government under the Individuals with Disabilities Education Act (IDEA) to ensure that they were provided a free appropriate public education which met their individual academic and behavioral needs (Individuals with Disabilities Education Act, 2004). Special education teachers have played a critical role in upholding the rights of students with disabilities as the primary designers and implementers of individualized educational programs for students with disabilities. Since the inception of special education law in 1975, IDEA has undergone several reauthorizations expanding the requirements of the law to ensure that students with disabilities were provided with services and programming that were individualized, meaningful, and valuable (Freeman, Yell, et al., 2019; Yell, 2019).

Student behavioral needs were first addressed in the 1997 reauthorization of IDEA which sought to address the right of all children to a safe learning environment, while also protecting the rights of students with disabilities to a free appropriate public education (Mitchell et al., 2019). This meant that students with disabilities who exhibited behavior that impeded learning had the right to an individualized education program that appropriately addressed their behavioral needs with effective supports and interventions (Yell, 2019). The Individuals with

Disabilities Education Act requires that positive behavior interventions and supports are considered to address behavior when a child's behavior impedes the learning of the child or others (Individuals with Disabilities Education Act, 2004; Zirkel, 2020). Positive behavior interventions and supports have been a system of evidence-based classroom and behavior management strategies that emphasized preventing challenging behavior, and teaching and reinforcing positive appropriate behaviors (Simonsen & Myers, 2015). It has been essential that special education teachers were trained in the use of evidence-based classroom management strategies to meet their legal obligations to the students with disabilities that they serve. Special education teachers need to be fluent in evidence-based classroom management strategies to develop and implement meaningful individualized education programs that address challenging behavior. In addition, special education teachers have also been responsible for training other teachers, specialists, and school staff to implement classroom management support for students with disabilities, which requires competency in these evidence-based practices.

Are Special Education Teachers Adequately Prepared to Meet the Needs of Students With Challenging Behavior?

Overwhelmingly, research has indicated that special education teachers were not adequately prepared to effectively implement or train others to implement evidence-based classroom management practices (Bowsher et al., 2018; Gilmour, Sandilos, et al., 2022; Myers, Sugai, et al., 2017). Although some research has shown special education teachers receive more training on classroom management than their general education counterparts (Beam & Mueller, 2016; Flower et al., 2017), a larger body of research has suggested that less than half of preservice special education teachers receive coursework explicitly focused on classroom management (Moore et al., 2017). The coursework that they do receive may focus more on

theory than evidence-based practices (Butler & Monda-Amaya, 2016). In addition, preservice special education teachers receive little to no school-based fieldwork focused on developing classroom management practices (Brownell et al., 2019). Additionally, the newest preservice special education teachers entering the field have had substantial impacts to their coursework and fieldwork experiences throughout the COVID-19 pandemic, resulting in even fewer opportunities for preservice special education teachers to engage in meaningful coursework and field-based experiences related to evidence-based classroom management practices (Choate et al., 2021; VanLone et al., 2022).

Statement of the Problem

Special education teachers have not been adequately prepared during their teacher preparation programs to support students with disabilities who exhibit challenging behavior. Research has consistently demonstrated that special education teachers utilized evidence-based classroom management practices at low rates, resulting in poorer academic and social outcomes for students with disabilities, and high rates of stress and attrition for special education teachers, compounding the decades long special education teacher shortage. With fewer trained and certified special education teachers, schools across the country have been having more difficulty addressing higher levels of challenging student behavior following the COVID-19 pandemic and have been unable to adequately support the academic and behavioral needs of students with disabilities.

Significance of the Study

Strengthening the methods used to deliver classroom management content in special education teacher preparation programs and support the development of preservice special education teachers' skills related to evidence-based classroom management can result in better

prepared in-service special educators. If special education teachers were better equipped to utilize evidence-based classroom management practices to meet the demands of supporting students with challenging behavior and training and supporting other school staff in doing so, rates of stress, burnout, and attrition may decrease amongst special education teachers. Better preparing preservice special educators in evidence-based classroom management practices could ultimately result in schools that have the resources to better support students with challenging behavior. More prepared teachers will better meet the academic, behavioral, and social needs of students with disabilities commensurate with the requirements of the law, having a significant and meaningful positive impact on the overall outcomes of students with disabilities who exhibit challenging behavior.

A growing body of research has established the effectiveness of multitiered support models for increasing in-service teachers' use of evidence-based classroom management strategies (Gage, MacSuga-Gage, & Crews, 2017; Grasley-Boy, Gage, et al., 2023; Myers, Simonsen, & Sugai, 2011; Simonsen, MacSuga-Gage, et al., 2014; Thompson et al., 2012;). While only a small number of these studies included special education teachers, the multitiered support structure has been considered a promising practice for supporting in-service teachers' implementation of evidence-based classroom management practices (Samudre et al., 2022; Sanetti & Collier-Meek, 2015; State et al., 2019). Given that research has shown that special education teachers were consistently underprepared to implement evidence-based classroom management practices (Brock et al., 2017; Gilmour & Wehby, 2019; Moore et al., 2017), exploring the use of a tiered behavior support structure in special education teacher preparation may provide important information to higher education faculty about additional methods to strengthen preservice teachers' classroom management practices so that they were better

prepared to support students with challenging behavior when they entered the teaching field (A. Kennedy & Lees, 2016; LaBrot, Weaver, Peak, et al., 2022).

To date, only one published study has explored the use of multitiered support structures in teacher preparation programs to support preservice teachers' development of classroom management practices. LaBrot, Weaver, Peak, et al. (2022) implemented a multitiered support model to support preservice early childhood educators in implementing behavior specific praise, an evidence-based classroom management practice, during a field-based practicum experience. All three preservice teachers increased and maintained their rate of delivering behavior specific praise with the implementation of the multitiered support model. This was the first study to implement a multitiered support structure with preservice teachers, however, their participants were future early childhood educators. The application of multitiered support structures to preservice special education teachers' use of classroom management practices has yet to be studied.

This study sought to replicate and extend the findings of LaBrot, Weaver, Peak, et al. (2022). By implementing tiered behavior support with preservice special education teachers in a field-based summer practicum, this study investigated if there was a functional relation between the implementation of tiered behavior support and preservice teachers' use of behavior specific praise.

Purpose of the Study

The purpose of this study was to evaluate the impact of tiered behavior support on preservice special education teachers' rates of behavior specific praise. This study also evaluated the acceptability of tiered behavior support. It was my hope to be able to provide important

information about the use of a tiered behavior support in special education teacher preparation programs to support preservice teachers in developing classroom management skills.

Research Questions

This study addressed the following research questions:

Q1 Is there a functional relation between tiered behavior support and preservice special education teachers' increased use of behavior specific praise?

Q2 To what extent do preservice special education teachers find tiered behavior support feasible and acceptable?

Definition of Terms

Behavior Specific Praise (BSP). An explicit positive praise statement delivered by a teacher to a student contingent on the student engaging in a desired behavior. Behavior specific praise includes naming the person being praised, a positive praise statement, and identification of the exact desired behavior they engaged in (e.g., "James, wonderful job cleaning up your art materials quickly and quietly when I rang the clean-up bell;" Simonsen, Fairbanks, et al., 2008).

Challenging Behavior. Any behavior that disrupts or impedes learning for an individual or those around them and requires the use of behavioral interventions and supports (IDEA, 2004).

Classroom Management. A set of practices that a teacher implements to promote appropriate student behavior to minimize disruptions to the classroom learning environment (Hulac & Briesch, 2017).

Emerging Practice. An educational practice that supports a small but growing number of experimental studies, typically four or fewer, that demonstrate the effectiveness of the practice (Council for Exceptional Children, 2014).

Evidence-Based Practices (EBP). An educational practice that is supported by a large number of rigorous experimental studies, typically five or more, that demonstrate the effectiveness of the practice (Council for Exceptional Children, 2014).

Goal Setting. The process of identifying and setting explicit and attainable performance targets for learning or behavior (Alberto & Troutman, 2013).

Individuals with Disabilities Education Act (IDEA). A federal law that protects the rights of individuals with disabilities to access a free appropriate public education through individualized education programs developed in accordance with their unique needs (Yell, 2019).

Multitiered Support Model (MTSM). A tiered framework used to provide varying levels of academic and behavioral support to address students' differentiated needs. The multitiered support model is an overarching framework that encompasses the response to intervention (RtI) and positive behavior interventions and supports (PBIS) models. In the MTSM framework, evidence-based interventions are provided to students with increasing individualization and intensity as they move up the tiers. The MTSM framework emphasizes ongoing data collection and progress monitoring and data-based decision making (Simonsen & Myers, 2015).

Multitiered Support Model-Professional Development (MTS-PD). A tiered framework for training teachers in evidence-based practices. The MTS-PD applies the same structure of the multitiered support model for students to teacher development. Like the other MTS models, MTS-PD provides a continuum of supports dependent on individual need and emphasizes data collection and progress monitoring to evaluate attainment of learning goals (Grasley-Boy, Gage, & MacSuga-Gage, 2019).

Performance Feedback. An evidence-based practice in which explicit feedback is provided to an individual on their performance. The feedback should be provided quickly, be explicit and include both positive and corrective statements. Performance feedback can be given through a variety of modalities including verbal, written, email, video, and graphic (Sleiman et al., 2020).

Positive Behavior Interventions and Supports (PBIS). A multitiered framework for providing a continuum of positive behavioral supports for all students which emphasizes on-going data collection to monitor progress and evaluate the outcomes of the interventions (Sugai & Simonsen, 2012).

Preservice Teacher. An individual enrolled in teacher preparation program and completing coursework to earn a graduate or undergraduate degree in education that enables them to attain teacher certification (Council for Exceptional Children, 2020).

Promising Practice. An educational practice supported by a limited number of experimental studies, typically two or fewer, that demonstrate positive or mixed effects of the practice (Council for Exceptional Children, 2014).

Prompt. A cue or reminder provided to an individual that increases the likelihood that they will respond correctly (Alberto & Troutman, 2013).

Response to Intervention (RtI). A tiered system of supports that provide a continuum of evidence-based academic interventions to all students. Response to intervention emphasizes universal screening, evidence-based interventions targeted to students' specific needs, and ongoing data collection and progress monitoring of learning goals (Preston et al., 2016).

Special Education Teacher. An individual who has obtained a minimum of a bachelor's degree from a state-approved teacher preparation program in the area of special education, demonstrated competency in special education by passing required state certification exams, and certified by their state as a special education teacher (Yell, 2019).

Teacher Preparation Program (TPP). An institute of higher education offering a state-approved course sequence at either the undergraduate or graduate level that meets the state requirements for teacher certification (U.S. Department of Education, Office of Postsecondary Education, 2022).

CHAPTER II

LITERATURE REVIEW

Understanding and managing behavior is an essential skill for teachers and school personnel. Despite its importance, classroom and behavior management has continued to be an area in which educators report limited knowledge and preparation (Moore et al., 2017). Student misbehavior has consistently been identified as a top challenge facing educators (Bowsher et al., 2018; Gilmour, Sandilos, et al., 2022; Oliver & Reschly, 2010) and one of the primary reasons teachers leave the field (Bettini et al., 2020; Gilmour & Wehby, 2019; Hester et al., 2020). Teacher turnover has been highest amongst teachers who service students with challenging behavior (Gilmour & Wehby, 2019). Special education teachers, who have been most often tasked with teaching and supporting students with challenging behavior, leave the field at a rate double that of general education teachers (Billingsley & Bettini, 2019; Gilmour & Wehby, 2019). Special education teacher shortages, growing student behavioral needs, and under-prepared teachers have plagued schools for decades, however, the recent COVID-19 pandemic has exacerbated these issues to crisis level in many schools throughout the nation (VanLone et al., 2022).

Pandemic Impacts

In March of 2020, the Coronavirus began spreading across the United States causing schools across the nation to shut down. Schools were abruptly closed and did not reopen for six to 12 months. During that time, children were being educated in virtual formats, in their homes,

with little, if any, peer interaction. Students were no longer experiencing typical school and classroom expectations, routines, and structures. Additionally, community spaces and activities (e.g., youth sports leagues, libraries, playgrounds, retail outlets, concerts, theater, holiday activities, parades, birthday parties) were also shut down further limiting children's opportunities to develop and practice typical social expectations.

When schools reopened, strict restrictions were in place to mitigate the spread of the Coronavirus. These restrictions included wearing masks for the entire school day, remaining six feet away from others, no use of playground equipment, group games, group play areas, and other communal items, no school assemblies, field trips, special guests, or mixing of classes (U.S. Department of Education, Office of Planning, Evaluation and Policy Development, 2021). Under these conditions, students had limited social contact with peers and teachers and limited opportunities to learn, practice, and establish expected school behaviors. For many children, this meant up to 2 years of lost social and behavioral learning opportunities. Due to the recency of the COVID-19 pandemic, research has just begun to emerge on the impacts of the pandemic on students' behavior and development.

Beginning in September of 2022, the U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics began the School Pulse Panel to collect data on the impact of the pandemic on schools. The School Pulse Panel collects and reports monthly data about the impacts of the pandemic on education from a nationwide sample of public schools across all grade levels. Following the recent COVID-19 pandemic and related school closures, educators have reported increased challenging behaviors in the classroom (U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2022). Data from the School Pulse Panel has shown that 84% of public schools

reported that the pandemic has had a negative impact on student behavior in their schools, with noted increases in classroom disruptions from student misconduct and acts of disrespect towards teachers when compared to a typical pre-pandemic school year. Additionally, schools reported an increased need for mental health services for both students and staff, more training on classroom behavior management, and strategies to support students' social and emotional development (U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2022).

The detrimental impacts of the pandemic on special education teacher shortages and the new teacher pipeline have made it even harder for schools to address the growing behavioral needs of their students. At the start of the 2022-2023 school year, approximately 65% of schools reported having inadequate staffing in special education, with over half of schools reporting difficulty simply finding special education teachers (U.S. Department of Education, Office of Postsecondary Education, 2022). Despite a rise in the number of vacancies and the rate of attrition for special educators following the pandemic, new teacher hiring rates have remained low (Schmitt & deCourcy, 2022). With special education teachers in critical shortage, school districts did not have the ability to provide adequate support and educational opportunities to students with challenging behavior (Monin et al., 2021).

The new teacher pipeline has not only decreased but concerns have been raised about the quality of teacher candidates entering the field. When the spread of COVID-19 caused the closure of schools across the nation, this included colleges and universities. The impact of school closures was most profound for preservice teachers enrolled in preparation programs between 2020 and 2022. With school closures beginning in March of 2020 and widespread COVID restrictions extending through 2022, preservice teachers experienced serious disruptions to their

fieldwork, practicum, and student teaching placements (Choate et al., 2021). Participating in high-quality student teaching and practicum experiences were key elements of teacher preparation. It was through these experiences that preservice teachers had opportunities to apply and practice the skills and knowledge they had acquired in their coursework (Putman & Walsh, 2021). Preservice teachers who have had high-quality student-teaching experiences with highly effective cooperating teachers enter the field as more prepared and effective teachers than others who have experienced lower-quality mentorship (Goldhaber et al., 2019). Preservice teachers who experienced disruptions to their student teaching experience reported feeling underprepared to enter the field, particularly in the areas of classroom and behavior management (VanLone et al., 2022). Additionally, new teachers who did not complete a traditional student teaching experience reported an increased need for support in classroom and behavior management (Choate et al., 2021).

Coupled with the disruption to applied classroom experiences, the pandemic also impacted the certification requirements for new teachers entering the field during the pandemic (Choate et al., 2021). In almost all states across the nation, special education teachers must meet the requirements of their teacher preparation program and pass a series of comprehensive assessments and exams to earn a teaching license (Putman & Walsh, 2021). School closures forced preparation programs to waive or alter their requirements for graduation, including the requirements of student teaching and adequate completion of comprehensive assessments like the edTPA portfolio (Saenz-Armstrong, 2020). With testing centers closed and teacher preparation requirements altered, all states across the nation delayed or waived certification and licensure requirements for new teachers (Choate et al., 2021). New teachers did not have to take or pass certification exams to demonstrate basic competency in their fields and were instead

granted temporary teaching certifications valid for one year up to five years depending on the individual state (Saenz-Armstrong, 2020). This meant that new special education teachers entering the field between 2020 and 2023 did not have opportunities to engage in essential applied fieldwork to develop their instructional and classroom management skills, were not required to demonstrate competency in content knowledge or practical applied skills yet were granted certification and licensure to teach vulnerable students with challenging behavior (VanLone et al., 2022). Although current preservice teachers in the final semesters of their preparation programs were likely engaging in more typical student teaching experiences, fieldwork requirements and opportunities for applied work in earlier semesters was likely disrupted by the pandemic, leaving them without important opportunities to build a solid foundation of teaching practices, particularly in relation to classroom and behavior management.

Teacher Preparation Programs

Although the pandemic has amplified the need for high-quality teacher preparation in the areas of classroom and behavior management, this has not been a new issue. According to data from the National Center for Education Statistics (2022), only 61% of new teachers (i.e., under three years of experience) reported being able to control disruptive behavior in their classrooms, and only 67% of teachers reported being able to get students to follow classroom rules. It was likely that teachers felt even less able to manage classroom behavior post-pandemic.

Under-preparing teachers to manage challenging behavior in the classroom has had serious impacts on student outcomes and teacher well-being (Freeman, Yell, et al., 2019). Managing students with challenging behavior can create high stress and emotionally taxing environments for educators. Student misbehavior has been correlated with high levels of stress and emotional burnout for teachers (Hagenauer et al., 2015). High levels of emotional stress have

been correlated with negative student-teacher relationships and low-quality classroom management practices (Braun, Schonert-Reichl, et al., 2020). Low-quality classroom management practices may include ineffective strategies to manage classroom behavior such as, reprimands, exclusion from the classroom, and disciplinary referrals, which has often resulted in continued challenging behavior (Braun, Roeser, et al., 2019). Caldarella et al. (2019) found that teacher delivered reprimands were correlated with increased disruptive behavior and decreased academic engagement for students with challenging behavior, creating a repeating cycle in which challenging behavior was followed by ineffective teacher responses, to then be followed by more challenging behavior and more ineffective teacher responses. Providing teachers with high-quality training in evidence-based classroom management practices can break the ineffective response cycle. Without effective classroom management skills, teachers of students with challenging behavior would continue to face increased stress, emotional exhaustion, and high levels of burnout (State et al., 2019).

Student outcomes have also been negatively impacted when teachers lacked classroom and behavior management skills (Braun, Schonert-Reichl, et al., 2020; Freeman, Yell, et al., 2019). Teachers reported losing approximately 2.5 hours per week of instructional time to behavioral disruptions (District Leadership Forum, 2019) putting students behind academically. When teachers did not have adequate classroom and behavior management skills, they often turned to punitive punishment practices such as removal from class and suspensions further limiting students' academic progress and increasing the likelihood of immediate and long-term negative outcomes (Braun, Schonert-Reichl, et al., 2020). Students who exhibited challenging behavior were twice as likely to receive repeated out-of-school suspensions than the average student (Mitchell et al., 2019). Students with emotional or behavioral concerns were three times

more likely to repeat a grade (Data Resource Center for Child and Adolescent Health, 2018). High school students with challenging behavior were more than twice as likely to drop out compared to their peers (Dupéré et al., 2018). Seventy percent of youth in the juvenile justice system have had a history of challenging behavior (National Collaborative on Workforce and Disability, 2015). The rate of unemployment was higher among U.S. adults who had behavioral difficulties (Substance Abuse and Mental Health Services Administration, 2018).

Teacher preparation programs have carried the responsibility of ensuring that preservice teachers were prepared with the necessary skills to manage the classroom and support students with challenging behavior. However, there was no consensus in the field about what and how classroom management content should be taught (Klopfer et al., 2019). Studies have indicated that only about half of teacher preparation programs included coursework on evidence-based classroom management strategies (Freeman, Simonsen, et al., 2014; Klopfer et al., 2019; Moore et al., 2017). Programs that did include classroom management content, often focused on theoretical content over evidence-based practices and embedded the content into other courses rather than having a dedicated course focused only on classroom management (Greenberg et al., 2014). About a quarter of teachers reported that they were not required to complete school-based fieldwork focused on classroom management and did not receive feedback from university instructors on their use of classroom management strategies during student teaching and other fieldwork placements (Moore et al., 2017). It has been essential that teacher preparation programs prepare future educators to effectively manage challenging behavior with evidence-based behavior support strategies.

The Council for Exceptional Children (CEC) and Interstate Teacher Assessment and Support Consortium (InTASC) teacher preparation standards have offered limited guidance to

programs about the content and skills necessary to include in classroom management curriculum. While the standards have broadly addressed student learning differences, assessment, engagement, and learning environment, they have not explicitly outlined standards and dispositions for classroom management (Council of Chief State School Officers, 2013; Council for Exceptional Children, 2015). Despite limited consensus and guidance on what should be included in classroom management curriculum, researchers have identified some key content and methods for teacher preparation faculty to include in their programs. High-quality classroom management curriculum should provide preservice teachers with a foundational understanding of behavior principles (Butler & Monda-Amaya, 2016), fluency with evidence-based practices in classroom management and positive behavior supports (Myers, Sugai, et al., 2017), aligned field-based opportunities to practice evidence-based classroom management practices in school settings (Brownell et al., 2019), and coaching from instructors with goal setting, progress monitoring, and performance feedback on implementation of classroom management strategies (Myers, Sugai, et al., 2017). Rich field-based approaches to developing classroom management practices have shown to have a positive impact on preservice teachers' use of evidence-based classroom management strategies (A. Kennedy & Lees, 2016); however, proper implementation can require extensive time and resources from faculty (Brownell et al., 2019). One possible solution to alleviate some of the time and resources needed from faculty has been to utilize a multitiered support model (MTSM) to provide varying levels of support to preservice teachers based on their performance. Multitiered support models are discussed in depth in a later section of this paper.

Evidence-Based Practices in Classroom Management

The Council for Exceptional Children (2014) has established a set of standards to identify evidence-based practices in special education. Based on the standards to be considered an evidence-based practice, a classroom management intervention must be supported by at least seven to 10 high-quality experimental studies that demonstrate positive effects of the intervention. As previously noted, despite standards to identify evidence-based classroom management practices, there has continued to be a lack of agreed upon content for classroom management curriculum in teacher preparation programs (Klopfer et al., 2019). However, research has been clear that preservice teachers need to understand, practice, and become fluent with evidence-based classroom management practices in order to be prepared to handle challenging behavior in their future classrooms (Myers, Sugai, et al., 2017).

Simonsen, Fairbanks, et al. (2008) conducted an expansive systematic literature review of nearly 40 years of published studies on classroom management strategies to identify which strategies qualified as evidence-based practices. The studies included in the review all took place in a school setting with at least two school-age participants, were focused on classroom management, used an experimental research design, and were published in a peer-reviewed journal. For a classroom management practice to be classified as evidence-based, Simonsen, Fairbanks, et al. (2008) used the following criteria for classification: (a) the practice was evaluated using a methodologically sound experimental research design, (b) the practice was determined to be effective, and (c) the practice was supported by at least three empirical studies published in peer-reviewed journals. Based on their analysis, the authors identified 20 evidence-based classroom management strategies which were organized into five broad categories: (a) maximize structure and predictability; (b) post, teach, review, monitor, and reinforce

expectations; (c) actively engage students in observable ways; (d) use a continuum of strategies to acknowledge appropriate behavior; and (e) use a continuum of strategies to respond to inappropriate behavior.

Regarding preservice teacher preparation, Simonsen, Fairbanks, et al. (2008) noted that, although their research was important to identify evidence-based classroom management practices, it was essential that future research explored methods to effectively train preservice teachers to implement these practices accurately and consistently, because teaching evidence-based practices through readings and lectures alone was unlikely to impact the use of these practices in classrooms. Furthermore, the authors stated that, when training teachers, it was important to consider which evidence-based classroom management practices should be prioritized based on factors such as, the adaptability of the practice to generalize to a variety of settings and populations and the likelihood that the practice would be implemented with fidelity (Simonsen, Fairbanks, et al., 2008).

To that point, Simonsen, Fairbanks, et al. (2008) highlighted that, out of the 20 evidence-based classroom management strategies, behavior specific praise was the simplest practice to implement and had the strongest empirical evidence base of all the classroom management practices included in their analysis. A later study conducted by Gage and MacSuga-Gage (2017) found that, when compared to other classroom management practices, behavior specific praise was the most salient-classroom management skill for teachers. Given these findings, teacher preparation programs should consider training preservice teachers to implement behavior specific praise before other classroom management strategies. The following section provides greater detail on the evidence-base supporting behavior specific praise and its inclusion as a primary focus of classroom management training in teacher preparation programs.

Behavior Specific Praise (BSP)

The topic of teacher-delivered praise has been studied for many decades with some of the earliest studies dating back to the 1970s. Throughout the literature, a distinction has been made between generalized praise and behavior-specific praise. Generalized praise referred to any positive general statement or gesture that indicated the teacher's approval of a behavior but did not explicitly state the behavior (Alberto & Troutman, 2013; Collier-Meek et al., 2019). Behavior-specific praise can be defined as a positive statement made by the teacher that was: (a) contingent on the student engaging in a specific desired behavior (i.e., praise was delivered only after the student engaged in the behavior), (b) explicitly stated the specific behavior that was being praised, and (c) named the student(s) who engaged in the behavior (Brophy, 1981; Hulac & Briesch, 2017; Simonsen, Fairbanks, et al., 2008). Table 1 provides examples of generalized praise and behavior-specific praise comments.

Table 1

Examples of Generalized and Behavior Specific Praise

Generalized Praise	Behavior Specific Praise
"Great job"	"Daniel, great job neatly lining up your numbers on your math homework."
"Awesome work"	"Group 1, awesome work answering all of your literature circle questions with descriptive language."
"Well done"	"Sarah, I know that last science question was hard, but you asked for help instead of giving up. I'm so impressed by your perseverance!"

Initial research on praise indicated that behavior-specific praise was more effective at increasing positive student behaviors than generalized praise (Brophy, 1981). This finding has

continually been confirmed throughout the decades as the research-base for the use of praise was established. Consequently, the literature base on praise has almost entirely focused on behavior-specific praise. Floress et al. (2017) conducted a systematic review of 29 studies on praise published between 1985 and 2015 and found that only 10% of studies included generalized praise.

Approximately 40 years after Brophy (1981) indicated that BSP was more effective than generalized praise, Collier-Meek et al. (2019) found that behavior-specific praise had a statistically significant effect on increasing student engagement as compared to general praise. Additionally, their data demonstrated that, although teachers delivered general praise at a higher rate than BSP, it did not have a significant impact on student behavior. This was an important distinction between BSP and general praise.

As noted in the previous section, Simonsen, Fairbanks, et al. (2008) conducted a systematic literature review to identify evidence-based classroom management strategies and found that there was sufficient data on the effectiveness of BSP to support its classification as an evidence-based practice for classroom management. The classification of BSP as an evidence-based practice was strengthened further by the findings of Gage and MacSuga-Gage (2017). Gage and MacSuga-Gage conducted an analysis comparing the impact of BSP, opportunities to respond, and prompting on student engagement and disruptive behavior. The authors noted that these three evidence-based strategies were chosen because they had consistently been shown to be effective for students with challenging behavior. Their results indicated that, although all three classroom management skills had some impact on student behavior, only BSP was shown to have a statistically significant effect on increasing student engagement and decreasing disruptive behavior. Based on these findings, Gage and MacSuga-Gage concluded that BSP was

the most salient classroom management skill when compared to opportunities to respond and prompting. Gage and MacSuga-Gage suggested that teacher-development training in classroom management should consider focusing on teachers' use of BSP before other strategies as teachers were likely to see the greatest impact on student behavior,

Behavior-specific praise has been highly effective because it utilized the scientific-behavior principle of reinforcement, specifically positive reinforcement. Positive reinforcement was defined as the addition of a pleasant stimulus following a behavior that increases the likelihood of the behavior occurring in the future (Cooper et al., 2020). By identifying the specific desired action that the student engaged in (i.e., a behavior) and following it with praise (i.e., pleasant stimulus), the student then knew exactly what behavior to demonstrate in the future to access praise (i.e., reinforcement). Therefore, the student was more likely to engage in that behavior again in the future under similar circumstances. In contrast, when general praise was provided, the student could not identify what specific behavior was being praised and, therefore, may not be likely to engage in that behavior more in future simply because they did not know which behavior would earn them praise.

Providing BSP to students has been an efficient and effective low intensity evidence-based classroom management strategy that required little to no resources to implement. Behavior specific praise has been supported by decades of empirical evidence of having significant positive impacts on student outcomes, including increased academic engagement (Caldarella et al., 2019; Collier-Meek et al., 2019; LaBrot, Dufrene, Whipple, et al., 2020), increased on-task behavior (Sutherland et al., 2000; Thompson et al., 2012), and decreased disruptive behavior (Gage & MacSuga-Gage, 2017; Sanetti & Collier-Meek, 2015,). However, even with all the evidence of its effectiveness and relative ease to implement, research has shown that teachers

have continued to use BSP at low rates or not at all (Thompson et al., 2012). Particularly concerning was that students with disabilities received BSP at much lower rates than students without disabilities (Royer et al., 2019). For students with disabilities who may be facing academic and behavior challenges, or students without disabilities who exhibited challenging behavior, implementing behavior-specific praise accurately and at high rates could have a significant positive impact on their academic and behavioral outcomes. Because BSP has relied on reinforcement of positive behaviors and not punishment of problem behaviors, higher levels of BSP could lead to a more positive and supportive classroom climate.

Unfortunately, teachers who did not utilize BSP for classroom management may instead rely on reprimands to punish and decrease problem behaviors. This approach could be detrimental to student outcomes, as research has shown that reprimands could lead to decreased academic engagement and increases in disruptive behavior (Caldarella et al., 2019). Additionally, special education teachers not only taught more students with behavior challenges than general education teachers did, but they were often looked at to provide consultation and training on classroom management to the other educators in their school (Cooper & Scott, 2017), For these reasons, it would be essential that special education teachers to receive adequate training in the implementation of BSP.

Training Teachers to Use Evidence-Based Classroom Management Practices

Determining the most effective methods for training teachers to use evidence-based classroom management practices was an important topic for researchers to explore. Two recent studies analyzed the teacher training research to determine the most common and most effective methods used to train teachers to implement BSP (Floress et al., 2017; Zoder-Martell et al., 2019). Floress et al. (2017) analyzed 29 studies about training teachers to implement BSP. They

sought to identify the training methods that were most used as well as the methods that were associated with the most significant positive outcomes. They found that didactic training was used in 96% of training studies, followed by performance feedback in 67% of studies, goal setting in 54% of studies, and prompting in 27% of studies. The researchers then analyzed only the studies that reported positive outcomes to determine which training methods most frequently resulted in increased use of BSP. Floress et al. found that didactic training was used in 100% of all studies that reported positive outcomes, followed by performance feedback in 86% of studies, goal setting in 53%, and prompting in 40% of studies. The authors cautioned that it was important to understand the context in which didactic training was associated with positive outcomes, because previous research had overwhelmingly shown didactic training alone to be ineffective in increasing teachers' use of BSP. Floress et al. (2017) noted that, although didactic training was used in 100% of the studies that reported positive outcomes, it was always implemented in combination with at least one of the other identified training methods (i.e., performance feedback, goal setting, prompting).

Zoder-Martell et al. (2019) reported similar results as Floress et al. (2017). To note, 13 of the 29 studies included in their analysis were also included in Floress et al. (2017). Zoder-Martell et al. (2019) found that, after didactic training, performance feedback, goal setting, and prompts were the most commonly used methods for training teachers to increase their use of BSP. The authors noted that all the studies in their analysis used multicomponent training packages, therefore, they were unable to conclude which individual training methods were most effective. However, the analysis did show that, of the studies that reported the largest effect sizes, most included performance feedback, goal setting, and prompting (Zoder-Martell et al., 2019). The following three sections provide an analysis of the research base supporting the use of

performance feedback, goal setting, and prompting as effective practices for training teachers to implement evidence-based classroom management practices.

Performance Feedback

Performance feedback has been one of the most widely used training methods for increasing teachers' use of evidence-based classroom management strategies (Floress et al., 2017; Zoder-Martell et al., 2019). Performance feedback has had a large and growing research base demonstrating its effectiveness with both preservice and in-service teachers (Grasley-Boy, Gage, MacSuga-Gage, 2019). Performance feedback has been considered an evidence-based practice for increasing teachers' use of academic and behavioral interventions in school settings (Fallon et al., 2015). It has been defined as observing an individual and providing specific feedback to improve or increase their use of a particular teaching practice (Collins et al., 2018).

Performance feedback has been studied extensively throughout the last four decades and, while some specific characteristic may result in individual variability in responding, overall performance feedback has been shown to increase implementation and use of targeted strategies no matter the modality, frequency, or format of delivery (Brock et al., 2017; Fallon et al., 2015; Schles & Robertson, 2019; Sleiman et al., 2020). When considering specific components of performance feedback (i.e., participants, frequency, format), research has consistently shown that the characteristics of performance feedback that yielded the largest effect sizes and strongest functional relations included: (a) visually presented data (i.e., graphed data), (b) feedback delivered individually, and (c) feedback delivered on a daily or weekly basis (Fallon et al., 2015; Sleiman et al., 2020).

Additionally, research has begun to explore the effectiveness of delivering performance feedback using technology. Given the recent pandemic mitigations which limited in-person

interaction and the shortage of teachers, consultants, and coaches to deliver feedback, technology-based methods of delivery may be a more efficient and less time-consuming way for one coach or consultant to support more teachers in the implementation of evidence-based classroom management practices (Grasley-Boy, Gage, et al., 2023). Email delivery of performance feedback has had a growing evidence-base, with several recent studies demonstrating a functional relation between email delivery of performance feedback and teachers' implementation of evidence-based practices (Barton, Velez, et al., 2020; Gage, MacSuga-Gage & Crews, 2017; McLeod et al., 2019; Rathel et al., 2014). Recently, Barton, Rigor, et al. (2019) expanded the research base for technologically delivered performance feedback when they demonstrated a functional relation between text message delivery of performance feedback and increases in preschool teachers' use of effective practices.

While performance feedback has been a highly effective evidence-based strategy for improving teachers' classroom practices, there were some important considerations for teacher preparation noted by researchers. Brock et al., (2017) noted that performance feedback may be especially critical for preservice special education teachers, as they often receive limited opportunities for development of classroom management practices in applied settings, work with a higher number of students with challenging behavior, and consistently report being underprepared to manage challenging student behavior in their classrooms. Schles and Robertson (2019) have identified performance feedback as a promising practice for developing preservice special education teachers' classroom management practices, particularly given that teacher preparation programs vary greatly in their inclusion and delivery of classroom management content and field-based opportunities to practice classroom management skills. McLeod et al. (2019) suggested that university supervisors may have more opportunity to provide repeated

performance feedback regularly within the context of practicum or fieldwork placement for preservice teachers, than a consultant or a coach within a school context which may result in high-quality learning opportunities for preservice teachers to develop classroom management skills and enter the field more prepared for the challenge of managing classroom behaviors.

Goal Setting

Goal setting has been one of the most common components of multicomponent intervention and support packages for increasing teachers' use of classroom management skills (Floress et al., 2017; Zoder-Martell et al., 2019). Research has shown that goal setting has been an effective strategy for changing a variety of behaviors and can be broadly applied in a variety of contexts (e.g., schools, businesses, fitness; Epton et al., 2017). Because of the broad applicability of goal setting, it can be a key element of behavior change interventions (Criss et al., 2022).

For goal setting to be most effective, goals should include the following three elements, (a) goals should be specific, (b) goals should be sufficiently challenging, and (c) goals should include steps for progress monitoring and feedback (Camp, 2017). Because one of the components of effective goal setting can be monitoring progress towards the goal, goal setting is not likely to be used in isolation wherein goals were set without data collection, progress monitoring, and feedback (Criss et al., 2022). Goal setting has been most often implemented in combination with performance feedback and prompting (Criss et al., 2022; Floress et al., 2017; Zoder-Martell et al., 2019). Combining goal setting with performance feedback and prompting has often enhanced the effectiveness of each. In Barton, Velez, et al.'s (2020) study exploring the effects of email performance feedback on teachers' behaviors, one group of teachers did not consistently demonstrate an increase in the targeted teacher behaviors with the performance

feedback intervention. Barton, Velez, et al. (2020) then added goal setting to the teachers' intervention, and they successfully met the criteria set by the researcher.

Although goal setting has almost always been used in combination with other supports, two recent studies have explored the effectiveness of goal setting in isolation (Epton et al., 2017; Markelz, Ridden, & Hooks, 2021). Markelz, Ridden, and Hooks (2021) conducted a component analysis comparing the effects of three different components of an intervention package on the frequency of BSP statements of teachers. The three components included: (a) didactic training plus goal setting, (b) self-monitoring, and (c) tactile prompting. The results indicated that there was a functional relation between the training plus goal setting and the frequency of BSP statements. They also found that there was a greater impact on the increase in frequency of BSP when training plus goal setting were combined with self-monitoring, demonstrating that goal setting had a strong impact on behavior when implemented in combination with other strategies (Markelz, Ridden, & Hooks, 2021).

Epton et al. (2017) conducted a meta-analysis to explore the effect of goal setting on behavior change. The meta-analysis included 144 studies which included a goal-setting condition. Contrary to other research findings, the authors concluded that goal setting was equally effective whether implemented in isolation or in combination with other supports. Their findings also indicated that difficult but achievable goals had a stronger impact on behavior change than easy goals and that having another person monitor progress towards the goals was more effective than self-monitoring progress. To add to that, Criss et al. (2022) found that teacher-created goals were associated with higher outcomes than goals set by consultants or coaches, or goals set collaboratively. In addition, they found that goals that were set during

baseline and were continuously measured with feedback also yielded higher outcomes than goals that were not repeatedly measured (Criss et al., 2022).

Although Epton et al. (2017) concluded that goal setting alone was effective, the research base largely indicated that goal setting was an effective and key component of supporting teachers' development of classroom management practices when combined with performance feedback (Cavanaugh, 2013). Goal setting provided in-service and preservice teachers a context in which to improve their practice. When goal setting was used in combination with performance feedback, explicit information can be provided to support progress towards and achievement of the goal. Additionally, prompting, which is described in the following section, can support goal setting by providing reminders and cues to orient an individual towards goal attainment.

Prompting

Like goal setting, prompting has commonly been combined with other strategies to support teachers in increasing their use of classroom management strategies. A prompt can be defined as a reminder or cue provided to an individual to signal a specific response (Alberto & Troutman, 2013; LaBrot, Johnson, et al., 2022). In recent research on the use of prompting to support teachers' implementation of classroom management practices, the most common types of prompts used were: (a) verbal (LaBrot, Dufrene, 2021; LaBrot, Pasqua, et al., 2016); (b) email (LaBrot, Johnson, et al., 2022); and (c) tactile prompts (Lastrapes et al., 2021; Markelz, Taylor, et al., 2019; O'Handley, Dufrene, et al., 2018; White et al., 2021). Across all studies, each type of prompting was effective in increasing teachers' behaviors.

Four of the studies reviewed included the use of tactile prompting to increase teachers' use of BSP. O'Handley, Dufrene, et al. (2018) and Lastrapes et al. (2021) both used an electronic device called a MotivAider which can be clipped on the participant and prompts responses by

emitting a pulse at the designated time interval. Markelz, Taylor, et al. (2019) and White et al. (2021) utilized Apple watches with prompting apps which provided a pulse or beep to prompt responding. All four studies demonstrated a functional relation between tactile prompting and increased use of BSP. Additionally, White et al. (2021) also noted a functional relation between tactile prompting and increased student academic engagement. Despite the effectiveness of tactile prompts that were demonstrated in this study, Lastrapes et al. (2021) and Markelz, Taylor, et al. (2019) both noted cost and feasibility as a limitation to the use of tactile prompts. While the cost of the MotivAider was less than the Apple watch, both required some level of funding to implement.

Verbal prompts were implemented by LaBrot, Pasqua, et al. (2016) and LaBrot, Dufrene, et al. (2021) using a one-way FM radio transmitter placed in the ear of the teachers. On a schedule of every one minute, the researchers would identify a student engaging in a desired behavior and verbally prompt the teacher to provide BSP to that student by stating a BSP statement into the FM radio transmitter. Within 10 seconds of receiving the verbal prompt statement (e.g., "Jon, excellent job neatly placing your papers in your folder"), the teacher was expected to repeat the prompted phrase verbatim to the student. Both studies reported that the use of verbal prompting was effective in increasing and maintaining teachers' increased rates of BSP. In addition, LaBrot, Dufrene, et al. (2021) reported that teachers in their study also generalized use of BSP to untrained settings. Like the use of tactile prompt, the authors noted that cost, time, and resources limited the external validity of the use of verbal prompts delivered through a FM radio transmitter at a rate of once per minute. This may not be feasible for consultants or coaches who work with a large number of teachers. However, LaBrot, Dufrene, et al. (2021) did note that this type of prompting may be appropriate in a tiered-support structure in

which this level and type of prompting was only provided for teachers who did not improve with lower intensity methods.

Email prompts were the third type of prompts used in recent research (LaBrot, Johnson, et al., 2022). In this study, the researchers provided teachers with a daily email prompt each morning which contained a rationale for the use of BSP, a description of BSP, two examples of BSP, instructions to provide at least one BSP statement per minute, and a positive statement of encouragement. The results of this study demonstrated that email prompts were effective in increasing and maintaining teachers' use of BSP without the need for additional support. Unlike the limitations to resources, cost, and time that were noted with tactile and verbal prompts, the use of email prompts provided a feasible, low resource and time intensive strategy for supporting teachers' use of classroom management practices. LaBrot, Johnson, et al. (2022) reported that it took approximately five minutes to set up the email prompt template and they were automatically sent each day to the teachers at their preferred times using a free email application that was easily accessible with most email providers.

Performance feedback, goal setting, and prompting have been highly effective strategies for supporting in-service and preservice teachers in increasing their use of evidence-based classroom management practices. While all three strategies were effective when implemented individually, when used in combination they resulted in better outcomes for teachers and students (Floress et al., 2017; Zoder-Martell et al., 2019). Recent research on performance feedback and prompting examined the use of technology to increase feasibility and decrease strain on time and resources (Barton, Rigor, et al., 2019; Barton, Velez, et al., 2020; Gage, MacSuga-Gage, & Crews, 2017; LaBrot, Pasqua, et al., 2016; LaBrot, Weaver, et al., 2022; McLeod et al., 2019; Rathel et al., 2014). Given the increased behavior challenges in schools,

teachers underprepared in classroom management, high teacher attrition, and critical teacher shortages, incorporating the use of these strategies into teacher preparation programs can help to better prepare future teachers to implement evidence-based practices in their classrooms.

Zoder-Martell et al. (2019) and Floress et al. (2017) both recommended that future research explores the use of performance feedback, goal setting, and prompting within multitiered training models to address the varied and individual needs of preservice teachers. In addition to being able to address individual training needs, Zoder-Martell et al. noted a multitiered training model may be an efficient way to train teachers as it allowed schools to maximize resources and time. As teacher preparation programs have continued to revise and improve their delivery of classroom management curriculum including a multitiered support model into field-based experiences with a focus on developing preservice teachers' use of evidence-based classroom management practices could support new teachers' knowledge and implementation of evidence-based classroom management practices.

The following sections provide an analysis of the research-base on multitiered support models. Specifically, these sections will: (a) give an overview of the multitiered support model framework as it applies to school age students, (b) provide a detailed description of the multitiered support framework as it applies to in-service teacher professional development and training, and (c) review the emerging literature base on the implementation of the multitiered support model as it applies to training preservice teachers in teacher preparation programs.

Multitiered Support Model (MTSM)

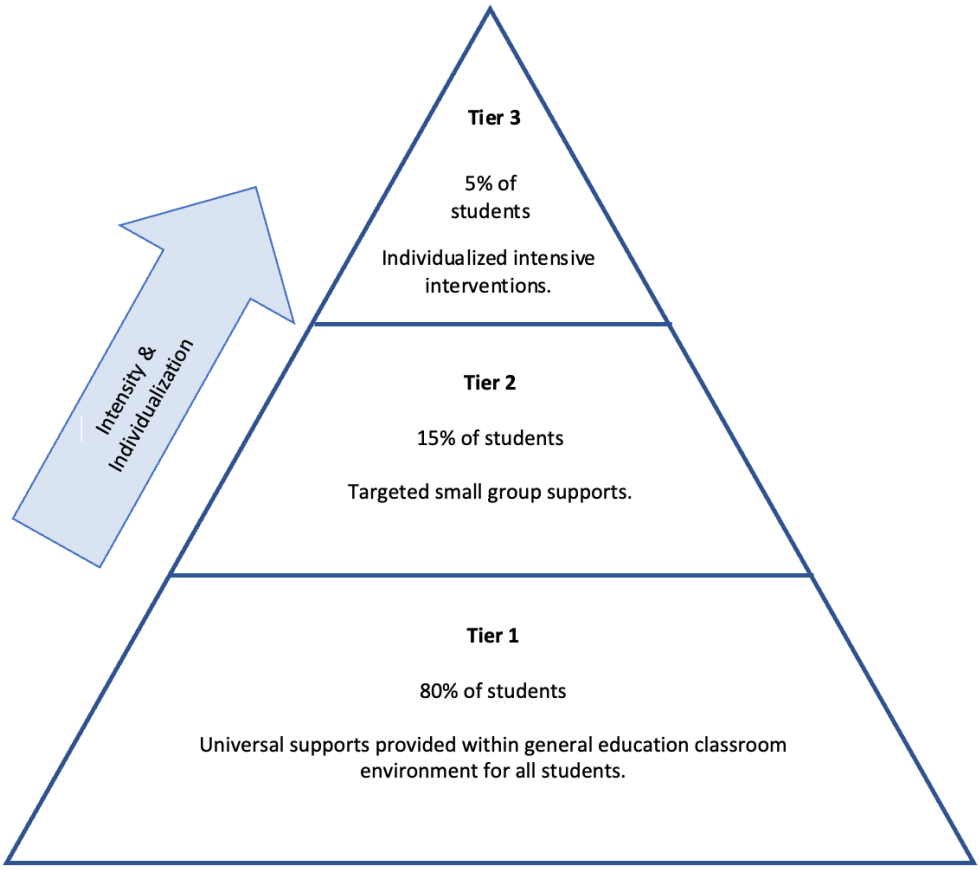
Multitiered Systems of Support (MTSS) is a tiered-support framework made up of three levels or tiers of evidence-based support strategies varying in intensity as tiers increase (Simonsen & Myers, 2015). There have been three applications of the MTSS framework

commonly utilized in schools. Response to Intervention (RtI) addresses the delivery of academic interventions to students with different levels of need (Friend & Bursuck, 2019). Positive Behavior Interventions and Supports (PBIS) is a proactive approach to addressing the delivery of evidence-based behavioral interventions and supports to address students' behavioral needs on a schoolwide, classwide, and individual level (Simonsen & Myers, 2015). The Multitiered Support for Professional Development (MTS-PD) is a tiered framework for providing varying levels of coaching to educators on the implementation of evidence-based practices (Myers, Simonsen, & Sugai, 2011; Simonsen, MacSuga-Gage, et al., 2014). In addition, MTSS frameworks have also been applied in the delivery of school-based mental health supports (Marsh & Mathur, 2020) and school consulting (Briere et al., 2015; Gilmour, Wehby, & McGuire, 2017; LaBrot, Dufrene, et al., 2020).

All MTSS models include three tiers of support, with tier one support being the least intensive and tier three the most (see Figure 1). Each tier of support is described in the sections below.

Figure 1

Basic Components of the Multitiered Support Model for Students



Tier One

Tier one supports have been considered universal supports because they were proactively provided to all students or staff depending on the model. Within PBIS and RtI, tier one supports would include evidence-based instructional and behavioral-support strategies implemented in all classrooms and school environments to all students. The universal implementation of these strategies would provide a baseline for determining the need for more intensive interventions (Preston et al., 2016; Sugai & Simonsen, 2012). In the MTS-PD model, tier one would represent universal professional development training provided to the entire staff. Tier one professional development training has focused on the acquisition of skills and knowledge. Tier one support

has been considered low intensity and did not involve individualization of content or delivery method (Simonsen, MacSuga-Gage, et al., 2014). Universal screening tools have been used to collect data in tier one to monitor performance and identify individuals that may need a higher level of support. Tier one supports have been effective for approximately 80% of individuals (Myers, Simonsen, & Sugai, 2011).

Tier Two

Individuals who have not met the academic, behavioral, or implementation criteria after a period of tier one progress monitoring would be provided with tier two support. Only about 10% to 15% of individuals would require tier two support (Simonsen & Myers, 2015). Tier two supports would target an individual's specific needs, were more individualized, more intensive, and required more frequent data collection than tier one. Tier two supports would involve different components depending on the MTSS model. Within PBIS and RtI, tier two supports were typically delivered one to three times weekly in small groups with other individuals with similar needs (Friend & Bursuck, 2019; Simonsen & Myers, 2015). In an academic structure, this may be small group phonics instruction three times a week with a group of three to five students who were identified as struggling with phonics skills. In a behavioral structure, tier two support may include instruction on organizational strategies once a week in a small group of 5 to 10 students who have all been identified as struggling with materials management. In a professional development structure, tier two support could be delivered either individually or in a small group to staff who have been identified as not meeting the implementation goal of the professional development. Tier two professional development support may include one-on-one teaching, goal setting, and performance feedback (Samudre et al., 2022). On-going progress monitoring through data collection would be more frequent during tier two support than in tier one.

Tier Three

Individuals whose data have shown that they had not met the learning or implementation criteria with tier two support were provided with tier three supports. Approximately 5% of individuals would require tier three support. Tier three supports have been the most individualized and intensive level of support provided in the MTSS framework (Sugai & Simonsen, 2012). In all MTSS models, tier three support would be provided in a one-on-one format by a consultant or specialist in need. In addition, progress would be monitored through data more frequently than in the other tiers. Progress monitoring may take place daily, two-three times a week, or weekly. In an academic structure, tier three support may include specialized phonics instruction provided five days a week for 30 minutes, in a one-on-one format with a reading specialist. In a behavioral structure, tier three support may include an individualized and targeted behavior support plan developed and implemented by a behavior specialist across all the individual's school activities. In a professional development structure, one-on-one coaching or consultation would be provided by a specialist around need, along with frequent performance feedback, and goal setting with defined steps to meeting the goal (Simonsen & Myers, 2015).

Multitiered Support Model and Teacher Development

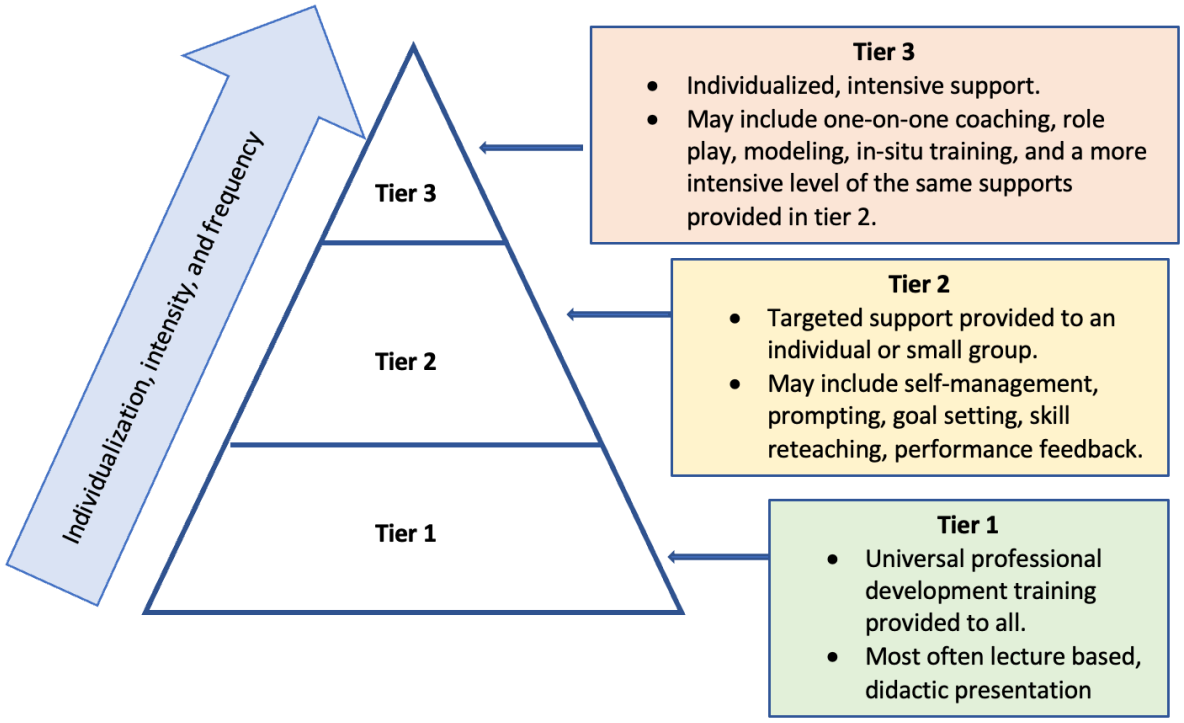
Multitiered support models such as PBIS and RtI have been well established in the prevention and intervention literature for nearly 30 years (Preston et al., 2016; Sugai & Simonsen, 2012) and widely used in schools across the country. Both PBIS and RtI have focused specifically on supporting student outcomes in preschool through high school settings. The application of the MTSM framework to teacher development began more recently, with the multitiered support model for professional development (MTS-PD), first introduced in the research literature just a decade ago (Myers, Simonsen, & Sugai, 2011; Simonsen, MacSuga-

Gage, et al., 2014; Thompson et al., 2012). Over the past decade, the empirical evidence for the effectiveness of MTS-PD as a research-supported framework for supporting teachers' use of classroom management practices has grown (Samudre et al., 2022). This growing research base was timely given the previously noted lack of preparation around classroom management, shortage of qualified teachers, and increased levels of challenging behavior in schools.

The MTSS framework has been well established as an evidence-based practice for supporting children in developing new academic and behavioral skills. Changing adult behavior would require the same evidence-based methods and practices that result in behavior change, new learning, and skill development in children. Therefore, it would stand to reason that the same MTS framework would also be effective when applied to teachers' learning and development. Because MTSS has been rooted in behavioral learning theory, and systematically applied scientific principles of human behavior to learning, the framework can be applied to any individual when new or improved skills were desired (Simonsen & Myers, 2015). The underpinnings of behavioral learning theory have been demonstrated throughout the MTSS framework as each tier supported individuals through the four phases of learning: acquisition, fluency, maintenance, and generalization (Cooper et al., 2020). Tier one support focused mainly on acquisition, while tier two and three supported fluency, maintenance, and generalization in a variety of ways dependent on individual need (Simonsen & Myers, 2015). Each tier of the MTS-PD model is described below. Figure 2 provides information on the basic characteristics of each tier of MTS-PD.

Figure 2

Basic Components of the Multitiered Support Model for Teacher Training



Multitiered Support - Professional Development

Tier One

Traditionally, professional development for teachers has consisted of in-service training delivered in short lecture-style presentations at faculty meetings, workshops, or conferences (State et al., 2019). This format has sometimes been referred to as “sit and get” training, meaning that information was presented without application or follow-up activities, and teachers were expected to take in the information and then apply it in their classrooms (Grasley-Boy, Gage, MacSuga-Gage, 2019). Often “sit and get” training was delivered in tier one of the MTS-PD model. This type of training can add to a teachers’ knowledge and understanding of a practice but often without ongoing support, “sit and get ‘‘ training failed to improve teaching practices (State et al., 2019). In the MTS-PD framework, tier one support included group professional

development training on a specific skill, program, or practice (Grasley-Boy, Gage, & MacSuga-Gage, 2019). Tier one training may be delivered to the entire staff (e.g., schoolwide training on PBIS) or a small group of teachers and can be as short as 10 minutes, span a full school day, or multiple days (State et al., 2019).

Research on the MTS-PD framework has shown that traditional professional development and tier one support was often not sufficient to improve teachers' classroom management practice (Gage, MacSuga-Gage, & Crews, 2017; Myers, Simonsen, & Sugai, 2011; Simonsen, MacSuga-Gage et al., 2014; Thompson et al., 2012; Zakszeski et al., 2020). Myers, Simonsen, and Sugai (2011) conducted one of the early studies exploring the use of the MTSS framework to increase teachers' implementation of classroom management practices. The participants in this study were middle school teachers whose school was implementing School-Wide Positive Behavior Supports (SWPBS). At the time of the study, all participants had taken part in almost two school years of tier one training in SWPBS, which covered a variety of content including contingent specific praise. Despite extensive tier one training, all teachers participating in the study delivered little to no specific praise statements per observation session, with rates averaging between zero and two praise statements per observation. The data in this initial study suggested that tier one training alone did not result in increased implementation of classroom management practices with teachers. When participants were provided more intense and more individualized tier two and tier three support, their rates of specific praise increased. The level of support required for each participant varied. Two teachers met the designated criteria for delivery of specific praise with tier two support, whereas the other two teachers required tier three support. The results of this study supported the idea that teachers needed differing levels of support to improve their classroom management skills, therefore, applying

MTSS to professional development was more effective than the traditional tier one universal training typically provided to teachers (Myers, Simonsen, & Sugai, 2011). Following Myers, Simonsen, and Sugai (2011), Thompson et al. (2012) reported the same findings when the three teachers in their study showed almost no change in the number of BSP statements per observation following tier one universal faculty training. Although Myers, Simonsen, and Sugai (2011) and Thompson et al. (2012) noted that adding tier two and three supports following universal professional development increased teachers use of BSP, a functional relationship between the two variables was not demonstrated. Following Myers, Simonsen, and Sugai (2011) and Thompson et al. (2012), Simonsen, MacSuga-Gage, et al. (2014), and Sanetti and Collier-Meek (2015) further demonstrated the need for a tiered framework to support teachers' increased implementation of classroom management practices but, like previous research, failed to demonstrate a functional relationship between the two.

Gage, MacSuga-Gage, and Crews (2017) added to the research on MTS-PD by further confirming the ineffectiveness of tier one universal professional development and building an evidence-base for the effectiveness of tier two supports by conducting two studies to compare the impact of tier one and tier two professional development training and support on elementary teachers' use of BSP. In the first study, four elementary teachers were provided tier one professional development which consisted of a traditional lecture style presentation lasting 30 minutes. In the training, teachers were given information on BSP and how to implement it and were provided instructions on how to self-monitor their use of BSP. Based on the data, the authors concluded that tier one, universal professional development, did not have a meaningful impact on teachers' use of BSP. Additionally, only one of the four teachers collected and reported self-monitoring data and, when compared with the observation data, there was 0%

accuracy. These findings provided evidence to suggest that providing only tier one professional development did not meaningfully impact teachers' classroom management practice even when implementation tools and instructions for use were provided (Gage, MacSuga-Gage, & Crews, 2017).

Multitiered Support--Professional Development

Tier Two

When a teacher did not show improvement with tier one support alone in the MTS-PD model, they were then provided more intense and individualized support. Tier two support can include one-on-one coaching (Simonsen, Freeman, et al., 2017), skill reteaching (Grasley-Boy, Gage, & MacSuga-Gage, 2019), more frequent data collection (Myers, Simonsen, & Sugai, 2011; Simonsen, MacSuga-Gage, et al., 2014; State et al., 2019), goal setting (Simonsen, MacSuga-Gage, et al., 2014), self-management (Myers, Simonsen, & Sugai, 2011; Simonsen, MacSuga-Gage, et al., 2014; Thompson et al., 2012), prompting (LaBrot, Johnson, et al., 2022; State et al., 2019; Zakszeski et al., 2020), and performance feedback (Briere et al., 2015; Grasley-Boy, Gage, et al., 2023; LaBrot, Dufrene, et al., 2020). The possible components of tier two supports would vary depending on the specific characteristics of the setting, context, and available resources.

In the early MTS-PD models developed by Myers, Simonsen, and Sugai (2011) and Simonsen, MacSuga-Gage, et al. (2014), tier two progress monitoring relied mainly on teachers' self-collected and self-reported data. Some studies have since suggested that teachers may have difficulty self-monitoring their use of classroom management practices due to other competing responsibilities (Grasley-Boy, Gage, et al., 2023). As noted above, Gage, MacSuga-Gage, and Crews (2017) reported that only one of the four teachers in their study completed the self-management activities, and the one teacher that did report data were found to have 0% accuracy

when compared with the researchers' data collection. Additionally, Briere et al. (2015) also reported low levels of accuracy between teachers' self-recorded data in comparison with data collected by direct observers. For these reasons, some more recent MTS-PD models have less of a focus on self-management in tier two (Gage, MacSuga-Gage, & Crews, 2017; Grasley-Boy, Gage, et al., 2023; LaBrot Weaver, et al., 2022). Instead, recent research on MTS-PD focused more on goal setting, prompting, and performance feedback as tier two supports (Barton, Velez, et al., 2020; Grasley-Boy, Gage, et al., 2023; LaBrot, Weaver, et al., 2022).

There has been a growing research-base for the use of tier two supports to increase teachers' implementation of classroom management practices. In the second study, of the comparison research conducted by Gage, MacSuga-Gage, and Crews (2017), tier two support was provided to the participants from the first study who showed low rates of BSP after receiving tier one training. In this study, tier two professional development included one-on-one coaching and weekly visual performance feedback. In contrast to study one in which participants only received tier one training, all participants in study two implemented BSP at a rate higher than the goal, demonstrating a functional relationship between tier two supports and an increase in teachers' use of BSP (Gage, MacSuga-Gage, & Crews, 2017).

In addition, Simonsen, Freeman, et al. (2017) explored the effectiveness of targeted professional development on general education elementary teachers' use of BSP. Targeted professional development as described by Simonsen, Freeman, et al. (2017) consisted of an initial 15-minute direct training on BSP and self-management, self-management (i.e., development of a self-management plan, self-monitoring BSP, goal setting, self-reinforcement), and weekly email prompts. Although direct training, which was typically part of tier one, was included in the targeted professional development package, the primary focus of the package

were self-management and email prompts, which were consistent with tier two support. The authors reported a high level of variability in teachers' implementation of the self-management protocols, accuracy of self-collected data, and submission of self-collected data to the researchers. Despite the variability in teachers' implementation of self-management, the results and analysis demonstrated a functional relationship between tier two targeted professional development and teachers' increased use of BSP. Furthermore, Simonsen, Freeman, et al. (2017) noted that increased rates of BSP did not maintain following the targeted professional development, and teachers reported inconsistent to minimal use of self-management during the follow-up phase. This suggested that more intensive support may be needed to support teachers in on-going use of classroom management practices.

Grasley-Boy, Gage, et al. (2023) conducted a conceptual replication using a combination of methods and procedures from Gage, MacSuga-Gage, and Crews (2017) and Grasley-Boy, gage, & MacSuga-Gage (2019). Participants included four elementary general education teachers with low rates of BSP following tier one training. The tier two supports included skill reteaching through a 20-minute one-on-one training and visual performance feedback provided weekly via either text message or email. Results showed that all participants increased their use of BSP above the goal criteria with the support of tier two visual performance feedback. None of the participants required more intensive tier three support. Upon analysis, the authors determined that a functional relationship was present between visual performance feedback provided via email or text message and teachers rates of BSP. As previously noted, there could a variety of supports that can be provided in tier two professional development.

The findings of Grasley-Boy, Gage, et al. (2023) demonstrated two important considerations for choosing tier two supports that were feasible, efficient, and effective. First, the

teachers in this study did not engage in self-management. As previously noted, extensive multi-step self-management protocols like those described in Simonsen, Freeman, et al. (2017) can be time consuming and add extra work tasks to already over-taxed teachers, resulting in limited accuracy of self-collected data (Gage, MacSuga-Gage, & Crews, 2017), and variable fidelity to the self-management protocols (Simonsen, Freeman, et al., 2017). The results of this study indicated that self-management may not be needed to effectively implement effective tier two support. Second, while this was not the first study to examine the use of performance feedback delivered via email or text message, the functional relationship demonstrated by Grasley-Boy, Gage, et al. (2023) between email and text message performance feedback and teachers use of BSP suggested that using technology may be an efficient and effective way to deliver performance feedback to teachers without requiring time consuming in-person meetings to review data and provide feedback. This was important because, in the current state of teacher shortage, it would likely be that coaches or consultants would have limited time to consistently conduct in-person meetings with teachers (Gilmour, Wehby, & McGuire, 2017).

Multitiered Support--Professional Development
Tier Three

When teachers have continued to demonstrate low rates of classroom management practices despite tier one universal training and tier two targeted support, in the MTS-PD model, tier three support would be provided. Tier three professional development would involve the same components as tier two (i.e., one-on-one coaching, data collection, goal setting, performance feedback, skill reteaching, prompting) but the supports would be provided more frequently, with greater individualization, and with greater intensity (Samudre et al., 2022). In addition to these components, modeling, role playing, in-situ training, and step-by-step action

plans may also be included as tier three supports (Grasley-Boy, Gage, & MacSuga-Gage, 2019; Simonsen, MacSuga-Gage, et al., 2014; State et al., 2019).

Tier three supports have been the highest intensity supports within the MTS-PD model. Following the same tiered intervention logic as MTSS, RtI, and PBIS, only about 5% of teachers would require this highest level of support. Although, with the current state of teacher shortages, under-preparation of new teachers due to lost fieldwork experiences during the pandemic and increased student behavioral needs, it may be possible that a higher percentage of teachers will require tier three support.

LaBrot, Dufrene, et al. (2020) demonstrated the progression from tier two to tier three support when applying the MTS-PD model to preschool and elementary school teachers' use of BSP. In this study, tier two support included a brief 15-minute meeting, access to pre-recorded video models, and weekly digital performance feedback. When a participant moved to tier three support, they were given the option to choose either a digital prompting device that is worn like a watch and vibrated at timed intervals providing a tactile prompt to the participant to use BSP or a digital communication device place in their ear that would allow the researcher to provide verbal prompts every two minutes in real time. The digital prompting device and verbal prompts delivered in real-time provided a higher level of intensity and individualization than the access to a video model which was provided in tier two (LaBrot, Dufrene, et al., 2020).

Myers, Simonsen, and Sugai (2011) demonstrated the progression in support intensity when teachers in their study moved from tier two to tier three support. In tier two, teachers met once weekly with the researcher for consultation and were provided weekly visual performance feedback on paper. When a teacher moved to tier three support, they met with the researcher for consultation daily, were provided explicit scripts for praising students, received emailed

performance feedback daily, with a paper copy provided the following morning in the daily consultation meeting. In this study, tiers two and three contained the same supports, one-on-one consultation, visual performance feedback, and progress monitoring. However, the frequency and intensity of these supports increased from weekly delivery to daily delivery when participants moved from tier two to tier three (Myers, Simonsen, & Sugai, 2011).

Multitiered Support Model and Preservice Teachers

With a growing research base providing empirical evidence of the effectiveness of applying the MTSM framework to the development of in-service teachers' classroom management practices, recent research has begun to explore the use of the MTSM framework to develop the classroom management practices of preservice teachers (A. Kennedy & Lees, 2016; LaBrot, Weaver, et al., 2022; McLeod et al., 2019). The application of tiered approaches in teacher preparation programs has been almost nonexistent, yet the success of MTS-PD in developing classroom management practices of in-service teachers has provided some evidence that a tiered structure could also be successful in developing classroom management practices of preservice teachers in fieldwork placements (A. Kennedy & Lees, 2016). Examining the effectiveness and feasibility of applying MTSM to preservice teachers' fieldwork experience would be a logical and important area for future research.

To date, A. Kennedy and Lees (2016) and LaBrot, Weaver, et al. (2022) were the only two known published research studies in which the MTSM framework was implemented with preservice teachers. Both published studies included participants that were preservice general education teachers in elementary and early childhood education. There have currently been no known studies on MTSM in teacher preparation that focus on the preparation of preservice special education teachers. In fact, there was only one study known to the researcher that

examined MTSM frameworks with in-service teachers that included participants that were special education teachers (Myers, Simonsen, & Sugai, 2011). Special education teachers have faced the highest turnover rates, greatest shortages, and highest numbers of students with challenging behaviors. It would be essential that they leave teacher preparation programs prepared with strategies to manage behavior in their classrooms. Studies on MTS-PD have demonstrated that a tiered-support structure can increase teachers' use of classroom management practices. Implementing a tiered support structure within preservice special education teachers' fieldwork experiences could result in special education teachers who were more prepared to implement classroom management practices effectively, ultimately resulting in better outcomes for students with disabilities (Brock et al., 2017).

A. Kennedy and Lees (2016) implemented the MTSM to explore the use of tiered supports to increase preservice early childhood teachers' developmentally appropriate interactions with infants and toddlers in an 8-week birth to three Head Start classroom fieldwork experience. The preservice teachers' interactions were scored on a formal rating scale of early childhood educators' classroom practices. The tiered supports in this study followed the previously outlined structure of the MTS-PD model and included data collection, observations, modeling, and feedback that increased in frequency and intensity with each tier of support. Also, like the previously discussed studies on MTS-PD, the preservice teachers required differentiated levels of support to meet the proficiency levels set by the researchers. There was only one preservice teacher who met the performance criteria with universal training only. Of the two preservice teachers who did not meet criteria after tier one, one met criterion with tier two support. The third preservice teacher required the most intensive tier three supports to meet criteria (A. Kennedy & Lees, 2016). While this study did not explicitly focus on increasing

classroom management practices, as one of only two published studies in which the MTSM framework was used in teacher preparation, it provided some initial evidence that the MTS-PD framework for training in-service teachers could also successfully be applied to preservice teachers.

Like the A. Kennedy and Lees (2016) study, the LaBrot, Weaver, et al. (2022) study also applied the MTSM framework to preservice preschool teachers during a semester-long practicum placement. This study focused specifically on exploring the impact of utilizing the MTSM framework on preservice teachers' use of BSP. Following the same structure as MTS-PD, tier one training included a short professional development training on BSP. Tier two support included goal setting with a brief prompt delivered in-person daily. In tier three, goal setting with a brief daily prompt continued, and visual performance feedback (i.e., participant's graphed data) was delivered with the daily prompt. In line with the findings of the MTS-PD research, the authors found that tier one universal training alone did not result in increased use of BSP for any of the preservice teachers in this study. With tier two support, two of the three participants met their BSP usage goal. One participant required tier three support to meet goal criteria. This study provided an efficient and clear model for implementing the MTSS framework to support the development of classroom management practices in preservice teachers. LaBrot, Weaver, et al. included three simple, research-based support strategies (i.e., goal setting, prompting, performance feedback) in their tiered support framework. Given the simple and efficient supports and procedures included in this study, it may be feasible for a university instructor to utilize the same structure to support several preservice teachers at once in a fieldwork practicum. Additionally, the preservice teachers in this study reported the multitiered support model as

acceptable, feasible, and understandable with all social validity items receiving ratings ranging from moderately to highly acceptable (LaBrot Weaver, et al., 2022).

In contrast, A. Kennedy and Lees (2016) included more complex and time-consuming multicomponent strategies in each tier of their support structure. For example, tier one included seminar instruction, explicit feedback on formal and informal assignments, peer and instructor feedback on videos of daily teaching, daily verbal feedback, and weekly written progress notes. Given the multiple components of each tier, it may be difficult for a university instructor to support multiple students with the complex supports the authors outlined in their study. The authors did not report formal social validity data. They interviewed the participants to gain information about their perceptions and experiences with the video-based feedback component of the tiered supports. The authors concluded that the preservice teachers found video-based feedback to have a positive influence on their development as a teacher (A. Kennedy & Lees, 2016).

One limitation to both LaBrot, Weaver, et al. (2022) and A. Kennedy and Lees (2016) was the lack of student outcome data. Ultimately, the goal of implementing a MTSM framework in teacher preparation programs was to develop in-service teachers who were prepared to manage challenging behavior in their classrooms so that students could get the most benefit from their learning environment. While both studies demonstrated evidence that the MTSM framework may be an effective model for training preservice teachers, neither LaBrot, Weaver, et al. or A. Kennedy and Lees collected data on the impact of increased implementation of BSP on student behavior. It would be important that future research to explore the relationship between implementation of evidence-based classroom management practices and the impact on

student behavior to contribute to a larger literature-base on the effectiveness of MTSS for preservice teachers.

Conclusion

The MTSS framework was introduced decades ago as a structure for supporting the differentiated academic and behavioral needs of students (Preston et al., 2016). More recently, the MTSS framework has been applied to developing the classroom management skills of in-service teachers through the MTS-PD structure (Myers, Simonsen, & Sugai, 2011; Simonsen, MacSuga-Gage, et al., 2014). Given the success of MTSS with students and in-service teachers, researchers have begun to explore the use of the MTSS framework in preservice teacher development. Though in its infancy, with only two published studies to date, there was some initial evidence to suggest that the MTSS framework could be an effective structure for supporting preservice teachers in field-based practicum settings to develop their classroom management practices. Because special education teachers work with higher numbers of students with challenging behavior than general education teachers, have higher attrition rates, and are in critical shortage, it would be important for researchers to begin exploring the use of the MTSS structure to support preservice special education teachers' development of classroom management practices so that new special education teachers were better prepared and more likely to implement evidence based practices to address challenging behavior and support student success. Because student behavior has been identified as one of the top reasons for teacher attrition, it would be reasonable to conclude that special education teachers who felt prepared to use evidence-based classroom management strategies would be more likely to successfully support their students, feel lower levels of stress and burnout, and be more likely to remain in the field of education.

CHAPTER III

METHODOLOGY

The use of behavior specific praise (BSP) has been widely researched for decades as a proactive evidence-based strategy for decreasing disruptive behavior and increasing engagement in the classroom (Zoder-Martell et al., 2019). Despite a large literature base showing its effectiveness across populations, low levels of BSP continue to be seen in classrooms (Thompson et al., 2012). Previous research has suggested that a more systematic approach to teaching evidence-based strategies during teacher preparation programs may lead to increased use in the field (A. Kennedy & Lees, 2016; LaBrot, Weaver, et al., 2022).

The purpose of this study was to evaluate the impact of tiered behavior support on preservice special education teachers' rates of behavior specific praise. This study extended the findings of LaBrot, Weaver, et al. (2022) to preservice special education teachers acting as the primary teacher in elementary classrooms during a summer practicum experience. This study evaluated the functional relation between tiered behavior support and the increase in preservice teachers' rates of BSP. This study also evaluated the extent to which preservice special education teachers found tiered behavior support feasible and acceptable. This study provided important information about the use of tiered behavior support in special education teacher preparation programs to aid preservice teachers in developing classroom management skills. This study addressed the following research questions:

Q1 Is there a functional relation between tiered behavior support and preservice special education teachers' increased use of behavior specific praise?

Q2 To what extent do preservice special education teachers find tiered behavior support feasible and acceptable?

Participants and Recruitment

Participants were recruited from a graduate special education teacher preparation program at a university in the Northeastern United States. To meet the eligibility requirements of this study, participants must have (a) been enrolled in a state accredited graduate special education teacher preparation program; (b) never held a regular or temporary teaching license in any certification area; (c) never been employed as a classroom teacher in a public or private school in any grade level, including as a long-term substitute teacher; and (d) must have been enrolled in a field-based practicum.

The specific university and graduate program were selected for recruitment due to the researcher's access to the university and knowledge of the graduate special education program. With the collaboration of a university instructor, a pool of potential participants was identified based on their enrollment in a field-based summer practicum. The researcher provided the practicum instructor with a recruitment letter which was emailed to the pool of potential participants through university email. The recruitment email included a link which potential participants used to indicate their interest in becoming a study participant (see Appendix A). Those who indicated interest in participating received an invitation to take part in a video conference at their convenience (see Appendix A). During the follow-up video conference information was provided about the study commitment, informed consent (see Appendix B) was explained, and potential participants completed a demographic survey (see Appendix C) to determine if they met the eligibility criteria for the study. In total six graduate students responded

to the recruitment letter. Two respondents did not meet the inclusionary criteria because they held temporary teaching licenses and were employed as classroom teachers. The other four respondents met the criteria to be included as participants in the study. To meet the requirements of the single case research design that was used in this study, a sample size of four participants was selected (C. H. Kennedy, 2005; Kratochwill et al., 2013). Participants were then provided with an electronic consent form to complete.

Participant commitment was minimal in this study. Participants were required to take part in a brief 7-10-minute recorded training on BSP, a brief 7-10-minute goal setting meeting, a daily 10-minute observation, and daily text messages or emails from the researcher. Participants were also required to complete a brief demographic survey, and a social validity rating scale. The Modified User Rating Profile – Intervention which was used as the social validity rating scale is attached in Appendix D.

During the practicum, participants were supported through daily informal observations and feedback from their professor and district classroom teacher. Additionally, they took part in bi-weekly formal observations in which their performance was evaluated by the professor using a university selected performance rubric. Participation in this study did not impact the practicum requirements (e.g., assignments, assessments, meetings, observations) set forth by the university professor, and had no bearing on the participants' grade or performance evaluation conducted by the university professor. Because daily observations by the university professor and district classroom teacher were already built into the practicum experience, researcher observations did not require any further coordination or effort on the part of the participant. The researcher and trained observers were present daily for the duration of the practicum and moved between classrooms as needed for observations.

The 3 participants selected for this study were between the age of 27 and 43. Three of the participants were employed full time in schools in non-teaching positions. One participant was not employed in a school. The length of time participants had worked in school settings ranged from six months to 12 years.

Matthew identified himself as a 29-year-old white male. At the time of the study, he was employed full time in a school as a paraprofessional. He had been employed in school settings for approximately eight years as a paraprofessional. Sarah identified herself as a 43-year-old white female. At the time of the study, she was employed full time in a school as a Registered Behavior Technician (RBT). She has been employed in school settings for 12 years as a paraprofessional and RBT. Emma identified herself as a 26-year-old white female. At the time of the study, she was not employed in a school setting. She was employed part-time in the food and hospitality industry for approximately one year. Prior to that she was employed full-time in a school as a paraprofessional for three years. A fourth participant, Kim, was originally included in this study, but withdrew from the study during the baseline phase. Kim identified herself as a 27-year-old black female. At the time of the study, she was employed full time in a school setting as an academic assistant. She was employed in this position for approximately six months. It is the only position she has held in a school setting.

Research Setting

This study took place during a 4-week field-based summer practicum at an elementary school in a moderately sized suburban school district in the Northeastern United States. During the course of the practicum participants assumed all classroom teaching responsibilities. Practicum students were divided into a morning session and afternoon session. Students in the morning session reported to their practicum placements from 8:30 a.m. to 10:30 a.m. Students in

the afternoon session reported to their practicum placements from 10:30 a.m. to 12:30 p.m. In collaboration with the practicum instructor, two elementary classrooms were identified for this study. Two participants were assigned to each classroom. Although participants were working in the same classroom their placement sessions did not overlap. Because they were responsible for teaching different academic subjects the participants did not engage in any joint planning or implementation of lessons and activities. Matthew was assigned to classroom A and Sarah and Emma were assigned to classroom B. Matthew and Sarah were assigned to the morning practicum session and Emma was assigned to the afternoon session. The students in each classroom were enrolled in the district's extended school year program for elementary students with disabilities who receive special education services.

Classroom A was comprised of nine students entering grades four through six. Four students were entering fourth grade, four students were entering fifth grade, and one student was entering sixth grade. The students in classroom A were receiving special education services under the disability designations of Specific Learning Disability (seven students) and Speech or Language Impairment (two students). There was one student in this classroom who had a behavior intervention plan. Classroom B was comprised of 11 students entering grades one through three. Eight students were entering grade one, two students were entering grade two, and one student was entering grade three. The students in classroom B were receiving special education services under the disability designations of Specific Learning Disability (four students), Speech or Language Impairment (three students), Other Health Impairment/Attention Deficit Hyperactivity Disorder (three students), and Autism Spectrum Disorder (one student). Three students in this classroom had behavior intervention plans.

Experimental Design

Single case research design (SCRD) was used for this study. Single case designs are experimental research designs commonly used in the fields of education, applied behavior analysis, and psychology to determine functional relationships between environmental variables and human behavior (Cooper et al., 2020). The primary characteristic of SCRD is that each participant acts as their own control which means that each participants' behavior is measured before and after the implementation of the independent variable to determine the effect of the treatment (Ledford, Barton, et al., 2019). This is sometimes referred to as within-case design since effect is determined by changes within each individual participant, in contrast to other experimental designs that compare changes in large, randomized group data (Horner et al., 2012). Other key characteristics of SCRD include, (a) systematic manipulation of the independent variable, (b) repeated measures of behavior to demonstrate replication of effect, and (c) on-going visual analysis of data (Kratochwill et al., 2013).

The specific type of SCRD used for this study was a concurrent multiple baseline across participants design. In a multiple baseline design, baseline data are collected concurrently and continuously on all participants, with the independent variable being applied to one participant at a time in a staggered manner. Once effect is demonstrated with the first participant, the independent variable is applied to the second participant with this sequence repeating for all remaining participants. Baseline data collection continues for each participant in which the independent variable has not yet been implemented (Cooper et al., 2020).

One benefit of a multiple baseline design is that the removal of the independent variable is not required to demonstrate experimental control (C. H. Kennedy, 2005). In a multiple baseline across participants design, experimental control is achieved when three replications of

effect are demonstrated across participant tiers (Horner et al., 2012). Because the independent variable in this study included teaching participants about BSP, and then supporting their use of it, it was not possible for the researcher to remove the participants' acquisition of skills. For this reason, a multiple baseline design was most appropriate to the goals of this study over other commonly used single-case designs.

Dependent Measures

The primary dependent variable in this study was the participants' use of BSP. The operational definition of the dependent variable can be found in Table 2.

Table 2

Operational Definition of Dependent Variable

Variable	Definition	Examples	Non-Examples
BSP	Verbal praise given by a teacher, contingent on a demonstration of a desired student behavior, which explicitly states the behavior in which the student is being praised for.	"Joseph, thank you for quietly waiting for my next direction" "Tammy, you did a great job using a quiet voice during group work."	"Good work" "Nice job" "Great" "You are correct"

Behavior Specific Praise

Behavior Specific Praise (BSP) was selected as the primary dependent variable for this study because it is a simple and effective evidence-based behavior management strategy that preservice teachers can implement with minimal resources and training (Gage, MacSuga-Gage, & Crews, 2017). Behavior Specific Praise was measured using frequency recording. Frequency

recording is a type of event-based recording in which an observer records every instance of the target behavior (Cooper et al., 2020). Using a frequency data recording sheet split into ten second intervals, observers marked a tally or check for every occurrence of the behavior during the session within each ten second interval. The duration of each observation session was 10 minutes. The frequency of BSP statements was converted to rate by dividing the total number of BSP statements by the total number of minutes in the observation period (i.e., 10). The rate of BSP statements was reported as the total number of statements per minute (i.e., four statements per minute).

Independent Measures

Tiered Behavior Support

Tiered behavior support is a three-tiered model in which increased levels of support are systematically provided dependent on performance. The tiered behavior support that was implemented in this study, follows the same multitiered systems of support (MTSS) framework as other tiered support models described earlier (e.g., RtI, SW-PBIS). Within the MTSS framework, support is least intensive at the lower tiers and most intensive at the highest tiers.

Tier One

The first tier represents the least intensive and least individualized level of support provided. In line with the MTSS framework, tier one support in this study consisted of a low intensity group training or professional development that all practicum students completed. Tier one training took place during the practicum students' orientation and consisted of a 10-minute recorded training on BSP. The training included the following: (a) definition and description of BSP, (b) a rationale for the use of BSP as a classroom management strategy with empirical evidence from three research studies demonstrating effectiveness, (c) modeling of three to five

examples of BSP, (d) preservice teachers developing three of their own examples of BSP and role-playing delivery of BSP, (e) feedback provided by researcher on preservice teachers' examples and delivery of BSP, (f) opportunities for preservice teacher to ask and have their questions answered by the researcher. In this study, the tier one phase served as baseline because the tier one training was provided universally to all participants in this study.

Tier Two

The second tier of support provided a slightly higher level of support and was more individualized to each participant. Tier two support consisted of goal setting and brief prompts. In this study, participants who received tier two support met with the researcher for a goal setting meeting in which the researcher briefly reviewed BSP and participants chose a BSP rate goal for themselves. Previous research has established that one BSP statement every two minutes (i.e., 0.5 BSP per minute) was an effective delivery rate for behavior change (O'Handley, Olmi, et al., 2022). Based on this information, participants set a goal for their personal BSP delivery rate of at least 0.5 BSP statements per minute. To support participants in meeting their goal, the second support provided in tier two was brief prompts. Participants received a brief daily prompt reminding them of their goal (e.g., "Good morning, remember your goal is to provide approximately eight BSP statements during the morning meeting"). Prompts were provided daily through either text message or email based on participant preference. They were delivered at a preferred time selected by the participant. Although the researcher was on-site the option of verbal prompts was not offered. It was important that the tiered behavior support model was implemented in ways that were efficient and practical for the university professor. It was unlikely that when supervising 10-15 practicum students, a university professor would realistically be able to provide verbal prompts to each student at the start of the day. Delivery of

daily prompts via text message or email allowed for even greater ease and efficiency if the professor opted to utilize a communication program or application that automated electronic messages. Additionally, utilizing text message or email prompts allowed a higher level of individualization to the delivery of tier two supports, as each participant chose the platform and time of day that was optimal for their individual needs. One participant may prefer a text message prompt ten minutes prior to the start of morning meeting, while another may prefer an email at five in the morning as they prepare for work.

Tier Three

The third tier of behavior support provided the highest level of support and individualization. Tier three support consisted of continuation of the brief daily prompt with the addition of daily visual performance feedback in the form of graphed data on the participants rate of BSP. Daily visual performance feedback was provided through the same communication method the participant previously chose for their daily prompt. If email was used, visual performance feedback would be included in the email. If a text message was used, the text message would either include a link to a document with the visual performance feedback, or a photo of the performance feedback would be attached to the text message prompt. The visual performance feedback included the daily prompt previously described in tier two, a line graph showing the participants rate of delivery of BSP relative to the goal selected by the participant, a statement indicating whether or not they met the goal, and a statement of BSP if they met the goal or a statement of encouragement if they did not.

Procedure

This study consisted of three phases: baseline, intervention, and maintenance. The baseline phase also acted as the tier one phase of tiered behavior support. During the baseline

phase data were collected on the teachers' rate of BSP during tier one implementation of tiered behavior support. The intervention phase was comprised of the tier two and tier three phases of tiered behavior support. During this phase ongoing data collection and visual analysis was conducted to determine if participants moved to the next support tier or to the maintenance phase. During the maintenance phase, the intervention was no longer in place and data were collected on each participant to determine if rates of BSP maintained at intervention level following the withdrawal of tiered behavior support.

Baseline/Tier One

As part of their graduate teacher preparation program all participants took one course on classroom behavior management which covered a wide variety of strategies, assessments, and behavior management content, including information on BSP. Additionally, at the start of the practicum students took part in a brief orientation which included information regarding classroom management, lesson planning, classroom structure, and a variety of other topics. During orientation, the researcher provided a brief 10-minute recorded training for all students in the practicum on BSP. The training materials consisted of 10 PowerPoint slides and an audio presentation recorded through the Zoom video conferencing platform. The recording was uploaded into EdPuzzle, a web-based educational tool that allowed the researcher to edit the recorded training video to include interactive questions and responses. The video editing features in Edpuzzle also allowed the researcher to prohibit viewers from skipping portions of the video. The participants were provided a link to access and complete the recorded training through the Edpuzzle platform.

The training included the following information on BSP: (a) definition and description of BSP, (b) a rationale for the use of BSP as a classroom management strategy with empirical

evidence from three research studies demonstrating effectiveness, (c) researcher modeled three to five examples of BSP, (d) preservice teachers provided three of their own examples of BSP, and (e) feedback was provided by researcher on preservice teachers' examples. During the training, preservice teachers were able to ask questions and have all questions answered by the researcher. Following the training, the preservice teachers were given access to the training materials (i.e., training presentation and researcher feedback) and could review them at any time during the study.

Because all practicum students were exposed to BSP through recent coursework and received training on it during orientation, this was a universal condition across all participants which served as baseline. This is in line with LaBrot, Weaver, et al. (2022) in which multitiered supports were implemented with preservice teachers. Given the structure of the practicum setting, it was required that preservice teachers take part in coursework and orientation prior to their work in the classrooms, therefore, it was not possible to collect baseline data before the implementation of tier one universal support. During the baseline/tier one phase, participants did not receive any other support or prompts related to their use of BSP. They were instructed to teach their class as they normally would.

Baseline/tier one observations took place in person by two trained observers. Observation periods were 10 minutes long and took place during the classroom morning meeting at the start of the day, and the classroom wrap-up meeting at the end of the day. Observers utilized the frequency data recording materials and methods previously described to collect data on the preservice teachers' use of BSP.

The baseline phase of this study included a minimum of three consecutive and concurrent baseline data points for each participant. After three stable data points, intervention was applied

for the first participant. Stability was accessed through evaluation of level, trend, and variability. A stable baseline was demonstrated by minimal variability in the level of the data and no clear increasing or decreasing trend (Richards, 2019). When intervention was implemented for Matthew, baseline continued for all other participants until demonstration of intervention effect was noted for Matthew. The criteria for demonstration of intervention effect for this study was a change in level of BSP delivery rate for at least one data point following baseline. Using this criteria, implementation of tiered behavior support was staggered by one session for each participant. Tiered behavior support was introduced for Matthew in session four, Sarah in session five, and Emma in session six. This is similar to LaBrot, Weaver, et al. (2022) in which implementation of the intervention was staggered by one session between participant one and two, and two sessions between participant two and three.

Intervention

Tier Two (Goal Setting and Brief Prompts)

Following baseline/tier one implementation, participants participated in a brief one-to-one goal setting meeting with the researcher. The one-to-one goal setting meeting took place in the afternoon following practicum on the final day of baseline/tier one data collection. During this meeting the researcher: (a) reviewed the definition of BSP and provided two examples of BSP statements; (b) asked participants to provide two examples of BSP statements and provided feedback on them; (c) explained that previous research has shown that providing at least one BSP statement per 2 minutes can result in decreased disruptive behavior in the classroom, (d) asked participants to choose a BSP rate goal at or above 0.5 BSP statements per minute; (e) asked participants to identify a preferred contact method (e.g., email, text message) and a preferred time of day (before the identified observation period) to receive an prompt reminding

participants of their BSP goal (e.g., “Good morning, remember your goal is to provide approximately five BSP statements during the morning meeting”).

All participants chose to receive their brief daily prompts via text message. During the goal setting meeting a sample text message was sent to the participant to ensure delivery. Participants were asked to turn on the “read receipt” feature which displayed the word “read” on the sender’s text message when the participant opened the text message. Although this did not guarantee that the prompts were read, it did provide evidence that the prompts were received and opened. Participants were not required to send a response back to the text message, though it was noted by the researcher when they did. Matthew identified 9:00 a.m. as his preferred time to receive the text message prompt. Sarah preferred to receive her prompt at 5:00 pm. Emma selected 10:00 a.m. as her preferred time to receive her prompt.

Participants began receiving daily prompts the day after the goal setting meeting. In this phase, observations were conducted in person for 10 minutes during the classroom morning meeting and classroom wrap-up meeting. Data on preservice teachers’ use of BSP was recorded by two trained observers using the frequency recording methods and materials previously described.

During tier two, data trends were analyzed daily for each participant. Transition to maintenance occurred if at least three data points were recorded with a BSP rate at or above the participant’s selected goal. Transition to tier three occurred if at least three data points were collected and any two data points fell below the selected goal.

Tier three (Brief Prompts with Visual Performance Feedback)

Participants whose data indicated a transition to tier three continued to receive the daily prompts described in tier two. In addition to the prompt, the daily text message or email also

included visual performance feedback in the form of graphed data. Each daily email or text message included, (a) daily prompt reminder of the goal as described in tier two; (b) a line graph showing the participants data points in tier three with a goal line showing the participants selected BSP rate goal; (c) a statement indicating whether the participant did or did not meet their goal; (d) if the participant meet their goal, specific praise was included with encouragement to continue providing BSP at the identified goal rate (e.g., "You met your BSP praise goal – well done! Keep working hard to meet your goal each day!"). For participants whose preferred contact method for receiving prompts was a text message, performance feedback was included in the text message as a picture.

Data collection on BSP statements remained the same in this phase as all the others. The tier three phase continued until at least three data points were collected in which the rate of BSP statements was at or above the chosen goal rate. Once three data points were collected at or above goal, the participant transitioned to the maintenance phase.

Maintenance

When participants met the requirements for a transition to maintenance, maintenance data collection began in the session following the observation in which criteria was met. During maintenance, observation periods and data collection methods remained the same as all other phases. Data were recorded on teachers' BSP statements. Participants did not receive email prompts or performance feedback during maintenance.

Data Collection and Recording Procedures

Throughout this study, data were continuously collected and analyzed on the dependent variable. Delivery of BSP statements was measured through frequency recording by two trained observers in daily ten-minute observation sessions. A frequency tally chart split into ten second

intervals was utilized for data collection. Observers marked a tally on their data sheet each time the participant made a BSP statement within each ten second interval. The frequency of BSP statements was converted to rate by dividing the number of BSP statements per observation period by the number of minutes in the session (i.e., 10 minutes). Each participant's daily rate of BSP statements was graphed on a line graph through all phases of the study.

Graphed data were visually analyzed daily to determine changes in level, trend, and variability. Visual analysis allowed the researcher to make decisions about phase changes throughout the study in accordance with the criteria previously outlined in the description of the baseline, intervention, and maintenance phases. A sample frequency data recording sheet is included in Appendix E.

Treatment Fidelity

Treatment fidelity was addressed throughout all phases of this study. For each intervention phase of this study, treatment fidelity was evaluated across 100% of sessions for each participant using checklists. Treatment fidelity checklists for the baseline/tier one, tier two, and tier three phases can be found in Appendix F. During the baseline/tier one phase, each participant completed a brief recorded training on behavior specific praise. Two trained data collectors evaluated fidelity in this phase utilizing the checklist. Treatment fidelity was 100% across all participants.

The tier two phase was comprised of one goal setting meeting with each participant and daily brief prompts. Trained data collectors evaluated treatment integrity during both the goal setting meetings and the delivery of the daily brief prompts. Treatment fidelity for the goal setting meetings was 100% for each participant. Additionally, treatment fidelity data were taken

on 100% of the daily brief prompts delivered to each participant. For each participant treatment fidelity of daily brief prompts was 100%.

During the tier three phase of the study participants received daily brief prompts with performance feedback. As in the other phases, treatment fidelity was evaluated for 100% of the daily brief prompts with performance feedback. Treatment fidelity was 100% across all participants.

One fidelity point for the brief daily prompts delivered via text message in the tier two and tier three phases, was that participants enabled read receipts which were sent back to the researcher after they opened the text message. This fidelity point was important to ensuring the delivery of the prompt. The read receipt was received following 100% of the delivered prompts . Though not required, Matthew and Sarah provided additional written responses during the tier two and three phases in response to the delivered brief prompts. During the tier two phase, Matthew provided an additional written response (i.e., “got it,” “thank you,” “awesome”) following 50% of the delivered prompts. Sarah provided an additional written response following 66% of delivered prompts. In phase three, Matthew provided an additional written response following 33% of delivered prompts, and Sarah provided an additional written response following 66% of delivered prompts. Emma did not provide additional written responses to delivered prompts in any phase of the study.

Interobserver Agreement

Interobserver agreement (IOA) data were collected for approximately 29% of all baseline, intervention, and maintenance observation sessions in this study. Interobserver agreement data were collected independently but simultaneously by the researcher and one trained observer. Trial by trial IOA was calculated to compare observer data. To calculate trial

by trial IOA, the researcher determined the number of intervals with agreement and divided that number by the total number of intervals and then multiplied by 100. Interobserver agreement data were also collected on treatment fidelity across all phases of the study. A minimum of 85% agreement was recorded for all participants and treatment observations.

In addition to the researcher, two graduate students studying Applied Behavior Analysis were recruited as observers for this study. Observers were trained by the researcher to ensure understanding of the dependent variable and data collection procedures. Training included review of the written description of the operational definition of the dependent variable including examples and non-examples of BSP. Observers identified their own examples and non-examples. The data collection procedures and materials were reviewed and provided to observers in writing. Following the review, the researcher demonstrated the data collection procedures during a ten-minute classroom observation. The researcher then observed the trainees using the data collection procedures during a second 10-minute classroom observation and provided feedback as needed. Four training trials were then conducted, two in each elementary classroom, during which the researcher and two observers simultaneously collected data with the goal of at least 90% agreement calculated using the trial-by-trial IOA formula described previously. Agreement for the first training trial was 98%, followed by 100% agreement in the three subsequent trails.

A total of 45 participant observations were conducted across all phases of the study. Interobserver agreement data were collected in 13 of 45 participant observation sessions, or approximately 29% of observation sessions. Interobserver agreement was collected during four sessions for participant 1, four sessions for participant 2, and five sessions for participant 3, or 26%, 26%, and 33% of sessions, respectively. Using the trial-by-trial IOA formula provided above, agreement was calculated as 100% for participant 1, 97% for participant 2, and 96% for

participant 3. A mean IOA of 97% demonstrates high reliability in the data collected throughout this study.

Interobserver agreement data were collected on treatment fidelity during tier one universal training, tier two goal setting meetings and brief prompts, and tier three brief prompts with performance feedback. During tier one training, IOA was collected on one out of three participant training videos, or 33% of tier one training sessions. During the tier two phase, IOA data recorded on one out of three, or 33% of goal setting meetings, and 12 out of 12, or 100% of delivered brief prompts. During the tier three phase, IOA data were collected on nine out of nine, or 100% of brief prompts delivered with performance feedback. Agreement between observers was 100% across all intervention phases.

Social Validity

In accordance with LaBrot, Weaver, et al. (2022), a modified version of the Usage Rating Profile-Intervention Revised (URP-IR) was used to assess the acceptability of tiered behavior support as a strategy for supporting preservice teachers' use of BSP. The URP-IR (Chafouleas et al., 2011) contained 29 items rated on a 6-point rating scale, ranging from 1 (*strongly agree*) to 6 (*strongly disagree*). The URP-IR was modified to include specific language relevant to tiered behavior training (e.g., goal setting, performance feedback, BSP). There were five items (i.e., item 10, 14, 16, 20, 26) on the URP-IR that evaluated system climate with respect to the intervention (e.g., administrator support, school mission, work environment), and three items (i.e., 5, 15, 28) that evaluated home-school collaboration. These items were removed, as they were not applicable to the participants. Since participants were preservice teachers in a practicum setting and not employed in the setting, they would not have knowledge of the level of support provided by administrators, the school's mission, or the typical work environment. Additionally,

because tiered behavior support was implemented on the preservice teachers' behavior and not the students', home-school collaboration was not a relevant factor in evaluating the social validity of the intervention.

Ten additional items were added to the URP-IR that specifically assessed the social validity of goal setting with brief prompts (i.e., tier two behavior supports) and brief prompts with performance feedback (i.e., brief prompts with performance feedback; LaBrot, Weaver, et al., 2022). One open-ended question was added in which participants could provide any additional feedback they had on tiered behavior support.

The modified URP-IR was scored by calculating the overall mean scores for all items, as well as overall mean scores for each individual factor outlined in the URP-IR Scoring Guide (Briesch et al., 2013). The individual factors evaluated were, (a) acceptability; (b) understanding; (c) feasibility; and (d) system support. In addition, descriptive statistics were used to analyze the results of the modified URP-IR.

Conclusion

The goal of this study was to extend the current research conducted by LaBrot, Weaver, et al. (2022) on utilizing multitiered support structures with preservice teachers to increase their use of BSP. Utilizing a concurrent multiple baseline design as seen in LaBrot, Weaver, et al. (2022), tiered behavior support was implemented with preservice special education teachers to explore the impact on preservice special education teachers' use of BSP. This study took place during a summer practicum experience with preservice special education teachers in elementary school classrooms in an extended school year program for students with disabilities.

This study is unique in that there is no known published research that explores the implementation of tiered behavior support with preservice special education teachers focused on the development of classroom management practices.

CHAPTER IV

RESULTS

Using the methodology outlined in the previous chapter, this study utilized a multiple baseline across participants research design to determine if a functional relation exists between the use of tiered behavior support and preservice special education teachers' rate of behavior specific praise. This study also evaluated the social validity of tiered behavior support. The results presented in this chapter will answer the following research questions:

Q1 Is there a functional relation between tiered behavior support and preservice special education teachers' increased use of behavior specific praise?

Q2 To what extent do preservice special education teachers find tiered behavior support feasible and acceptable?

Tiered Behavior Support

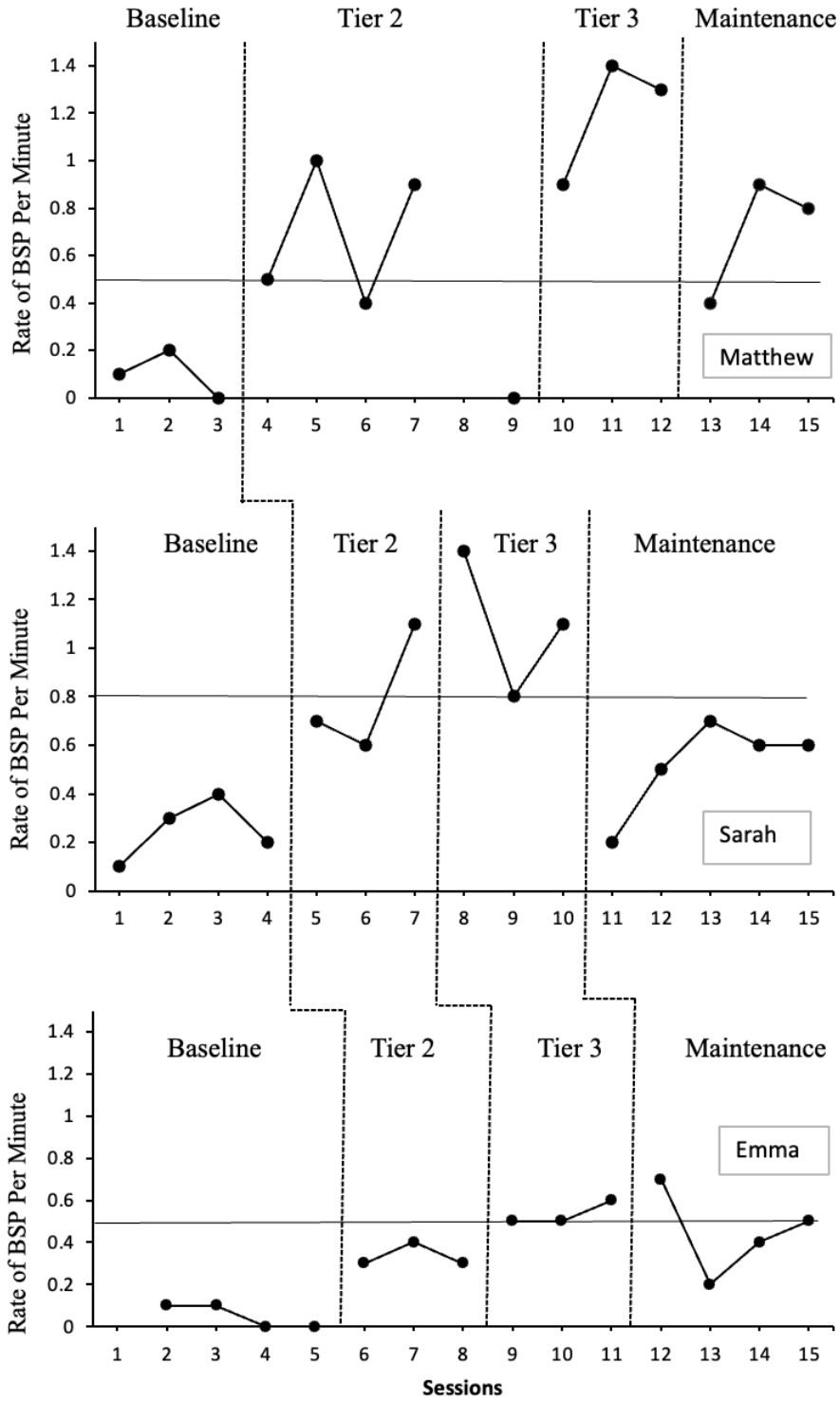
In this study, preservice special education teachers' use of BSP was evaluated using a multiple baseline across participants research design. Visual analysis was used to determine whether a functional relation was demonstrated between tiered behavior support and the use of BSP for each participant. Visual analysis was conducted by evaluating the level, trend, and variability of the data. The consistency of the data, overlap in data points, and immediacy of effect were also evaluated. To systematically assess the presence of a functional relation, the researcher utilized a 22-question responsive web-based protocol developed by Wolfe et al. (2019) which is specifically designed to evaluate experimental control in studies using multiple baseline designs. The interactive web-based protocol produces an experimental control score based on the researcher responses to the protocol items. The experimental control scores

produced using this systematic evaluation tool range from 0 to 5, with 0 indicating no functional relation and 5 indicating a strong functional relation (Wolfe et al., 2019). The validity and reliability of this protocol was assessed by Wolfe et al. (2019) using interrater agreement with scores falling in the good to excellent range. This tool was selected by the researcher due to its ease of use, evidence of good reliability and validity, and high social validity ratings. Based on Wolfe et al.'s (2019) protocol, this study received an experimental control score of 4.5 demonstrating a functional relation between tiered behavior support and the increased delivery of BSP statements.

Figure 3 is a multiple baseline across participants graph that displays the results for all three participants in the study. Data for Kim is not displayed due to her withdrawal from the study during baseline data collection. The graph shows the rate of BSP statements delivered per minute throughout all phases of the study for each participant and includes a horizontal line to show the BSP delivery rate that each participant selected as their goal. The results for each participant are discussed in more detail in the following sections.

Figure 3

Rate Per Minute of Preservice Special Education Teachers' Delivery of Behavior Specific Praise



Matthew

Baseline Phase

Three data collection sessions occurred for Matthew during the baseline phase. During these sessions, Matthew delivered a mean rate of 0.1 BSP statements per minute. The rate of delivery ranged from 0 to 0.2 BSP statements per minute. The level and variability of the baseline data for Matthew was low and stable.

Tier Two – Goal Setting and Brief Prompts

Prior to the first data collection observation in the tier two phase, Matthew met with the researcher and selected a goal for the delivery of BSP statements. Matthew selected a goal rate of 0.5 BSP statements per minute. His mean rate of BSP delivery increased to 0.6 BSP statements per minute during the tier two behavior support phase. When compared to the baseline mean delivery rate of 0.1, an increase of 0.5 BSP statements per minute were recorded in the tier two phase. The rate of delivery during tier two ranged from zero to one BSP statement per minute, demonstrating high variability. To transition from the tier two phase to the maintenance phase, it was required that a minimum of three data points were collected falling at or above the goal rate. Although this condition was met in session seven, due to the high variability in the data, the tier two phase was extended to five data points for Matthew. During the fifth observation in this phase, Matthew's BSP delivery rate decreased to zero further increasing the variability. Following the fifth observation, Matthew transitioned to tier three behavior support.

During session eight, no usable data were recorded for Matthew due to a deviation from the data collection protocol. Rather than utilizing the 10-second interval recording system, the observer anecdotally recorded a list of praise statements delivered by Matthew. Although the anecdotal data contained some BSP statements, it was not possible to match the statements with

corresponding intervals, therefore no useable data were obtained. Following the breach in session eight the researcher retrained the observer on the data collection protocol. No other deviations from the data collection protocol occurred during the remainder of the study.

Tier Three--Brief Prompts with Visual Performance Feedback

Three data points were collected in the tier three behavior support phase for Matthew. During these sessions, Matthew delivered a mean rate of 1.2 BSP statements per minute with a range of 0.9 to 1.3 BSP statements delivered per minute. Mean rate of delivery of BSP doubled from tier two to tier three, with a mean increase of 0.6 BSP statements per minute. The variability of BSP delivery rate decreased in the tier three behavior support phase. Matthew was transitioned to the maintenance phase following the third observation because all three data points fell at or above the selected goal.

Maintenance

Three data points were collected in the maintenance phase for Matthew. The mean delivery rate of BSP during the maintenance phase was 0.7 BSP statements per minute with a range of 0.4 to 0.9 BSP statements delivered per minute. This was a decrease in level of 0.5 BSP statements per minute from the tier three phase. Variability of delivery also increased during the maintenance phase for Matthew.

Summary

The data collected on the delivery rate of BSP for Matthew demonstrated a functional relation between tiered behavior support and an increased delivery rate of BSP. During baseline, Matthew demonstrated low and stable rates of responding. With the addition of tier two behavior support, Matthew's rate of delivery increased in level, but showed high variability. When a more intensive level of behavior support was applied in the tier three phase, delivery increased in level

from tier two and also increased in stability. When tiered behavior support was removed in the maintenance phase, Matthew's delivery rate decreased back to the level and variability recorded during the tier two phase. These results demonstrate that tier three behavior support had the greatest impact on increasing the level and stability of Matthew's BSP delivery rate when compared to baseline. When data from the tier two and tier three phases are combined, Matthew's overall mean delivery rate was 0.8 BSP statements per minute throughout the intervention. In comparison to Matthew's baseline delivery of 0.1 BSP statements per minute, there was an increase in delivery rate of 0.7 BSP statements per minute during intervention. Immediacy of effect was demonstrated by the immediate change in level of BSP delivery rate between the baseline observations and the first three observations in the intervention phase (Ledford, Lane, & Severini, 2017). It should be noted that although there was an increase in the level of BSP delivery rate, when combined overall variability during tier two and three was moderate to high. Additionally, the data showed that there was one overlapping data point between the intervention and baseline phases. Despite this overlap, the percentage of nonoverlapping data points (PND) between baseline and intervention for Matthew was 88% meeting the criteria to be considered an effective intervention (Scruggs & Mastropieri, 1998, 2013).

Sarah

Baseline Phase

Four data collection sessions occurred for Sarah during the baseline phase. During these sessions, Sarah delivered a mean rate of 0.25 BSP statements per minute. The rate of delivery ranged from 0.1 to 0.4 BSP statements per minute. The level of the baseline data for Sarah was low and showed limited variability.

Tier Two--Goal Setting and Brief Prompts

Prior to the first data collection observation in the tier two phase, Sarah met with the researcher and selected a goal for the delivery of BSP statements. Sarah selected a rate of 0.8 BSP statements per minute. Her mean rate of BSP delivery increased to 0.8 BSP statements per minute when receiving tier two behavior support. When compared to baseline delivery rates, during the tier two phase, there was an increase in mean delivery rate of 0.55 BSP statements per minute. The rate of delivery during tier two ranged from 0.6 to 1.1 BSP statements per minute, demonstrating moderate variability. Sarah was transitioned to the tier three behavior support phase following the third observation in the tier two phase because two of the three data points fell below the goal delivery rate of 0.8 BSP statements per minute.

Tier Three--Brief Prompts with Visual Performance Feedback

Three data points were collected in the tier three behavior support phase for Sarah. During these sessions, Sarah delivered a mean rate of 1.1 BSP statements per minute with a range of 0.8 to 1.1 BSP statements delivered per minute. Mean rate of delivery of BSP increased by 0.3 statements per minute from the tier two to tier three phase. The variability of BSP delivery remained moderate. Sarah was transitioned to maintenance after three observations because all three data points fell at or above the selected goal delivery rate of 0.8 BSP statements per minute.

Maintenance

Five data points were collected in the maintenance phase for Sarah. The mean delivery rate of BSP during the maintenance phase was 0.5 BSP statements per minute with a range of 0.2 to 0.7 BSP statements delivered per minute. This was a decrease in mean delivery rate of 0.6 BSP statements per minute when compared to delivery rate in the tier three phase. Variability of delivery remained moderate.

Summary

The data collected on the delivery rate of BSP for Sarah demonstrated a functional relation between tiered behavior support and an increased delivery rate of BSP. During baseline, Sarah demonstrated low and mostly stable rates of responding. With the addition of tier two behavior support, Sarah's rate of delivery increased in level, but remained moderately variable. When a more intensive level of behavior support was applied in the tier three phase, delivery increased slightly in level from tier two and did not change in variability. When tiered behavior support was removed in the maintenance phase, Sarah's delivery rate decreased to a low to moderate level with a value range falling above baseline rates, but below tier two rates. Similar to Matthew, these results demonstrated that tier three behavior support had the greatest impact on increasing the level of Sarah's BSP delivery rate when compared to baseline. When data from the tier two and tier three phases are combined, Sarah's overall mean delivery rate was 0.95 BSP statements per minute throughout the intervention. In comparison to Sarah's baseline delivery of 0.25 BSP statements per minute, there was a mean increase in delivery rate of 0.7 BSP statements per minute during intervention. Immediacy of effect was demonstrated by the immediate change in level of BSP delivery rate between the baseline observations and the first three observations in the intervention phase (Ledford, Lane, & Severini, 2017). Additionally, the data showed that there were no overlapping data points between the intervention and baseline phases resulting in a PND of 100%, meeting the criteria to be considered a very effective intervention (Scruggs & Mastropieri, 1998, 2013).

Emma

Baseline Phase

Four data collection sessions occurred for Emma during the baseline phase. Although Sarah and Emma participated in the same number of observations in baseline, the introduction of the intervention remained staggered per the requirements of multiple baseline design. Intervention was introduced to Sarah in session four, and session five for Emma. Emma was not available for observation during session one due to illness and subsequent absence from the practicum. During the baseline sessions, Emma delivered a mean rate of 0.05 BSP statements per minute. The rate of delivery ranged from 0 to 0.1 BSP statements per minute. The level and variability of the baseline data for Emma was low and stable.

Tier Two--Goal Setting and Brief Prompts

Prior to the first data collection observation in the tier two phase, Emma met with the researcher and selected a goal for the delivery of BSP statements. Emma selected a rate of 0.5 BSP statements per minute. Her mean rate of BSP delivery increased from 0.05 in baseline to 0.3 in tier two, which is a mean increase of 0.25 BSP statements per minute. The rate of delivery during tier two ranged from 0.3 to 0.4 BSP statements per minute. The delivery rate remained low and stable. Emma was transitioned to the tier three behavior support phase following the third observation in the tier two phase because all three data points fell below the goal delivery rate of 0.5 BSP statements per minute.

Tier Three--Brief Prompts with Visual Performance Feedback

Three data points were collected in the tier three behavior support phase for Emma. During these sessions, Emma's mean delivery rate increased from 0.3 BSP statements per minute in tier two, to 0.5 BSP statements per minute in tier three demonstrating a mean increase of 0.2

BSP statements per minute. In the tier three phase, delivery rate ranged from 0.5 to 0.6 BSP statements per minute. The variability of BSP delivery remained low. Emma was transitioned to maintenance after three observations because all three data points fell at or above the selected goal delivery rate of 0.5 BSP statements per minute.

Maintenance

Four data points were collected in the maintenance phase for Emma. The mean delivery rate of BSP during the maintenance phase was 0.45 BSP statements per minute with a range of 0.2 to 0.7 BSP statements delivered per minute. Emma's mean rate of delivery decreased slightly from the tier three phase with a mean difference of 0.05 BSP statements per minute. In contrast to the stable data recorded in other phases, Emma's delivery of BSP was highly variable during the maintenance phase.

Summary

The data collected on the delivery rate of BSP for Emma demonstrated a functional relation between tiered behavior support and an increased delivery rate of BSP. During baseline, Emma demonstrated low and stable rates of responding. With the addition of tier two behavior support, Emma's rate of delivery increased slightly and remained stable. When a more intensive level of behavior support was applied in the tier three phase, delivery increased in level from tier two and continued to remain stable. When tiered behavior support was removed in the maintenance phase, Emma's delivery rate decreased just slightly from tier three and became highly variable. Similar to Matthew and Sarah, these results demonstrate that tier three behavior support had the greatest impact on increasing the level of Emma's BSP delivery rate when compared to baseline. When data from the tier two and tier three phases are combined, Emma's overall mean delivery rate was 0.43 BSP statements per minute throughout the intervention. In

comparison to Emma's baseline delivery of 0.05 BSP statements per minute, there was an increase in mean delivery rate of 0.38 BSP statements per minute. Immediacy of effect from baseline to intervention had a longer latency for Emma than for the other participants. A change in level from baseline did not occur until session nine when tier three behavior support was implemented. Additionally, the data showed that there were no overlapping data points between the intervention and baseline phases resulting in a PND of 100%, meeting the criteria to be considered a very effective intervention (Scruggs & Mastropieri, 1998, 2013).

Social Validity

As described in the previous chapter, a modified version of the Usage Rating Profile-Intervention Revised (URP-IR) was used to evaluate the social validity of tiered behavior support as a strategy for supporting preservice teachers' use of BSP. Each item on the modified URP-IR was scored on a 6-point rating scale with 1 being *strongly disagree* and 6 being *strongly agree*. The URP-IR included sections for assessing the social validity of tiered behavior support as an overall intervention, as well as specific evaluation of each tier of support (i.e., goal setting with brief prompts and brief prompts with performance feedback). Mean scores were calculated for each item. Items were classified under one of the following social validity factors, (a) acceptability; (b) understanding; (c) feasibility; and (d) system support. One open-ended question was also included on the URP-IR.

Mean scores falling within the range of four to six were considered favorable for acceptability, understanding, and feasibility. Mean score ranges in the category of system support can be interpreted as favorable across all mean ranges. Items addressing system support required participants to rate the level of support and resources they would need to receive tiered behavior support in the future. For example, scores in the low range may be viewed as favorable

as they indicate the ability to benefit from tiered behavior support with little additional need for support, while scores in the high range may also be considered favorable as they may provide evidence for more resources and support for preservice teacher's development of classroom management practices. The interpretation of these scores will be discussed more thoroughly in the final chapter.

Table 3 contains the mean scores by factor for tiered behavior support, goal setting and brief prompts, and brief prompts with performance feedback. Across all factors and tiers of the intervention, participants rated acceptability, understanding, and feasibility in the score range of five to six, with the lowest mean score being 5.3 and highest mean score being 5.8. This indicates that participants found all aspects of tiered behavior support to be acceptable, feasible and understandable suggesting high social validity. The mean scores for system support fell between 3 (*slightly disagree*) and 4 (*slightly agree*) in the mid-range of the rating scale. The lowest mean score reported for system support was 3 and the highest was 3.8. This suggested that, as a result of this study, participants may be mostly prepared to participate in tiered behavior support in the future, however, they may sometimes require additional support and resources. Two participants provided a written response to the open-ended question on the modified URP-IR which asked participants to provide any other feedback they may have on tiered behavior support. Matthew and Sarah offered the following feedback, "Seeing the data in the morning prior to my lessons was a great motivator in reminding me to use BSP in the classroom"; and "There was a noticeable difference in the classroom once I implemented BSP regularly." Overall, the results of the URP-IR demonstrate that participants found tiered behavior support to have high social validity.

Table 3

Participants' Mean Social Validity Scores on the Usage Rating Profile-Intervention Revised

Social Validity Items	Mean Score
Tiered Behavior Support	
Acceptability	5.8
Understanding	5.4
Feasibility	5.7
System Support	3.8
Total Mean Score	5.2
Goal Setting with Brief Prompts (Tier Two)	
Acceptability	5.7
Understanding	5.3
Feasibility	5.7
System Support	3.7
Total Mean Score	5.1
Brief Prompts with Performance Feedback (Tier Three)	
Acceptability	5.7
Understanding	5.3
Feasibility	5.7
System Support	3
Total Mean Score	4.9

Summary of Results

The primary purpose of this study was to evaluate the impact of tiered behavior support on preservice special education teachers' rates of behavior specific praise. This study met the

basic requirements of a multiple baseline design wherein all phases include a minimum of three data points, introduction of the independent variable is staggered across participant tiers, and three replications of effect are present. All three participants in this study increased their delivery rate of BSP following implementation of tiered behavior support. The baseline mean rate of delivery of BSP across all participants was 0.13 BSP statements per minute. This increased to 0.57 BSP statements per minute with the introduction of tier two behavior support, and to 0.93 BSP statements per minute when tier three behavior supports were implemented. Visual analysis was used to conclude that a functional relation exists between tiered behavior support and preservice special education teachers' increased use of BSP. Vertical analysis of data across participant tiers also concluded that a functional relation exists, and experimental control was established through prediction, verification, and replication. Stable baseline data for all participants allowed for predication. Verification was demonstrated when changes in baseline delivery rate occurred only in response to implementation of tiered behavior support for each participant. Replication of effect was established when similar changes in delivery rate of BSP were noted for all participants following implementation of tiered behavior support. To complement the use of visual and vertical analysis, this study was also analyzed using Wolfe et al. (2019) systematic protocol for evaluating multiple baseline designs. The protocol yielded an experimental control score of 4.5, meaning that this study demonstrates a functional relation with medium to large behavioral change. Additionally, analysis of PND indicated that tiered behavior support was effective or very effective in increasing preservice special education teachers' use of BSP. Lastly, using a modified URP-IR, the participants in this study rated tiered behavior support as highly acceptable, feasible, and understandable.

CHAPTER V

DISCUSSION

Strong classroom management is the foundation of effective teaching. When teachers have the training, knowledge, and competency to manage challenging behavior in their classrooms, student engagement and achievement is higher and teacher stress and burnout is lower (Gage, Scott, et al., 2018; Gilmour, Sandilos, et al., 2022). Unfortunately, most teachers receive minimal training on evidence-based classroom management practices in their teacher preparatory programs (Bowsher et al., 2018; Myers, Sugai, et al., 2017). The training that they do receive is often embedded into other coursework and not specifically focused on classroom management practices, and addresses theory more than practice (Butler & Monda-Amaya, 2016; Moore et al., 2017). Difficulty managing challenging student behavior is one of the most common reasons teachers leave their position or the teaching field altogether (Hester et al., 2020). The lack of adequate training in classroom management is an issue for all teachers, but it is especially concerning for special education teachers.

Special education teachers have a demanding and unique role related to managing student behavior in schools. Special education teachers are primarily responsible for providing specialized instruction addressing the academic, behavioral, and functional needs of students with disabilities. Per the Individuals with Disabilities Education Act (IDEA), special educators have a legal obligation to provide an appropriate and effective individualized education program to students with disabilities that addresses their behavioral needs using evidence-based practices (Individuals with Disabilities Education Act, 2004). Although challenging

behavior is present in all student populations, students with disabilities engage in higher rates of challenging behavior than students without disabilities (Simo-Pinatella et al., 2019). Furthermore, the role of a special educator extends beyond classroom instruction. Special educators are often seen as experts on behavior and are called on by administrators and colleagues to consult, train, and support other teachers to manage challenging behavior (Bagley & Tang, 2018). In addition to an already complex role, special educators must also contend with the increased frequency of challenging behavior in schools since the COVID-19 school closures, high teacher turnover rates, and a critical shortage of trained special education teachers (U.S. Department of Education, Office of Postsecondary Education, 2022). Special education teachers must enter the field equipped with the skills and knowledge needed to effectively implement evidence-based classroom management practices in order to meet the demands of their important role. Yet, more than half of new special education teachers report minimal coursework or fieldwork focused on classroom management, leaving them feeling unprepared to manage challenging behavior in their classrooms (Brock et al., 2017; Gilmour & Wehby, 2019; Moore et al., 2017).

It is critical that special education teacher preparation programs and faculty evaluate current practices and consider additional methods for training preservice teachers in evidence-based classroom management practices. With that in mind, this study was designed to evaluate the use of tiered behavior support to increase preservice special education teachers' use of BSP in a field-based practicum. Specifically, this study was designed to assess (a) if a functional relation exists between tiered behavior support and preservice teachers' increased use of BSP, and (b) to what extent preservice special education teachers find tiered behavior support to be acceptable and feasible.

Despite a growing research base supporting the use of multitiered support to increase in-service teachers' use of classroom management practices (Samudre et al., 2022; Sanetti & Collier-Meek, 2015; State et al., 2019), the use of tiered support in preservice teachers' training has been largely unexplored. Only one other study known to the researcher has investigated the use of tiered behavior support in preservice teacher training. LaBrot, Weaver, et al. (2022) conducted a study in which they implemented tiered behavior support to increase preservice early childhood educators' use of BSP in a field-based setting. The findings of this study add to this limited literature base by extending the evidence for the use of tiered behavior support in preservice teacher training. The following sections will discuss the findings of this study specific to the research questions, implications for practice, and future research.

Participant Results in Relation to Research Questions

The first research question asked if a functional relation exists between tiered behavior support and preservice special education teachers' use of BSP. The results show that all three participants in this study increased their delivery rate of BSP when tiered behavior support was introduced. As noted previously in chapter IV, visual analysis was conducted for each participant as well as vertical analysis of the overall study data. Analysis of level, trend, variability, immediacy of effect, overlap of data points, and consistency indicated that a functional relation exists between tiered behavior support and the increased delivery of BSP statements. Three demonstrations of effect were present across the participant tiers. Analysis of PND yielded results of 88% nonoverlapping data points between baseline and intervention for Matthew, and 100% for Sarah and Emma. These results indicate that tiered behavior support was an effective intervention for Matthew, and a very effective intervention for Sarah and Emma. Further, the use of the systematic visual analysis protocol developed by Wolfe et al. (2019) generated an

experimental control score for the study of 4.5 out of 5 indicating that a functional relation with medium to large behavior change has been demonstrated.

The second research question examined to what extent participants found tiered behavior support to be socially valid. Social validity was evaluated using a modified version of the URP-IR, similar to LaBrot, Weaver, et al. (2022). All three participants rated the intervention highly acceptable, understandable, and feasible. A fourth factor examined on the URP-IR was system support. Items relating to system support asked participants to rate the level of support and resources they would need to participate in tiered behavior support in the future. The mean participant score for these items was 3.5 on a 6-point rating scale. Though rated lower than the other social validity factors on the URP-IR, this score is not surprising considering previous research findings that preservice teachers have had minimal coursework, training, and fieldwork experiences dedicated to classroom management (Brownell et al., 2019; Moore et al., 2017). It is reasonable that preservice teachers with little training in classroom management would need additional supports and resources to receive tiered behavior support.

Implications for Practice

In addition to the overall research findings described in the section above, there are other important conclusions that can be drawn from the participant data. First, previous research has indicated that universal, didactic training alone does not result in greater implementation of classroom management practices (Floress et al., 2017). In this study, the baseline rate of BSP delivery for all three participants was low and fell below the minimum delivery rate found to be effective in decreasing disruptive behavior and increasing student engagement (i.e., 0.5 BSP statements per minute). The participants in this study not only received universal training on BSP, but unlike many preservice teachers, they all completed a full course in their graduate

program that focused only on classroom management. The graduate program requires students to earn a minimum course grade of a B (i.e., 83% - 87%) to remain in the program. Although the specific grades of each participant are not known, they all earned the minimum grade required by the university, suggesting that they had some previous understanding of classroom management and BSP prior to their participation in this study. In addition to their prior coursework, the universal training provided in this study was a recorded training, approximately ten minutes in length that defined BSP, provided examples and non-examples, and provided a rationale for its use supported by empirical data. In the training, participants were required to produce three of their own examples of BSP statements, were provided feedback on their examples, and were able to ask questions that were answered by the researcher. However, despite previous coursework and training in classroom management, all participants delivered BSP statements at low to very low rates. Emma delivered the lowest rate of BSP, only 0.05 BSP statements per minute. Sarah had the highest baseline delivery rate of 0.25 BSP statements per minute. The mean baseline delivery rate for the three participants was 0.13 BSP statements per minute, which was well below the minimum effective delivery rate of 0.5. These results are in line with previous research findings that universal didactic training alone is not effective in increasing the implementation of evidence-based classroom management practices (Floress et al., 2017; Gage, MacSuga-Gage & Crews, 2017). Further, while a logical first step in improving preservice teacher preparation may be include requiring that all programs offer a course solely dedicated to classroom management, the results of this study suggest that coursework alone is not enough to meaningfully impact future implementation of classroom management practices. Based on the results of this study, preparation programs should consider pairing coursework with fieldwork experiences that intentionally focus on the use of classroom management practices and include tiered behavior

support for greater impact on preservice teachers' future implementation of classroom management practices.

In addition to the recorded training on BSP, tiered behavior supports also included goal setting, brief prompts, and visual performance feedback. As discussed previously in chapter II, all three of these components have been established as highly effective strategies for supporting in-service and preservice teachers to increase their use of evidence-based classroom management practices (Floress et al., 2017; Zoder-Martell et al., 2019). While effective individually, research has shown that when goal setting, prompts, and visual performance feedback are implemented together they lead to even greater outcomes (Zoder-Martell et al., 2019). Commensurate with previous research, the results of this study show that these components combined led to increased delivery of BSP for all participants. When analyzed individually, the results indicate that visual performance feedback had the greatest impact on increasing participants' use of BSP. Although delivery rates increased when goal setting and brief prompts were implemented in tier two, the highest delivery rates occurred for all participants when visual performance feedback was provided in tier three. For Matthew, mean BSP delivery rate increased from 0.1 in baseline to 1.2 after visual performance feedback was implemented. The mean BSP delivery rate for Sarah increased from 0.25 in baseline to 1.1 when visual performance feedback was provided. Emma's mean BSP delivery rate increased from 0.05 during baseline to 0.5 following delivery of visual performance feedback. Previous research on performance feedback and teacher training has found that performance feedback that is visually presented (i.e., graphed data), delivered individually, and provided regularly (i.e., daily or weekly) results in strong functional relations (Fallon et al., 2015; Sleiman et al., 2020). The results of this study add to the evidence-base

supporting the use of visual performance feedback as a highly effective component of preservice teacher training in classroom management practices.

In this study visual performance feedback was delivered via text message to participants. The delivery of performance feedback through technology (i.e., email, text message, video) has a small but growing research-base with very few studies investigating text message delivery (Barton, Velez, et al., 2020). Text messaging may provide a fast, feasible, sustainable, and low-effort method for university instructors to provide graphically displayed visual performance feedback to preservice teachers. While it is common for university instructors to provide feedback to preservice teachers verbally through on-going in-person conferences following observations, this approach requires substantial time and availability to execute. In practicum setting used in this study, the university instructor was on-site daily conducting observations and conferencing with preservice teachers. Utilizing text messaging or other technology-based feedback methods (e.g., email, video, applications), to deliver performance feedback could potentially decrease the amount of time spent in individual conferences and increase the number of observations and feedback preservice teachers receive. The results of this study demonstrate that text messaging is an effective method for delivering visual performance feedback to increase preservice teachers' use of BSP. These findings contribute to the limited body of research supporting the effectiveness of text message delivered performance feedback.

Previous research conducted on the use of multitiered supports with in-service teachers indicates that most in-service teachers increase responding with tier two level support, with a few requiring more intensive tier three support (Myers, Simonsen, & Sugai, 2011; Thompson et al., 2012; Zakszeski et al., 2020). LaBrot, Weaver, et al. (2022) yielded similar results with two out of three preservice teachers meeting the goal rate with tier two support only. Unlike the previous

findings, all three participants in this study required the most intensive level of support. While not surprising that preservice teachers may need a higher level of support, these results highlight the utility of tiered behavior support in meeting the individual needs of preservice teachers. Preservice teachers, particularly on the graduate level, may have varied levels of classroom experience and exposure to classroom management. Some graduate students, like Sarah, have worked in various roles in schools for over a decade and have received some specialized training in behavior, while other students, like Kim, who ultimately withdrew from the study, have only a few months of experience working in a classroom. Tiered behavior support allows instructors to meet the individual and varied needs of preservice teachers efficiently and effectively. The level and intensity of support is determined by ongoing analysis of individual performance data. Although the overall response patterns in this study differed from previous research, Matthew and Sarah benefited from the individualized decisions allowed for when implementing tiered behavior support. In this study and the study conducted by LaBrot, Weaver, et al. (2022), participants were asked to select a BSP delivery goal for themselves that was at or above the minimum level shown to be effective (i.e., 0.5 BSP statements per minute). All participants in LaBrot, Weaver, et al. (2022) selected the minimum goal rate of 0.5. However, in this study, Sarah selected a higher goal rate of 0.8 BSP statements per minute. If Sarah had instead selected a goal rate of 0.5, she would have met the delivery criteria with only tier two support. Choosing a higher goal rate allowed Sarah to access reinforcement for higher rates of delivery than she may have if her goal rate was only 0.5. Additionally, Matthew technically met goal criteria during tier two, however, due to the variability in delivery rate and the descending trend noted after the third session in the tier two phase, the tier two phase was extended to five observations. Matthew ultimately demonstrated the highest BSP delivery rate of all three participants during the

intervention and maintenance phases. The extended tier two phase may have provided additional feedback, practice, and reinforcement leading to higher rates of delivery compared to the other two participants. The individualizations noted in this study allowed the preservice teachers to be successfully supported based on their varied needs and performance. This confirms the findings of previous research which asserts that tiered behavior support is an effective approach to supporting students on all levels (Simonsen, Freeman, et al., 2017).

Lastly, although the research questions in this study did not specifically address maintenance of BSP delivery rates, several conclusions can be drawn from the maintenance data collected for each participant. For Matthew and Sarah, the mean delivery rate decreased when tier three behavior support was withdrawn. During maintenance, Matthew's delivery rate did not return to baseline levels, but instead maintained at approximately the same rate as tier two with no overlapping data points between maintenance and baseline. Following withdrawal of tier three support, Sarah's mean delivery rate decreased to a rate slightly below the tier two rate, but above baseline with some overlap of data points between maintenance and baseline. Emma's mean delivery rate during maintenance (0.45 BSP statements per minute) remained almost equal to the delivery rate during tier three (0.5 BSP statements per minute) with no overlap of data points between the baseline and maintenance phases. Similar to the findings of LaBrot, Weaver, et al. (2022), these data provided some evidence that increased delivery rates of BSP may maintain after tiered behavior support is withdrawn. One component of the brief prompts and visual performance feedback delivered during tier three was a statement of praise if the participant met their delivery goal. All participants met their goal and received reinforcement for three consecutive observations during tier three immediately prior to withdrawal. It is possible that the reinforcement received during tier three increased their future delivery of BSP.

Limitations and Implications for Future Research

This study was conducted during a short four-week summer practicum setting which allowed only a total of 15 consecutive observations to be conducted for each participant. This limited time frame was similar to LaBrot, Weaver, et al. (2022) in which only 17 observations were conducted for one participant and 20 observations for the other two participants. While the results of this study supported that a functional relation existed between tiered behavior support and preservice teachers' increased delivery of BSP, the short time frame of the practicum presented some limitations to these results. First, several phases of this study included only three data points. While this met the minimum requirement to establish a data trend, a stronger assessment of trend and functional relation would have been established if time allowed for collection of at least five data points in each phase. Additionally, a multiple baseline design requires that implementation of the independent variable is staggered across participant tiers. In this study, similar to LaBrot, Weaver, et al. (2022), the introduction of tiered behavior support was staggered by one observation per participant tier, with implementation of the independent variable occurring in session four for Matthew, session 5 for Sarah, and session 6 for Emma. Although introducing the independent variable in consecutive sessions meets the requirement of a staggered independent variable (Cooper et al., 2020), delaying introduction for a minimum of three data points to assess trend would provide a stronger evaluation of experimental control. Due to the short timeframe of the practicum, it was not possible to delay introduction of the intervention by at least three data points per participant. To address these limitations, future researchers should consider replicating this study in a practicum that spans a longer time period. This would allow for ample data points to demonstrate a more powerful functional relationship and strong experimental control.

Considering the large body of research supporting the effectiveness of BSP as an evidence-based classroom management practice for increasing student engagement and decreasing disruptive student behavior (Gage & MacSuga-Gage, 2017; Gage, Scott, et al., 2018; Simonsen, Fairbanks, et al., 2008), it is possible that during this study the increased delivery of BSP in the classroom may have resulted in less disruptive behavior and more engagement. However, student outcome data were not collected to evaluate the effect of increased rates of BSP on student behavior. Ultimately the purpose of better preparing preservice teachers to use evidence-based classroom management practices is to improve the learning environment so that students and teachers can learn and teach more effectively. Future research should aim to collect student outcome data to evaluate if tiered behavior support for teachers leads to better outcomes for students.

This study was conducted with in-person data collectors. Although every effort was made to reduce possible reactivity from preservice teachers and the students in their classrooms (e.g., being present in classrooms throughout the day outside of data collection periods, interacting with teachers and students daily), it is possible that the presence of the researcher acted as a stimulus signaling preservice teachers to increase their use of BSP. Future research may want to consider utilizing other methods of conducting observations such as recorded lessons or virtual observation sessions.

Brief prompts and performance feedback were delivered to preservice teachers daily during the tier two and tier three phases. Because the length of the summer practicum was so short, spanning only four weeks and including only 18 teaching days, it would not have been possible to deliver prompts and performance feedback weekly or semi-weekly instead of daily. However, in many fieldwork experiences instructors may not be on-site daily to conduct

observations and provide feedback. As more research is conducted on the use of tiered behavior support in teacher preparation programs, researchers should consider implementation in lengthier practicums or fieldwork experiences to allow for the study of varied prompt and feedback schedules. It is possible that prompts and feedback may be just as effective when delivered weekly or semi-weekly. Investigating the effectiveness of intermittent prompting and feedback is important to expanding the generalizability of tiered behavior support.

Participants in this study were offered the choice of receiving daily prompts and performance feedback via email or text message. All participants chose text message delivery. Text messages require relatively little effort to compose and deliver, however, there may be other digital tools that are more feasible for university professors. Future research should continue to evaluate the effectiveness and feasibility of other technology-based methods for delivering prompts and feedback.

In this study, all observations, data recording, prompts, and feedback were conducted and delivered by the researcher and two trained observers. During the course of this study, the researcher's only responsibility was to implement the methodology of this study with three preservice teachers. In contrast, the practicum instructor was responsible for observing and providing feedback to all students enrolled in the practicum along with many other duties. Now that initial evidence of the effectiveness of tiered behavior support has been established through this study, it is essential that future research involves training university professors to implement tiered behavior support and then evaluates the effectiveness of their implementation. Future research studying university instructors' implementation of tiered behavior support would provide researchers important information on the social validity of these methods from the perspective of those responsible for teacher preparation. While the methods of this study and

components of tiered behavior support were designed and selected with feasibility in mind (e.g., short observation periods, simple data collection methods, electronically delivered prompts and feedback that can be preprogrammed by instructors), the actual feasibility of implementation must be evaluated from a university instructors' perspective.

In addition to evaluating university instructors' implementation, future researchers should consider training cooperating teachers to implement tiered behavior support and evaluating their implementation. In this study, the university professor was on-site every day for the duration of the practicum, however, most fieldwork experiences only require university instructors to be present periodically for observations and feedback. In contrast, cooperating teachers are present daily mentoring and supporting preservice teachers in their classrooms. Training cooperating teachers to implement tiered behavior support could benefit preservice teachers by providing additional regular opportunities for feedback on and reinforcement of their classroom management practices. It could also provide increased opportunities for the cooperating teacher to model data collection, graphing, and feedback procedures that preservice teachers can later use in their own classrooms. As future research continues to evaluate implementation of tiered behavior supported by university instructors, it may be worthwhile for researchers to consider further expanding the literature-base to include cooperating teachers.

Finally, tiered behavior support may also be an effective model for preparing preservice teachers to implement other evidence-based classroom management practices, such as opportunities to respond and active supervision. Like BSP, both opportunities to respond and active supervision are evidence-based practices that have been shown to increase student engagement and decrease disruptive student behavior when implemented consistently (Simonsen, MacSuga-Gage, et al., 2014) and warrant focus in teacher preparation. To further

extend the findings and generalizability of this study, future researchers should consider evaluating the effectiveness of tiered behavior support in increasing preservice teachers' use of other evidence-based classroom management practices.

Conclusion

The purpose of this study was to evaluate the impact of tiered behavior support on preservice special education teachers' rates of behavior specific praise. This study demonstrated that a functional relation exists between the implementation of tiered behavior support and preservice special education teachers' increased delivery of behavior specific praise. Analysis of PND indicated that tiered behavior support is an effective to very effective method for supporting preservice teachers' implementation of evidence-based classroom management practices. The results of this study also showed that preservice teachers found tiered behavior support to be accessible, feasible, and understandable as evidenced by high social validity ratings. All participants in this study increased their delivery rate of behavior specific praise following the introduction of tiered behavior support with the highest rates present during tier three support which included the delivery of daily prompts with visual performance feedback. The results of this study suggested that coursework and didactic training were not sufficient to prepare preservice teachers to implement classroom management practices. Coursework should be accompanied by field-based experiences that focus on developing classroom management practices through the implementation of tiered behavior support. This study provided strong evidence that tiered behavior support may be a feasible and effective method for training preservice teachers in classroom management practices. Based on the findings of this study, higher education faculty should consider the use of tiered behavior support as an effective method for preparing preservice special education teachers to implement classroom management

practices. Better preparing preservice special education teachers to manage challenging student behavior in their future classrooms can help to reduce rates of teacher turnover, increase teacher satisfaction, and ultimately lead to better academic and social outcomes for students with disabilities.

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APPENDIX A

PARTICIPANT RECRUITMENT EMAIL AND PHONE/VIDEO CONFERENCE SCRIPT

PARTICIPANT RECRUITMENT EMAIL

Participant Recruitment Email:

Dear (Participant Last Name),

I would like to invite you to participate in a research study exploring the use of a multitiered model of support for graduate level practicum students. As a participant of this study, you will be asked to take part in one brief 7-10 minute group training, one brief 7-10 minute individual goal setting meeting, a daily 10-minute observation, and brief daily communication from the researcher via text message or email. You will also be asked to complete a short survey about your experience with the multitiered support model utilized throughout the study. Participation in this study will not impact the required activities, assignments, assessments, or performance evaluation of your practicum placement set forth by your university professor.

If you are willing to participate, please use this link to indicate your interest and provide preliminary information about yourself. I will contact you by phone to discuss the study in more depth and answer any questions you may have.

Thank you,

Kristy Hynes, BCBA, LBA-CT

Participant Recruitment Phone/Video Conference Script:

Hello (participant name), my name is Kristy Hynes. You recently replied with interest to an email regarding a study I am conducting on the use of a multitiered model of support for graduate level practicum students.

I would briefly like to explain the purpose of the study, the requirements of your participation and answer any questions you have.

The study I am conducting will explore the use of a multitiered model of support for graduate level practicum students with regard to classroom management. Exploring the effectiveness of multitiered supports in developing preservice teachers' use of classroom management practices will help faculty to design practicum experiences to better prepare practicum students for their future teaching role in the field of special education.

As a participant of this study, you will take part in one brief 7-10 minute group training, one brief 7-10 minute individual goal setting meeting, and a daily 10-minute observation, and brief daily communication from the researcher via text message or email. You will also be asked to complete a short survey about your experience with the multitiered support model utilized throughout the study. Participation in this study will not impact the required activities, assignments, assessments, or performance evaluation of your practicum placement set forth by your university professor.

What questions can I answer for you regarding the study or your role as a participant?

Are you interested in and able to commit to being a participant in the study?

If answer is no - Thank you for your time today. End call.

If answer is undecided - What other information can I provide or clarify for you to help you make your decision?

If answer is yes - Thank you! I will now email you the consent form for you to sign electronically and email back to me. Please let me know when you see this in your email inbox. Please take a minute and read the consent form. Do you have any additional questions? Participant will be asked to sign and email it back to the researcher while on the phone or video conference. Thank you for your time today and your willingness to participate in this research study. If you have any questions between now and the orientation training, please call or email me.

APPENDIX B

CONSENT FORM

CONSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH

University of Northern Colorado

Study Title:	Tiered Behavior Support to Promote Preservice Teachers' Use of Behavior Specific Praise.
Researcher:	Kristy Hynes, BCBA, LBA-CT
Email:	hynesk3@southernct.edu
Research Advisors:	Dr. Tracy Gershwin, PhD., BCBA-D., Intervention Specialist Applied Behavior Analysis, School of Special Education and Behavioral Sciences
Phone:	970.351.1664
Email:	Tracy.gershwin@unco.edu

Purpose and Background: The purpose of this study is to explore the effectiveness of multitiered supports in developing preservice teachers' use of classroom management practices. The findings of this study will provide teacher preparation faculty in the field of special education important information that can be used to design practicum experiences that better prepare graduate students for their future teaching role in the field of special education.

Participants in this study will take part in one brief 7-10 minute group training, one brief 7-10 minute individual goal setting meeting, a daily 10-minute observation, and brief daily communication from the researcher via text message or email. Participants will also be asked to complete a short survey about their experience with the multitiered support model utilized throughout the study. Participant information will be kept confidential through the use of pseudonyms.

If you agree to participate in this research study, the following will occur:

- You will take part in one brief 7-10 minute group training.
- You will take part in one brief 7-10 minute individual goal setting meeting
- You will be observed for 10 minutes daily by the researcher
- You will receive brief daily communication from the researcher via text message or email

- You will complete a short survey about your experience with the multitiered support model utilized throughout the study.
- You will be asked to share demographic information, related to age, gender, employment, and educational background.

Confidentiality: Your responses will only be shared with members of the investigation team. By participating in this study, you have given us permission to release information to these persons. Although confidentiality cannot be guaranteed, every effort will be made to maintain your confidentiality. The results of this study may be published in the professional literature, but no publication will contain information that will identify you. The research data will be kept in a secure location, and only the researchers will have access to the data. After transcription, identifying information will be removed. The consent forms and de-identified transcripts will be kept in a locked file in the Research Advisor's office for three years.

Risks: There are no foreseeable risks to participants in this study. If emotional distress occurs, the UNC Counseling Center may be contacted for free counseling services. Contact information is listed below.

UNC Counseling Center 1901 10th Ave., Greeley, CO 80639 970-351-2496

Benefits: There are no direct benefits to participants of this study, however, the information gained in this study can help inform the use of multitiered support models in teacher preparation practicums in the future.

Costs: Participants will not be compensated for this study. There are no costs associated with this study other than the participants' time.

Questions: If you have any questions about the study, you may contact the researcher by phone or email. You may also contact the researcher's advisor, Dr. Tracy Gershwin, by phone or email.

Participation is voluntary. You may decide not to participate in this study and if you begin participation, you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in loss of benefits to which you are otherwise entitled. Having read the above and having had an opportunity to ask any questions, please sign below if you would like to participate in this research. A copy of this form will be given to you to retain for future reference. If you have any concerns about your selection or treatment as a research participant, please contact the Office of Research, Kepner Hall, University of Northern Colorado Greeley, CO 80639; 970-351-1910.

_____ _____

Participant's Signature Date

APPENDIX C

DEMOGRAPHIC SURVEY QUESTIONS

DEMOGRAPHIC SURVEY QUESTIONS

1. Do you currently hold a teaching license in CT? If so, what is the area(s) of your certification?

2. How many years have you held your current teaching license(s)?

3. Please indicate if you are employed full-time, part-time or are currently not employed.

4. If employed, what is your current position?

5. How many years have you held your current position?

6. How many years have you worked in the education field?

7. Other than your current position, what other positions have you held in the education field?

8. Please indicate your age.

9. Please indicate your gender.

10. Please indicate your race.

APPENDIX D

MODIFIED USER RATING PROFILE-INTERVENTION (URP-IR)

MODIFIED USER RATING PROFILE-INTERVENTION (URP-IR)

(Adapted from the Usage Rating Profile-Intervention Revised [URP-IR];
Chafouleas et al., 2011)

I.	**Please indicate how much you agree with the following questions about tiered behavior support.**						
		Strongly Disagree	**Disagree**	**Slightly Disagree**	**Slightly Agree**	**Agree**	**Strongly Agree**
1.	Tiered behavior support is an effective choice for supporting my use of BSP.	1	2	3	4	5	6
2.	I would need additional resources to receive tiered behavior support.	1	2	3	4	5	6
3.	I would be able to allocate my time to receive tiered behavior support.	1	2	3	4	5	6
4.	I understand how tiered behavior support is implemented.	1	2	3	4	5	6
5.	I am knowledgeable about tiered behavior support procedures.	1	2	3	4	5	6
6.	Tiered behavior support is a fair way to handle preservice teachers' support needs.	1	2	3	4	5	6
7.	The total time required to receive tiered behavior support would be manageable.	1	2	3	4	5	6

		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
8.	I would not be interested in receiving tiered behavior support.	1	2	3	4	5	6
9.	I would have positive attitudes about receiving tiered behavior support.	1	2	3	4	5	6
10.	Tiered behavior support is a good way to increase teachers' use of BSP.	1	2	3	4	5	6
11.	Preparation of materials needed to receive tiered behavior support would be minimal.	1	2	3	4	5	6
12.	Material resources needed to receive tiered behavior support is reasonable.	1	2	3	4	5	6
13.	I would receive tiered behavior support with a good deal of enthusiasm.	1	2	3	4	5	6
14.	Tiered behavior support is too complex to receive.	1	2	3	4	5	6

		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
15.	Tiered behavior support would not be disruptive to students.	1	2	3	4	5	6
16.	I would be committed to receiving tiered behavior support.	1	2	3	4	5	6
17.	Tiered behavior support would easily fit in with my current practices.	1	2	3	4	5	6
18.	I would need consultative support to receive tiered behavior support.	1	2	3	4	5	6
19.	I understand the procedures of receiving tiered behavior support.	1	2	3	4	5	6
20.	The amount of time required for record keeping would be reasonable.	1	2	3	4	5	6
21.	I would require additional professional development to receive tiered behavior support.	1	2	3	4	5	6
II.	**Please indicate how much you agree with the following questions about <u>goal setting and brief prompts.</u>**						
		Strongly Disagree	**Disagree**	**Slightly Disagree**	**Slightly Agree**	**Agree**	**Strongly Agree**
25.	I liked the procedures used for goal setting and brief prompts.	1	2	3	4	5	6

		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
26.	I have the skills needed to receive goal setting and brief prompts.	1	2	3	4	5	6
27.	The amount of time required to receive goal setting and brief prompts was reasonable	1	2	3	4	5	6
28.	I would need consultative support to receive goal setting and brief prompts again.	1	2	3	4	5	6
29.	I would not be interested in receiving goal setting and brief prompts again.	1	2	3	4	5	6
III.	**Please indicate how much you agree with the following questions about brief prompts with performance feedback.**						
		Strongly Disagree	**Disagree**	**Slightly Disagree**	**Slightly Agree**	**Agree**	**Strongly Agree**
30.	I liked the procedures used for brief prompts with performance feedback.	1	2	3	4	5	6
31.	I have the skills needed to receive brief prompts with performance feedback.	1	2	3	4	5	6
32.	The amount of time required to receive brief prompts with performance feedback was reasonable.	1	2	3	4	5	6

		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
33.	I would need consultative support to receive brief prompts with performance feedback again.	1	2	3	4	5	6
34.	I would not be interested in receiving brief prompts with performance feedback again.	1	2	3	4	5	6

35. What other feedback would you like to provide about tiered behavior support?

APPENDIX E

SAMPLE FREQUENCY DATA RECORDING SHEET

Frequency Data Recording Sheet

Behavior Specific Praise:

Definition	Examples	Non-Examples
Verbal praise given by a teacher, contingent on a demonstration of a desired student behavior, which explicitly states the behavior in which the student is being praised for. Components of Behavior specific praise: a) Specifically identifies the student(s) b) Explicitly describes the desired behavior that the student(s) engaged in Behavior Specific Praise can be delivered to an individual student, a small group of students, or an entire class.	"Joseph, thank you for quietly waiting for my next direction" "Tammy, you did a great job using a quiet voice during group work." "Jessica, you did a great job keeping your hands by your sides as you walked to lunch" "Table 4, thank you for opening your science journals and beginning your vocabulary prompt as soon as you entered class today" "Red team, excellent job opening your Chromebook and waiting quietly for my next direction" "Ms. James' class, thank you for cleaning up your art supplies immediately after I rang the clean-up bell" "Mr. Lopez's science class, everyone handled our lab materials safely today. Well done!	"Good work" "Nice job" "Great" "You are correct" "Great job in the hallway, Jessica" "Excellent work, Table 4" "Nice job, Red team" "Thank you, class" "Good job, everyone"

Participant:_____ **Observer:**_____

Date:_____

Observation Time: Start:_____ **End:**_____

Instructions: Place a tally mark in each designated column each time the target behavior occurs. Continue data collection for the full 15-minute observation period.

Behavior Specific Praise Statements (BSP)						
Interval #						
1	2	3	4	5	6	Total Frequency of Behavior
7	8	9	10	11	12	Total Frequency of Behavior
13	14	15	16	17	18	Total Frequency of Behavior
19	20	21	22	23	24	Total Frequency of Behavior
25	26	27	28	29	30	Total Frequency of Behavior
31	32	33	34	35	36	Total Frequency of Behavior
37	38	39	40	41	42	Total Frequency of Behavior

43	44	45	46	47	48	Total Frequency of Behavior
49	50	51	52	53	54	Total Frequency of Behavior
55	56	57	58	59	60	Total Frequency of Behavior

Total # of BSP Statements across all intervals: _____

Calculate Rate:

Total #_____/ 10 minutes = _____

Total Rate: _____ BSP statements per min.

APPENDIX F

TREATMENT INTEGRITY CHECKLISTS

Participant_____ Observer_____

Date_____

Treatment Integrity Checklist Tier 1: Universal Training on Behavior Specific Praise		
YES	**NO**	**Definition and Description of BSP was provided.**
		Researcher provided definition of BSP.
		Researcher modeled 3-5 examples of BSP.
		Researcher provided rationale for the use of BSP as a classroom management strategy with empirical evidence from three research studies was provided.
		Participants provided 3 of their own examples of BSP.
		Researcher provided feedback on participants' examples.
		Participants had an opportunity to ask questions.
		Researcher provided answers to participants' questions.

Participant_____ Observer_____

Date_____

Treatment Integrity Checklist Tier 2: Goal Setting and Brief Prompts		
YES	**NO**	**Definition and Description of BSP was provided.**
		Participant was sent daily prompt via email or text message reminding them of their BSP goal.
		Daily prompt was sent at the participants' preferred time.
		Daily prompt included the participants' BSP goal.
		Daily prompt included a statement encouraging participants to meet or exceed their BSP goal.
		Daily prompt included a read receipt.
		Read receipt was sent back to researcher.

Participant_____ Observer_____

Date_____

Treatment Integrity Checklist Tier 3: Brief Prompts with Performance Feedback		
YES	**NO**	**Definition and Description of BSP was provided.**
		Participant was sent daily prompt via email or text message reminding them of their BSP goal.
		Daily prompt was sent at the participants' preferred time.
		Daily prompt included the participants' BSP goal.
		Daily prompt included graphed data of participant's use of BSP.
		If the participant met their BSP goal, the prompt included a statement of praise.
		If the participant did not meet their BSP goal, the prompt included a reminder statement of their goal.
		Daily prompt included a read receipt.
		Read receipt was sent back to researcher.

Participant_____ Observer_____

Date_____

Treatment Integrity Checklist Goal Setting Meeting		
YES	**NO**	**Definition and Description of BSP was provided.**
		Researcher reviewed the definition of BSP.
		Researcher provided 2 examples of BSP statements.
		Participants provided 2 examples of BSP statements.
		Researcher and provided feedback on participants examples.
		Researcher explained that research has shown that providing at least one BSP statement per two minutes can result in decreased disruptive behavior and increasing engagement in the classroom.
		Researcher asked participants to choose a BSP rate goal at or above 0.5 BSP statements per minute.
		Participant chose a BSP rate goal at or above 0.5 BSP statements per minute.
		Researcher explained that participant would receive a daily prompt via email or text message about their BSP goal.
		Participant identified a preferred contact method (e.g., email, text message) and a preferred time of day to receive the daily prompt.
		Researcher will explain that a read receipt will be included in the prompt.
		Participants will have an opportunity to ask questions.
		Researcher will answer participant questions.