TEACHING THE NEW LEARNER: AN INVESTIGATION OF ADULT EXECUTIVE FUNCTIONING AND RESPONSE TO DEMANDS

by

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A DISSERTATION

Presented to the Department of Educational Methodology, Policy, and Leadership
and the Graduate School of the University of Oregon
in partial fulfillment of the requirements
for the degree of
Doctor of Education

March 2021

DISSERTATION APPROVAL PAGE

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Title: Teaching the New Learner: An Investigation of Adult Executive Functioning and Response to Demands

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DISSERTATION ABSTRACT

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Doctor of Education

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March 2021

Title: Teaching the New Learner: An Investigation of Adult Executive Functioning and Response to Demands

Executive Functioning (EF) is a cognitive skill set that encompasses metacognition and emotional and behavioral regulation. EF skills grow into adulthood but may have lagging development due to a variety of factors. The resulting executive dysfunction may impact behavior, performance, and social interactions. Many of the skills needed to access a typical educational environment require the use of EF for both students and teachers. Targeted interventions can support the growth of these skills in students, leading to improved outcomes in multiple academic and social areas, but these interventions are reliant on teacher skill sets. The purpose of this study was to explore the relationship between teacher EF skills and their perceptions of the demands that are put onto those skills. In response to the COVID-19 pandemic and subsequent closure of school buildings, perceptions of demands related to distance learning were also investigated.

A sample of 63 kindergarten and first grade educators from across the Pacific NW region of the United States participated in this study through a one-time online survey. Perceptions of self-efficacy, mindset, and intervention expectations were gathered using the Staff Perceptions and Experiences Survey (SPES) and the SPES for Distance Learning (SPES-DL). Perceptions related to satisfaction, burnout, and traumatic stress

were measured using the Professional Quality of Life survey (ProQOL). EF skills of participants were measured through self-report using the Behavior Rating Inventory of Executive Function, Adult Version (BRIEF-A).

Correlation analysis and frequency counts were used to explore the relationship between teacher EF skills and their perceptions during in-person and virtual learning. Statistically significant small to moderate correlations were found for teacher EF skills and self-efficacy, as well as quality of life components during distance learning. Correlations between teacher EF skills and perceptions of behavior, knowledge of expectations, or self-efficacy during in-person learning were not statistically significant. When not teaching virtually, the EF delays of K/1 students and the resulting behavioral and social challenges are one of the greatest demands on educators' skills; my results suggest this might have changed during the COVID-19 pandemic. Suggestions for future research are discussed.

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ACKNOWLEDGMENTS

I began this journey intending to learn more about working effectively in educational systems. For many years I have been a part of these systems, at times one of the experts, but I hadn't spent much time questioning the system itself. I will be forever grateful to my professors and colleagues from the EMPL cohort of 2021 for challenging me from the beginning to question what I knew. I emerged from this experience kinder, clearer, and firmer in my convictions toward effective change, and I am especially thankful for the partners who helped this transformation, Jennie Hall and Dayle Spitzer. I would like to express sincere appreciation to Dr. Julie Alonzo for her mentorship and guidance, and to Dr. Mark VanRyzin for his patient navigation through the maze of SPSS. I would also like to thank my work colleagues, especially Lori Thompson and Cathy Jensen, who were among the first to believe in my vision, to trust my instincts, and to help me find my voice.

This journey took immeasurable sacrifice from my family and friends, and I can't begin to express my gratitude. To each of you who listened, encouraged, commiserated, and held me up: I count it among my greatest blessings that such a network of unconditional love surrounds me. Thank you for taking care of me and helping to care for my children when there were too many things to do at once. Finally, to my favorite boy, every brave thing I do begins as a nudge from you. Thank you for being my safe harbor and my straight path.

This dissertation is dedicated to my husband Corey, for his unwavering belief in me and his impeccable ability to see to the heart of things. I dedicate this to my children, Benjamin and Madeline, who inspire me to keep learning and growing alongside them. Finally, I dedicate this to my parents, Judy and Bill, who instilled in me a love of learning, a faith in things unseen, and a heart for servant leadership.

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CHAPTER I

INTRODUCTION AND LITERATURE SYNTHESIS

Executive functioning (EF) skills, which have been shown to grow rapidly in the preschool years, may have lagging development due to a variety of factors (Hughes et al., 2010). The resulting executive dysfunction may impact classroom behavior and performance, which impacts teacher-student interactions, and can lead to reduced access to the general education environment. In Oregon over the past seven years, for example, the number of K/1 students found eligible for Special Education services has risen from 8784 to 10,668. The percentage of K/1 students found eligible for services under Other Health Impairment and Emotional Disturbance, two categories closely associated with social/emotional and behavioral dysregulation, has risen from 9.9% to 17.1% (Oregon Department of Education, Special Education Reports and Data, 2020). As I will discuss in my synthesis of the literature, targeted interventions can support the growth of EF skills in early elementary school, leading to improved outcomes in multiple academic and social areas.

When students display executive dysfunction, educators often respond by providing more scaffolding or intervention, but many times teachers are not equipped to provide these supports on their own. Interventions targeted at specific lagging skills, often social-emotional or self-regulatory, are reliant on teacher skill sets. Metacognition and inhibitory skills are needed to effectively program, maintain a positive environment, and problem-solve. Although the EF skills of adults are typically established rather than growing, they exist in a balance of strengths and weaknesses that allow adults to manage their relationships and environment. Understanding teacher skills sets and how these

relate to their perceptions of, and response to, student behavior can lead to more effective interventions for supporting delayed skills.

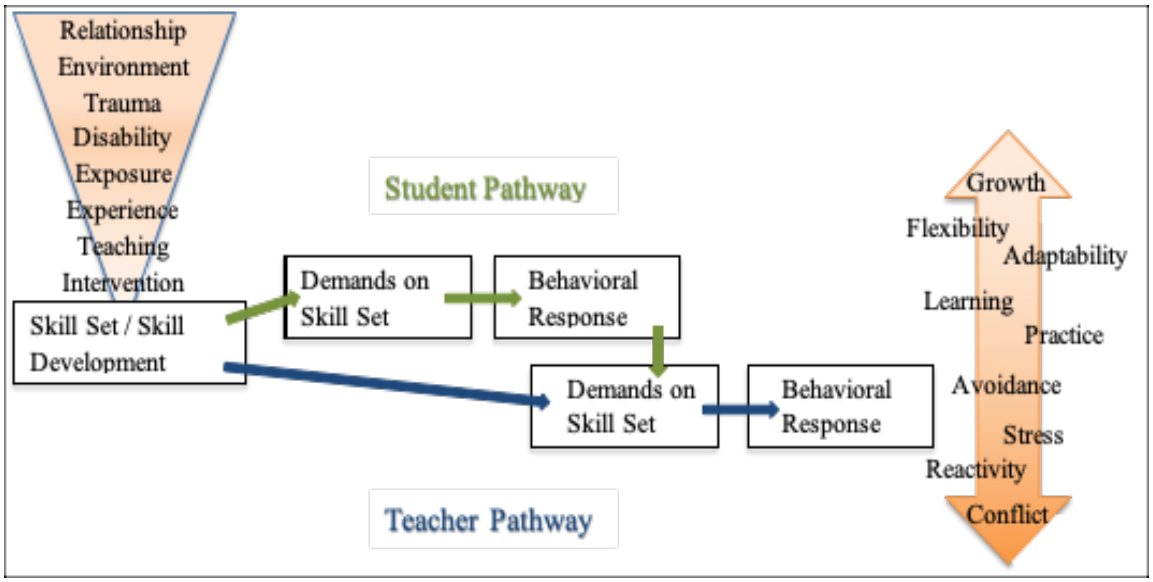
Intervention Model: Theoretical Framework

Through intervention for specific EF deficits and opportunities for students to grow these skills, educators can better respond to the increasingly challenging behaviors exhibited by K/1 students. An effective multi-tiered system of support (MTSS) approach to managing challenging behavior incorporates elements of Response to Intervention and Positive Behavior Intervention and Supports, creating school environments that are predictable, positive, safe, and consistent while providing explicit scaffolded instruction (see Benner et al., 2013). MTSS incorporates resources for teachers and ongoing professional development for more effective outcomes, but these extra supports are typically provided unilaterally without specific considerations for what the educators need most.

The proposed theoretical model for this dissertation research draws from several existing frameworks in conjunction with my professional learning and practical experience. This model, depicted in Figure 1, outlines the interplay of skill sets and skill development with the demands that are put onto specific skills and the resulting behavioral response (Blaire & Raver, 2015; Miller & Marcovich, 2012; Moriguchi 2014). This interaction of demands and behaviors creates a pathway that can be seen in both students and teachers, and the resultant behavioral responses can then trigger further responses from both student and teacher (Greene et al., 2003). Depending on the skill set, type of demand, and behavioral response, the outcome of this pathway will result in a

continuum of experiences that may be positive (prosocial) or negative (antisocial) (Blaire & Raver, 2015).

Figure 1. *The theoretical model incorporates factors that impact skill development for students and teachers with the behavioral responses that emerge when demands are put on these skill sets.*



Within this model, *skill sets* are defined as the cognitive, adaptive, social, and behavioral skills that emerge and develop throughout childhood. As shown through the teacher pathway, these skill sets continue to grow and develop in adults, through their own interactions, experiences, learning, and exposure. The model indicates that *demands* are placed onto a student's existing or developing skills. These demands might include expectations, unfamiliar material, social interactions, structures and routines, or unexpected events. Based on supports, experience, capacity, and ability, the student exhibits a *behavioral response* to these demands. This could be a positive response that furthers their growth, enables learning, and/or improves flexibility, or it could be a negative response that leads to avoidance behaviors, stress, and/or conflict (Bronfenbrenner, 1979; Walker et al., 2014). The students' behavioral response to the demands on their skill sets activates demands onto their teachers' existing and developing

skills. Positive behavioral response from a student might enable the teacher to rely on relationship-building skills to create an interaction where the student gains new skills. Negative behavioral response from a student might stretch a teacher to rely on less-developed skills that are uncomfortable, resulting in a conflictual interaction.

Task demands on developing or lagging skill sets can result in unexpected or immature behavioral responses. Greene, Ablon, and Goring (2003) describe how lagging skill development impacts students and teachers, resulting in behavior and interactions with each other that are either productive or conflictual. These authors note that high adult-child compatibility produces optimal outcomes. Using this framework, it is anticipated that providing targeted support for lagging skill sets in educators will support more effective interventions that will, in turn, provide more opportunity for positive growth in students' executive functioning. In my dissertation, I explore the relationship between teacher skill sets specific to executive functioning and the behavioral response that occurs when demands are put on those skill sets, such as in moments when a teacher is faced with the need to manage multiple competing demands simultaneously and prioritize where they should focus their attention, or times when they need to adjust quickly to an unexpected turn of events. The sudden shift to comprehensive distance learning in the spring of 2020 as a result of the COVID-19 pandemic provides an opportunity to study the relation between K/1 teachers' EF skills and their self-reported knowledge of district social and emotional learning (SEL) expectations, comfort with providing SEL interventions, overall teaching efficacy, and current quality of life.

Literature Synthesis

Executive functioning refers to a cognitive skill set that encompasses metacognition and emotional and behavioral regulation. The ability to access EF skills enables the use of organization, working memory, inhibitory control, and cognitive flexibility (Cirino & Willcutt, 2017). These allow for behaviors such as holding information in the brain and manipulating it for problem-solving purposes, stopping an impulsive behavior, organizing thoughts and materials, and transitioning between activities or problem-solving approaches (see Hughes, Ensor, Wilson, & Graham, 2010). EF also enables modulation of emotional responses and self-awareness, which can be seen through the ability to calm down when agitated or frustrated, to respond appropriately to the magnitude of a problem, or to recognize the ways that one's actions might impact others (see Espy, Sheffield, Wiebe, Clark, & Moehr, 2011). In general, EF can be thought of as the intentional, goal-directed control of thoughts, actions, and emotions (Zelazo & Carlson, 2012).

Many of the skills needed to access a typical educational environment require the use of EF. A student entering kindergarten or first grade (K/1) might be expected to demonstrate inhibitory control, problem-solving, and shift by following directions, sitting still, transitioning between activities, and navigating novel social situations (Best, Miller, & Jones, 2010; Blaire & Raver, 2015; Hughes et al., 2010). In most cases, the school system is designed to support the growth of these skills over time by scaffolding supports for younger grades and slowly removing them (Brock, Rimm-Kaufman, Nathanson, & Grimm, 2009; Matte-Gagné, Bernier, Sirois, Lalonde, & Hertz, 2018). In K/1 classrooms,

such scaffolding could look like providing frequent movement breaks, helping students turn in work, and giving only one or two directions at a time.

Lagging EF skills (executive dysfunction) can manifest in a variety of ways. Difficulty sitting still, waiting, regulating emotional responses, tolerating frustration, problem-solving, and demonstrating flexibility might be present (Blaire & Raver, 2015; Hughes et al., 2010). These behaviors are typical in preschool students and toddlers who have less-developed EF skills (Zelazo & Carlson, 2012) but begin to look like characteristics of a disability, such as Attention Deficit Hyperactivity Disorder or Oppositional Defiant Disorder, as students get older (Espy et al., 2011). When students display executive dysfunction, educators respond by providing more scaffolding or intervention, but Benner, Kutash, Nelson, and Fisher (2013) argue that many times teachers are not equipped to provide these supports on their own. A referral for special education may follow. Understanding typical executive functioning development and the impact of lagging skills can enable educators to determine appropriate interventions. Understanding how these skills manifest into adulthood can help us better support the educators implementing those interventions.

Development and Structure of Executive Functions

Executive Functioning skills develop rapidly between birth and age five and play a key role in the development of social competence and school readiness (Blair, Zelazo, & Greenberg, 2005). Diamond and Ling (2015) gathered evidence from 84 studies demonstrating how these skills can grow with exposure and practice. This skill growth is described as experience-expectant development: Our genetic coding establishes a first

draft for brain development, but experience and opportunity create the basis for growth and skill acquisition (Lukianoff & Haidt, 2018).

Understanding EF in children. Much of the early research around EF centered around deficits in adolescents and adults, but research over the past 30 years has shifted to better understand early development and growth (see Hughes, 2011). Garon, Bryson, and Smith (2008) demonstrate the importance of the first five years of life on skill development by linking EF development with the prefrontal cortex, one of the slowest developing areas of the brain. They state, "During infancy and the preschool period, core components of EF develop, forming a critical foundation that will set the stage for the development of higher cognitive processes well into adulthood" (p. 31). In general, it is believed that the EF skill of inhibition emerges first, followed by working memory, flexibility, and planning (Best et al., 2010).

Development of EF in the first two years of life follows a single-factor model with less cohesive abilities (Miller & Marcovitch, 2012; Monette, Bigras, & Lafreniere, 2015). As children move through toddlerhood and into the preschool years, a two-factor model emerges, with latent variables of inhibition and working memory/flexibility (Monette et al., 2015). These two factors result in skills that are often described as *hot* (inhibition) and *cool* (working memory) (Brock et al., 2009). As children move from preschool to kindergarten, the impact of these two factors can be measured and observed through tangible tasks (Hughes et al., 2010).

Growth of EF skills. The development of EF is rapid during early childhood, and healthy development of these skills appears to play a role in development of social competence and academic readiness (Blair et al., 2005; Willoughby, Wirth, & Blair,

2012). In contrast, lack of development and growth in these skills can be a predictor for emotional symptoms, hyperactivity, and conduct/peer problems in kindergarten and first grade students (Hughes & Ensor, 2011; Hughes et al., 2010).

Several studies have demonstrated the importance of social interactions and the parent-child relationship on EF development, including longitudinal impact of early attachment (Matte-Gagné, Bernier, Sirois, Lalonde, & Hertz, 2018). Bernier, Carlson, and Whipple (2010) investigated maternal sensitivity, mindfulness, and autonomy support and found that all three were predictors of self-regulatory skill development. Supportive parenting, including scaffolding, acceptance, and autonomy, facilitates EF development in the areas of problem solving, set shifting, and working memory. For typical EF growth, social interactions and healthy relationships are necessary. Parenting style can be more predictive than age in development of self-regulation skills and a child's ability to manage their emotions and behavior (Moriguchi 2014; Piotrowski, Lapierre, & Linebarger, 2012).

Delayed EF growth. Development of EFs can also be disrupted by a variety of factors, including maltreatment and abuse (Bell, Bayliss, Glauert, & Ohan, 2018), a single parent household (Baker, Jensen, & Tisak, 2019), and disorganized or unpredictable family life (Hughes, 2011). Recent studies around the impact of technology indicate a likelihood of delayed EF development for young children who use technology frequently (Madigan, Browne, Racine, Mori, & Tough, 2019; Zimmerman & Christakis, 2007). Given the importance of relationship and social interaction in skill development, disruptors appear to be factors that inhibit healthy social exposure. Although many

factors can contribute to lagging EF skills, it is not uncommon for multiple disruptors to be present simultaneously (Little, 2017).

EF development into adulthood. EF skills continue to develop through childhood, adolescence, and into early adulthood (Brocki & Bohlin, 2004; Hunter, Edidin, & Hinkle, 2012). Just as a surge of skill development is expected around a child's entrance into elementary school, another period of significant growth is typically seen in early adolescence. Researchers have found that this growth may follow a variety of developmental trajectories based on concurrent brain development, resulting in inconsistent demonstration of EF skills after late childhood (see Blakemore & Choudhurry, 2006). It is widely accepted that these skills continue to grow and develop through the age of 25.

Although EF skills in adults are expected to have reached their full growth, other factors can impact their efficacy. Many of the things that delay skill development early in life, such as disability, relationships, stress, and trauma, can impede the use of these skills in adults (Eysenck et al., 2007; Visu-Petra, Miclea, & Visu-Petra, 2013; Williams, Suchy, & Rau, 2009). Princiotta, DeVries, and Goldstein (2014) argue that EF skills are interactive, not independent, and hierarchically organized in development to mediate other cognitive functions. They posit that executive functioning is only necessary for tasks that are newly learned; as performance becomes more habitual with age, the need for EF skills as moderators reduces. This idea is supported through studies that have found a decline in EF skills, memory, and attention beginning in middle adulthood (Crawford et al., 2000; Gunstad et al., 2006). Thus, adults may experience difficulty

performing tasks that are newly learned or require the integration of knowledge and abilities (Naveh-Benjamin et al., 2005; Princiotta et al., 2014).

Executive Functioning at School

EF skills are "goal-directed behaviors that enable individuals to override automatic or established thoughts and responses" (Garon, Bryson, & Smith, 2008, p. 31). Expectations in the school setting rely on students to exhibit this override and self-regulate. Many studies over the past decade have demonstrated the impact of executive functioning skills on academic readiness, social interactions, and self-regulatory behavior (see Diamond & Ling, 2015). Lonigan et al. (2017) found that delayed self-regulation skills in preschoolers were associated with externalizing behavior problems and inattention in early elementary students. EF skills are critical for school readiness; they have been found to be more predictive of early school success than even IQ or reading and math skills (Blair, 2002; Hughes & Ensor, 2008).

The argument can be made that students are entering kindergarten with lagging EF skills (Blair & Raver, 2015; Willoughby, Magnus, Vernon-Feagans, & Blair, 2017). Although there are systems to identify and support a variety of developmental and skill delays in young children, it is often the demands of the school setting that bring skill deficits to light (Blair, 2002; Brock et al., 2009). Students with few social interactions or constraints placed on them, who do not have to tolerate waiting, or do not experience a denial of their demands, may find the transition to school unexpected and jarring (Bassok, Latham, & Rorem, 2016). Without a practiced skill set on which to rely, K/1 students with executive dysfunction may exhibit challenging and unexpected behaviors (Lonigan et al., 2017).

EF and teaching. Teachers also rely upon goal-directed behaviors to override impulsive responses and self-regulate. Beyond young adulthood, EF skills are expected to assist with decision-making, problem-solving, flexibility, planning, and self-monitoring (Williams, Suchy, & Rau, 2009). For adults, many of the tasks requiring EF skills become habitual, and teachers are not an exception. The school day, and even the school year, becomes a pattern that is predictable and routine. This habituation enables teachers to rely on specific EF skills, such as working memory, to organize their time and activities, with less need for the use of inhibition and regulation.

EF skills allow for solving novel problems, generating strategies for complex actions, modifying behavior to adapt to new information, following through with plans, and inhibiting behavioral and emotional responses, but a multitude of demands requiring the simultaneous use of these skills is unexpected in adulthood (Princiotta et al., 2014). When teachers are asked to adapt to new curricula, schedules, behaviors, and systems, it can become overwhelming for the lesser-used EF skills. Further, if existing disability, trauma, or stress is incorporated, it becomes more difficult for the educator to access the skills they have (Visu-Petra et al., 2013; Williams et al., 2009).

Intervening Around Executive Dysfunction

Delayed EF development is a predictor for increased learning-related problems in school; using EF measures to screen for kindergarten readiness can help educators identify students who are at-risk for long-term educational difficulties (Willoughby, Magnus, Vernon-Feagans, & Blair, 2017). Interventions for EF skills improve performance at school, both academically and socially. Durlack, Weissberg, Dymnicki, Taylor, and Schellinger (2011) conducted a meta-analysis that summarized results of 213

school-based social–emotional learning programs for students in kindergarten through high school, reporting positive effects on students' academic performance. Davies et al. (2016) found that effect sizes for non-cognitive skills were comparable to, or larger than, gender or first language effects.

Domitrovich, Cortes, and Greenberg (2007) demonstrated social competence and interaction gains through interventions targeting social-emotional learning. When social-emotional intervention was combined with self-regulation instruction for preschoolers, Graziano and Hart (2016) found growth across multiple aspects of school readiness. Martins Dias and Gotuzo Seabra (2017) shared similar results for first grade students, with growth in measures of attention, working memory, and achievement. Thus, interventions that target both hot and cool EF skills, rather than solely emotional regulation, are likely to have the greatest impact for K/1 students.

Researchers have demonstrated that adult response is also a primary factor in the effectiveness of interventions. Buy-in from the community is important in any situation, and this remains true for the educational environment. A teacher's relationship with a student and willingness to participate in intervention activities can impact the development of skill sets (Little, 2016; McKinnon & Blair, 2018). Further, teachers' perceptions of students' behaviors as symptoms of a disability can change the effectiveness of intervention (Buckrop, Roberts, & LoCasale-Crouch, 2014; Moore et al., 2015). The impact of intervention on skill development can change drastically through teacher support, consistency, and participation (Jennings & DiPrete, 2010; Jennings & Greenberg, 2009; McKinnon & Blair, 2018).

Teacher Perception

Teacher perceptions of student behavior can be thought of as the beliefs that teachers hold about the cause of student behavior (or misbehavior), and the value they assign to those beliefs. The teacher response that occurs as a result of these teacher perceptions has been studied many times over the past twenty years (see Gregory & Roberts, 2017; van Uden, Ritzen, & Pieters, 2013). Studies have documented the interaction between teacher perceptions of misbehavior and disability, the impact on academic outcomes, and the impact on relationships (Thijs & Koomen, 2009). Most studies ask teachers to think of specific student behaviors or of a specific target student, rather than looking at a broader understanding of teacher perceptions and beliefs (Thijs & Koomen, 2009).

Teacher self-efficacy and its impact on teacher and student outcomes has been studied many times over the past two decades as well (O'Neill & Stephenson, 2011). Much of the work in this area draws from Bandura's Social Cognitive Theory (Bandura, 1986); self-efficacy can be thought of as one's belief in their ability to organize and execute courses of action to bring about desired results (Tschannen-Moran & Woolfolk Hoy, 2001). For teachers, this might look like believing in the capacity to affect and influence student performance or behavior, even if the student is difficult (Brouwers & Tomic, 2001). A study from Tschannen-Moran and Woolfolk Hoy (2001) found that teacher self-efficacy is connected to student gains, and that teachers with lower efficacy scores are more likely to give up quickly on students and blame low ability for a student's lack of performance. A connection between teacher self-efficacy and student growth mindset, as defined by Dweck (2006), has also been suggested.

The constructs of teacher mindset, teacher beliefs, and teacher self-efficacy have been studied widely. The connection between teacher emotion and self-efficacy in responding to misbehavior has also been investigated (Tsouloupas, Carsona, Matthews, Grawitchc, & Barber, 2010). However, no known studies have combined the constructs of teacher perceptions/mindset and teacher self-efficacy with teacher EF skills.

Summary

EF skills, which have been shown to grow rapidly in the preschool years, may have lagging development due to a variety of factors (Hughes et al., 2010). The resulting executive dysfunction may impact classroom behavior and performance, which impacts teacher-student interactions and can, in turn, lead to reduced access to the general education environment. Targeted interventions can support the growth of these skills, leading to improved outcomes in multiple academic and social areas.

Interventions targeted at specific lagging skills, often social-emotional or self-regulatory, are reliant on teacher skill sets, which may also be impacted. Thus, along with developing an intervention plan, it is important to consider the skills of both students and teachers and determine if additional supports are needed, particularly in times when the teachers are experiencing increased demands on their own EF. My interest in this topic has led me to the following research questions:

1. How do the EF skills of K/1 educators relate to their perceptions of student behavior?

2. What is the relation between K/1 educators' EF skills and their self-reported knowledge of expectations, comfort with intervention, and overall teaching efficacy?

3. What is the relation between K/1 educators' EF skills and their self-reported efficacy and quality of life during a period of time when reacting to a pandemic required a sudden and unexpected switch to comprehensive distance learning?

CHAPTER II

METHODS

This descriptive correlational study focused on educators implementing social-emotional intervention programs with K/1 students, with the intent of exploring teacher perceptions of behavior, self-efficacy, growth mindset, and executive functioning. The research design, population, data collection, and analysis procedures are described in the sections that follow.

Design

A descriptive quantitative design was used to explore the connections between the executive functioning skills of educators and their perceptions of self-efficacy and student behavior. Self-reported engagement with teaching and distance learning activities were explored in relation to educators' executive functioning skills. Specifically, patterns between teacher-reported skill sets and perceptions were explored, with a view for how each of these might impact adult behavior. A descriptive quantitative design was appropriate for this study because it allowed for the comparison of teacher perceptions against a standardized measure of executive functioning skills.

Setting

A convenience sample of participants was recruited from elementary schools in four different school districts in the Pacific Northwest. The participating districts all utilized research-based curricula and programming for universal and targeted interventions in social-emotional and self-regulation skills as part of their core curriculum. All four districts were engaging in Comprehensive Distance Learning (CDL) during this study due to the COVID-19 pandemic; no in-person instruction had occurred for seven months, but virtual synchronous instruction was occurring. All participating

districts had the expectation that social-emotional curricula would be somehow incorporated into distance learning. The districts include large suburban and rural settings. Table 1 provides an overview of the four districts, along with a comparison to the demographics of the state as a whole. This table also outlines the intervention program(s) used by each district, as well as other information related to implementation.

Table 1

Demographics of Participating Districts, Compared to State Averages

	A	B	C	D	State Avg
Setting	Suburban	Rural	Rural	Rural	
Total students	20,220	2,820	2670	520	2,917
Elementary schools	25	3	4	1	
K-2 attendance rate	87%	84%	78%	84%	81%
SPED students	16%	17%	15%	20%	15%
EL students	30%	<5%	13%	<5%	9%
FRL qualified	57%	43%	35%	41%	51%
SEL curriculum	PAX, Wellness	Zones, Wellness	Various	MindUp, Zones	NA
Years SEL implemented	3	2	1	3	NA
Other staff involved	Y	Y	Y	Y	NA
IAs involved	Y	Y	Y	Y	NA

*Note: SPED – special education; EL – English learner; FRL – free-reduced lunch; IA – instructional assistant; Other staff – counselor, psychologist, special educator, etc.

Participants

A convenience sample of educators from each of the four districts was recruited to participate in this study. Participants included kindergarten and first grade (K/1)

teachers, along with other staff involved in implementing the interventions in these districts, such as counselors, behavior coaches, specialists, and instructional/teaching assistants. Additional participants were recruited through my professional network and personal contacts, through direct interactions and a shareable Facebook post. Interested participants were invited to provide their email addresses and verify that they were educators working with K/1 students in a district utilizing social-emotional curriculum in classrooms. These participants were then invited to participate via an email link during the same window as district participants. Opportunity to be entered into a drawing for a gift card was offered to all participants, with five names drawn from each district that participated and five names drawn from the additional participants who were recruited through my professional network and personal contacts ("other districts"). Districts were incentivized to participate through the sharing of results and recommendations.

A response rate of 25% resulted in an initial sample size of 90 educators. Removal of incomplete surveys resulted in a final sample size of 67 educators: 43% from District A, 33% from District B, 7% from District C, 12% from District D, and 5% from other districts. Participant ages ranged from 21 through 64 years old with a median age of 41. The majority of the sample (n = 27, 43%) reported 11 or more years of teaching experience; 16 (25% of the sample) reported five or fewer years of experience. Additional demographic information can be found in Table 2.

In addition to these demographics, the majority of participants (83%) reported that their interactions with students at the time they completed the survey were *mostly* to *fully synchronous*, with 59% reporting *mostly* to *entirely whole group* instruction. The presence of additional stressors related to COVID-19 was also gathered to better understand the sample and the experiences of participants (see Table 3).

Table 2

Demographics of Participants

Characteristic	Percent of Sample			PNA
Race/Ethnicity	White	Non-White	Hispanic	
	88%	7%	3%	5%
Grades Taught/Supported	Kinder	First	Both K/1	
	15%	23%	55%	7%
Gender	Female	Male		
	88%	7%		5%
Taught Other Grades	Yes	No		
	73%	20%		7%
Taught Other Districts	Yes	No		
	55%	45%		

Note. PNA – prefer not to answer

Table 3

COVID-19 Stressors, by Percent of Sample

Identified Stressor	Yes	No	PNA
Children under 18 years in the home	1-2: 42% 3+: 7%	50%	1%
Partner/family member to help	65%	20%	15%
Loss of income due to COVID-19	22%	75%	3%
High-risk household members	55%	45%	
Other significant stressor	67%	33%	

Note. PNA – prefer not to answer

Data Sources

Five self-report measures were combined into one survey and provided to participants through an online Qualtrics link: the *Staff Perceptions and Experiences Survey* (SPES), the *Staff Perceptions and Experiences Survey for Distance Learning* (SPES-DL), the *Behavior Rating Inventory of Executive Function, Adult Version* (BRIEF-A), the *Professional Quality of Life Scale* (ProQOL), and the *Coronavirus Anxiety Scale* (CAS). Participants were asked to complete the survey one time, with a window of two weeks allotted for participation. A link to the survey was provided through email, with a follow-up reminder email in the second week.

SPES survey. Participants were invited to complete the SPES, a short self-assessment tool. I developed and validated the SPES in fall 2019 using a sample of 34 teachers from two districts. This measure was developed with the intent of capturing teacher beliefs about behavior and self-efficacy. The survey development included research into self-efficacy, teacher beliefs, teacher mindset, student-teacher relationships, and growth mindset. A 27-item survey was first created using elements of the *Growth Mindset Scale* (Dweck, 2006), *Bandura's Instrument Teacher Self Efficacy Scale* (Bandura, 1997), and the *Perceived Self-Efficacy* subscale of the *Teacher Interpersonal Self-Efficacy Scale* (Brouwers & Tomic, 2001). Once the 27-item survey was developed, items were removed to avoid repetitive, vague, and unnecessary questions. Some questions were reworded to add clarity and to encourage responders to think about self-efficacy from a theoretical as well as a personal perspective. The remaining 19 items were separated into four areas: Beliefs, opinions about Student Behavior, opinions about

Adult Behavior, and Experiences. As part of the piloting of this survey, these 19 items were reduced to 13 through exploratory factor analysis.

The SPES consists of 13 selected-response items with Likert-scale responses that can be clustered into four themes: *Mindset* (4 items), *Classroom Management* (3 items), *Relationship* (3 items), and *External Locus of Control* (3 items). Based on a factor analysis run using data from my dissertation sample, these items were organized into two factors: *Behavior* and *Self-efficacy*. A supplemental section of the survey asks questions that provide demographic information and further expansion on experiences, expectations, and training (12 items). A sample of items can be found in Figure 2. Approximate time to complete the SPES is 5 minutes.

Figure 2. *Overview of Staff Perceptions and Experiences Survey*

Format:	**Sample Items**
25 questions – 13 scale items; 12 demographic items 4-point scales include: (1) *Not at all True* to (4) *Very True;* (1) *Very Little* to (4) *A Great Deal;* and (1) *Never* to (4) *Almost Always*	• People can learn new strategies to alter their behavior, but they can't really change their behavioral instincts. • How much can teachers do to get students to follow classroom rules? • How much can teachers do to promote learning when there is lack of support from the home? • I can execute several activities at once without becoming overwhelmed.
Subscales: *Mindset, Self-Efficacy*	

Internal reliability for the SPES was established using Cronbach's alpha. The measure as a whole has reliability of $\alpha = .818$. Subscale reliability ranged from $\alpha = .612$ (Mindset) to $\alpha = .836$ (Self-Efficacy). Construct validity was established using exploratory factor analysis with promax rotation. Two distinct factors emerged, with a correlation between factors of .290. Content validity was established using the Growth Mindset Scale (GM), which was positively and significantly correlated with the Mindset

subscale of the SPES, $R(33) = .43$, $p = .01$. No significant correlations exist between the GM scale and the Self-Efficacy subscale of the SPES, indicating that this subscale is distinct from the mindset construct.

SPES-DL survey. The SPES-DL, is a modified version of the SPES that was developed to address self-efficacy when teaching virtually. Questions from the SPES related to self-efficacy were modified for the distance learning platform to obtain eight 4-point items that could be completed in approximately 3 minutes. Construct validity was established using exploratory factor analysis with promax rotation. Two factors emerged, with a correlation between factors of .31. Reliability of these two factors was established using Cronbach's alpha: $\alpha = .63$ and $\alpha = .82$.

BRIEF-A self-assessment. Participants were asked to complete the BRIEF-A, a standardized measure that provides insight into executive functioning (EF) skills and self-regulation for adults (Roth, Gioia, & Isquith, 2006). This scale is based on the original BRIEF (updated to the BRIEF-2 in 2016), which targets the EF skills of children ages 5-18 through parent-, teacher-, and self-report. The BRIEF-A consists of 75 statements that can be marked with "*Never*" "*Sometimes*" or "*Often*" based on self-evaluation. Administration takes approximately 10 minutes.

Nine theoretically and clinically derived scales are used to define EF: *Inhibit*, *Self-Monitor*, *Plan/Organize*, *Shift*, *Initiate*, *Task Monitor*, *Emotional Control*, *Working Memory*, and *Organization of Materials*. The BRIEF-A also includes two broad indices, *Behavior Regulation* and *Metacognition*, as well as three validity indices, *Negativity*, *Inconsistency*, and *Infrequency*. The BRIEF-A was normed on a sample of 1136 adults from a wide range of racial, ethnic, educational, socioeconomic, and geographic backgrounds. The norming sample differs from the sample in the current study, where

participants were primarily female, white, college-educated and from the Pacific Northwest, but mirrors the population of the greater United States.

Internal consistency for the BRIEF-A is moderate to high for clinical scales (.73 - .90) and high for indices (.93 - .96). Test-retest correlations across clinical scales range from .82 - .94, over an average interval of 4.22 weeks. Convergent validity was established through significant correlations with the *Frontal Systems Behavior Scale* (FRSBE), the *Dysexecutive Questionnaire* (DEX), the *Cognitive Failures Questionnaire* (CFQ), the *Clinical Assessment of Depression* (CAD), the *Geriatric Depression Scale* (GDS), the *Beck Depression Inventory-II* (BDI-II), and the *State Trait Anxiety Inventory* (STAI).

Stress and anxiety scales. To assess the potential impact of the global COVID-19 pandemic on participant responses, the ProQOL and CAS, along with five pandemic-related stress questions, were included at the end of the survey. These items were included to help determine respondents' concerns for their own health and well-being, the extent of stress related to quality of life at work, and additional external stressors that may be impacting their perceptions and experiences, such as having to teach while supporting children in their home with learning. Appendix E contains copies of these scales and questions.

The ProQOL (Stamm, 2010) is a 30-item scale that measures professional quality of life through compassion satisfaction, burnout, and compassion fatigue/secondary traumatic stress. *Compassion satisfaction*, which has been linked to mindfulness, empathy, and perspective taking, measures the perception of pleasure derived from caring for others (Conrad & Kellar-Guenther, 2006). It can be understood as a mitigating factor for the development of burnout or compassion fatigue (Stamm, 2010). *Burnout* measures the extent to which helpers are feeling emotionally exhausted and hopeless, which may

lead them to become cynical and experience decreased interest in their work (Conrad & Kellar-Guenther, 2006; Stamm, 2010). *Compassion fatigue* occurs when a helper has intense exposure to traumatic experiences through their work and subsequently demonstrates diminished capacity for compassion toward others who have experienced trauma (Conrad & Kellar-Guenther, 2006). *Secondary traumatic stress*, a similar concept, is the natural strain that occurs from exposure to others' trauma (Stamm, 2010).

Adequate reliability for the ProQOL has been established multiple times since its initial validation, which measured internal consistency at $\alpha = .87$ (compassion satisfaction), $\alpha = .72$ (burnout), and $\alpha = .80$ (compassion fatigue/secondary traumatic stress). Items ask how frequently a person has experienced each prompt in the past 30 days, with higher scores indicating a greater presence of each subscale construct. Response options are presented as a 5-point scale ranging from (1) *never* to (5) *very often*. Scores are obtained by taking the sum of items, with possible scores ranging from 10–50. Approximate time to complete the ProQOL is 10 minutes.

The CAS (Lee, 2020) is a brief mental health screener to identify probable cases of dysfunctional anxiety associated with the COVID-19 pandemic. It consists of five items that measure the cognitive, behavioral, emotional, and physiological dimensions of coronavirus anxiety. Initial analyses revealed high reliability ($\alpha = .93$) and acceptable sensitivity (90%) and specificity (85%). Content validity was demonstrated through strong, positive correlations with relevant measures of disability, distress, and coping. Administration of the CAS takes approximately two minutes.

Procedures

Recruitment. Participating districts were recruited through my professional network, with individual participants recruited through email. I personally contacted superintendents and district-designated research contacts and explained study parameters.

With their approval, and based on their communication preferences, I then contacted designated staff and invited them to participate through an emailed survey link (Appendix B). These staff included K/1 teachers, counselors, psychologists, resource teachers, instructional assistants, behavior coaches, and other staff involved with K/1 students. The emailed survey link took them to the Qualtrics website and an informed consent page (Appendix C). Upon granting consent, participants were given access to the rest of the survey. Responses were anonymous, with no identifying information gathered through Qualtrics. Participants were given a two-week window in which to complete this survey, and a reminder email was sent toward the end of the second week.

A second wave of recruitment was completed due to recruitment challenges as a result of the COVID-19 pandemic. In March 2020, schools were shut down by executive order from the governor due to the pandemic. There was hope that schools would reopen by fall, but in August 2020 the Oregon Department of Education released expectations for virtual instruction through Comprehensive Distance Learning (CDL). At the same time, further challenges arose as wildfires swept across the western United States and the Pacific Northwest; districts and teachers were evacuated as the school year was set to begin. For these reasons, several larger districts that had previously expressed interest in participation opted to decline. With IRB approval, I conducted additional recruitment through my professional network and personal contacts, with direct interactions and a shareable Facebook post. Interested participants were asked to verify that they were educators working with K/1 students in a district utilizing social-emotional curriculum in classrooms. These participants were then emailed a link to the Qualtrics survey within the same window of time as the district participants.

Survey administration. For utility and efficiency, consent was obtained from PAR, Inc. to add BRIEF-A questions to the end of the SPES and SPES-DL, combining

them into one survey administered through Qualtrics (Appendix D). The ProQOL and CAS were added to this survey as well, to assess the possible impact of pandemic-related stress on BRIEF-A scores. Using the Qualtrics survey platform, participants were able to complete the survey online with a computer, tablet, or mobile device. Participants were allowed to stop the survey at any time or to leave the survey and return to finish it later. They were allowed to complete the survey only once. After two weeks, all survey responses were saved, but only the results from completed surveys were analyzed.

Data preparation. Each participant was assigned a random identification number by Qualtrics, and these were simplified to R1, R2, R3, etc. These identification numbers ensured anonymity and that SPES, SPES-DL, BRIEF-A, ProQOL, and CAS responses were appropriately synced once they had been separated for scoring. A total of 23 incomplete surveys were removed during data cleaning.

BRIEF-A responses were hand-scored using the BRIEF-A administration and scoring manual (Roth, Gioia, & Isquith, 2006); *T*-scores were obtained for subscales, indices, and a global composite. Scores on the BRIEF-A range from 35-100+, but scores can also be categorized by significance (35-60 average, 60-65 mildly elevated, 65+ clinically significant; Roth, Gioia, & Isquith, 2006). Due to the positive skew of scores, any scores that fell above 60 were labeled as "elevated" and any scores in the average range were labeled as "not elevated." Both *T*-scores and significance were noted for analysis. The BRIEF-A also contains three validity scales: the *Negativity* scale screens for unexpected patterns of high ratings that could indicate negative response bias, the *Inconsistency* scale screens for unexpected inconsistencies in rater responses, and the *Infrequency* scale screens for responses that are highly unlikely in a normative or clinical population (Roth, Gioia, & Isquith, 2006). Raters that obtain Negativity scores of 6 or higher, Inconsistency scores of 8 or higher, and/or Infrequency scores of 3 or higher

should have their responses and results viewed with caution. After reviewing all 67 BRIEF-A validity scales, four surveys were removed from analyses due to elevated infrequency scores, resulting in a sample of 63 responses to the BRIEF-A.

The ProQOL surveys were hand-scored to obtain raw scores for the *Compassion Satisfaction* scale, the *Burnout* scale, and the *Secondary Traumatic Stress* scale. These raw scores were classified into levels (low, moderate, or high) according to the scoring guide (Stamm, 2010). Both raw scores and level were noted for analysis. Scores were then reviewed to determine if any raters indicated high levels across all scales, which could indicate significant stress and burnout. None were noted, and thus no surveys were excluded on the basis of ProQOL scores.

Questions from the CAS were hand-scored to obtain a raw score between 0 and 20. The author of this survey notes that scores of nine or above classified adults as having dysfunctional levels of anxiety related to the coronavirus (90% sensitivity, 85% specificity, 15% false positive rate; Lee, 2020). Raw scores were reviewed to determine if any participants reported levels greater than or equal to 9; none did, so no additional surveys were excluded on the basis of CAS scores.

Statistical Analysis

Once data were cleaned, results from the SPES, SPES-DL, BRIEF-A, ProQOL, and CAS were entered into SPSS for analysis. Descriptive statistics were run on demographic questions from the SPES and stress-related pandemic questions to determine the overall distribution of the sample. Factor analyses were run on SPES items to confirm factor loadings for the Mindset, Classroom Management, Relationship, and External Locus of Control subscales, and on the SPES-DL items to determine whether any questions should be excluded (Figure 3).

Figure 3. *Factor analyses of SPES and SPES-DL.*

Step:	**Result:**	**Outcome:**
1. Principal axis factoring with scree plot for SPES items	Two factors account for 33% and 14% of variance	Consider two factors: Mindset and Self-Efficacy
2. Two-factor extraction with promax rotation	Questions 1 and 10 do not load onto either factor; question 8 loads onto both factors but more strongly on factor 1 (mindset); question 9 (intended for mindset) loads onto factor 2 (self-efficacy).	Consider dropping questions 1 and 10, grouping question 8 with the mindset questions, grouping question 9 with the self-efficacy questions.
3. Internal reliability for Mindset items (Q2, Q3, Q8)	Q2 and Q3: α = .59 (low) Q2, Q3, Q8: α = .612 (acceptable)	Modified Mindset subscale composed of questions 2, 3, and 8.
3. Internal reliability for Self-Efficacy items (Q4-Q7, Q9, Q11-Q13)	α = .84 (good)	Modified Self-Efficacy subscale: questions 4, 5, 6, 7, 9, 11, 12, and 13.
4. Principal axis factoring with scree plot and promax rotation for SPES-DL items and SPES subscales (separately) Three-factor extraction for SPES-DL and Self-Efficacy subscale	Mindset subscale: three distinct factors emerge and account for >10% of variance. Correlations between factors are .163 and .278 Self-Efficacy subscale: four factors emerge, three account for >10% of variance. Correlations between factors are .336 to .504.	None of the SPES-DL items load onto the Mindset subscale of the SPES. None of the SPES-DL items clearly load onto the Self-Efficacy subscale of the SPES; there is some cross-loading when forced into three factors.
5. Principal axis factoring with scree plot for SPES-DL items; Two-factor extraction with promax rotation	Two distinct factors emerge (correlation of .307)	Factor 1- questions 1, 2, 3, 6, 7, 8, and 9 Factor 2 – questions 4 and 5
6. Internal reliability for two factors (F1 and F2)	F1: α = .82 (good) F2: α = .63 (acceptable)	Two subscales for the SPES-DL, Internal (F1) and External (F2).

As shown, this process resulted in two modified subscales for the SPES (*Mindset* and *Self-Efficacy*) and two separate subscales for the SPES-DL (*Internal Self-Efficacy* and *External Self-Efficacy*). Based on correlations and cross-loadings between items on the SPES Self-Efficacy subscale and the SPES-DL items, the Internal Self-Efficacy scale is considered to have items related to one's ability to change the outcome of something by changing their own behavior; the External Self-Efficacy scale is considered to have items related to one's ability to change the behavior of others.

To address RQ1 (*How do the EF skills of K/1 educators relate to their perceptions of student behavior?),* I ran correlational analysis comparing BRIEF-A *T*-scores with scores from the SPES *Mindset* subscale. To address RQ2 (*What is the relation between K/1 educators' EF skills and their self-reported knowledge of expectations, comfort with intervention, and overall teaching efficacy?),* I ran frequency counts of items related to social-emotional learning curriculum based on groupings of those with elevated BRIEF-A scores and those with scores that are not elevated. I also ran a correlational analysis comparing BRIEF-A *T*-scores with scores from the SPES *Self-Efficacy* subscale. To address RQ3 (W*hat is the relation between K/1 educators' EF skills and their self-reported efficacy and quality of life during a period of time when reacting to a pandemic required a sudden and unexpected switch to comprehensive distance learning?*), I ran two correlational analyses comparing BRIEF-A *T*-scores with SPES-DL scores and ProQOL raw scores.

CHAPTER III

RESULTS

This chapter presents the findings for each of my three research questions. Prior to analysis, the potential impact of pandemic-related stress on executive functioning scores was considered. See Table 4 for descriptive statistics. A *t*-test was used to determine if there was a significant difference in scores on the Coronavirus Anxiety Scale (CAS) between the group defined as having average scores on the General Executive Composite (GEC) of the Behavior Rating Inventory of Executive Function, Adult Version (BRIEF-A) and the group defined as having elevated GEC scores. A second and third *t*-test were run comparing the mean scores for the CAS between the groups with elevated scores for the Metacognition Index (MI) and Behavior Regulation Index (BRI) on the BRIEF-A, respectively, and the group with average scores on these indices.

Table 4

Descriptive Statistics for CAS for Those with Elevated (E) and Not Elevated (NE) BRIEF-A Scores

	Count	Mean	SD	Min	Max
General Executive (E)	12	1.83	1.64	0	4
General Executive (NE)	48	.94	1.45	0	6
Behavior Regulation (E)	11	1.82	1.60	0	4
Behavior Regulation (NE)	49	.96	1.47	0	6
Metacognition (E)	13	1.23	1.64	0	4
Metacognition (NE)	47	1.09	1.50	0	6

An independent-samples *t*-test was used to compare CAS scores for elevated GEC and not elevated GEC conditions. There was no significant difference in the scores for

elevated GEC (*M*=1.83, *SD*=1.64) and not elevated GEC (*M*=.94, *SD*=1.45) conditions; *t*(58)=1.87, *p* = 0.067. A second independent-samples *t*-test was run to compare CAS scores for elevated BRI and not elevated BRI conditions. There was no significant difference in the scores for elevated BRI (*M*=1.82, *SD*=1.60) and not elevated BRI (*M*=.96, *SD*=1.47) conditions; *t*(58)=1.72, *p* = 0.090. A final independent-samples *t*-test was run to compare CAS scores for elevated MI and not elevated MI conditions. There was no significant difference in the scores for elevated MI (*M*=1.23, *SD*=1.64) and not elevated BRI (*M*=1.09, *SD*=1.50) conditions; *t*(58)=3.04, *p* = 0.763. These results suggest that those with elevated scores for the GEC, BRI, and MI of the BRIEF-A did not differ from those with non-elevated scores for the GEC, BRI, and MI in terms of their CAS scores.

Research Question One

To answer research question one (*How do the EF skills of K/1 educators relate to their perceptions of student behavior?*), I ran a correlation between the Mindset subscale of the Staff Perceptions and Experiences Survey (SPES) and the MI, BRI, and GEC composites of the BRIEF-A, as well as the subscales that make up the MI and BRI. No statistically significant relations were found between responses to the Mindset subscale of the SPES and responses on the BRIEF-A (see Table 5).

Table 5

Correlations between Mindset and BRIEF-A Subscales and Composites (n = 63)

BRIEF-A	Mindset
GEC	.06
BRI Composite	.03
BRI Subscale: Inhibit	.13
BRI Subscale: Shift	.06
MI Composite	.03
MI Subscale: Emotional Control	.04
MI Subscale: Self-Monitoring	-.09
MI Subscale: Initiate	.04
MI Subscale: Working Memory	.14
MI Subscale: Planning/Organization	.03
MI Subscale: Task Monitoring	-.10
MI Subscale: Organization of Materials	.14

Research Question Two

To answer research question two (*What is the relation between K/1 educators' EF skills and their self-reported knowledge of expectations, comfort with intervention, and overall teaching efficacy?*), I report frequency counts and correlations.

Knowledge of expectations. Average *T*- scores for the BRIEF-A range from 40-60, with mildly elevated scores between 60-65 and clinically significant scores above 65. As noted in the methods section, scores for this sample were grouped as *Not Elevated* (35-60) or *Elevated* (61+). Both the SPES and the SPES-DL surveys asked the following questions for in-person and virtual instruction: *Are you currently expected to teach social*

emotional skills in your classroom/ through distance learning? Have you been provided with a curriculum or guidance? These questions were used to determine participants' knowledge of expectations, as each district had confirmed these expectations prior to survey administration. Table 6 presents frequency counts and percentages of responses to these questions, grouped by either not elevated (*n = 51*) or elevated (*n = 12*) based on participants' responses for the GEC of the BRIEF-A.

The majority of participants reported having knowledge of expectations for in-person and virtual teaching, with a slightly higher percentage of participants with elevated BRIEF-A scores than those with non-elevated BRIEF-A scores reporting knowledge of expectations for in-person teaching (83% compared to 78.4%) and virtual teaching (75% compared to 66.7%). These patterns were also found in participants' reports of being provided with SEL curriculum for in-person (75% compared to 64.7%) and virtual (66.7% compared to 49%) teaching (see Table 6).

Comfort with implementation. As part of the SPES and SPES-DL surveys, participants were asked, based on in-person and virtual instruction, *Do you feel equipped to teach social emotional skills?* Table 7 presents frequency counts and percentages of responses to this question, grouped by either not elevated (*n = 51*) or elevated (*n = 12*) based on participants' responses for the GEC of the BRIEF-A. The majority of participants reported feeling equipped to teach SEL skills in-person and virtually, with a slightly higher percentage of participants with elevated BRIEF-A scores than those with non-elevated BRIEF-A scores reporting comfort with implementation for both in-person teaching (66.7% compared to 59.4%) and virtual teaching (58.3% compared to 51%).

Table 6

Frequency (and %) of Expectations by BRIEF-A Grouping

	Yes	No	Not Sure
Expected to teach SEL (classroom)			
Not elevated	40 (78.4%)	6 (11.8%)	5 (9.8%)
Elevated	10 (83.3%)	1 (8.3%)	1 (8.3%)
Given curriculum (classroom)			
Not elevated	33 (64.7%)	10 (19.6%)	8 (15.7%)
Elevated	9 (75%)	1 (8.3%)	2 (16.7%)
Expected to teach SEL (virtual)			
Not elevated	34 (66.7%)	11 (21.6%)	6 (11.8%)
Elevated	9 (75%)	1 (8.3%)	2 (16.7%)
Given curriculum (virtual)			
Not elevated	25 (49%)	14 (27.5%)	12 (23.5%)
Elevated	8 (66.7%)	2 (16.7%)	2 (16.7)

Table 7

Frequency (and %) of Comfort with Curriculum by BRIEF-A Grouping

	Yes	No	Not Sure
Equipped to teach SEL (classroom)			
Not elevated	28 (54.9%)	7 (13.7%)	16 (31.4%)
Elevated	8 (66.7%)	1 (8.3%)	3 (25%)
Equipped to teach SEL (virtual)			
Not elevated	26 (51%)	8 (15.7%)	17 (33.3%)
Elevated	7 (58.3%)	1 (8.3%)	4 (33.3%)

Teaching efficacy. Scores from the Self-Efficacy scale of the SPES were correlated with *T*-scores for the MI, BRI, and GEC composites of the BRIEF-A, as well as the subscales that make up the MI and BRI. No statistically significant relations were found between responses to the Self-Efficacy subscale of the SPES and responses on the BRIEF-A (see Table 8).

Table 8

Correlations between Self-Efficacy and BRIEF-A Subscales and Composites (n = 63)

BRIEF-A	Self-Efficacy
GEC	-.118
BRI Composite	-.186
BRI Subscale: Inhibit	-.114
BRI Subscale: Shift	-.146
MI Composite	-.013
MI Subscale: Emotional Control	-.148
MI Subscale: Self-Monitoring	-.230
MI Subscale: Initiate	-.033
MI Subscale: Working Memory	-.061
MI Subscale: Planning/Organization	-.164
MI Subscale: Task Monitoring	-.079
MI Subscale: Organization of Materials	.044

Research Question Three

I ran correlations to answer research question three (*What is the relation between K/1 educators' EF skills and their self-reported efficacy and quality of life during a*

period of time when reacting to a pandemic required a sudden and unexpected switch to comprehensive distance learning?).

Self-efficacy during distance learning. To address this portion of the question, I ran a correlation between the two subscales of the SPES-DL (Internal Self-Efficacy and External Self-Efficacy) and the MI, BRI, and GEC composites of the BRIEF-A, as well as the subscales that make up the MI and BRI (see Table 9).

Table 9

Correlations between SPES-DL Subscales and BRIEF-A Subscales and Composites (n = 63)

BRIEF-A	Internal Self-Efficacy	External Self-Efficacy
GEC	-.34**	.16
BRI Composite	-.38**	.00
BRI Subscale: Inhibit	-.06	-.00
BRI Subscale: Shift	-.41**	-.08
MI Composite	-.25	-.01
MI Subscale: Emotional Control	-.46**	.02
MI Subscale: Self-Monitoring	-.18	-.03
MI Subscale: Initiate	-.30*	-.05
MI Subscale: Working Memory	-.26*	-.02
MI Subscale: Planning/Organization	-.32**	-.02
MI Subscale: Task Monitoring	-.21	-.03
MI Subscale: Organization of Materials	-.11	.09

Note. **Significant at the 0.01 level (2-tailed), *Significant at the 0.05 level (2-tailed)

There was a weak, but statistically significant, negative correlation between Internal Self-Efficacy scores and (a) General Executive Composite scores (r = -.34); (b) Behavior Regulation Index scores (r = -.38); and (c) the Planning/Organization subscale of the BRIEF-A (r = -.33). There was a moderate and statistically significant negative correlation between Internal Self-Efficacy scores and the following subscales of the BRIEF-A: (a) Shift (r = -.41) and (b) Emotional Control (r = -.46). No statistically significant relations were found between External Self-Efficacy and any BRIEF-A indices or subscales.

Quality of life during distance learning. To address this portion of the question, I ran a correlation between the three scales of the ProQOL (Satisfaction, Burnout, and Traumatic Stress) and the MI, BRI, and GEC composites of the BRIEF-A (see Table 10). There was a weak, but statistically significant, negative correlation between Satisfaction scores and General Executive Composite scores (r = -.32), as well as the following subscales of the BRIEF-A: Initiate (r = -.31); Working Memory (r = -.28); Task Monitoring (r = -.28); Organization of Materials (r = -.28). There was a moderate and statistically significant negative correlation between Satisfaction and Planning/Organization (r = -.41).

There was a weak, statistically significant positive correlation between Burnout scores and (a) General Executive Composite scores (r = .33); (b) Behavior Regulation Index scores (r = .31); (c) Metacognition Index scores (r = .26); and (d) several subscales of the BRIEF-A: Shift (r = .27); Initiate (r = .29); Working Memory (r = .31); Planning/ Organization (r = .27); and Organization of Materials (r = .26). There was also a weak, statistically significant positive correlation between Traumatic Stress scores and the

following subscales of the BRIEF-A: Initiate (r = .32); Planning/ Organization (r = .27). There was a moderate and statistically significant positive correlation between Burnout scores and the Emotional Control subscale of the BRIEF-A (r = .35). There was also a moderate, statistically significant positive correlation between Traumatic Stress scores and (a) General Executive Composite scores (r = .37); (b) Metacognition Index scores (r = .33); (c) Behavior Regulation Index scores (r = .42); and (d) the following subscales of the BRIEF-A: Shift (r = .34); Emotional Control (r = .49); and Working Memory (r = .38).

Table 10

Correlations between ProQOL Subscales and BRIEF-A Subscales and Composites (n = 63)

BRIEF-A	Satisfaction	Burnout	Traumatic Stress
GEC	-.32*	.33*	.37**
BRI Composite	-.19	.31*	.42**
BRI Subscale: Inhibit	-.10	.11	.19
BRI Subscale: Shift	-.22	.27*	.34**
MI Composite	-.22	.26*	.33**
MI Subscale: Emotional Control	-.14	.35**	.49**
MI Subscale: Self-Monitoring	-.15	.13	.18
MI Subscale: Initiate	-.31*	.29*	.32*
MI Subscale: Working Memory	-.28*	.31*	.38**
MI Subscale: Planning/Organization	-.41**	.27*	.27*
MI Subscale: Task Monitoring	-.28*	.23	.22
MI Subscale: Organization of Materials	-.28*	.26*	.14

Note. **Significant at the 0.01 level, *Significant at the 0.05 level (2-tailed)

CHAPTER IV

DISCUSSION

This study differed from others in that it aimed to identify a relationship between teacher EF skills and behavioral response to demands. Previous studies have explored teacher response to demands based on targeted skills, relationship with students, and perception/mindset (Buckrop, Roberts, & LoCasale-Crouch, 2014; Jennings & DiPrete, 2010; Jennings & Greenberg, 2009; Little, 2016; McKinnon & Blair, 2018; Moore et al., 2015), as well as the EF skills of students (Blair, 2002; Diamond & Ling, 2015; Hughes & Ensor, 2008; Lonigan et al., 2017), but none have combined these with the EF skills of teachers. EF skills touch all areas of cognition and functioning, but they are skills that are rarely explicitly talked about beyond school age because it is assumed that functioning adults either have developed sufficient EF skills or have learned how to scaffold, accommodate, and work around their areas of difficulty. Yet EF can become less effective due to external factors (stress, depression, trauma, age, disability) or can be strengthened, even as adults. The theoretical model proposed for this study (Figure 1) suggests that teacher pathways of behavioral response and outcome interact with the behavioral response pathways of students. I wanted to further explore teacher skill sets in the area of EF in order to better understand the specific supports that could increase teachers' self-efficacy when responding to demands.

Main Findings

I hypothesized that higher EF skills in the areas of metacognition (working memory, organization, monitoring, initiation) would correlate with higher scores of self-efficacy, and that higher EF skills in the areas of behavior regulation (shift, emotional

control) would correlate with lower perceptions of student behavior and lower engagement. I also hypothesized that higher EF skills overall would result in lower burnout and traumatic stress scores. Findings from this study were surprising in light of these expectations, but not inconsistent with prior research.

Teacher EF skills and perceptions of behavior in person. No statistically significant relationship between teachers' self-reported EF skills and perceptions of student behavior during in-person learning emerged. As noted in Chapter 1, perceptions of student behavior are typically investigated through academic and social outcomes, after asking teachers to think of specific student behaviors or specific students (see Thijs & Koomen, 2009). A broader understanding of teacher perceptions and beliefs about student behavior (or misbehavior) has not been widely explored, which is why the perceptions measure for this study incorporated research around growth mindset. Zhang (2013) referred to *Social Reference Theory* in proposing the idea that perceptions do not exist without context. Although this theory is fairly new, research has supported its claims that changing references can change perceptions and any perceptions must be understood in the context of a reference (Zhao & Zhang, 2020). I attempted to measure teacher perceptions in a general way, but it is possible that perceptions of behavior cannot be measured in the way I attempted, using quantitative methods without reference or context for that behavior. I could have explored teacher perceptions of behavior using a combination of the mindset scale and qualitative analysis of open-ended scenario questions, or through a qualitative case study. Such approaches might be more fruitful in future studies.

In addition to difficulties with the way that the construct of perceptions was measured, my results also reflect challenges that are common with correlations. As noted by Aggarwal and Ranganathan (2016), low correlations are likely to appear with samples that (a) are smaller; (b) have little variance, and/or (c) are not normally distributed. My sample was small, there was not a lot of variance in responses, and results on the BRIEF-A were positively skewed.

Teacher EF skills and knowledge of expectations. The results around knowledge of expectations related to social emotional learning (SEL) instruction and intervention were unexpected. I had anticipated that a greater percentage of educators with average EF skills would report knowledge of expectations, consistent with research that has found lower EF skills can result in deficits with organization, working memory, and sustained attention (Best & Miller, 2010). However, the majority of participants reported having knowledge of expectations for in-person and virtual teaching (83% and 68%, respectively). A similar result was found when asking about the expectations of SEL curriculum for in-person and virtual learning (67% and 52%). My findings suggest that the majority of participants know the expectations around SEL instruction and intervention, and lack of knowledge does not appear to be related to their EF skills or deficits.

There were some limitations with my measurement for knowledge of expectations. My sample was small (n = 63) and the majority of these (81%) reported average EF skills. Additionally, my data were gathered using only self-report measures, which carry the risk of social desirability and assume a capacity for self-reflection. Finally, knowledge of expectations is not the same as acting on expectations; Lee and

Francis (2018) found a misalignment between elementary teachers' perceptions and their observed practices. I might have had different results if I had asked about implementation of interventions or if I had observed to see if expectations were acted upon during interactions with students.

Teacher EF skills and comfort with implementation. Similar to knowledge of expectations, more than half of the participants in my study reported feeling equipped to teach SEL in person and virtually (57% and 52%, respectively). This was also an unexpected result, in light of the model proposed by Jennings and Greenberg (2009), who theorized that social emotional competence (SEC) in teachers can impact engagement with intervention implementation, particularly at the elementary level. My results suggest that the majority of participants in my study perceived that they had the resources for SEL instruction and intervention; feeling ill-equipped was not related to EF skills or deficits.

As previously noted, there are limitations to measuring comfort with implementation using a self-report measure alone, without accounting for actual implementation practices. Additionally, analysis for comfort with implementation took an already small sample and further divided it into groups (average scores and elevated scores), which were in turn unbalanced (n = 51 and n = 12, respectively). These unbalanced and small samples would have made finding statistical significance more challenging, regardless of the construct being measured.

Teacher EF skills and self-efficacy in person. I found no statistically significant relationship between self-reported EF skills and efficacy scores for in-person instruction. This was an unexpected result; it was anticipated that metacognition skills would

correlate with self-efficacy scores, even if a global executive function score did not. Such a finding would have been consistent with research that has identified deficits in metacognition skills as impacting working memory, task initiation, problem-solving, and multi-tasking (Best & Miller, 2010). In contrast, I found no relationship between self-efficacy during in-person teaching and EF skills or deficits.

As previously stated, challenges that are common with correlations may have impacted my results. Low correlations are likely to appear with smaller samples, when there is little variance, and/or with samples that are not normally distributed (Aggarwal & Ranganathan, 2016). In addition to my smaller sample, teachers tended to respond similarly on the self-efficacy scale, resulting in little variability of scores. While self-efficacy scores were normally distributed as expected, BRIEF-A scores in my data set were positively skewed. It is not possible to know the degree to which these factors impacted the correlations, though it is likely that they did. It should also be noted that teachers had not taught in person for the six months prior to participating in this study due to the COVID-19 pandemic. They were asked to reflect on teaching practices, responses, and self-efficacy from months prior, without a current context for in-person teaching. This lack of current direct context on which to base their responses could account for the lack of variance with the self-efficacy construct.

Teacher EF skills and efficacy during distance learning. Self-efficacy during distance learning was defined through two subscales: *Internal,* related to one's ability to change the outcome of something by changing their own behavior, and *External,* related to one's ability to change the behavior of others. I found a weak relationship between EF skills and internal self-efficacy during distance learning. That is, as EF skills decrease,

internal self-efficacy scores may decrease as well. A similar weak relationship was found between internal self-efficacy scores and behavior regulation skills. These results suggest that educators with more executive functioning skills may perceive an increased ability to control the outcome of something by changing their own behavior. Jennings and Greenberg (2009) proposed a connection between classroom management and social-emotional competence in teachers; my results could be considered an extension of this idea.

An analysis of subscale scores is less reliable than one based on indices or composite scores (Roth, Gioia, & Isquith, 2006) but was conducted due to the nature of the research questions and theoretical model. Identifying specific areas of skill deficit that relate to educator response requires an understanding of those skill areas. I found a weak relationship between internal self-efficacy and planning/organization skills, and a moderate relationship between internal self-efficacy and (a) shift, and (b) emotional control. These results suggest that educators with more skills in the areas of problem-solving, organization of ideas, cognitive flexibility, and emotional control may feel an increased ability to control the outcome of something by changing their own behavior.

No statistically significant relationships were found between EF skills and External Self-Efficacy. This finding suggests that there is no relationship between an educator's EF skills and their perceived ability to change the behavior of others during virtual learning. Bandura (1986) argued that teachers need to believe they are capable of managing situations effectively or else their self-doubts will overrule knowledge and skills. Research around self-efficacy expands on these ideas, often asking teachers to rate how much they believe they can do (O'Neill & Stephenson, 2011). The external self-

efficacy measure for my study differs from those used in previous studies in that it combines the idea of beliefs about one's own ability to manage something with the beliefs the respondent holds about others.

Teacher EF and quality of life during distance learning. Quality of life during distance learning was defined through *Satisfaction*, or the pleasure derived from caring for others; *Burnout*, or feelings of emotional exhaustion and hopelessness; and *Traumatic Stress*, or the strain of exposure to the trauma of others. I found a weak relationship between EF skills and Satisfaction scores, suggesting that educators with higher EF skills may report higher job satisfaction. I also found weak relationships between EF skills and scores for Burnout and Traumatic Stress, suggesting that educators with lower EF skills report higher burnout and compassion fatigue. These findings were similar to those presented by Jennings and Greenberg (2009), where an analysis of research revealed a connection between teacher social-emotional competence, emotional stress, and burnout.

At the individual skill level, the following results were found for quality of life:

1) Higher skills in problem-solving and organization of ideas were moderately related to higher satisfaction. Higher skills of initiation, working memory, monitoring of tasks, and organization of materials were weakly related to higher satisfaction.
2) Fewer skills in emotional control were moderately related to higher burnout. Lower skills in cognitive flexibility, initiation, working memory, problem-solving and organization of ideas, and organization of materials were weakly related to higher burnout.

3) Lower skills in cognitive flexibility, emotional control, and working memory were moderately related to higher compassion fatigue and trauma-related stress. Lower skills in initiation and problem solving and organizing of ideas were weakly related to higher compassion fatigue and trauma-related stress.

Limitations

This study had several limitations related to internal validity, particularly in the areas of history, selection bias, and instrumentation. The primary threat to this study was history. The study purpose, design, and potential outcomes were shared with districts through a recruitment flyer in spring 2020, in an attempt to gather interest for participation. Six districts, representing a broad range of demographics, expressed some level of interest. By April 2020, however, schools across the state had shut down and moved to distance learning due to the COVID-19 pandemic, and educators all over the state were uncertain about what the fall would bring. Although some districts were hesitant to commit to participating, all were hopeful that teachers and students would be back in buildings by September. In August 2020, it became clear that this would not happen, and districts began pivoting to a fully virtual model of instruction for the fall. The school year was delayed in starting as districts provided additional training in online resources and curriculums. Start dates were further delayed as three large wildfires swept across the state, displacing hundreds of educators and families. My participating districts dropped from six to three, and I could not get new districts to respond to recruitment efforts.

In addition to the impact on recruitment, the COVID-19 pandemic, subsequent school shut-down, and shift to virtual teaching meant that participating teachers were

asked to reflect on practices and experiences from more than six months prior, with many events occurring in between. In an attempt to reduce the impact of this unfortunate circumstance, I added questions related to distance learning and levels of stress related to the pandemic. The definition of *demands* on teacher skill sets expanded to include expectations around distance learning and overall quality of life. These changes to my original study design were necessary given the pandemic, yet it is likely that my participants' experience with these numerous challenges impacted their responses to the different survey questions in ways that I was unable to measure or account for.

The second threat to internal validity came from selection bias. Because the participants in this study were a convenience sample, with voluntary participation, it is possible that they are not representative of the larger population of teachers in the United States, or even in the state of Oregon. To counteract this threat, attempts were made to engage multiple districts with a variety of demographics, and teachers were offered a small incentive for participation. Demographic characteristics of respondents were collected and reported to provide context for interpreting the degree to which the findings might generalize to other settings. Broader generalizability beyond the Pacific Northwest is limited, as shown through the state averages outlined in Table 1. As previously noted, attempts were made to get a larger, more representative sample for the state; the active pandemic, state-wide fires with their accompanying mass evacuations, and new expectations for virtual learning resulted in districts that were hesitant to grant access to their teachers.

The final threat to internal validity came from instrumentation. Questions were self-reflective in nature, so it was important for participants to understand the purpose of

the surveys. It is possible that too much information was provided in describing survey constructs, which might have impacted participants' responses. To reduce the likelihood of this occurring, care was taken to fully disclose potential harm while ensuring anonymity, and broad terms and phrases were used as much as possible to mask the true nature of what was being assessed. To counteract the impact of social desirability on participants' responses, participants were assured that no identifying information was being collected, and they had the choice to opt-out of demographic questions that they felt might lead to disclosure of their identity. Surveys were completed independently, rather than in a staff meeting or with colleagues, to further protect against social desirability impacting responses.

As noted in Chapter 2, reliability for the SPES Mindset scale was not ideal; assessing perceptions of behavior without using specific examples, triggering defensiveness, or giving away too much of what was being measured proved challenging. Little variability was seen for responses on this measure, which added to complications with analysis. Additionally, the measure used for the construct of EF, though an established self-report instrument, is only one method for evaluating the presence of EF skills. It is common to incorporate an additional BRIEF-A reporting form that gathers input from someone well-known to the self-reporter, such as a spouse, family member, friend, or coworker. Results from this measure can be further compared against observations and direct interactions that assess EF skills through specific tasks. I did not choose to measure EF using these alternate methods due to constraints of time and access to participants. Thus, instrumentation threats remain a weakness in this study.

Contributions to Practice

The results of this study contribute to the greater discussion on how educators can respond to challenging behaviors and intervene effectively around lagging social-emotional/self-regulation skills in students. As noted by Jennings and Greenberg (2009), SEL curriculums focus on teaching students the skills of self-control, social competence, positive peer relations, emotional literacy, and inter-personal problem solving, but they do not provide instruction for promoting these skills among teachers. These authors suggest mindfulness interventions and professional development in emotional intelligence as an approach to grow teacher social-emotional competence. Yet even with an increased focus on mindfulness practices and coaching for adults, my results suggest that important areas of skill development for teachers would be ignored if the focus remains solely on social-emotional competencies. Combining SEL interventions with those for hot (inhibition) and cool (working memory) skills increases the impact for K/1 students (Graziano and Hart, 2016; Martins Dias & Gotuzo Seabra, 2017). Likewise, focusing on building teacher SEL skills in conjunction with hot and cool EF skills may increase their ability to effectively intervene with challenging behaviors.

With regard to distance learning, which has been one of the greatest demands unilaterally placed on educators in recent history, my findings suggest increased self-efficacy for those with average EF skills, particularly in the areas of cognitive flexibility, problem solving and organization of ideas, and emotional control. My findings also suggest increased job satisfaction and reduced burnout and compassion fatigue for these educators. As districts are determining what supports are needed for teachers during this time and considering which voices need to be included in decision-making conversations,

it is important to keep in mind that the skill sets of teachers are unique and extend beyond what has been explicitly taught for managing behavior or providing instruction. Helping educators identify their own EF strengths and weaknesses could enable them to advocate for the areas where they need additional coaching and support in order to increase self-efficacy.

Future Research

As noted when discussing the limitations for this study, the COVID-19 pandemic and shift to virtual learning meant that participants were having to reflect on in-person practices, perceptions, and behaviors with which they had not engaged in six months. Results were not significant for in-person self-efficacy, but were significant when the teachers were asked to consider virtual learning, a practice in which they were currently engaged at the time they completed the survey. This finding leads me to wonder if a replication of this study when schools resume in-person learning would yield a different result with regard to self-efficacy during in-person instruction.

This study left additional questions unanswered for perceptions of behavior and self-efficacy, specifically as they relate to the theoretical framework. Additional research is needed to define and explore perceptions of student behavior, perhaps with context or reference as suggested by Social Reference Theory (Zhang, 2013). Such research might be more effective with a qualitative or mixed-methods approach, which would allow for open-ended situational questions or context-specific reflection on student behavior. Such designs would align with other research on the construct of perceptions and behavior, and it would allow for a richer understanding of the teachers' experience when specific behaviors act as a demand on them.

Along similar lines, additional research could be conducted to explore the EF skills of teachers using observations and direct assessment measures. The self-report measure used in this study is well-known as a measure of EF, but it is more typical for research on EF skills to include tests and activities that require use of these skills. Such measures could combine with the self-reported responses to gain a better understanding of how teachers perceive their own skill sets. Based on the high percentage of participants who reported average EF skills, further research on teacher EF skills could include purposive sampling to over-sample teachers with EF deficits, thus allowing for a broader exploration of how these deficits relate to perceptions, self-efficacy, and practices.

With regard to self-efficacy, participants were asked to share their perceptions of their self-efficacy in relation to both in-person and distance teaching, but I did not collect any direct evidence of their effectiveness, nor any additional data that might provide additional insight about the veracity of their perceptions about their ability to impact student learning or behavior. Lee and Francis (2018) conducted qualitative research to explore teacher perceptions of student thinking and found a disconnect between teachers' self-reported perceptions and their observed teaching practices. An expansion of my study could connect teacher self-report with direct observations of their teaching practices and measures of student outcomes. Similarly, my findings suggested that the majority of participants knew the expectations around SEL instruction and intervention and that they felt equipped to teach SEL, but they were not asked if they were currently teaching these skills. This exclusion of a direct question about their SEL teaching practices was purposeful to avoid social desirability, but a deeper study into teaching

practices and outcomes might provide additional insights about the relation between teachers' EF skills and their self-efficacy, teaching practices, and student outcomes.

Conclusion

The intent of this study was to investigate the relationship between self-reported skill sets of teachers and their response to demands that are placed on them. Specific demands included challenging behavior, intervention expectations, and distance learning. Research questions compared self-reported EF skills in teachers with their perceptions of behavior, self-efficacy, and engagement with expected materials and practices during in-person and virtual learning. As shared by van Uden, Ritzen, and Pieters (2013), teacher beliefs influence their behavior in the classroom and can affect learning environments and outcomes. This study sought to explore the extent to which those beliefs could be associated with EF skills.

Ultimately, I found no connection between educator EF skills and perceptions of behavior or knowledge of expectations. I found no connection between educator EF skills and self-efficacy during in-person learning. I did, however, find relationships between educator EF skills and self-efficacy, as well as overall quality of life, during distance learning. When not teaching virtually, the EF delays of K/1 students and the resulting behavioral and social challenges are one of the greatest demands on educators' skills. This has changed during the COVID-19 pandemic, as teachers have had to adapt their curriculums, teaching styles, schedules, and engagement strategies for a new format in a very short amount of time. Thus, I feel that my results support the need for further research into the EF skills of educators and the ways in which these skills manifest in response to demands.

APPENDIX A

IRB APPROVAL

UNIVERSITY OF OREGON

DATE: August 28, 2020 **IRB Protocol Number: 08102020.015**

TO: Bethany Bowers, Principal Investigator
Educational Methodology, Policy and Leadership

RE: Protocol entitled, "Teaching the New Learner: An Investigation of Adult Executive Functioning and Response to Demands"

Notice of Review and Exempt Determination

The above protocol has been reviewed and determined to qualify for exemption. The research is approved to be conducted as described in the attached materials. Any change to this research will need to be assessed to ensure the study continues to qualify for exemption, therefore an amendment will need to be submitted for verification prior to initiating proposed changes.

For this research, the following determinations have been made:

- **This study has been reviewed under the 2018 Common Rule and determined to qualify for exemption under Title 45 CFR 46.104(d)(2).**

Contingency:

- **Documentation of approval from participating districts must be submitted to Research Compliance Services before human subjects research activities in those districts can begin.**

Approval period: August 28, 2020 - August 31, 2021

If you anticipate the research will continue beyond the approval period, you must submit a Progress Report at least 45-days in advance of the study expiration. **Without continued approval, the protocol will expire on August 31, 2021 and human subject research activities must cease.** A closure report must be submitted once human subject research activities are complete. Failure to maintain current approval or properly close the protocol constitutes non-compliance.

You are responsible for the conduct of this research and adhering to the Investigator Agreement as reiterated below. You must maintain oversight of all research personnel to ensure compliance with the approved protocol.

The University of Oregon and Research Compliance Services appreciate your commitment to the ethical and responsible conduct of research with human subjects.

Sincerely,

Russell Melia
Research Compliance Administrator

COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS • RESEARCH COMPLIANCE SERVICES
677 E. 12th Ave., Suite 500, 5237 University of Oregon, Eugene OR 97401-5237
T 541-346-2510 F 541-346-5138 http://rcs.uoregon.edu

UNIVERSITY OF OREGON

DATE: October 26, 2020 **IRB Protocol Number: 08102020.015**

TO: Bethany Bowers, Principal Investigator
Department of Educational Methodology, Policy and Leadership

RE: Protocol entitled, "Teaching the New Learner: An Investigation of Adult Executive Functioning and Response to Demands"

Notice of Amendment Review and Exempt Determination

The amendment submitted on October 12, 2020 to the above protocol has been reviewed and determined to continue to qualify for exemption. Any other change to this research will need to be assessed via a separate amendment to ensure the study continues to qualify for exemption. The research is approved to be conducted as described in the attached materials.

The purpose of this Amendment is to:

- Add an additional recruitment strategy which involves the use of personal contacts and social media.
- Revise the survey.

For this research, the following determinations have been made:

- This study has been reviewed under the **2018 Common Rule** and determined to qualify for exemption under Title 45 CFR 46.104(d)(2).

Contingency:

- If any schools/districts require their own research or ethics review process, the PI must submit documentation of that approval to RCS prior to engaging in human subjects research at that site.

Approval period: October 26, 2020 - August 31, 2021

If you anticipate the research will continue beyond the approval period, you must submit a Progress Report at least 45-days in advance of the study expiration. **Without continued approval, the protocol will expire on August 31, 2021 and human subject research activities must cease.** A closure report must be submitted once human subject research activities are complete. Failure to maintain current approval or properly close the protocol constitutes non-compliance.

You are responsible for the conduct of this research and adhering to the *Investigator Agreement* as reiterated below. You must maintain oversight of all research personnel to ensure compliance with the approved protocol.

The University of Oregon and Research Compliance Services appreciate your commitment to the ethical and responsible conduct of research with human subjects.

Sincerely,

Lizzy Utterback

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APPENDIX B

RECRUITMENT EMAIL

SUBJECT: Educators working with K/1 students

Hello,

My name is Bethany Bowers and I am a licensed school psychologist working on my doctorate through University of Oregon. For my dissertation I am conducting research on the impact of changing demands, expectations, and learners on teacher job satisfaction, efficacy, and interactions with others. The results of this research will provide important information about the experiences and perceptions of educators who work with our youngest students while navigating new demands, social-emotional learning, and unexpected behaviors.

As an educator working with kindergarten and/or first grade students, you are invited to participate in a survey that will take approximately 25 minutes of your time. It is 100% online and can be completed on a computer, tablet, or smartphone. By participating in this survey, you will have the option of being entered into a drawing to receive a $20 Amazon gift card. Participation in this survey is completely voluntary, and responses will be anonymous and confidential. If you would like to add your perspective to this research, please follow the link below:

Thank you for your time and consideration,

Bethany Bowers, EdS
Doctoral Candidate
Department of Educational Methodology, Policy, and Leadership
University of Oregon
bbowers3@uoregon.edu

APPENDIX C

INFORMED CONSENT

Welcome to the Early Elementary Staff Experiences and Functioning Survey!

You have been invited to participate in this survey because you are an Oregon educator working with kindergarten and first grade students in a district that uses social-emotional learning as part of their core curriculum and intervention programming. Participating in this survey will help us understand how the changing expectations and demands of teaching young students impact teachers' job satisfaction, efficacy, and interactions with others. This study is particularly important given the increasing challenges teachers face in light of the COVID-19 pandemic.

My name is Bethany Bowers, and I am a doctoral candidate in the department of Educational Methodology, Policy, and Leadership at the University of Oregon. I am conducting this survey under the supervision of Julie Alonzo, Ph.D. It has been approved by the University of Oregon Institutional Review Board.

This survey will take approximately 25 minutes of your time. It is 100% online and can be completed on a computer, tablet, or smartphone. By participating in this survey, you will have the option of being entered into a drawing to receive a $20 Amazon gift card. At the end of the survey, you will be provided with a link through which you can submit your email address for inclusion in this drawing. Separating your email address from your survey responses will help to ensure anonymity of your responses. Five winners will be drawn from each district that participates in this survey.

This survey is composed of three parts that will assess: (1) perceptions and experiences related to teaching in-person and through distance-learning, (2) executive functioning strengths and areas of growth, and (3) quality of life and stress during the current COVID-19 pandemic.

Risks and Actions to Reduce the Risks:
The risk to you is minimal, but you will be asked to reflect on your perceptions, practices, and current functioning. You might feel uncomfortable if you are unsure how to answer some questions, or if questions bring forth reminders of stressful situations. The following link contains a self-care card with suggestions for managing these kinds of uncomfortable feelings:
https://drive.google.com/file/d/1xGKQ0238cX6m7jNnxkO7AcLzbdJ294QX/view?usp=sharing

As with any research study, there is a risk of loss of confidentiality. Demographic questions are included in this survey, along with the option to provide your email address. The following precautions will be taken:

- Researchers are trained (and required) to protect your confidentiality.
- Any information you provide will be de-identified, and minimal demographic information is included. If desired, you can opt-out of questions, including demographic ones.
- All information will be kept in password protected files. Only authorized research personnel will have access to the information.
- Your email will be kept separate from your survey responses and will be deleted after the drawing is complete.

Benefits to You for Your Participation:
There are some benefits to completing this survey. You will be contributing to the scientific and educational community by helping us understand how the experiences, perceptions, and skill sets of teachers respond to increasing demands that are being placed on them. You will also have an opportunity to share your experience as an educator during this unprecedented global pandemic.

Request for more information or concerns:
Your questions or concerns about this research can be directed to Bethany Bowers (bbowers3@uoregon.edu) or Dr. Julie Alonzo (jalonzo@uoregon.edu). If you have questions about your rights as a research subject, call the Research Compliance Services office, University of Oregon, at 541-346-2090 or email them at researchcompliance@uoregon.edu.

Your right to Withdraw from the Project:
Your participation is voluntary, and you can withdraw at any time. If you decide to withdraw, none of your previously-completed survey items will be saved.

Consent to participate
By clicking “I agree” below, you are indicating that:
(1) you have read and understand the information provided above,
(2) you willingly agree to participate

APPENDIX D

SURVEY QUESTIONS

Section 1 - Beliefs and Experiences

This first section is designed to help us gain a better understanding of teachers' beliefs and experiences with challenging behavior in the classroom. Please consider **in-person instruction** when responding to each of the statements and questions below.

1. People can learn new strategies to alter their behavior, but they can't really change their behavioral instincts.

o	o	o	o
Not at all true			Very True

2. Behavioral responses are something about people that they can't change very much.

o	o	o	o
Not at all true			Very True

3. People have certain behavioral skills, and they really can't do much to change them.

o	o	o	o
Not at all true			Very True

4. Which has a greater influence on a student's behavior toward others at school?

o	o	o	o
Class / School Environment			Temperament

5. How much can you do to promote learning when there is lack of support from the home?

o	o	o	o
Very little			A great deal

6. How much can you do to overcome the influence of adverse community conditions on students' learning?

o	o	o	o
Very little			A great deal

7. How much can you do to get students to follow classroom rules?

o	o	o	o
Very little			A great deal

8. How much can you do to control disruptive behavior in the classroom?

o	o	o	o
Very little			A great deal

9. How much can you do to get students to trust teachers?

o	o	o	o
Very little			A great deal

10. I communicate to students that I am serious about getting appropriate behavior.

o	o	o	o
Never			Almost always

11. I can execute several activities at once without becoming overwhelmed.

o	o	o	o
Never			Almost always

12. I can keep defiant students involved in my lessons.

o	o	o	o
Never			Almost always

13. I can keep disruptive students from ruining a lesson.

o	o	o	o
Never			Almost always

Are you currently expected to teach social/emotional skills in your classroom? (yes, no, not sure, n/a)

If yes, have you been provided with a curriculum or guidance? (yes, no, not sure, n/a)

If yes, do you feel equipped to teach these skills? (yes, no, not sure, n/a)

Section 2 – Distance Learning

This second section is designed to help us gain a better understanding of teachers' experiences with distance learning. Please consider **remote instruction** when responding to each of the statements and questions below.

1. How much can you do to promote learning in the home environment?

o	o	o	o
Very little			A great deal

2. How much can you do to overcome the challenges of the home environment on students' learning?

o	o	o	o
Very little			A great deal

3. How much can you do to get students to engage in learning opportunities?

o	o	o	o
Very little			A great deal

4. How much can you do to control disruptive behavior when using a distance learning platform?

o	o	o	o
Very little			A great deal

5. How much can you do to connect with students during distance learning?

o	o	o	o
Very little			A great deal

6. I can manage several activities at once without becoming overwhelmed.

o	o	o	o
Never			Almost always

7. I can keep defiant students involved in my lessons.

o	o	o	o
Never			Almost always

8. I am able to meet the expectations of my role as a teacher.

o	o	o	o
Never			Almost always

9. The majority of my interactions with students are:

o	o	o	o
Asynchronous (through assignments)			Synchronous (live interactions)

10. The majority of my synchronous interactions with students are:

o	o	o	o
Individual			Whole group

Are you currently expected to teach social/emotional skills through distance learning? (yes, no, not sure, n/a)

If yes, have you been provided with a curriculum or guidance? (yes, no, not sure, n/a)

If yes, do you feel equipped to teach these skills? (yes, no, not sure, n/a)

Section 3 – Functioning

This third section is designed to help us gain a better understanding of teachers' overall functioning, including areas of strength and need. Please respond to each of the questions below.

To accurately score this section, please provide your age: ___ years, _____ months

(BRIEF-A questions inserted with permission from PAR, Inc. No alterations were made to these standardized questions.)

APPENDIX E

PANDEMIC-RELATED SCALES AND QUESTIONS

Section 4 – Pandemic Stress

This fourth section is designed to help us gain a better understanding of the impact of the COVID-19 pandemic on teachers' quality of life. Please respond to each of the statements below.

[Directions and Questions from ProQOL inserted]

How often have you experienced the following activities over the last 2 weeks?

1. I felt dizzy, lightheaded, or faint, when I read or listened to news about the coronavirus.

o	o	o	o	o
Not at all	Rarely (< 1-2 days)	Several Days	>7 days.	Nearly every day

2. I had trouble falling or staying asleep because I was thinking about the coronavirus.

o	o	o	o	o
Not at all	Rarely (< 1-2 days)	Several Days	>7 days.	Nearly every day

3. I felt paralyzed or frozen when I thought about or was exposed to information about the coronavirus.

o	o	o	o	o
Not at all	Rarely (< 1-2 days)	Several Days	>7 days.	Nearly every day

4. I lost interest in eating when I thought about or was exposed to information about the coronavirus.

o	o	o	o	o
Not at all	Rarely (< 1-2 days)	Several Days	>7 days.	Nearly every day

5. I felt nauseous or had stomach problems when I thought about or was exposed to information about the coronavirus.

o	o	o	o	o
Not at all	Rarely (< 1-2 days)	Several Days	>7 days.	Nearly every day

Additional pandemic-related stress questions:

1. How many children under the age of 18 do you support in your home at this time? (drop down menu) : None, 1-2, 3-4, 5+, prefer not to answer

2. Do you have a partner or family member who is able to help care for children in your home? (drop down menu) : Yes, no, prefer not to answer

3. Has your household experienced a loss of income since the start of the COVID-19 pandemic? (drop down menu) : Yes, no, prefer not to answer

4. Are any members of your household considered “high-risk”? (drop down menu) : Yes, no, prefer not to answer

5. Has there been some other significant stressor in your life at this time, unrelated to COVID-19? (drop down menu) : Yes, no, prefer not to answer

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APPENDIX F

PAR, INC LICENSE AGREEMENT

5

Creating Connections. Changing Lives. PAR

LICENSE AGREEMENT

THIS AGREEMENT, made this September 11, 2020, by and between Psychological Assessment Resources, Inc., a Florida Corporation, with its principal offices located at 16204 North Florida Avenue, Lutz, Florida 33549, hereinafter referred to as PAR, and Bethany Bowers, EdS, with her principal offices located at the University of Oregon, 11260 SW 90th Ave, Tigard, OR 97223, hereinafter referred to as Licensee.

1) RECITALS

PAR has developed and holds all copyrights and distribution rights to certain psychological tests and related materials as listed in Schedule A, hereinafter called "Test". The Test consists of PAR's items, scoring keys, scales, profiles, standard-score conversion tables, norms tables, interpretive information, and related materials created, prepared, devised, and combined by PAR for the administration, scoring, reporting, and analysis of the Test, and includes the words, symbols, numbers, and letters used to represent the Test. Licensee desires to develop automated procedures for the secure and encrypted administration of the Test through Licensee's secure internet assessment website utilizing Qualtrics. The access to Licensee's website will be by invitation only in connection with Licensee's research titled, *Teaching the New Learner: An Investigation of Adult Executive Functioning and Response to Demands* and to subjects for this research purpose only (the "Limited Purpose(s)"). Unless permitted to do so by a separate license agreement, Licensee only has the right to use the Test for the Limited Purpose described above.

In consideration of the mutual covenants and promises expressed herein and other good and valuable considerations, it is agreed as follows:

2) LICENSE

PAR hereby grants to Licensee, subject to the terms of this Agreement, a non-transferable, non-refundable, non-exclusive license to place the Test on Licensee's Website for the Limited Purpose described in Section 1 above. Licensee agrees to hold secure and treat as proprietary all information transferred to it from PAR. Licensee shall carefully control the use of the Test for the Limited Purpose described in this Agreement. Licensee's use of the Test will be under the supervision or in consultation with a qualified psychologist or other qualified individual and consistent with the then current edition of the Standards for Educational and Psychological Testing published by the American Psychological Association.

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3) TERMS AND TERMINATION

The initial term of this Agreement shall extend from September 28, 2020 through October 31, 2020, and may be extended only by mutual agreement of the parties. Notwithstanding any other provision of this Agreement, this Agreement may be terminated if any of the following events occur:

(a) Termination is mutually agreed to by the parties.

(b) Licensee defaults in the performance of any of its duties hereunder.

On the effective date of expiration or termination of this Agreement pursuant to subsections (a) and (b) above, all rights in this Agreement revert to PAR. Computer software programs written by or for Licensee remain the property of Licensee. Licensee warrants that upon expiration or termination of this Agreement under subsections (a) and (b) above, and except as set forth in any separate license agreement relating thereto, all portions of the Test licensed hereunder shall be removed from Licensee's Website. Failure to cease all uses of the Test shall constitute copyright infringement.

4) TERMINATION RIGHTS

In the event of termination pursuant to paragraph 3 above for any reason, PAR shall not be liable to Licensee for compensation, reimbursement or damages for any purpose, on account of any expenditures, investments, leases or commitments made or for any other reason whatsoever based upon or growing out of this Agreement.

5) CONDITIONS OF USE

PAR shall have the right to review, test, and approve that portion of Licensee's Website which includes the Test. Following PAR's approval of that portion of Licensee's Website containing the Test, the manner in which the Test appears on such Website shall not be changed in any material way without prior approval of PAR.

The computer programs developed by Licensee and used in any phase of administration and scoring of the Test shall be fully tested by Licensee and shall be encrypted and reasonably protected from access, intrusion and changes by persons who are not authorized agents of Licensee. In addition to the foregoing, Licensee shall exert all reasonable commercial efforts to prevent the Programs, and any accompanying code for the administration of the Test from being accessed, viewed or copied by others. Licensee warrants the accuracy of such scoring and reporting.

6) PROPRIETARY RIGHTS

PAR is the owner of all right, title and interest in the Test. Licensee shall acquire no right or interest in the Test, by virtue of this Agreement or by virtue of the use of the Test, except the right to use the Test in accordance with the provisions of this Agreement. Licensee shall not modify or revise the Test in any manner without written approval by PAR. All uses of the Test by Licensee shall inure to the benefit of PAR. Licensee agrees not to challenge or otherwise interfere with the validity of the Test or PAR's ownership of them.

7) ROYALTIES

Licensee agrees to pay PAR a royalty fee for use of the Test and copyrighted materials contained therein, at the rate of $4.20 per each test administration of the Test. Licensee will also provide PAR with an itemized accounting of all administrations of each Test administered by Licensee during the term of this agreement. Licensee shall pay to PAR Four Hundred and Twenty US Dollars ($420.00) as an initial license fee ($4.20 per administration for 100 administrations), which is due and payable upon the signing of this License Agreement. Licensee shall also pay PAR $4.20 per each test administered for any tests administered above 100 by November 15, 2020. This fee includes a 40% student discount.

For the purposes of this Agreement, an administration of the Test includes any instance where the Test is completed wholly or in part by a subject.

8) ACCOUNTING

Licensee shall develop secure computerized accounting methods acceptable to PAR. Such accounting methods must include an electronic counting mechanism which will accurately record the number of administrations of each Test used. Licensee will keep accurate financial records of all transactions relating to the use of the Test, and PAR shall have the right to examine the software and records of Licensee pertaining to the use of the Test. Licensee will make such software and records accessible to PAR or its nominee during normal working hours upon not less than five (5) business days' prior written notice. Licensee shall retain such software and records for at least one year from the date this Agreement expires or the effective termination date.

The Website shall contain the following copyright notice:

> "Adapted and reproduced by special permission of the Publisher, Psychological Assessment Resources, Inc. (PAR), 16204 North Florida Avenue, Lutz, Florida 33549, from the Behavior Rating Inventory of Executive Function – Adult Version by Robert M. Roth, PhD, Peter K. Isquith, PhD and Gerard A. Gioia, PhD, Copyright

1996, 1998, 2001, 2003, 2004, 2005 by PAR. Further reproduction is prohibited without permission from PAR."

9) INDEMNITY

Licensee agrees to indemnify PAR and hold PAR harmless against any claim or demand or against any recovery in any suit (including taxes of any kind, reasonable attorney's fees, litigation costs, and other related expenses) that may be:

(a) brought by or against PAR, arising or alleged to have arisen out of the use of the Test by Licensee;

(b) sustained or incurred by PAR, arising or alleged to have arisen in any way from the breach of any of Licensee's obligations hereunder; or

(c) incurred by PAR in any litigation to enforce this Agreement, including litigation against Licensee.

10) ASSIGNMENT

Licensee shall not assign this Agreement or any license, power, privilege, right, or immunity, or delegate any duty, responsibility, or obligation hereunder, without the prior written consent of PAR. Any assignment by PAR of its rights in the Test shall be made subject to this Agreement.

11) GOVERNING LAW

This Agreement shall be construed according to the laws of the State of Florida of the United States of America. Venue for any legal action relative to this Agreement shall be in the appropriate state court in Hillsborough County, Florida, or in the United States District Court for the Middle District of Florida, Tampa division. Licensee agrees that, in any action relating to this Agreement, the Circuit Court in Hillsborough County, Florida or the United States District Court for the Middle District of Florida, Tampa Division, has personal jurisdiction over Licensee, and that Licensee waives any argument it may otherwise have against the exercise of those courts' personal jurisdiction over Licensee.

12) SEVERABILITY

If any provision of this Agreement shall, to any extent, be invalid and unenforceable such provision shall be deemed not to be part of this Agreement, and the parties agree to remain bound by all remaining provisions.

13) EQUITABLE RELIEF

Licensee acknowledges that irreparable damage would result from unauthorized use of the Test and further agrees that PAR would have no adequate remedy at law to redress such a breach. Therefore, Licensee agrees that, in the event of such a breach, specific performance and/or injunctive relief, without the necessity of a bond, shall be awarded by a Court of competent jurisdiction.

14) ENTIRE AGREEMENT OF THE PARTIES

This instrument embodies the whole Agreement of the parties. There are no promises, terms, conditions, or obligations for the Test licensed hereunder other than those contained herein; and this Agreement shall supersede all previous communications, representations, or agreements, either written or verbal, between the parties hereto, with the exception of any prior agreements that have not previously been terminated by written consent of both parties or by one party if the terms of the agreement allow. This Agreement may be changed only by an agreement in writing signed by both parties.

15) NOTICES AND MODIFICATIONS

Any notice required or permitted to be given under this Agreement shall be sufficient if in writing and if sent by certified or registered mail postage prepaid to the addresses first herein above written or to such addresses as either party may from time to time amend in writing. No letter, telegram, or communication passing between the parties hereto covering any matter during this contract, or periods thereafter, shall be deemed a part of this Agreement unless it is distinctly stated in such letter, telegram, or communication that it is to constitute a part of this Agreement and is to be attached as a right to this Agreement and is signed by both parties hereto.

16) SUCCESSORS AND ASSIGNS

Subject to the limitations on assignments as provided in Section 10, this Agreement shall be binding on the successors and assigns of the parties hereto.

17) PARAGRAPH HEADINGS

The paragraph headings contained in this Agreement are inserted only for convenience and they are not to be construed as part of this Agreement.

18) AUTHORIZATION AND REPRESENTATION

Each party represents to the others that it has been authorized to execute and deliver this Agreement through the persons signing on its behalf.

IN WITNESS WHEREOF, the parties have executed this Agreement in duplicate on the date first herein above written.

ACCEPTED AND AGREED:

University of Oregon:

BY: _____

BETHANY BOWERS, EDS
Title: DOCTORAL CANDIDATE

DATE: 9/11/20

ACCEPTED AND AGREED:

PAR:

BY: _____

VICKI M. MCFADDEN
Title: PERMISSIONS SPECIALIST

DATE: September 16, 2020

PAYMENT RECEIVED: VISA
PAR CUSTOMER No.: 290490

SIGNATURE OF PROFESSOR REQUIRED:

I hereby agree to supervise this student's use of these materials. I also certify that I am qualified to use and interpret the results of these tests as recommended in the *Standards for Educational and Psychological Testing*, and I assume full responsibility for the proper use of all materials used per this Agreement.

BY: _____

Printed Name: Julie Alonzo

SCHEDULE A

The Test licensed to Licensee pursuant to the above license consist of PAR's items, scoring keys, scales, profiles, standard-score conversion tables, norms tables, and related materials created, prepared, devised, and combined by PAR for the administration, scoring, reporting, and analysis of the Test, and include the words, symbols, numbers, and letters used to represent the Test. However, PAR and Licensee acknowledge and agree that Licensee may use only the PAR items and scoring information for the Test as appropriate for the Limited Purpose. The Test referred to in the body of this Agreement is defined as follows:

1) Behavior Rating Inventory of Executive Function-Adult Version (BRIEF-A)
   Self-Report Form
   Self-Report Form Scoring Summary/Profile Form / Score Report

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