Up the Creek Without a Paddle: Our Nation's Principals and Special Education

By

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To my husband, Jonathan, and sons, Anthony and Joseph, inspiring me to finish

To my family and friends that supported me through this process

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Introduction

In our nation's schools, principals and assistant principals fill an invaluable role as building leaders. Principals function either alone as the sole principal in a school building or as a part of a team of assistant principals. Regardless of the leadership size within a school, both principals and assistant principals alike hold multiple responsibilities to the community, the staff, and the students. These leaders jump from task-to-task, often working countless hours. Their jobs are complicated, simultaneously requiring the skills of educators, business professionals, public speakers, therapists, and motivators. Indeed, a successful principal, assistant principal, or dean of students (hereafter "principal") is necessarily an effective leader in every sense of that word.

Just a glance at the Professional Standards for Educational Leaders (PSEL), which guide the licensing of principals, sheds light on the many responsibilities principals hold (National Policy Board for Educational Administration [NPBEA], 2015; NPBEA, 2018). They are to ensure that *all* students are receiving and accessing education – including students with disabilities. To adequately fulfill such responsibilities requires fluency in federal and state mandates. At the intersection of these outlined duties, principals must have a command of leadership qualities, communication, and problem-solving skills. The behaviors of principals matter. In fact, a recent meta-analysis found that principal behaviors impact a number of school variables, including teacher retention (Billingsley & Bettini, 2019; Glazer, 2018) and student outcomes (e.g. Liebowitz & Porter, 2019; Louis et al., 2010). Yet, these roles are further complicated when considering students with disabilities and the federal and state mandates which guide their education.

Students with disabilities represent a fraction of the school's population but demand an inordinate proportion of principals' time. On average, 13.6% of a school's students receive special education (SPED) services (National Center for Education Statistics [NCES], 2019) as a result of having a qualifying disability. However, principals report that SPED-related matters take up between 50% (Lasky & Karge, 2006) to 70% (Christenson et al., 2013) of their time. Each student with a disability presents with unique and complex needs warranting individual learning plans, thus adding to principals' ever-present responsibilities to the student body as a whole. Complicating matters further, special education is a highly litigious and procedure-driven area, with a hefty price tag attached to errors (Katisyannis et al., 2001; Zirkel & Johnson, 2011). Despite these facts, little is known about the intersection of principals and their knowledge and practice of special education.

This national study investigated the extent to which principals are prepared for special education in their administrative role and the extent to which they reported engaging in administrative behaviors related to special education. To better appreciate the principal's role in special education, we need to understand the principal's responsibilities relative to special education processes, the consequences of being ill-prepared for such processes, and what is known regarding principal preparation for SPED-related matters.

Administrator Responsibilities Relative to SPED

The disproportionate time demands required by students receiving SPED services may be better understood in the context of the federal law that guides these services, the Individuals with Disabilities Education Improvement Act (IDEIA, 2004). Nationally, this Act requires that public schools or schools receiving federal monies are required to identify, evaluate, and serve these students. More specifically, schools must provide, for each individual student with a qualifying

disability, a free and appropriate public education (FAPE) in the least restrictive environment (LRE). Beyond federal mandates, state-created policies further specify the federal legislation with additional procedures, definitions, or requirements; however, these state-level policies cannot take away from IDEIA's requirements (*Schaeffer v. Weast*, 2006). Thus, understanding the federal mandate is vital to all public-school principals. To further complicate matters, procedures can vary at each phase of implementation of the SPED process - identification, evaluation, and services.

Identification

To identify all school-age children eligible for SPED services, IDEIA specifies that local school districts must find, identify, and process referrals from ages 3 to 21 (i.e., Child Find; 34 C.F.R. §300.111). Though the Act specifies state-level responsibilities to meet the requirements of Child Find, for this paper I will highlight the general responsibilities that principals have at the individual school level. At this level, such referrals can be initiated by school staff, parents, or community members. After referrals are made, parents and schools then work together to discuss possible concerns and the possible disabilities that may be considered. There are 13 federal qualifying disability categories for which a student may become eligible.

During this identification phase, principals may be involved in one of three general roles: referral initiation (i.e., contacting the identified school or district personnel with a student-related concern), referral processing (i.e., gathering, providing, or facilitating input from stakeholders currently working with the student), or engagement in referral meetings that decide whether a referred student should move into the eligibility process. During identification, principals must have an understanding of basic Child Find requirements, within-district personnel involved, timelines associated with referrals, and a basic understanding of disability characteristics.

Eligibility

After a referral, a collaborative team (often including principals) and parents meet to discuss the referred student, the upcoming eligibility process, and the procedural safeguards afforded to parents. The team then selects the appropriate assessments, schedules observations, and identifies those data sources that will constitute a comprehensive evaluation of the child's strengths and weaknesses. After receiving the parent's informed consent, the schools then have 60 days (fewer in certain states) to complete all assessments and collect all necessary data (34 C.F.R. §300.301[c][1]).

After the assessments are completed, the team (again including the parent) reconvenes to review the information and to determine if the child meets the state criteria for one or more disability categories. These eligibility decisions are two-pronged, showing that a) the child meets the requirements of the disability definition and b) the disability condition adversely impacts the child's education. Definitions and eligibility requirements vary greatly from state to state (e.g., autism; Barton et al., 2016). Beyond understanding the federal and state definition for a given disability category, principals must also understand how that disability impacts the child's education.

Administratively, principals are responsible for ensuring that staff have the resources and time to complete assessments - including assisting assessors and providing space for such testing. Principals are also communicating with parents, and often directly participating in the formal team proceedings (e.g., ensuring proper membership, completing paperwork, facilitating meetings). If a child is determined to meet eligibility criteria for services and the parent provides informed consent for those services, the team then moves to the next phase, the development of SPED services.

Special Education Services

As students are found eligible, principals navigate a third set of timelines and procedures. Given an assigned disability category and comprehensive evaluation data, the team (hereafter IEP team) has 30 days from receiving consent to develop the child's Individualized Education Program or IEP (34 C.F.R. § 300.323 [c][1]). The IEP team is responsible for collaboratively working through this draft document at the meeting. At such meetings, multiple components need to be addressed and supported by data. Although not required to be content experts on all aspects of special education (34 C.F.R. § 300.321 [a][4]), principals do well to detect when IEP components are not thoroughly addressed or resourced. IEP development is a complicated process that encompasses several nuances related to procedural, presentation, and substance.

As the name implies, the IEP is a unique creation for *each* child who qualifies for services. In fact, the similarity between two IEPs can be determined as a violation of FAPE (*Endrew F. v. Douglas Cty. Sch. District,* 2018). An IEP should describe the individual child's strengths, deficits, goals, services, and needed accommodations or modifications required to access the curriculum of his or her peers without disabilities. Annual goals may address both academic or functional (e.g., social-emotional, self-help, job readiness skills, etc.) deficits identified in the evaluation phase. Each goal is attached to a corresponding SPED service or related service and constitutes the basic substance of the child's program. To determine whether an IEP goal is being addressed in the classroom, principals serving as LEAs should have a basic understanding of a specific, classroom-related IEP goal.

After considering the child's evaluative data and individualized goals, the IEP team then specifies the necessary accommodations and service delivery system. Specifically, the IEP quantifies, usually, in minutes per week, the amount of service support the child will need from

special educators, support staff, or related service providers (e.g., speech therapists, occupational therapists, physical therapists, bus drivers, etc.). As the authors of the school's master schedule, principals are responsible for ensuring that the allotted minutes fit into each student's schedule. If not, the administrator needs to coordinate resources by finding space, moving staff around, hiring new staff, or working with the district to develop an altogether new program. Through one or a combination of these behaviors, principals must collaborate with their SPED teachers and district personnel to ensure that the IEP can be executed as described.

Once the goals and services have been defined, the IEP team then determines the child's LRE (U.S. Department of Education, 2007; Yell et al., 2020). The LRE is a combination of the level of service delivery, as defined by the amount of time with or separate from the child's same-aged peers without disabilities and location. The team must consider which LRE options are supported by their data and also are the least restrictive (i.e., as inclusive as possible). Occurring independently of administrative convenience or existing school programs, LRE selections are based on the *individual* student's program (34 CFR §300.114 [a][2]). Finally, the team's agreed-upon IEP goes into effect for the calendar year. However, this phase of the SPED process is not finite, but ongoing. Data are collected on the annual goals as services and accommodations are carried out daily or weekly. Progress monitoring reports to the parent are generated at least quarterly. In essence, the IEP is a working document which the team may amend or update as the student masters goals or changes arise via IEP amendment meetings. Principals have a number of responsibilities to ensure that the substance of the child's IEP is properly carried out on a day-to-day basis.

Both during and after the development of the IEP, principals have several obligations. As the brief overview of the IEP document and meeting presents, numerous technicalities may arise in

developing a student's program. Productive involvement in the meeting requires a basic understanding of procedures, IEP meeting protocols, and required paperwork. Even when principals are not part of the IEP meeting, they should understand the SPED process, its legal document (e.g., the IEP), and the school's capacity for implementation. That is, principals must supervise SPED staff and provide space or resources for special educators. Staff supervision may also include problem-solving around a student's challenging behavior and following up with teachers or case managers regarding how the IEP is being implemented.

Across each phase of special education, one group deserves particular attention: the transdisciplinary SPED or Individualized Education Program (IEP) team. This team includes mandated attendees – often including the building principal. In such formal team meetings, principals frequently assume the legal role of local education agency representative (hereafter LEA). In that role, LEAs must fulfill three criteria according to the Act (34 C.F.R. § 300.321[a][4]). First, the LEA represents the district's authority during the meeting. Specifically, the LEA representative must make decisions to commit services, personnel, and resources. Second, the LEA representative must have expertise in the general education curriculum. Third, the LEA representative has the authority to directly supervise, or communicate with the direct supervisors of, special educators implementing SPED services. Note that the last criterion is already a responsibility of the administrator, even if he or she does not fulfill the role of LEA at a team meeting.

To determine whether an IEP is in fact being carried out, principals should understand when teachers and staff are properly implementing a student's program as agreed to in the IEP meeting. Although this understanding involves many components, these parts can best be categorized into behaviors related to meetings or to processes. For the purposes of this study,

then, *IEP-related behaviors* refer to principals' responsibilities surrounding IEP development, implementation, and meetings. Such behaviors include such things as facilitating IEP meetings, understanding IEP roles, assisting in paperwork completion, suggesting solutions to problems or issues, collaborating with district personnel, and following up with a teacher or case manager to ensure IEP implementation.

When Problems Arise

When adding the complexities of the SPED process to their existing, non-SPED responsibilities, principals can quickly drown in meetings, procedures, and tasks. Unfortunately, additional obligations arise when disagreements, breakdowns in processes, or errors occur. Examples of such issues include disagreements with parents over services, challenging student behavior, or trouble with SPED staff. With each issue comes increased time spent in meetings, teacher conferences, direct student intervention, or collaborations with third parties. IDEIA (2004) outlines specific dispute resolution procedures to address such breakdowns, which are also published in the parent's procedural safeguards. The Center for Appropriate Dispute Resolution in Education (CADRE; 2017) suggests that a principal's ability to facilitate a solution is near impossible once procedural safeguards are enacted – usually by the parent. Once formal dispute resolution procedures are enacted, third parties often enter in, including district personnel, lawyers (or other legal representatives), hearing officers, or third-party mediators. These dispute resolution processes are also extremely costly (Mueller, 2015; Pudelski, 2013). On average, to simply resolve an issue outside of formal (i.e., court) proceedings, school districts may spend, $24,000 (Pudelski, 2016); if matters are taken to court, costs can exceed $55,000, not including insurance premiums. Adding in attorney's fees (from $95,000 to $212,000 per case;

Daggett, 2004; Special Education Expenditure Project, 2003 respectively), resolving a dispute for a single student can consume nearly all of a principal's time, attention, and energy, as well as a large portion of the district's budget.

How principals resolve and work through complaints may vary depending on the type of error(s) or concerns brought forth. Generally, such complaints fall into one of two error categories: (1) substantive or (2) procedural (Yell & Drasgrow, 2000). Substantive errors relate to the content of the student's program. These errors relate to curriculum selection, calculation of IEP goals (*Endrew F. v. Douglas Cty. Sch. Dist.,* 2018), lack of research-based interventions, insufficiently trained staff, or insufficient data on student progress. From the perspective of administrative oversight, substantive errors can be a result of several things relating to staff or resources and can often be avoided. Examples of preventable errors include improper data collection, lack of resources, or lack of proper planning or organization of the special education staff. Procedural errors relate to the many timelines and requirements of the IEP process and corresponding meetings. Examples of procedural errors include: failing to meet timelines (e.g., failure to hold an IEP meeting within 30 days of a qualifying eligibility decision), failing to provide parents a copy of their procedural safeguards, missing paperwork, or failing to have the proper IEP team members present for part or all of a team meeting. Simple oversight of adherence to a single procedural requirement coupled with a poorly written IEP can result in a hearing officer's or judge's decision that the school district failed to provide a FAPE (U.S.C. § 1415 [f][3][E]). In essence, no matter how well-written and appropriately implemented an IEP, the schools may be at fault in a due process proceeding.

Literature Review

Despite the monumental financial, relational, and personal consequences related to principals being prepared for the SPED process, school principals and their SPED-related behaviors have only rarely been examined. Since 2004, administrator preparation for or knowledge of SPED has been the focus of only nine peer-reviewed studies and 22 doctoral dissertations. All studies cross-sectionally sampled principals via surveys. This literature review will highlight the findings and variability within and across these studies. Specifically, I will review studies in terms of sampled populations, types of information gathered, and potential particular correlates of interest relative to administrator preparation for navigating procedural and substantive requirements of IDEIA.

Descriptions of Sample Characteristics

A first issue involves the generally poor quality of most studies. Across these 31 studies, many did not even collect such simple demographics as the principals' gender, age, and years of experience. At the individual respondent level, half of the studies examined principals alone, two examined assistant principals alone, and six examined a mix of both principals and assistant principals. When data were reported, the individual principals were mostly female, older than 35 or 40 years of age, and from general education backgrounds (as opposed to SPED backgrounds).

Studies also varied widely in how they were performed, with most studies limited in ways that call into question their generalizability to the entire country. For example of those who reported, the majority of studies examined principals from either a single school district (eight studies), whereas a few selected districts within a state (Duncan, 2010; Newman, 2015). Of the 31 studies examined, only 14 separate states are represented in the single-state studies, with only two studies including principals from more than one state (Bineham, 2014; Wakeman et al.,

2006; one study examined federal territories; Hall-Evans, 2016). In most all of these single-district or single-state studies, researchers did not address the sample's comparability to the nation's principals. Though state- or district-level studies may help inform more micro-level issues, we first must grasp a sense of principals more generally.

Principal Preparation Program or Training Experiences

Although several studies gathered information about principal preparation for special education, they did so in strikingly different ways. Some studies asked whether administrators had taken SPED or SPED law courses (e.g., Wakeman et al., 2006; Newman, 2015), whereas others did not ask the number of courses (e.g., Collins, 2008; Cooper, 2012; Rinehart, 2011). In some studies, nearly half of administrators had no special education coursework (McHatton et al., 2010; Stevenson et al., 2006; Thompson, 2010; Wakeman et al., 2006). Even fewer studies collected information related to other types of post-baccalaureate training experiences.

Beyond coursework per se, researchers rarely asked about other sources of special education knowledge. Only two studies, for instance, asked whether principals had internships with students with disabilities (Bineham, 2014; Grasso, 2008), and only one apiece gathered information regarding administrator's personal experience with an individual with a disability (69.3% had; Collins, 2008), or their level of experience with students with disabilities (70.7% had some or none; Lasky & Karge, 2006). No study asked whether the respondents themselves had children with disabilities.

Apart from the characteristics and quality of the existing studies themselves, a preliminary picture of school principals' preparation nevertheless emerges. Considering these few instances when studies did collect relevant information, the amount of pre-professional SPED training was

generally low. In the few studies collecting such information, principals had little explicit training in SPED, seemed (from the few questions asked) to have little other formal SPED training, and few reported personal experiences with disabilities.

Principals' Perceptions of Knowledge, Comfort, and Abilities

Half of the existing studies attempted to gather some information about principals' perceived level of knowledge, comfort, or abilities relative to special education. Though measures varied widely across studies, it is possible to provide some general takeaways. Generally, principals rated themselves highly in terms of having average to extensive *perceived* knowledge about SPED law, policies, or terms (e.g., Bineham, 2014; Burton, 2008; Lucker, 2012; Newman, 2015; Williams, 2015). At the same time, principals also self-reported low, inadequate, or basic levels of special education knowledge (Grasso, 2008; Williams, 2015). In terms of actual special education knowledge, principals ranged from 9.2% (Singh, 2015) to 69% (Lewis, 2013) of respective samples answering content questions with at least 70% accuracy. Especially given the high costs of substantive and procedural errors in the IEP process, this potential disconnect between one's perceived and actual knowledge is alarming.

When asked about their abilities related to their performance of specific SPED behaviors, administrators generally rated themselves as having good or adequate abilities, with a few exceptions (Lucker, 2012; Wakeman et al., 2006). As above, the specific behaviors examined varied widely across studies, including: generally dealing with SPED matters (Burton, 2008; McHatton et al., 2010); serving as an LEA (Duncan, 2010); participating in IEP meetings (Collins, 2008); accommodating students (Roberts & Guerra, 2017); interpreting and evaluating IEPs or eligibility reports (Randles, 2011; Rinehart, 2011; Roberts & Guerra, 2017); providing

input or expertise to staff on student placement (Roberts & Guerra, 2017); training, evaluating, and coaching SPED staff (Rinehart, 2011); and fielding questions from parents or staff members (Rinehart, 2011). In addition to varying greatly across studies, most studies asked about "abilities" in these areas, with few studies (McHatton et al., 2010) collecting information about the frequency with which principals engage in any of these behaviors.

An even smaller sub-sample of studies asked principals about the level of perceived preparedness from a principal preparatory program (e.g., see Burton, 2008; Davidson & Algozzine, 2002; Cooper, 2012; Keenoy, 2012; Lucker, 2012; Thompson, 2010). In all but one study (Willams, 2015), respondents reported not being prepared by their preparatory program. Even when they did perceive themselves as more highly prepared, principals still reported training needs across a number of special education topics.

If principals have not been trained by their school-principal training programs, maybe they attained such knowledge in other ways. To some extent, such on-the-job training does appear common. Whereas on average, less than 25% of the principals reported accessing information from their principal preparation program, 13 studies noted that principals reported that their source of SPED knowledge was either "on the job" training (63%) or seeking information from a SPED supervisor (70%). Even so, many of these principals acknowledged their need for additional SPED knowledge, with the most commonly requested training topic involving SPED law and procedures (Bai & Martin, 2015; Bineham, 2014; Pontius, 2010; Roberts & Guerra, 2017).

Correlates of Principals' Special Education Outcomes

Although most studies were descriptive, a few did relate participant-level variables to possible SPED outcomes. The investigated outcomes included: level of actual or perceived SPED knowledge (e.g., Becnel, 2018; Grasso, 2008; Lewis, 2013); perceived preparedness (e.g., Burton, 2008); need for additional SPED training (Bai & Martin, 2015); perceived ability in SPED matters (Rinehart, 2011); and comfort level in dealing with SPED matters (Angelle & Bilton, 2009).

Some outcomes were shared across studies but correlates that replicated across studies were not. There were, however, three outcomes that shared identical or near-identical correlates, albeit differentially assessed. These outcomes related to the principals' *perceived* level of SPED knowledge (Frost & Kersten, 2011; Williams, 2015), level of preparedness (Burton, 2008), and ability in SPED matters (Rinehart, 2011). The shared correlate related to previous SPED teaching experience, which in most studies was measured by the respondent holding a SPED certificate, endorsement, or prior SPED teaching experiences. No study considered other aspects of personal experiences in special education, including varying levels of personal experience with students with disabilities, special educators, or persons with disabilities, or having a child/family member with a disability. General ability in SPED matters was also predicted by having 10 or fewer years of experience as a principal (Rinehart, 2011). Angelle and Bilton (2009) found having at least one SPED course predicted higher comfort levels with SPED activities.

Concerning predictors of higher levels of actual knowledge, for each study that found a particular correlate, at least one other study did not. For example, higher levels of actual special education knowledge were found in one study—and not found in one or more other studies—to relate to being a principal at the elementary level (Collins, 2008—but see also Bugden, 2007;

Power, 2007); holding current role as an assistant principal (versus a principal; Singh, 2015, but see Grasso, 2008), and having between 20 to 29 years of experience (Randles, 2011, but see Burton, 2008; Hall-Evans, 2016; Lewis, 2013; Singh, 2015). Other correlates that did not emerge in relevant studies included: age and gender (Collins, 2008; Power, 2007); school size (Budgen, 2007; Lewis, 2013; Power, 2007); and highest attained degree (Hall-Evans, 2016; Power, 2007; Singh, 2015). Few consistent findings emerged across studies, although this listing provides insight into those sample characteristics previously examined as potential correlates of SPED knowledge, comfort, or abilities of school principals.

Obviously, important gaps remain in our understandings of school principals vis-à-vis Special Education and the IEP process. Few studies examined samples of principals from more than one state or collected basic demographic variables. Details about administrator preparation programs were rarely collected or sufficiently specified, leaving inconsistencies in the literature. Though some studies asked about the number of special education courses, it is not clear the extent to which special education content may have been embedded in other elements of their training program, for example, in lectures, assignments, clinical experiences, or internships. With the exception of McHatton and colleagues (2010) referring to five general SPED activities, studies did not ask principals to describe the frequency with which they engaged in specific procedural behaviors that align with SPED requirements. Neither were univariate nor multivariate analyses usually conducted. Even when researchers did perform such analyses, conclusions differed as to which sample characteristics mattered. No studies considered the nature of the SPED-related behaviors administrators engage in and the correlates of such engagement.

Study Purpose

Given the state of the art of this research, this study adds to the available literature by examining, in a much more intensive manner, school principals' special education training and practices, as well as which personal, school, and other characteristics might relate to principals' SPED-related behaviors. I examined a large, national sample of school principals and assistant principals in ways that supplement existing knowledge, examine additional aspects of training (broadly conceived) and identify multiple personal, professional, and school characteristics as correlates of principals' SPED-related behaviors.

At its most basic level, this study complements available studies in supplementing prior information about the amount and type of SPED training that these school principals have received. The study includes other, previously unexamined issues, for example, whether respondents have their own child(ren) in special education. Understanding such basic information—and how principals might, due to such characteristics, partly differ in their engagement in IEP-related behaviors—provides a starting point for future research in this area.

Beyond filling in information that is either rarely or inadequately collected, the study examines certain issues more intensively. Across multiple studies, many measures have been used to examine preparation programs or previous training. Training has been measured as having at least 1 course in SPED (Angelle & Bilton, 2009), higher attained degrees (Bai & Martin, 2015), and previous experience in SPED (Frost & Kersten, 2011; Williams, 2015). It remains unclear, however, the extent to which special education content may be infused in either course components (e.g., assignments) or within clinical experiences. In this same vein, current studies disagree in findings related to principal self-reported preparation for and comfort with SPED-related behaviors – specifically as they relate to procedural and substantive concerns.

Other unstudied potential correlates include the amount of time an administrator previously collaborated with a special educator or frequency of working with students receiving SPED services. By employing many of these measures in a single, large-scale study, this study will determine the relations among these various measures, thereby providing a more informed understanding of "training" for future research and policy initiatives.

Similarly, consider the issue of current experience in dealing with special education. Though Lucker (2012) considered as a correlate the years of experience on the IEP team and Collins (2008) considered as a correlate the percentage of SPED students, a more specific measure may be the (annual) number of IEP meetings that an administrator attends. Large schools often have more than one administrator. As a result, some principals attend several IEP meetings each year, others do not. Finally, given that due process complaints stem from procedural or substantive errors (Yell & Drasgow, 2000), involvement in previous litigation may impact principal procedural, or substantive, behaviors. Beyond years of IEP-team experience or the school's percentage of SPED students, then, there may be other, important ways to conceptualize "experience." As a final point, even fewer studies investigated the potential correlates and independent predictors of principals' IEP-related behaviors.

Equally important, few studies consider the degree to which principals engage in actual, IEP-related behaviors. Such engagement likely promotes the everyday functioning of school principals vis-à-vis special education, while also reducing the risk for committing procedural or substantive errors. Capitalizing on a large, national sample, I can determine the degree to which school principals perform a set of IEP-related behaviors and how those behaviors go together. Finally, again benefiting from a large sample, I can perform both univariate and multivariate analyses. These analyses allow this study to identify specific personal, professional, and school

variables that predict principals who perform more (or less) of several different types of IEP behaviors.

This study, then, focuses on training and IEP-behavior performance. Specifically, I will use my sample of principals to answer the following three research questions (RQ):

RQ 1. To what extent did school principals receive instruction in special education or related matters in their post-bachelor's training?

RQ 2. To what extent do principals engage in behaviors related to the procedures and substance of students' IEPs and IEP meetings and what is the nature of these behaviors?

RQ 3. To what extent do principal characteristics relate to or predict higher levels of self-reported IEP and SPED behaviors?

Chapter 2

Method

Participants

Participants included 246 building-level principals (i.e., school principals and vice-principals). Respondents were mostly White (87.2%) females (63.5%), who mostly served as school principals (66.3%), with an average age of 46.8 years (*SD* = 8.43). Nearly 85% had children and 26.7% reported that at least one of their children has an IEP (including an IEP for gifted education). Close to half (52.7%) of the respondents held a master's degree (*n* = 123) or bachelor's (*n* = 3) and 65.9% came from a general education teaching background. Although most respondents (1/3) came from a single southeastern state, the sample included respondents from 42 of 51 US states (including Washington D.C.; see Appendix 1). See Table 1 for sample demographics.

Relative to the 2017-2018 *National Teacher and Principal Survey* (Taie & Goldring, 2019) of school principals (data on assistant principals were not collected), this sample in most respects was similar to demographics of principals overall. Nationally, school principals are mostly White (78%) and more female (54%), with a larger percent of principals being female (67%) in primary school settings. Similarly, principals most commonly hold a master's degree (62%) and have a median age of 47 years. Across several demographic variables, this study uses a sample roughly comparable to the national averages (see Table 1).

Table 1

Sample Demographics

		Mean (*SD*)	% *(n)* *
Female			63.5% (155)
Ethnicity	Caucasian		87.2% (212)
	African-American		9.5% (23)
Respondent Age		46.76 (*8.43*)	
Children	None		15.2% (37)
	1 child		14.8% (36)
	2 children		39.9% (97)
	3 or more children		30.0% (74)
Has Child with IEP [a]			26.7% (55)
Highest Degree	BS or Masters		52.7 % (126)
	6th year		28.9% (69)
	Ed.D. or Ph.D.		18.4% (44)
Most Recent Degree Field [b]	General Education		65.9% (162)
	Special Education [c]		15.0% (37)
	Other (e.g., Related Arts, psychology, etc.)		19.1% (47)
Previous Role Prior to Admin. Role	General Education Teacher		60.8% (149)
	Special Education Teacher		15.9% (39)
	Other		23.3% (57)
Previous Experience with SWD Prior to Admin Role [d]	Not at all to A little		14.3% (35)
	Occasionally		13.9% (34_
	Often		33.1% (81)
	A lot		38.8% (95)
Previous Experience Collaborating with SPED Teachers [e]	20% or less of the day		53.9% (130)
	21% to 41% of the day		19.1% (46)
	41% or more of the day		27.0% (65)
Work Status During Admin. Coursework	Worked Full time and School part-time		91.8% (225)
	Other		8.2% (20)
Admin. Coursework Format	Face to face only		58.1% (143)
	Distance or Hybrid [d]		41.9% (103)
Time to Complete Admin. Requirements	24 months or less		75.5% (185)
Time in Education (years)	11-20 years		43.3% (106)
Administrator License Type	Professional (3 years or more)		84.0% (205)
Current Position	School Principal		66.3% (163)
	Assistant Principal		32.5% (80)
Time in Current Position and Placement	5 years or less		59.4% (145)
School Setting Type	Public School		98.4% (242)
Avg. No. Students with IEPs	0-25		13.4% (33)
	26-50		30.9% (76)
	51-75		20.3% (50)
	76-100		10.6% (26)
	100+		24.8% (61)

Note. * Respondents were not required to answer all questions and some responses options allowed administrators to select more than one. [a] Included intellectually gifted IEPs. [b] Respondents could check more than one option. [c] Respondents with degrees in both general education and special education were

coded as special education. [d] Combined answer choices for descriptive purposes. [e] Average percent of the work day spent in collaboration with special education teachers IEP = Individualized Education Plan.

Participants were included if they were at least 18 years old, had no more than 5 missing variables of interest, and currently served in the capacity of a building-level administrator. Of the original 425 records, 89 records were removed because they were blank. An additional 75 records were only partially completed, in that the respondent did not click "submit" but may have answered almost all of the questions. Participants were also excluded if they were currently serving at the district level (e.g., superintendent, supervisor of SPED), as a teacher (e.g., SPED or general education teacher; $n = 25$), or failed to answer the question related to their current role ($n = 14$). Fifty-one records were missing 5 or more survey responses to variables of interest (i.e., independent or dependent variables). The final sample thus included 246 respondents. See Figure 1.

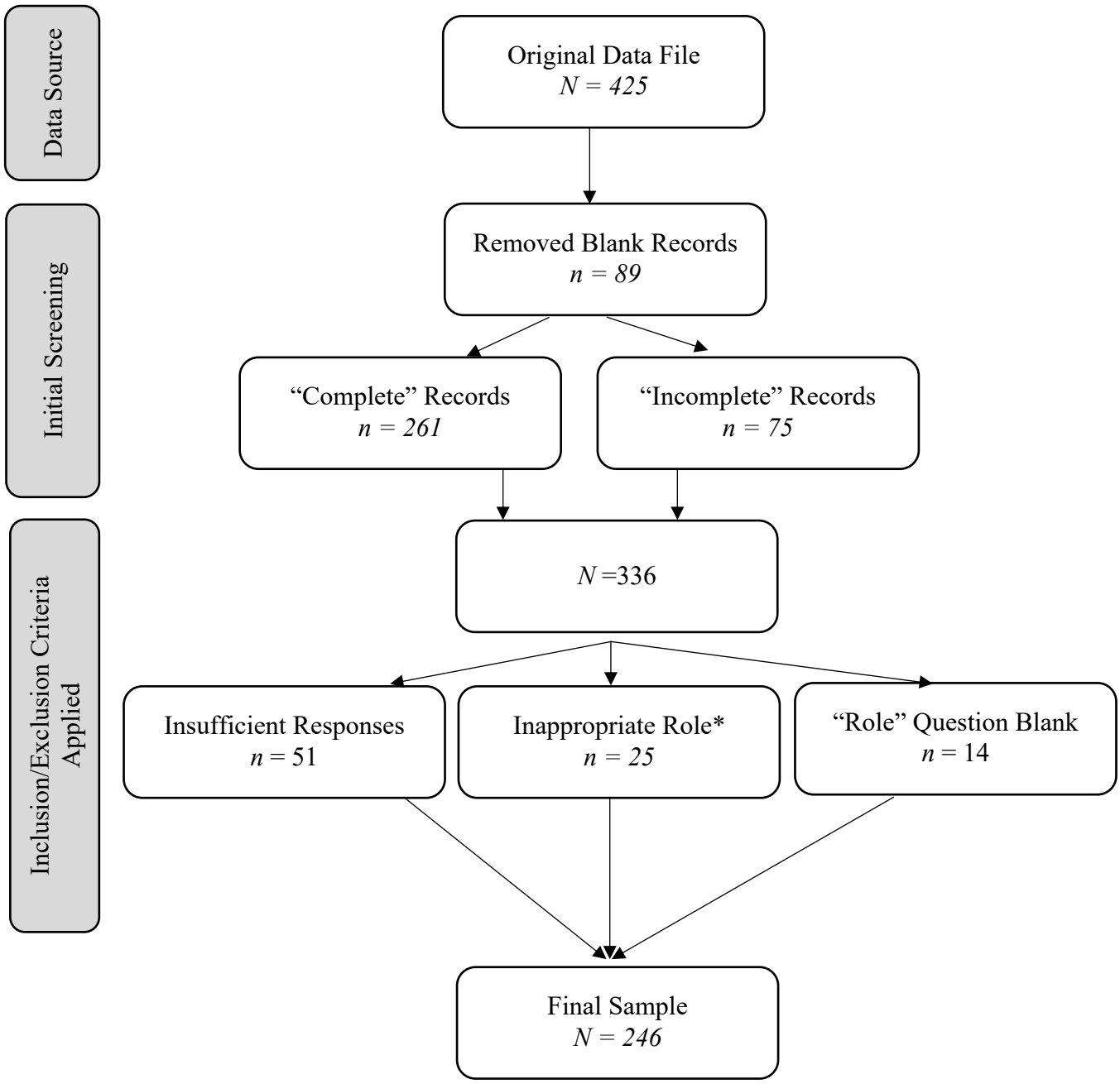

Figure 1. Participant Inclusion Flow Chart

This figure described the screening process for sample selection. "Complete" records refer to those surveys answered in entirety. "Incomplete" records either failed to click "submit" or were missing variables. * Excluded roles: special education supervisor, special education teacher, or superintendent.

Procedures

Survey Development

To assess these principals, I developed a national survey to gather information about administrator training, experiences, current roles, and views of and involvement in SPED. The survey was developed with the help of experts in SPED, applied behavior analysis, and school administration. I then disseminated the draft to 20 principals and one SPED supervisor from public school districts in two different states. Principals were asked to verify the length of time taken to complete the survey, provide any feedback on the questions, and the extent to which the response options provided sufficient answer choices. Respondents were also asked to comment on the reasonableness of a $20 compensation amount available via raffle to survey completers.

Recruitment

After receiving institutional review board (IRB) approval, recruitment occurred by contacting state departments of education; national SPED and administrator agencies; and individual administrator contacts. IRB-approved email scripts were disseminated to state-level superintendents and SPED directors. In the absence of state-level contact lists for principals, trained graduate assistants blinded to the research purposes compiled a list of administrator contacts. Using a master list of all U.S. counties (all 50 states and Washington, D.C.), counties were selected at random to include at least one rural county from each state. The research assistants then searched via the internet to locate all the school districts within those counties and, when available, the respective administrator contact emails.

After contact lists were gathered, agencies, state-level representatives, and individual principals received an email with a description of the survey, its purpose, a $20 gift card raffle

description, and a link to the survey. Upon completion of the survey, principals had the option of opting into a random drawing for the $20 gift cards. If desired, principals could then select a button to take them to a separate, unconnected survey to enter their contact information. This form was not linked to any responses and therefore all principals' answers were kept anonymous. Recruitment began in October 2018 and was conducted in six waves through December 2019. A random selection for and dissemination of the gift cards occurred in the summer of 2019 and spring of 2020. Per the approved IRB and advertised compensation to participants, a total of 100 gift cards were disseminated.

Data Collection

Survey records were anonymously collected via the secure, online Research Electronic Data Capture (REDCap; Harris et al., 2009) platform. Participants responded by seeing the online flyer or clicking on the survey link itself. After reading the IRB-like introductory language, respondents were asked if they understood and were willing to participate by responding "yes" to the first survey question. They then proceeded to take the survey. Respondents took between 10 to 20 minutes to complete the survey and were compensated for their efforts by being entered into the drawing for a $20 gift card.

After the data collection period ended, records were exported from REDCap directly into the statistical software program, SPSS (IBM, 2019). To ensure proper transfer of data and corresponding variables, records were visually checked between the software program and REDCap. Records were evaluated against inclusion and exclusion criteria; the final data file to be used in analyses consisted of 246 participants.

Survey Instrument

The final survey included 54 questions related to one of the following sections: a) eligibility and demographics; b) education and training; c) previous experience with SPED; d) characteristics of current administrator position, and e) open-ended responses. Response options included multiple-choice, text entry, open-ended questions, or Likert scales presented in a matrix format. Using branching logic, some questions only appeared when the respondent answered a certain way to a prior question (e.g., when answering "Other" to a question, an additional question appeared in which the participant could write out the content to which other referred). Descriptions pertain to those survey sections and questions relative to the research questions. See Appendix B for the full survey.

Eligibility and demographics. This section included questions to gather administrator demographics and confirm their current role (e.g., principal, assistant principal, etc.) and setting (e.g., public school, charter school, etc.). Other basic demographic characteristics included state, zip code, marital status, ethnicity, and gender. Respondents were asked to specify whether they had a child with an IEP and, if so, the types of disabilities the child had (see Table 1).

Education and training. In this section, principals answered questions related to their highest attained degree and the corresponding field (e.g., general education, SPED, or other [related arts, counseling, psychology, or non-education]) of their most recent degree obtained before receiving their administrator's license. Branching logic was utilized to further specify the area of concentration for both general education (e.g., math, language arts, etc.) and special education (e.g., disability-specific, low-incidence, or high-incidence disability degrees).

Related to their administrator preparation program, the survey asked for information about the principal training program's format (e.g., face-to-face, online, hybrid), job status while

completing the training program, and the length of time it took the administrator to finish their administration coursework (in months). Principals were also asked to select the number of courses that they had taken on SPED or SPED law (1 – 0 courses to 6 - 5 or more courses) content. This section also included a question asking principals to rate, using a 5-point Likert scale (1 – never to 5 – always), the frequency of training concerning IEPs or special education processes that they had experienced across their administrator training program components including coursework, practica, internships, clinical experience hours, lectures, assignments, independent studies, or online modules. To gauge their overall perceived preparedness, principals were asked the extent to which their post-bachelor degree training prepared them for their current principal role in terms of special education process and knowledge (1 – not at all to 4 – completely).

To gather more in-depth information about their perceived comfort with special education processes commonly completed by principals, respondents were asked to rate their agreement (1 – strongly disagree to 5 – strongly agree) with each of the ten statements as a result of their training program (Cronbach's α = .963). Examples included comfort with participating in IEP meetings, facilitating meetings, managing SPED personnel, understanding IEP paperwork, etc. Using a principal components analysis, these 10-items formed a single factor (hereafter, SPED Comfort Scale; Eigenvalue of 7.530), accounting for 75.3% of the variance. See Table 3 for all 10 items.

Previous experience with special education. In this section, principals described their previous role (e.g., special education teacher, general education teacher, related arts, district position, etc.) and, while in that role, the frequency with which they worked with students with disabilities (1 - not at all to 5 - a lot), and the average percentage of the day they collaborated

with SPED staff (1 - 20% or less of the day to 5 – 81 to 100% of the day). Principals were also asked the extent of their experience with specific disabilities across the 13 federal categories (1 – not at all to 5 – a lot; IDEIA, 2004). These questions were designed to get information (beyond their degree type) about the respondent's self-reported experience with specific disabilities and special education before their current role.

Characteristics of current administrator position. The first portion of this section presented the principals with several multiple-choice questions to gather information about the type of school district in which they work, their current position (e.g., principal, assistant or vice-principal, etc.), and current type of administrator license (e.g., initial licensure, or full professional licensure). Respondents were also asked how long they have worked in their current position, in their current district, and in education. Principals were asked the numbers of students who have IEPs in their school (increments of five from 0 to 100+) and (within the last year) the estimated number of IEP meetings they attended (0 to 30+).

Principals were asked about the importance of and frequency with which they engage in 14 behaviors related to the procedures or substance of IEPs and their corresponding meetings (hereafter, IEP-related behaviors). These behaviors serve as the primary dependent variables for this study. IEP-related behaviors refer to principals' responsibilities surrounding IEP development, implementation, and meetings. Principals rated each item on a 5-pt Likert scale lead by the following prompt: "*Within the last school year, to what extent did you do each of the following for IEP meetings in your role as an administrator….".* Likert response choices were: not at all, a little, occasionally, often, a lot. Each of the 14 behaviors is listed in the appended survey on page 18 and in Table 2.

Table 2

Survey Question for IEP-Related Behaviors and Responsibilities

Variable Name	Corresponding Survey Question(s)	Variable Type
Within the last school year, to what extent did you do each of the following for IEP meetings in your role as administrators:		
IEP-Related Behaviors	Introducing the team members Identify and describe the roles of team members Lead discussion during the meeting Assist with paperwork Record meeting minutes or notes Assist in ensuring that the meeting was completed within allotted time Suggest solutions to problems Assist with develop the IEP or IEP documents themselves Read over a child's IEP in its entirety Follow up with the teacher or case manager is being implemented Initiate to schedule an IEP meeting Participate in functional behavior assessment or behavior intervention plan for a student Actively train to deliver a component of the IEP directly Collaborate with district personnel to solve parent or teacher concerns	Likert [a]

Note. [a] Response options were on a 5-pt Likert scale from 1- not at all to 5 – a lot.

Finally, to gather information about the respondent's involvement in dispute resolutions, the survey included questions about the frequency with which one had worked with SPED parent advocates or lawyers (1 – never to 5 – frequently) or been involved in mediation, or due process (1- never to 6 – 10 or more times) in the last five years.

Experimental Design

The study employed a descriptive, cross-sectional, non-experimental quantitative analysis of survey data. Common in educational research (Creswell, 2003), such designs allow for

descriptive analyses of a given population and help gather information about processes that have already occurred (i.e., administrator preparatory training; Spector, 2019).

Data Diagnostics and Analytic Plan

For all variables of interest, I analyzed data for each variable with respect to the normality of distribution, sufficient number responses (i.e., 10 or less) within categorical variables for later statistical analyses, and, for survey scales, the extent to which items formed factors or were highly correlated. I also analyzed missing data within variables of interest which would later impede inclusion in multivariate analyses.

RQ 1: School Principals' Preparation for Special Education

Relative to this research question, I analyzed the survey responses related to principals' training and experience prior to their current administrative role. Each variable of interest was statistically analyzed to collect frequencies and representativeness within the sample, measures of central tendency (e.g., means and standard deviations), and the extent to which items within a scale (i.e., comfort scale, or SPED training by program components) hung together (e.g., factor analyses and Cronbach's α). Categories were collapsed if a category had insufficient responses in a given response option, or for descriptive purposes: the number of SPED courses, highest attained degree (i.e., combined Bachelor's and Master's), recent degree field (combined related arts, counseling, other), previous experience with students with disabilities and special education teachers, and the average number of students with IEPs.

RQ 2: Principals' Behaviors Related to SPED Students' IEPs and IEP Meetings

Research question two concerns the nature of the dependent variable(s) of this study relative to the administrator's engagement in IEP-related behaviors. These 14 items were analyzed in

several ways. First, basic descriptives were collected for each item (e.g., frequencies, mean, standard deviations). Then, I calculated average scores for each item (see the far-right column of Table 4). Next, to measure the internal consistency of the 14-item scale, I calculated Cronbach's α. Data were inspected to determine if the Barlett's test of sphericity (Bartlett, 1950; Howard, 2016) and Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (Kaiser, 196 0; Howard, 2016) assumptions were met. Afterward, I conducted a principal components analysis (PCA) with varimax rotation to determine the extent to which the items hung together (i.e., formed factors). To determine factor cut-offs, I applied the Kaiser method such as an eigenvalue greater than 1.0 formed a factor (Kaiser, 1960). For interpretation of which factor to assign each item, I considered an item as loading if its loading was at least .45 on the primary factor, with no secondary factor loading, or was at least .50 if a secondary loading occurred or a difference of at least .20 in between loading comparisons (Howard, 2016). I hypothesized that these 14-items would form a single factor.

Following the PCA, within-item data were then analyzed for any missing data at random. To ensure inclusion of observations in the multi-variate analyses, data were imputed only if respondents were missing less than 5% of possible responses within the scale (Pederson et al., 2017). If the respondent was missing a within-factor item, this value was imputed by inserting the rounded average of that factor (n = 12). Finally, for each resultant factor, a variable was created by averaging the within-item scores. A higher average score indicated higher engagement in IEP-related behaviors. These average scores were used as the dependent variables.

RQ 3: Correlates of Implementing Each of the Three Factors of IEP-Related Behaviors

Using existing studies on school principals, my own prior experiences, and informal information from current school principals, I hypothesized potential correlates from the following categories: (a) administrator preparatory training and previous experiences, (b) current role characteristics, and (c) experience with formal resolution proceedings. Specifically, I predicted that higher levels of IEP-related behaviors might occur given that the respondent had previous teaching experience as a special educator (versus general educator; Burton, 2008; Frost & Kersten, 2011; Rinehart, 2011; Williams, 2015); at least one special education course (versus none); a doctorate; more past experience with students with disabilities (often) and greater amounts of time collaborating with special educators; and having their own child with an IEP. I also hypothesized that higher levels of IEP-related behaviors would be predicted by higher averages in the SPED Comfort Scale and higher perceived preparedness as a result of their post-baccalaureate training. The final potential correlate involved the extent to which the respondent felt prepared by their preparatory program in terms of SPED processes or knowledge, with higher scores potentially correlated with greater amounts of IEP behaviors. I also predicted higher levels of IEP-related behaviors when the administrator served as a principal (versus assistant principal), attended greater numbers of IEP meetings in the last year, and had experience with formal resolution proceedings.

To examine this question, analyses were performed in two ways. First, I performed a series of univariate one-way ANOVAs to determine if statistically significant differences occurred within variable categories relative to IEP-related behaviors. To account for the number of analyses, statistical significance was set at $p < .01$ a priori, and a measure of effect size, partial eta, was calculated for significant potential correlates (Richardson, 2011). Then, after testing the statistically significant variables for multi-collinearity and internal consistency, I performed

regression analyses. Given the distribution of the dependent variables, I ran two types of regression models - a multi-linear regression (MLR) and a logistic regression - to determine which correlates were observed to independently predict higher levels of IEP-related behaviors.

Chapter 3

Results

RQ 1: School Principals' Preparation for Special Education

Almost one-third (32.1%) reported that their post-bachelor's training program did not prepare them as an administrator in terms of special education processes and knowledge. A full 40.6% of respondents reported one or fewer courses in special education or special education law. See Tables 1 and 3. This lack of special education preparation was also evident in the survey's individual items related to training. The 8-item program component scale had high internal consistency (Cronbach's α =.90). Basic assumptions for PCA were met (i.e., KMO Measure of Sampling Adequacy = .872 and Bartlett's Test of Sphericity $\chi^2[28] = 1189.56$, $p = .000$) and two distinct factors were formed (Eigenvalues of 4.743 and 1.049 respectively) accounting for 72.39% of the variance. Factor 1, hereafter Coursework Training Activities, related to those program components related to coursework or in-class experiences, and Factor 2, hereafter In-Person Training Activities, related to in-person training program components. As shown in Table 3, over 2/3 of all respondents reported receiving low levels of SPED information from either their coursework or their in-person practicum experiences. See Table 3.

Table 3

Characteristics of Post-Baccalaureate Training and Preparation for SPED

Survey Question	Response Options	% (*n*)	Mean (*SD*)
Number of SPED courses in Admin Prep Program	0 courses	8.9% (22)	
	1 course	31.7% (78)	
	2 or more courses	59.4% (146)	
Overall in your post-bachelor's training, to what extent did you receive training on IEP or special education process issues via … [a]			
In-Person Training Activities [b]	Respondents averaging less than *Sometimes*	69.2% (166)	2.25 (*1.09*)
Coursework Training Activities [c]		65.8% (137)	2.49 (*.86*)
To what extent did you feel that your post-bachelor's training prepared you for your current role as an administrator in terms of special education process and knowledge?			
	Not At all	32.1% (78)	
	Somewhat	47.7% (116)	
	Mostly to Completely [c]	20.2% (49)	
To what extent do you agree or disagree with the following statements. Due to my post-bachelor's training, I felt or feel comfortable [d]			
		Uncomfortable [e]	
Participating in IEP Meetings		29.7% (73)	3.33 (*1.29*)
Facilitating IEP meetings		52.8% (130)	2.74 (*1.32*)
Overseeing IEP Implementation		41.8% (102)	3.03 (*1.31*)
Managing special education personnel		29.3% (72)	3.38 (*1.29*)
Diffusing conflicts in IEP meetings		36.2% (89)	3.16 (*1.36*)
Managing severe or challenging behavior		43.9% (108)	2.93 (*1.35*)
Understanding IEP paperwork		44.5% (109)	2.91 (*1.34*)
Detecting possible violations of IEP procedural safeguards		48.0% (118)	2.82 (*1.33*)
Collaborating with the IEP team		24.5% (60)	3.54 (*1.27*)
Understanding different disabilities		30.6% (75)	3.27 (*1.27*)
Combined Comfort Score [f]		43.3% (101)[g]	3.11 (*1.14*)

Note .[a] Likert response scale: 1-never, 2-rarely, 3-sometimes, 4-often, 5-always. [b] Included Practica, internships, or clinical experiences. Cronbach's α =.90 [c] Included coursework, lectures, assignments, independent study, online modules. [d] Likert response scale 1-strongly disagree, 2-disagree, 3- neither agree or disagree, 4-agree, 5 – strongly disagree. [e] Uncomfortable = answered 1 or 2. [f] 10-items converged as a single factor. Cronbach's α = .963. Average score reported. [g] Combined Comfort Score average < 3.0.

In line with their non-special education backgrounds and lower levels of administrator training, so too did these principals report feeling under-prepared to perform various aspects of the IEP-special education process. With "uncomfortable" defined as item scores of below 3, half or nearly half felt uncomfortable with: facilitating IEP meetings, detecting possible violations in IEP procedural safeguards, understanding IEP paperwork, or managing severe or challenging behavior. PCA assumptions were met (i.e., KMO Measure of Sampling Adequacy = .934 and Bartlett's Test of Sphericity $\chi^2[45] = 2490.83$, $p = .000$). These 10 items converged a single factor (Eigenvalue of 7.530) accounting for 75.3% of the variance, (i.e., SPED Comfort Scale). With an average score of 3.11 on a 5-point scale, 43.3% of respondents felt uncomfortable (< 3.00) in dealing with special education processes or issues (see Table 3).

RQ 2: Principals' Behaviors Related Students' IEPs and IEP Meetings

Principals engaged in the 14 IEP-related behaviors to widely varying degrees, $F(13, 3185) = 85.23$, $p < .0001$. At the item-level, the following items were well above the grand mean ($\bar{\chi} = 2.89$, $SD = .053$): suggesting solutions to problems; reading over a child's IEP in its entirety, and following-up with a teacher or case manager to determine if the IEP was being implemented. On the other hand, the following items were well below the grand mean: actively training to deliver a component of the IEP; initiating to schedule an IEP meeting; assisting with paperwork, and recording meeting minutes or notes (all *p's* < .0001). Stated another way, principals engaged in only *a little* to *not at all* of: actively training to deliver a component of the IEP directly (76.4%); initiating to schedule an IEP meeting (59.3%); recording meeting minutes (58.5%); assisting with paperwork (54.1%); or assisting with developing the IEP or IEP documents themselves (53.7%). Conversely, these respondents reported themselves doing the

following *often* to *a* lot: suggesting solutions to problems (65.0%); reading over a child's IEP in its entirety (60.6%); and following up with the case manager or teacher to ensure IEP is being implemented (53.7%).

For these 14-items, PCA with varimax rotation assumptions were met (KMO Measure of Sampling Adequacy = .887 and Bartlett's test of Sphericity $\chi^2[91] = 1706.156$, $p < .000$). The 14-items formed three factors, cumulatively accounting for 64.04% of the variance. See Table 4.

Table 4

Factor Analysis and Descriptives for IEP-Related Behaviors Scale

Within the last school year, to what extend did you do each of the following for IEP meetings in your role as an administrator…	Component Loadings [a]			Average Score by Component [e]
	1[b]	2[c]	3[d]	Mean (*SD*)
10. Follow up with teacher or case manager to ensure IEP is being implemented	.769	-	-	3.51 (*1.04*)
12. Participate in FBA or BIP for a student	.699	-	-	2.97 (*1.12*)
9. Read over a child's IEP in its entirety	.698	-	-	3.62 (*1.27*)
14. Collaborate with district personnel to solve parent or teacher concerns	.641	-	-	3.31 (*1.09*)
7. Suggest solutions to problems	.582	-	-	3.77 (*.99*)
11. Initiate to schedule IEP meeting	.548	-	-	2.30 (*1.18*)
1. Introducing the team members	-	.892	-	3.81 (*1.45*)
2. Identify and describe the roles of the team members	-	.865	-	2.82 (*1.39*)
3. Lead discussion during the meeting	-	.742	-	2.91 (*1.23*)
6. Assist in ensuring that the meeting is completed in the allotted time	-	.602	-	2.79 (*1.25*)
5. Record meeting minutes or notes	-	-	.790	2.39 (*1.50*)
4. Assist with paperwork	-	-	.766	2.39 (*1.26*)
13. Actively train to deliver a component of the IEP directly		-	.656	1.80 (*1.11*)
8. Assist with developing the IEP or IEP documents themselves	-	-	.510	2.49 (*1.30*)
Eigenvalues	6.352	1.572	1.042	
% Variance Explained	45.37	11.23	7.44	
Cronbach's α	.810	.88	.80	
Factor Mean (*SD*)	3.25 (*.80*)	2.94 (*1.14*)	2.26 (*1.03*)	

Note. [a] Component loadings >.50 are reported. [b] Factor 1 = Substantive Problem-solving behaviors. [c] Factor 2 = IEP Meeting facilitation behaviors. [d] Factor 3 = Procedural Assistance Behaviors. [e] Likert scale for response choices: 1 – Not at all, 2 – A little, 3 – Occasionally, 4 – Often, 5 – A lot. IEP = Individualized Education Program. FBA = functional behavior assessment. BIP= behavior intervention plan.

The first factor, accounting for 45.37% of the variance, included six behaviors pertaining to the substance of the IEP and behaviors principals may engage in order to problem-solve. Substantive Problem-Solving behaviors included: following up with the teacher or case manager to ensure IEP is being implemented; participating in FBA or BIP for a student; reading over a child's IEP in its entirety; collaborating with district personnel to solve parent or teacher concerns; suggesting solutions to problems; and initiating to schedule an IEP.

Accounting for 11.23% of the variance, the second factor related to facilitating IEP meetings. The four items of this IEP Meeting Facilitation factor included: introducing team members; identifying and describing the role of team members; leading discussion during the meeting, and assisting in assuring that the meeting is completed in the allotted time. Finally, accounting for 7.44% of the variance, the third factor included four behaviors relating to assisting with IEP procedures. This Procedural Assistance factor included: recording meeting minutes or notes; assisting with paperwork; actively training to deliver a component of the IEP directly; and assisting with developing the IEP or IEP documents themselves.

To examine the degree to which respondents performed each type of behavior, three variables were computed of each respondent's average (mean) score across Substantive Problem-Solving (6 items), IEP Meeting Facilitation (4 items), and Procedural Assistance (4 items). On average, respondents performed the three types of behavior to different degrees, F (2, 490) = 146.89, $p < .0001$, with behaviors related to Substantive Problem-Solving at higher levels than IEP Meeting Facilitation, which in turn showed higher mean scores than Procedural Assistance. Examined in terms of individual respondents, two-thirds (67.9%) of these school principals completed high levels of Substantive Problem-Solving Behaviors (i.e., average factor score $\geq$ 3.0), compared to the percentages of principals who scored "high" on IEP Meeting Facilitation

behaviors (56.5%; McNemar test, p =.002) or Procedural Assistance Behaviors (27.6%; McNemar test, $p < .0001$). In addition, greater percentages of respondents scored "high" on IEP Meeting Facilitation behaviors compared to those who scored high on Procedural Assistance behaviors (McNemar test, $p < .0001$).

RQ 3: Correlates of Implementing Each of the Three Factors of IEP-Related Behaviors

Correlates are presented separately for each of the three factors of IEP-related behaviors: Substantive Problem-Solving; Behaviors Facilitating IEP Meetings, and Procedural Assistance. Predictors of each factor are first examined separately (see univariate analyses Table 5), then considered together using regression analyses (Tables 6 and 7).

Predictors of Substantive Problem-Solving

Univariate analyses revealed five correlates to be statistically significant (at the .01 level), with medium effect sizes: higher levels of special education content within coursework training activities; previously collaborating with special education teachers for 41% or more of the day; higher levels of special education content within in-person training activities; having higher levels of previous experience with students with disabilities; and attending more IEP meetings within the last year. See Table 5.

Table 5

Univariate Table Investigating Potential Correlates for each IEP-related Behavior Factor

Independent Variable	Response Options	Substantive Problem-Solving			IEP Meeting Facilitation			Procedural Assistance		
		Mean (*SD*)	*F*	*Partial* η^2	Mean (*SD*)	*F*	*Partial* η^2	Mean (*SD*)	*F*	*Partial* η^2
Previous and Personal Experience										
Highest Degree	Bachelors or Masters	3.25 (.72)	1.027, *ns*		2.88 (1.08)	.580, *ns*		2.24 (1.00)	.343, *ns*	
	Specialist or 6th Year	3.32 (.79)			3.06 (1.19)			2.33 (1.02)		
	Doctorate (Ed.D. or Ph.D.)	3.11 (.89)			2.89 (1.19)			2.18 (1.01)		
Previous Position [a]	General Education Teacher	3.17 (.76)	3.297, *ns*		2.87 (1.10)	3.866, *ns*	.031	2.09 (.98)	10.484***^	.08
	Special Education Teacher	3.53 (.80)			3.35 (1.21)			2.90 (1.01)		
	Other	3.27 (.82)			3.04 (1.13)			2.30 (.98)		
Previous Experience with SWD [a]	Not at all to A little	2.92 (.89)	5.041*	.059	2.68 (1.06)	2.495, *ns*		1.99 (.98)	3.879*	.046
	Occasionally	3.01 (.69)			2.77 (1.07)			2.04 (.82)		
	Often	3.29 (.76)			2.89 (1.15)			2.19 (1.01)		
	A lot	3.44 (.78)			3.19 (1.17)			2.54 (1.10)		
Previous Experience with SPED Teachers [a]	20% or less of the day	3.07 (.75)	8.656***	.068	2.76 (1.06)	4.457, *ns*	.036	2.05 (.88)	9.19***	.072
	21% to 41% of the day	3.34 (.78)			3.02 (1.15)			2.24 (1.00)		
	41% or more of the day	3.54 (.78)			3.26 (1.23)			2.69 (1.16)		
Has Child with IEP	No	3.20 (.78)	4.434, *ns*		2.81 (1.12)	15.318***	.060	2.20 (1.02)	5.273	
	Yes	3.46 (.85)			3.48 (1.11)			2.56 (1.07)		
Administrator Preparation Program Characteristics										
In-Person Admin Training Activities [b]	Low	3.17 (.72)	7.791*	.032	2.84 (1.07)	7.229*	.029	2.09 (.93)	21.693***^	.084
	Hi	3.48 (.92)			3.27 (1.24)			2.73 (1.13)		
Coursework Training Activities [b]	Low	3.11 (.76)	15.91***	.064	2.75 (1.07)	17.762***	.071	2.05 (.93)	24.20***^	.094
	Hi	3.54 (.84)			3.39 (1.19)			2.73 (1.11)		
IEP Training Comfort Scale [c]	Neither or Disagree	3.15 (.82)	5.638, *ns*		2.90(1.13)	.606, *ns*		2.08 (.99)	9.09*^	.036
	Agree	3.39 (.76)			3.01 (1.17)			2.48 (1.05)		
Perceived Preparedness for SPED	Not at all	3.20 (.75)	1.029, *ns*		2.78 (1.14)	1.614, *ns*		2.00(.93)	6.387*^	.051
	Somewhat	3.25 (.83)			2.99 (1.08)			2.30 (1.02)		
	Mostly to Completely	3.40 (.79)			3.14 (1.28)			2.66 (1.11)		
SPED Coursework	0 Courses	3.14 (.67)	2.768, *ns*		2.49 (.74)	4.480, *ns*	.036	1.93 (.70)	6.029*^	.047
	1 Course	3.11 (.82)			2.78 (1.15)			2.03 (1.03)		
	2+ Courses	3.36 (.79)			3.12 (1.16)			2.46 (1.05)		
Current Administrator Experience and Characteristics										
Current Position	School Principal	3.34 (.80)	2.771, *ns*		2.95 (1.13)	.107, *ns*		2.30 (1.04)	.833, *ns*	
	Assistant or Vice Principal	3.10 (.79)			2.98 (1.19)			2.23 (1.03)		

	Other	3.61 (.54)			2.67 (.76)			2.08 (.88)		
Type of Administrator's License	Provisional (0-3 yrs.)	3.08 (.96)			2.67 (1.23)			2.40 (1.06)		
	Full Professional (>3 yrs.)	3.29 (.76)	2.338, *ns*		3.02 (1.13)	3.056, *ns*		2.26 (1.04)	.604, *ns*	
	10 yrs. or Less	2.92 (.76)			2.32 (1.07)			2.10 (.67)		
Time in Education	11-20 years	3.17 (.80)	2.921, *ns*	.035	2.82 (1.08)	3.411, *ns*	.041	2.21 (1.02)	1.355, *ns*	
	21-30 years	3.34 (.73)			3.17 (1.14)			2.27 (1.06)		
	30+ years	3.51 (.93)			3.11 (1.26)			2.60 (1.13)		
Estimated No. of IEP Meetings attended last school year	0-10 IEP Meetings	2.97 (.88)			2.44 (1.26)			1.85 (1.01)		
	10-20 IEP Meetings	3.24 (.74)	3.946 *	.047	2.84 (1.03)	6.798 ***	.079	2.11 (.96)	6.588***^	.077
	20-30 IEP Meetings	3.43 (.78)			3.30 (1.05)			2.55 (1.05)		
	30+ IEP Meetings	3.37 (.74)			3.17 (1.07)			2.50 (1.01)		
Admin Experience with Lawyer or Advocate in IEP Meetings	Never	3.05(1.00)			2.64 (1.32)			2.26 (.99)		
	Rarely	3.13(.75)	3.497, *ns*	.043	2.79 (1.13)	2.406, *ns*		2.16 (.98)	2.297, *ns*	
	A little	3.30 (.78)			3.08 (1.08)			2.25 (1.08)		
	Often to Frequently	3.60 (.73)			3.25 (1.12)			2.69 (1.01)		
Admin Experience in Mediation	Never	3.23 (.84)			2.89 (1.20)			2.22 (1.06)		
	1 time	3.21 (.67)	1.468, *ns*		2.88 (.99)	2.651, *ns*		2.23 (.92)	1.962, *ns*	
	2 or more times	3.48 (.74)			3.38 (1.03)			2.60 (.99)		
Admin Experience with Due Process	Never	3.24 (.83)			2.92 (1.18)			2.24 (1.05)		
	1 time	3.28 (.70)	.109, *ns*		2.95 (1.11)	1.621, *ns*		2.29 (.96)	1.086, *ns*	
	2 or more times	3.26 (.72)			3.45 (.74)			2.64 (1.02)		

Note. [a] Variables refer to characteristics prior to admin role [b] For descriptive purposes, both scales were spilt to create a dichotomous variable such that factor scores of 2.99 and lower were considered low, and 3.0 and above were considered high. [c] The IEP comfort Scale was split into dichotomous categories of agree versus neither or disagree for descriptive purposes. Admin = administrator. IEP = individualized education program. SPED = special education. *ns* = not statistically significant. Partial η^2 effect size for ANOVA: small = .01, medium = .06, large = 0.14. ^ Indicates Kruskal-Wallis H-test was significant at the p <.01 level.
* = p < .01. **= p <.001. *** = p< .00

As shown in Table 6, the regression model for the Substantive Problem-Solving outcome accounted for 16.7% of the variance, F (11, 221) = 5.226, $p < .000$. Significant independent predictors of Substantive Problem-Solving behaviors included greater numbers of IEP meetings attended in the last year and a greater extent to which respondents previously collaborated with special education teacher

Table 6

Multiple Linear Regression Results for Substantive Problem-Solving and IEP Meeting Facilitation (N=233)

Variables	Substantive Problem-Solving				IEP Meeting Facilitation			
	β	S.E.	*t*	*p*-value	*β*	S.E.	*t*	*p*-value
Avg. No. IEP Meetings	**.143**	**.035**	**4.127**	**.000*** **	**.223**	**.049**	**4.573**	**.000*** **
Previous Experience Collaborating with SPED Teachers [a]	**.172**	**.043**	**4.020**	**.000*** **	**.130**	**.060**	**2.151**	**.033***
Has Child with an IEP	.234	.120	1.945	.053	**.692**	**.170**	**4.075**	**.000*** **
Extent of SPED Training in Assignments and Courses (APP)	-.008	.064	-.129	.897	**.254**	**.117**	**2.169**	**.031***
No. SPED Courses in Admin. Training (APP)	.014	.045	.310	.757	.000	.063	.002	.998
Perceived Preparation for SPED (APP)	-.048	.080	-.599	.550	.010	.113	.085	.932
Overall Comfort with SPED (APP)	.005	.087	.057	.954	-.143	.123	-1.164	.246
Extent of SPED Training in Clinical Experiences (APP)	-.008	.064	-.129	.897	.125	.090	2.169	.167
Previous Experience with SWD [a]	.091	.051	1.783	.076	.053	.072	.732	.465
Previously Gen. Ed. Teacher [a]	-.096	.121	-.797	.426	-.193	.171	-1.129	.260
Previously SPED Teacher [a]	-.371	.191	-1.941	.054	-.400	.270	-1.483	.139

Note. APP = Administrator Preparatory Program. SWD= Students with disabilities. SPED = Special Education.
[a] Prior to position as an administrator. * = $p < .05$. ** = $p < .01$. *** = $p < .001$

IEP Meeting Facilitation

As shown in the middle column of Table 5, univariate analyses indicated four correlates were significant (with medium effect sizes) for the IEP Meeting Facilitation outcome. Significant correlates included: having higher levels of special education content in their Coursework Training Activities; having (versus not having) a child with an IEP; receiving more special education content during In-Person Training Activities; and attending greater numbers of IEP meetings in the last year. Together accounting for 20.4% of the variance, F (11,221) = 6.399, $p <$ .0001, four independent contributors emerged. Similar to the first outcome, significant predictors of IEP Meeting Facilitation included the average number of IEP meetings attended in the last year and previous experience collaborating with special educators. In addition to these predictors, this outcome was also predicted by having a child with an IEP and by having greater training for special education in coursework components.

Procedural Assistance Behaviors

Finally, univariate analyses indicated nine statistically significant correlates with the Procedural Assistance outcome. The following correlates had small - to - medium effect-sizes: higher levels of special education content in Coursework Training Activities; higher levels of SPED content in In-Person Training Activities; previously holding a position as a special educator; having more experience collaborating with special educators; higher levels of comfort with SPED behaviors as a result of training programs; attending greater numbers of IEP meetings in the last year; higher level of perceived preparation for SPED; more courses in SPED; and having more experience with SPED students to prior to the administrative role. See Table 5.

Although all assumptions were met for the regressions involving the first two outcome variables (e.g., no multi-collinearity; outcome variables normally distributed), one important

assumption did not hold for the final outcome variable. Specifically, the histogram for Procedural Assistance revealed that this third factor was positively skewed—that is, a high percentage of respondents (15.4%) scored extremely low (i.e., 1 - never) in their average scores for this factor. Given the distribution of this outcome variable, I ran nonparametric mean-ranked tests, Kruskal-Wallis *H* test, for each significant variable, with the dichotomous outcome variable for Procedural Assistance split at the mean (less than 2.00 vs. greater than 2.00). Except for two potential predictors (having previous experience collaborating with SPED teachers; having previous experience with students with disabilities), the remaining seven correlates all continued to be significant at the .01 level. See note on Table 5.

This skewed outcome variable did, however, necessitate the use of logistic regression for the final regression analyses. This analysis revealed a single, significant predictor: attending a higher number of IEPs during the last year. Though it should be interpreted with caution (as it is a pseudo-R^2), this model accounted for 22.9% of the variance (Nagelkerke R^2). See Table 7.

Table 7

Logistic Regression Results for Procedural Assistance

Variables	*β*	S.E.	*Wald*	*p*-value	OR [95% CI]
Avg. No. IEP Meetings	**.392**	**.111**	**12.533**	**.000*** **	1.480 [1.191-1.839]
Avg. % Day with SPED Teachers [a]	.211	.133	2.505	*ns*	1.235 [.951-1.604]
Has Child with an IEP	.370	.370	.998	*ns*	1.448 [.701-2.991]
Extent of SPED Training in Assignments and Courses (APP)	.076	.255	.089	*ns*	1.079 [.655-1.777]
No. SPED Courses in Admin. Training (APP)	.140	.134	1.085	*ns*	1.150 [.884-1.496]
Perceived Preparation for SPED (APP)	.225	.251	.806	*ns*	1.253[.766-2.048]
Admin Training Prep Overall Comfort with SPED	.125	.262	.227	*ns*	1.133 [.678-1.892]
Extent of SPED Training in Clinical Experiences (APP)	.179	.193	.864	*ns*	1.196 [.820-1.745]
Previous Experience with SWD [a]	-.017	.153	.012	*ns*	.983 [.728-1.328]
Previously Gen. Ed. Teacher [a]	-.302	.358	.710	*ns*	.739 [.366 – 1.492]
Previously SPED Teacher [a]	.087	.595	.021	*ns*	1.091 [.340 – 3.504]
Constant	-3.494	.875	15.963	.000	

Note. OR = Odds Ratio AAP = Administrator Preparation program. SWD = students with disabilities. SPED = special education. * = $p < .05$. **= $p < .01$. *** = $p < .001$

Chapter 4

Discussion

Despite the critical importance of school principals to the IEP process, this study is among the first to examine the extent to which school principals engage in IEP-related behaviors and the characteristics associated with performing higher levels of such behaviors. More specifically, in addition to confirming prior findings, this study has produced findings that have important implications for practice, policy, and research. In the pages that follow, I first outline findings relative to each research question, before providing implications for the field at large.

Review of Findings

This study's first major set of findings relates to the preparation of school principals (RQ 1). Three major takeaways emerged. First, principals report being unprepared without much SPED instruction. Specifically, principals reported an overall lack of special education coursework – only 40.6% reported having as many as one course (some had none) in special education or special education law. Moreover, this lack of training might be an underestimate, as the lone national study of this issue, Wakeman et al. (2006), found that the percentage of school principals with one or no SPED courses equaled 74%.

Beyond coursework per se, school principals might know about IEP and the many SPED procedures from other training experiences. For this reason, this study also attempted to measure training in a more expansive way. Specifically, I gathered information about the extent that administrators may have received SPED content within their training programs via lectures, assignments, readings, online modules, or within their clinical/internship experiences. At most,

coursework or in-person experiences *sometimes* incorporated SPED content which were modestly observed within lectures ($\bar{x}$ = 2.82), assignments ($\bar{x}$ = 2.80), and coursework ($\bar{x}$ = 2.69), nearing average item scores close to 3.0 (i.e., sometimes). On the other hand, in-person SPED-content experiences averaged closer to the 2.0 or *rarely* range (see also Table 3).

This study also revealed some interesting descriptives related to perceived preparedness. Indeed, even without formal coursework, clinical experiences or assignments, school principals might still see themselves as prepared for overseeing IEPs and their school's special education services more broadly (Bineham, 2014; Burton, 2008; Lucker, 2012; Newman, 2015; Williams, 2015). But such was not the case in this sample; when asked explicitly the extent of their overall preparedness for SPED-related matters as a result of their training program, over 75% of respondents felt either not at all or only somewhat prepared. This finding somewhat conflicts with earlier findings. Note, for example, that, in terms of being "well-prepared" to deal with such matters, McHatton et al. (2010) reported that 50.8% to 75.5% considered themselves well-prepared, whereas Burton (2008) reported a "well-prepared" rate of 90.3%. Although speculative, it may be that this study's multiple questions—asking specifically about individual training elements and experiences—helped to remind this sample's principals about their "true" level of preparedness concerning SPED and IEP-related issues. Finally, when asked about their comfort with specific special education behaviors as a result of their training programs, nearly half of the respondents in this study felt uncomfortable across all ten items. Taken together, these principals generally did not report being prepared for or comfortable with their abilities relative to SPED-matters.

This study's second set of findings related to the nature of and the extent of reported engagement across 14 IEP-related behaviors (RQ2). My analyses indicated that these 14-items

formed three factors, consisting of behaviors that related to: Problem-solving the substance of a child's IEP, Facilitating IEP meetings themselves, and Assisting in the procedures of IEPs or IEP meetings. Explaining nearly two-thirds of the variance, these three factors show that principals' performance of special education behaviors is not a single "thing", that IEP and SPED behaviors are better conceptualized as falling into three distinct categories.

Within these analyses, it also became apparent that principals engage in different behaviors (and even groups of behaviors) to varying degrees. At the factor-level, principals more frequently reported engaging in Substantive Problem-Solving behaviors. At the item-level within this factor, principals at least occasionally suggested solutions to problems, read through a child's IEP in its entirety, followed up with the case manager to ensure IEP implementation, and collaborated with district personnel to solve parent or teacher conflicts. Looking more closely at the content of these items, substantive behaviors may occur both during an IEP meeting (e.g., suggesting solutions to problems, collaborating with district personnel, or reading an IEP in its entirety) or outside of an IEP meeting during day-to-day administration (e.g., following up with a case manager about IEP implementation, initiating to schedule an IEP meeting, or participating in a functional behavior assessment or behavior intervention plan). In each case, the focus of the behavior relates to what is within an IEP and how that IEP is being carried out, or solving any issues related thereof. For instance, the need to initiate an IEP meeting coming from a principal (as opposed to the case manager) is usually the result of a parent request or the need to resolve, change, or clarify the IEP in its current form as changes cannot be made to the document without holding an IEP meeting. Further, participating in part of a functional behavior assessment or behavior intervention plan is a result of the child engaging in behaviors that impede their learning or the learning of others.

With respect to IEP Meeting Facilitation behaviors, as a whole, these items were completed on average less frequently than Substantive Problem-Solving behaviors but more frequently than Procedural Assistance behaviors. At the item-level, principals reported introducing IEP team members as the behavior most frequently engaged in across all 14-items. However, the remainder of the related within-factor items were completed less than occasionally: leading discussion, identifying and describing the roles during meetings, and helping to ensure meetings are completed in allotted time. For some principals within this sample, taking part in the IEP meeting (versus not participating at all), seems to be occurring. The final factor, related to Procedural Assistance, was completed less frequently, both at the factor and item levels. At the item-level, principals reported doing the following *a little* of the time: assisting with the IEP or IEP documents, assisting with general paperwork, or recording meeting minutes or notes (see Table 3). Principals reported least likely engaging in training to deliver a component of the IEP. Overall, principals are less frequently engaging in procedural assistance behaviors.

A final set of findings related to the correlates of each factor (RQ3). Both across and within factors, we see one common and several divergent correlates. For Substantive Problem-Solving behaviors, higher levels were noted when principals reported a greater amount of previous experience with students with disabilities and previous collaboration with special educators. Higher Substantive Problem-Solving also occurred when principals had higher levels of special education content within their coursework and in-person training components. For this factor, having attended more IEP meetings within the last school year was the only significant characteristic related to the principal's current role. The administrator's experience with dispute resolution procedures, time in education, or even their current role do not seem to matter. In terms of independent predictors of Substantive Problem-Solving behaviors, principals who

attended more IEP meetings within the last year and more frequently collaborated with special education teachers prior to the principal role predict higher engagement in this factor. More interestingly, when considering those independent predictors of higher levels of Substantive Problem-Solving behaviors, no characteristic of the administrator's training program was statistically significant (see Tables 5 and 6).

For the second factor, IEP Meeting Facilitation behaviors, a different pattern arose. Though having higher levels of special education content in coursework and in-person training activities, as well as higher averages of IEP meetings attended within the last year, all predicted higher levels of this outcome, IEP Meeting Facilitation behaviors were also predicted by principals whose own child had an IEP. So far, only one study has asked principals about their personal experience with someone with a disability (Collins, 2008), but the extent to which this characteristic may impact principal's reported behaviors has not been investigated prior to this study.

The third factor, Procedural Assistance behaviors, sheds light on a group of behaviors that administrators overwhelmingly do not engage in. Looking at the within-factor average, 15.4% of the sample reported never doing any of the items and 50% reported doing them only a little. Several variables related to higher levels of this outcome, including having previous SPED experiences (e.g., teaching, coursework, collaborative experience) and higher ratings of both comfort and preparedness from one's training program. As noted in Table 5, attending a higher average of IEPs within the last school year also mattered for this factor. With the exception of the last correlate, the main theme seems to involve additional exposure to special education content both prior to and during one's training program.

It is also noteworthy that, of all three factors, previous experience as a special education teacher only mattered for Procedural Assistance (as noted in both Tables 5 and 7). Prior to this study, I had considered having prior experience as a special educator a primary hypothesis, one that might relate to many—possibly even all—IEP and special education behaviors. When considering the nature of the within-factor items (e.g., recording meeting minutes, assisting with paperwork, developing documents, etc.), each of the behaviors would require a higher level of special education knowledge and processes. For example, if less well-versed in the requirements of IDEIA (2004), one might feel uncomfortable capturing the meeting's proceedings via the minutes or assisting with documentation. It may be that for those persons with more experience with special education and higher comfort levels, engaging in such procedural behaviors as a principal is less intimidating.

Implications

In considering these three sets of findings, specific implications arise concerning principal preparation, in-service professional developments, and policy. More generally, administrators from across the nation reported their preparation programs often did not include much special education legal and procedural content, and did not leave them feeling prepared or comfortable with special education-related matters.

First, then, the field should consider the elements of administrator preparatory programs. However, the concentration may not be on special education coursework itself – as this only mattered for one factor (i.e., Procedural Assistance). But we do see a pattern of higher levels of *each* outcome when respondents had special education content infused within course elements (e.g., lectures, assignments) or their in-person clinical experiences (see Table 3); or when principals attended higher averages of IEP meetings within the last year. These findings may

suggest principal preparatory programs may better prepare administrators for special education-related content and procedures by infusing, throughout their program's existing coursework, more applied experiences.

Though most programs align their principal preparatory curricula after the Professional Standards for Educational Leaders (Vogel & Weiler, 2014), studies of program attributes and practices generally do not measure information regarding aspects of the programs related to special education (Anderson et al., 2018). It thus seems necessary to study principal preparatory programs in terms of their SPED contents, as well as how those contents are delivered. Along this same line, the field would also benefit from comparative analyses of graduates from programs over time, thereby determining how and to what extent SPED-specific program elements may or may not impact administrator behavior. At the very least, pre-service principal-training programs need an increased amount of training in special education issues. Specifically, they can certainly consider incorporating, as a program requirement, either more participation in IEP meetings or greater numbers of collaborative experiences with special education teachers. For example, pre-service administrators could follow a case study of a child receiving special education services within their clinical experiences, or shadow a special education teacher as they help develop a child's IEP.

To further support this point, consider the Substantive Problem-Solving factor, with which principals reported relatively high engagement. When looking at the 6-items within this factor, each one requires interaction with another person to some extent: following up with case manager/teacher, working through problems, collaborating with personnel, even obtaining a copy of an IEP to read through requires communication with the child's teacher. Likewise, both independent predictors (i.e., attending higher numbers of IEP meetings and having more

previous collaborative experience with SPED teachers) required interactions with others – specifically with special education staff. Such collaborative experiences with special educators and participation in IEP meetings could easily be incorporated into a training program. Increased exposure to and involvement in IEP meetings may also suggest that real-life application of special education procedures and knowledge could facilitate principals' acquisition of needed skills. To some extent, such "hands-on" training experiences are already being attempted in the wider field of special education with pre-service special educators. For example, Mueller et al. (2018) trialed simulated IEP meetings. This type of training, so far aimed at graduate students training to become special education teachers, could be adapted for pre-service school principals.

Although addressing gaps in principal preparation programs may be part of the solution, later, post-training interventions, when these individuals are actually on the job working as school principals, may be of even greater value. Given that we asked these principals *retrospectively* whether they felt prepared by their programs both generally and specific to behaviors, other interesting considerations also arise. Specifically, would administrators have realized the need for the special education content earlier, when they were enrolled in their training programs? Following student numbers alone, it makes sense that principal preparation programs concentrate their content on students without disabilities – they make up over 86% of a school's population (NCES, 2019). Still, although comprising only 14% of the student population, students with disabilities consume percentages of principals' work-day that range from 50% (Lasky & Karge, 2006) to 70% (Christenson et al., 2013).

In short, devoting time and training to SPED issues may only become important in the actual moment, when one finds oneself immersed in the complexities of educating students with disabilities, as well as having one's own time and resources occupied. This type of immediacy

might best be understood by difference between experiences that are "near" versus "far," best understood by a social psychological approach known as *construal theory*. In more general terms, construal theory notes that "the farther removed an object is from direct experience, the higher (more abstract) the level of construal of that object" (Trope & Lieberman, 2010, pg. 1). In terms of construal level theory, then, at the time of content instruction in a preparatory program, the concerns or complexities surrounding special education are psychologically distant from principals and therefore more abstract (Trope & Lieberman, 2010). However, when that psychological distance decreases and the issues surrounding students within special education become more immediate and concrete, on-the-job school principals might only then grasp the importance of SPED concerns and apply the content.

This idea of "near vs. far" experiences, combined with high demands from currently in-service principals for special education trainings (Bineham, 2014; Davidson & Algozzine, 2002; Roberts & Guerra, 2017; Pontius, 2010), also speaks to the need for interventions based on a case-based learning approach. After direct content instruction, the case-based learning or case-based collaborative learning approach (CBCL) presents a "case" or problem to individuals or small groups. Learners must then apply the presented content to arrive at a solution (Krupat et al, 2016). Such models have been used in the medical field (Krupat et al., 2016) and within education (Decker & Pazey, 2017). Decker and Pazey (2017) proposed using this model to inform teachers about at the legal nuances surrounding disciplining students with disabilities.

Given the collaborative nature of the IEP process, the CBCL model might constitute an ideal venue for training school principals. Further, current in-service administrators cite professional developments and on the job training as one their frequently accessed sources of special education knowledge (Burton, 2008; Bineham, 2014; Walton, 2008). To address deficits

in special education knowledge-expertise among school principals, one might begin with a more general presentation of special education law (Zirkel, 2015, 2020), coupled with some case-based investigations of adjudicated dispute resolutions. In this way, in-service school principals might develop concrete understandings of special education-related procedures. They could also quickly apply such knowledge in their everyday work.

These findings also have implications for future policies. Though IDEIA (2004) is a federal act, states can further specify their own special education framework (see *Schaffer v. Weast*, 2006; Zirkel, 2015). At the policy level, it might help if state education agencies (SEAs) and school districts analyzed their current special education frameworks and procedures for vulnerabilities related to both procedural and substantive errors (Zirkel, 2020). School principals would benefit from a knowledge of the Act, but also of how federal laws and regulations play out locally, as SEAs and local districts impose additional confusing procedures.

Some SEAs have made attempts to formalize procedures surrounding IEPs throughout their states. An example of policy intervention at the state level relates to facilitated IEP meetings. Mason and Goldman (2017) highlighted a state-level implementation of Facilitated IEP Planning (FIEP). Specific formal training programs exist, however, procedures are available freely via Mueller (2009) and the Center for Appropriate Dispute Resolution in Education (www.cadreworks.org). To better structure IEP meetings (Mueller, 2009), this facilitation process incorporates elements of business modeled meetings (see Chang & Kehoe, 1994). Such elements include having ground rules for communication (e.g., one person talking at a time) that are posted and reviewed within the meeting, or use of a meeting agenda to clearly establish both before and during the meeting the agreed upon topics/goals with corresponding time allotments. Other elements include use of a "neutral facilitator" whose role is to guide the meeting and

members to follow the agenda and remain focused on the topics. Mueller (2009) lists other essential elements of FIEP to include facilitation of collaborative environment, use of communication strategies giving balance to all members, and the use of a "parking lot" procedure, which involves making a list of issues/concerns that will be addressed later.

From Mason and Goldman's (2017) preliminary findings, some states are using the FIEP model and satisfied with the process. I would like to extend the consideration at the policy level that SEAs and school districts consider the utility of such a training for their principals who are serving in the capacity of LEA representative within IEP meetings. In this same vein, IEP meeting facilitation is commonly cited as a promising strategy to reduce conflict with favorable feedback from stakeholders (Mueller, 2015; Pudelski, 2013).

Limitations

Although an important first step, this study also has certain limitations. First, these data and their corresponding findings reflect a sampling of school principals in which not all states were represented, although the sample was roughly comparable to national averages in terms of gender, age, and years of experience. Second, as these data were all self-reported, it remains unclear whether principals were in fact engaging in the behaviors as described. Finally, these findings reflected a one-time cross-sectional, descriptive sampling; as such, one cannot make causal conclusions.

Conclusion

To extend this study's predominant metaphor, our nation's school principals and assistant principals are often drowning in a raging river of responsibilities and demands. Although they make up only a small portion of their school's population, students with disabilities often require a disproportionate amount of a principal's attention. As this study demonstrates, school

principals are not being prepared for such issues in their training programs and those that engage in the IEP process do so to varying degrees and levels. In essence, our administrators are often relying on having their personal experiences to navigate the waters. We need to better equip principals with more concrete, tangible strategies to efficiently navigate the tricky waters that constitute our nation's approach to special education for all children with disabilities.

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Appendix A

Proportion of Proposed Sample by States (N=246)

	% *(n)*	
	Percent by State (Respondents in State)	Summed Percent Across States with Equal No. of Respondents [a]
Tennessee	32.9% (81)	32.9% (81)
Nevada	10.6% (26)	10.6% (26)
Connecticut, Florida	4.9% (12)	9.8% (24)
New York, Utah, Virginia	3.3% (8)	9.8% (24)
Massachusetts, Rhode Island, Washington	2.4% (6)	7.3% (18)
New Jersey	2.0% (5)	2.0% (5)
Alabama, Hawaii, Louisiana	1.6% (4)	4.9% (12)
Delaware, Indiana, Maine, Maryland, Michigan, Mississippi, Wisconsin, Wyoming	1.2% (3)	9.8% (24)
California, Idaho, Kentucky, Montana, North Carolina, North Dakota, Ohio, Pennsylvania, Vermont, Washington D.C.	.8% (2)	8.1% (20)
Alaska, Arkansas, Minnesota, Missouri, Nebraska, New Hampshire, Oregon, South Dakota, Texas, West Virginia	.4% (1)	4.1% (10)

Note. [a] This column represents the summed percent across states with the same number of respondents.