From Traditional to Reform: Exploring the Involvement of School Psychologists in the Provision of Educator Professional Learning

Michelle Bolling
ACCEPTANCE

This dissertation, FROM TRADITIONAL TO REFORM: EXPLORING THE INVOLVEMENT OF SCHOOL PSYCHOLOGISTS IN THE PROVISION OF EDUCATOR PROFESSIONAL LEARNING, by MICHELLE AVILA BOLLING, was prepared under the direction of the candidate’s Dissertation Advisory Committee. It is accepted by the committee members in partial fulfillment of the requirements for the degree Doctor of Philosophy in the College of Education, Georgia State University. The Dissertation Advisory Committee and the student’s Department Chair, as representatives of the faculty, certify that this dissertation has met all standards of excellence and scholarship as determined by the faculty. The Dean of the College of Education concurs.

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ABSTRACT

FROM TRADITIONAL TO REFORM: EXPLORING THE INVOLVEMENT OF SCHOOL PSYCHOLOGISTS IN THE PROVISION OF EDUCATOR PROFESSIONAL LEARNING

by

Michelle Avila Bolling

School Psychologists may be well-suited to provide Professional Learning (PL) to assist schools in meeting legislative demands to increase student standards, to respond to demands for teacher accountability, and to meet the needs of a diversifying student population. School psychologists possess a depth and breadth of valuable knowledge and skills; and, certain aspects of the school psychologist role (e.g., flexibility in service delivery and scheduling) may enable them to invest time into PL and reap the potential benefits of a broader scope of impact and a focus on prevention. Little is known about the current PL practices of school psychologists due to a lack of research in this area. This research study attempts to fill the gap in the literature by exploring the perceptions and practices of school psychologists as they relate to the provision PL as an indirect service approach to capacity building within schools. In addition, the research identifies situational and personal variables that might contribute to the likelihood of engaging in PL as a service. Finally, motivations for providing PL and levels of satisfaction derived from the provision of PL are explored. These factors were investigated through survey research methodology. The survey method for this study consisted of a three stage recursive process in which earlier stages informed necessary modifications to later stages based on participant feedback. First, exploratory interviews informed the construction of an initial survey measure. The measure was piloted with two consecutive groups and amended each time in order to assist with clarification. The final survey measure was sent
to a stratified, random, national sample of practicing school psychologists. Descriptive
statistics were used to describe PL practices, the personal and situational variables under
investigation, motivations for providing PL and satisfaction derived from PL delivery.
Inferential statistics were used to investigate relationships between selected personal and
situational variables and PL delivery.
FROM TRADITIONAL TO REFORM: EXPLORING THE INVOLVEMENT OF SCHOOL PSYCHOLOGISTS IN THE PROVISION OF EDUCATOR PROFESSIONAL LEARNING

by

Michelle Avila Bolling

A Dissertation

Presented in Partial Fulfillment of Requirements for the Degree of Doctor of Philosophy in School Psychology in the Department of Counseling and Psychological Services in the College of Education Georgia State University

Atlanta, GA
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To my mother: Thank you for always believing in me and helping me make my dreams come true. Not just this once, but always. No matter what I wanted, you always helped find a way to make it happen. Your strength, generosity, and love have comforted and inspired. I hope some day to do the same for my daughter.

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<td>APA</td>
<td>American Psychological Association</td>
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<td>CDCP</td>
<td>Centers for Disease Control and Prevention</td>
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<td>CPRE</td>
<td>Consortium for Policy Research in Education</td>
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<td>CCTC</td>
<td>Council of Chairs of Training Councils</td>
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<td>EE</td>
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<td>IP</td>
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<td>NASP</td>
<td>National Association of School Psychologists</td>
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<td>NCES</td>
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<td>NSDC</td>
<td>National Staff Development Council</td>
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<td>SCOPE</td>
<td>The Stanford Center for Opportunity Policy in Education</td>
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<td>SDT</td>
<td>Self-Determination Theory</td>
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<td>USDOE</td>
<td>United States Department of Education</td>
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<td>US DHHS</td>
<td>United States Department of Health &amp; Human Services</td>
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CHAPTER 1

Introduction

School psychologists have been calling for reform of their role since the Thayer Conference held in 1954, where the general consensus was that school psychologists should work with all children, not just those being identified for Special Education (Sheridan & Gutkin, 2000). In 2006, the National Association of School Psychologists (NASP) revised its Blueprint for Training and Practice (Ysseldyke et al., 2006) which is meant to guide the provision of comprehensive school psychological services. Two primary outcomes for school psychology services were indicated: “(a) improve competencies for all students, and (b) build and maintain the capacities of systems to meet the needs of all students” (p. 12). In 2010, NASP developed the Model for Comprehensive and Integrated School Psychological Services (NASP Practice Model, 2010) advocating for the provision of systems-level services to build capacities of educational personnel. These goals are consistent with those of Professional Learning (PL) or staff development whose primary purpose is to, “improve educator practice and student results” (Learning Forward, 2011, p. 6). The provision of PL is a means by which school psychologists may endeavor to build capacity in educators and systems and assist schools in meeting the needs of all students; however little is known about school psychology practices in this domain.

The Importance of Providing PL

American schools have been under close scrutiny by policy makers and the public as a result of educational reform movements to raise student standards and increase educator accountability (United States Department of Education [USDOE], 2001; 2004;
Each year the National Center for Education Statistics (NCES) makes public the progress toward increasing student achievement in this country and makes comparisons with other developed nations. Since 1870, Congress has mandated comparisons of America’s students with those in other developed nations (NCES, 2011) and it is becoming increasingly important for America’s students to be competitive with those of other nations given the trend toward a global economy. Data for these comparisons come from a variety of public and private sources including, among others, the National Assessment for Educational Progress (NAEP) and the Program for International Student Assessment (PISA). In the most recent report (NCES, 2011), national reading scores have remained relatively stable since 1992 and are consistent with the international averages of developed nations. National math scores have increased steadily, albeit slowly. Unfortunately, the math scores remain lower than those of other developed nations.

While academic demands increase for America’s students, so too do their mental health needs (Centers for Disease Control and Prevention [CDCP], 2010). By some accounts, nearly 80% of children needing mental health services do not get access to those services (Kataoka, Zhang, & Wells, 2002). The current economic recession adds additional financial stressors to children and families (e.g., joblessness, limited resources, foreclosures, transiency, etc.), as well as schools (e.g., increased class sizes, reductions in staff, and budget cuts; NASP, 2009). In 2011, 16.1 million children (21.9%) in the US were living in poverty, with disparate proportionality across races (i.e., 74.4% of African-American children, 34.1% of Hispanic children, and 12.5% of white children were living in poverty; US DHHS, 2012). Children living in poverty tend to have higher
rates of transiency and subsequent higher risk of dropping out (Rumberger & Larson, 1998). In addition, America’s school population is expected to become more and more diverse. NCES (2008) projected disparate increases in various racial/ethnic student groups between 2001 and 2018. Increases included: 26% for students who are black, 38% for students who are Hispanic, 29% for students who are Asian or Pacific Islander, and 32% for students who are American Indian or Alaskan Native. These are in contrast to the 4% growth rate projected for students who are White. While the socioeconomic and racial/ethnic diversity are not inherently problematic; diversity issues present challenges to teacher preparedness related to specific skills and content needed for working with diverse populations (Ganadara & Maxwell-Jolly, 2002). Teachers in schools today face the challenge of educating an increasingly impoverished, transient (US DHHS, 2012), diverse student population (NCES, 2011), with more significant emotional needs (CDCP, 2010) to reach higher standards (USDOE, 2010) with fewer resources (NASP, 2009).

PL for teachers (i.e., professional development or inservice training) could provide the means to develop new competencies in educators to support students in the face of these current challenges (Darling-Hammond, 1999). Sustained and effective PL initiatives could help address the emerging needs of schools and students (Desimone, 2009). Loeb and Miller (2006) found that “teachers who participate in some sustained professional development that is linked closely to the work that they do in their classrooms, do, on average, become more effective” (p. ii). School psychologists are in a good position to assist in the PL of teachers thereby impacting the growth, development, and achievement of the children they serve. Shinn & McConnel (1994) state that school psychologists should strive to “bring new information to teachers and parents to
implement validated practices, destroy myths, and delete invalidated practices” (p.355). In subsequent sections of this manuscript connections will be made between the National Association of School Psychologists’ (NASP) published standards of school psychology practice (e.g. the *NASP Blueprint* by Ysseldyke et al., 2006; and the *NASP Model for Comprehensive and Integrated School Psychological Services*, 2010) and the best practice standards for the provision of PL (Learning Forward, 2011). Both NASP and Learning Forward have determined that best-practices should aim to build capacities in schools and increase student competencies.

**The Problem**

The provision of PL is an indirect service with broad scope implications for teacher capacity building (i.e., enhancing the skills, competencies and abilities of individuals to meet presented challenges and achieve measurable goals) and student achievement. Learning Forward, formerly known as the National Staff Development Council (NSDC), stated, “[PL] is the primary vehicle available to schools and school systems to strengthen the performance of the education workforce” (Learning Forward, 2011, p. 6). Conceptualizing PL as an indirect service worthy of school psychologist resources may require a shift in mind set for currently practicing school psychologists and consumers of their services. Fagan & Wise (2007) wrote, “In many ways the planning of in-service workshops can be viewed as a sort of grander-scale consultation” (p.129). Meyers (2002) in a retrospective on consultation training over the last 30 years states that training, “help[s] trainees overcome preexisting motivations for helping individual children directly, by developing a preventive orientation that motivates consultants in training to help larger numbers of children indirectly by assisting
caregivers (i.e., consultees) who will in turn help the needy children under their care” (p. 38).

School psychologists are accessible professionals who could be of great support to school faculty by providing PL; however, little is known about the nature and extent of school psychologist PL practices. These practices have been largely ignored in the research. Survey research conducted over the last thirty years has attempted to explore and define school psychological practices in general (e.g., Castillo, Curtis, & Gelley, 2012; Curtis, Hunley, & Grier, 2002; Curtis et al., 2008; Hosp & Reschly, 2002; Hutton, Dubes, & Muir, 1992; Lacayo, Sherwood, & Morris, 1981; Levinson, 1990; Reschly and Wilson, 1995, 1997; Roberts and Rust, 1994; Smith, 1984); however, few of these studies included as a variable the nature and extent of school psychologist PL practices. Furthermore, the studies cited above have described an evolution of the role of school psychology over the past few decades from largely direct service provision to a more indirect service orientation; as such, exploring the school psychologist as a provider of PL may not have been as relevant in the past as it is today. Given that the standards for PL and the standards for school psychology practice have established the parallel outcomes of increasing teacher capacities and student competencies, it seems worthy to consider if overlap exists between these domains of practice. Subsequent paragraphs in this section will explore the research toward this aim.

PL has been superficially explored in NASP’s longitudinal national survey efforts to describe school psychology practices. NASP collected survey data at 5 year intervals over the last 20 years. The data were first published by Curtis, Hunley, Walker and Baker (1999) and indicated that 77.8% of school psychologists surveyed reported that they had
engaged in conducting inservices in the 1994-95 school year. In addition, the authors reported that, “about one of five school psychologists (18.4%) conducted five or more inservice programs” (Curtis et al., 1999, p.113). Data based on the 2004-2005 school year indicated a decrease in the provision of PL by school psychologists (Curtis et al., 2008) in which 67.1% of school psychologists reported delivering PL with a mean of 2.6 inservices delivered. In the most recent NASP survey based on 2009-2010 practices, Castillo, Curtis, and Gelley (2012) found 71% of school psychologists reported having conducted at least one inservice with an average number of 3 inservices conducted by school psychologists. In addition, 18% of school psychologists reported more than 5 inservices conducted in that year. Finally, school psychologists in the 2009-2010 school year spent on average 2.8% of their work time on inservices. The authors concluded, “Together these data suggest that school psychologists do not often participate in activities that can build the capacity of other educational personnel” (Castillo et al, 2012, p.4). None of the NASP survey studies collected data regarding the “inservice” specifics (i.e., type, format, duration). It is also difficult to draw conclusions regarding trends in this data due to differences in reporting in these publications.

Curtis, Hunley and Grier (2002) analyzed the NASP survey data collected in 2000 to consider, among other things, if demographic variables were associated with the provision of inservice programs. They concluded that school psychologists with more training (as defined by highest degree earned) and school psychologists with more years of experience conducted more inservice programs than their less experienced peers. This was in contrast to their less experienced counterparts and those with lesser training who spent more of their time doing initial evaluations for special education. It was also found
that school psychologists who were employed in school districts with lower psychologist to student ratios were more likely to engage in activities outside the realm of special education eligibility. These included the provision of inservices and consultative services toward prevention and intervention activities. Although school psychologists have consistently reported desiring more time for consultation and less for assessment (e.g., Reschly & Wilson, 1995), it has not been reported whether PL is an activity to which school psychologists would prefer to devote more or less time.

In summary, the provision of PL by school psychologists could have broad scope implications for capacity building in schools, potentially impacting large numbers of students through an indirect service delivery model. To date, research on school psychologist PL practices has been limited at best. No studies have focused specifically on this phenomenon although several have grazed it while aiming to explore something else. These studies have shown that there is evidence that school psychologists do engage in the practice of providing PL; however, in-depth information is not available describing the phenomenon or factors associated with it.

A Framework for Professional Learning

PL is the process of learning new skills as related to one’s area of professional expertise. In education, the aim is to improve educator practice and student outcomes (Learning Forward, 2011). PL can be accomplished through a variety of means, thus for the purposes of this research a broad conceptual definition of PL as a continuum of learning experiences is presented. This broad continuum includes activities such as: inservice presentations, classes for teachers, courses delivered at work sites, the facilitation of learning communities, structured book studies, lesson studies, coaching,
consultee-centered consultation, etc. This definition is not meant to provide an exhaustive list, rather to assist the reader in conceptualizing PL as a broad continuum of experiences that can vary in intensity, duration, presentation, focus, and content.

It is helpful to examine the best practice recommendations for PL when considering reasons that school psychologists might be capable PL providers. Situating school psychologist skills and attributes within a framework for PL will provide a rationale for why school psychologists should endeavor to provide it. Recognizing the need for high quality PL, in 2011 Learning Forward revised its Standards for PL and stated, “Increasing the effectiveness of PL is the leverage point with the greatest potential for strengthening and refining the day-to-day performance of educators” (Learning Forward, 2011, p.13). The seven best practice standards with brief descriptions are depicted in Table 1.

Table 1

*Standards for PL*

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<tr>
<th>Standard</th>
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<tr>
<td>Learning Communities</td>
<td>Communities of learners establish, own and commit to PL goals aimed at continuous improvement.</td>
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<td>Leadership</td>
<td>Skillful leaders provide support and engage in advocacy to develop the capacity of learners.</td>
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<tr>
<td>Resources</td>
<td>Resources are prioritized, monitored and coordinated.</td>
</tr>
<tr>
<td>Data</td>
<td>Various data sources are used to plan, assess, and evaluate PL.</td>
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<tr>
<td>Learning Designs</td>
<td>PL is based on sound theoretical models and established research in the domain of concern.</td>
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Implementation  Systems change research is considered, along with necessary supports for sustained implementation.

Outcomes  Outcomes are aligned with professional standards of practice and student curriculum standards.


Although seven discrete standards are presented, Learning Forward has emphasized that all seven standards are essential and work collectively to produce high-quality professional learning.

“For it to be effective, PL occurs most often in learning communities; is supported with strong leadership and appropriate resources; is drawn from and measured by data on students, educators, and systems; applies appropriate designs for learning; has substantive implementation support; and focuses on student and educator standards” (Learning Forward, 2011, p.19)

In 2011, Learning Forward in collaboration with the Stanford Center for Opportunity Policy in Education (SCOPE) concluded a three phase study examining PL practices in the United States. A thorough review of the literature on PL conducted in phase I of this study indicated that ongoing and intense PL aligned with system practices and goals that is connected to content areas and fosters collaborative relationships among teachers is most effective (Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009). Effective PL activities empower teachers (Scribner, 1998;), are supported by school leaders (Banilower, Heck & Weiss, 2007; Joyce & Showers, 2002) occur in a
collaborative setting (Desimone, Porter, Garret, Yoon & Briman, 2002; Farmer, Hauk, & Neumann, 2005) and foster equity among members (Grundy, Robison, & Tomazos, 2005; Truscott & Truscott, 2004).

**School Psychologist Suitability to Enact the Standards for PL**

School psychologists have unique and diverse training that distinguishes their competencies from both educators and other disciplines of psychology (Tharinger, Pryzwansky, & Miller, 2008). Using the seven standards of PL presented in Table 1 above, the next section of this manuscript describes characteristics of school psychology training and practice that might be considered assets in each area.

**Equipped to facilitate learning communities.** Effective PL requires building learning communities that develop and commit to goals while engaging in a data-driven improvement process (Learning Forward, 2011). Collaboration is of specific import to the establishment of learning communities and has been posed as a standard for school psychology practice. The most recent NASP *Blueprint for Training and Practice* (Ysseldyke et al., 2006) indicates that, “school psychologists must understand the vital importance of collaboration and be able to facilitate it effectively in multiple contexts, as well as recognize that soliciting input from others may be as important as imparting knowledge or sharing expertise” (p.15). The importance of collaboration was reiterated in the NASP *Practice Model* (2010) which emphasizes the school psychologist’s ability to facilitate communication among diverse audiences to facilitate problem solving and promote change at a variety of levels (i.e., the individual student level, classroom level, building level, district level, etc.).
School psychology training programs accredited by the American Psychological Association (APA) may require courses, such as individual counseling, group counseling, and psychology core courses through which practitioners learn skills such as active listening, reframing, modeling, relationship development and understanding group dynamics (Hennings-Stout, 1999; Tharinger et al., 2008). These could serve as strong foundational skills for the facilitation of collaboration within learning communities. Many school psychologists learn skills associated with consultation either through specific coursework or infused throughout the program curriculum (Rosenfield, Levinsohn-Klyap, & Cramer, 2010) which could be assets to the facilitation of learning community environments. In consultation the practitioner must use an understanding of systems, interpersonal communication skills, personal and interpersonal relationship skills, and strategies for countering resistance (Hennings-Stout, 1999). Unfortunately, research on consultation training has illuminated several programmatic concerns including inconsistencies among training programs, paucity of courses, scarcity of applied field experiences, and inadequate supervision (Rosenfield et al. 2010). As a result, there has been a call for enhanced coursework and field experiences in consultation (Rosenfield et al., 2010) which could equip school psychologists with skills to function in and facilitate collaborative learning communities. Developing strong interpersonal skills and personal communication skills, understanding aspects of how people relate to each other, expanding skills to overcome resistance, and supporting people to make needed changes will all be assets to the school psychologist when facilitating learning communities in PL.
Prepared to fill leadership roles. PL, “requires skillful leaders who develop capacity, advocate, and create support systems for professional learning” (Learning Forward, 2011, p.28). NASP’s Blueprint for Training and Practice (Ysseldyke et al., 2006) calls for school psychologists to assume leadership roles in seven of the eight domains of competency. These include: (1) Interpersonal and Collaborative Skills, (2) Diversity Awareness and Sensitive Service Delivery, (3) Professional, Legal, Ethical, and Social Responsibility, (4) Data-Based Decision Making, (5) Systems-Based Service Delivery, (6) Enhancing the Development of Cognitive and Academic Skills, and (7) Enhancing the Development of Wellness. This call to leadership by NASP was only absent from the Technological Applications domain (Ysseldyke et al., 2006).

Studies have shown that school psychologists are often called on to assume different leadership roles within school buildings and systems (Shriberg, 2007), most frequently leadership is assumed on school-based intervention teams (Lowell, Rimmer, & Zeeman, 2010; McNamara, Rasheed, & Delamtre; 2008). The same interpersonal and communication skills that might make school psychologists adept leaders on school committees and intervention teams can be applied to the facilitation of PL. Ideally, these leadership skills would include: the ability to listen, the ability to collaborate with a diverse range of individuals, the ability to communicate effectively with a broad and variable audience, and the ability to mediate or facilitate difficult situations (Ysseldyke et al., 2006). Specific school psychology coursework that could serve as a foundation for leadership includes training in collaboration and consultation; organizational understanding of schools and classrooms as systems; school law; and special education law (Silva, 2003; Tharinger et al., 2008; Ysseldyke et al., 2006).
Competent to understand data and evaluate outcomes. Learning Forward’s Data and Outcomes Standards are inherently related. The PL Standards emphasize the importance that PL be data-driven and continuously modified based on ongoing evaluation (Learning Forward, 2011). The outcomes standard stresses the importance of, “equitable expectations for all students to achieve at high levels and hold educators responsible for implementing appropriate strategies to support student learning” (Learning Forward, 2011, p.61). Traditionally conducted at the individual student level, many school psychologists have been trained to use a variety of assessment methods to understand problems, establish baseline performance, develop interventions, monitor progress, and evaluate outcomes (NASP, 2008; Tilly, 2008). Ysseldyke et al. (2006) assert “school psychologists have historically been responsible for collecting considerable student data” (p.18). “Training in research methods, statistics, and program evaluation enables them to gather data about school systems, programs, and classroom environments as well” (p.18). The advent of legislation mandating Response to Intervention (RTI) has increased the need for school psychologists to develop these essential skills and broadened the implementation of a problem solving orientation from the individual student level to a systemic level (National Association of State Directors of Special Education [NASDE], 2005; Tilly, 2008). School psychologists have specific training experiences (albeit to varying degrees) that may prepare them for this role. Core preparation in general psychology and specialized training in school psychology incorporate content in the domains of research methods, statistics, psychological assessment, diagnostics, and program evaluation (Tharinger et al, 2008; Ysseldyke et al., 2006) which provide a foundation for understanding the uses and limitations of data. The
NASP Standards for Credentialing of School Psychologists (2008) state, “data-based decision making permeates every aspect of professional practice” (p. liv) and the NASP Practice Model (2010) asserts, “school psychologists have knowledge of research design, statistics, measurement, varied data collection, and analysis techniques, and program evaluation sufficient for understanding research and interpreting data in applied settings” (p. 8). Competency with understanding data and evaluation could enable school psychologists to make data-based decisions about training needs, collect and interpret formative assessment data, and evaluate the outcomes of PL endeavors.

**Well-suited to develop learning designs.** “Integrating theories, research, and models of human learning into the planning and design of PL contributes to its effectiveness” (Learning Forward, 2011, p.40). Furthermore, the learning design for a particular PL project (e.g., face-to-face versus on-line, or individual versus team-based, or job-embedded versus workshop learning, etc.) should vary based on intended outcome, student/educator needs, learner characteristics, and personal preferences. School psychology training is diverse and promotes a broad knowledge base in psychological and educational domains that could facilitate this integration. NASP’s Practice Model (2010), states, “School psychologists have knowledge of biological, cultural, and social influences on academic skills; human learning, cognitive, and developmental processes; and evidence-based curricula and instructional strategies” (p.5).

In order to integrate research into learning designs one must first be able to understand, analyze, and interpret research. Core competencies in psychology including training in basic psychological science, research, and statistics serve to prepare school psychologists to be astute consumers of research (Fagan & Wise, 2007, Tharinger et al.,
In addition, school psychology concentrations typically focus on child/school issues and often include training in human development, psychological aspects of learning, educational assessment, educational intervention, and aspects of motivation (Fagan & Wise, 2007; Silva, 2003; Tharinger et al., 2008; Ysseldyke et al., 2006). This core knowledge about learners could help school psychologists make sound decisions about learning designs. School psychologists also frequently have training in areas such as curriculum and instruction, prevention and intervention, exceptional education, and cultural diversity (Fagan & Wise, 2007). This cultural competence permeates all aspect of school psychology service (Ortiz, Flanagan, & Dynda, 2008) and would help to create culturally responsive learning designs. NASP’s Standards for Credentialing (2008) indicate:

School psychologists have knowledge of individual differences, abilities and disabilities and of the potential influence of biological, social, cultural, ethnic, experiential, socioeconomic, gender-related, and linguistic factors in development and learning. School psychologists demonstrate the sensitivity and skills needed to work with individuals of diverse characteristics and to implement strategies selected and/or adapted based on individual characteristics, strengths, and needs (p. liv).

Given these training foundations, school psychologists may have prerequisite knowledge to develop effective PL learning designs that are tailored to specific outcomes given diverse learner needs.

**A human resource to support implementation.** The Resource and Implementation Standards are intertwined (i.e., resources are required to support
sustained implementation) and will be addressed together in this section. The Resources Standard states, “effective [PL] requires human, fiscal, material, technology, and time resources to achieve student learning goals” (Learning Forward, 2011 p. 32). The Implementation Standard proposes PL as a systemic change process “that occurs over time and requires support…to embed new learning into practices” (Learning Forward, 2011, p.44). Although NASP’s Blueprint and Model do not specifically address the school psychologist’s role in managing resources, there appear to be certain attributes associated with the role and function of the school psychologist that could enable them to act as a human resource. School psychologists work in schools, thus a certain amount of accessibility to the school psychologist as a PL resource could be afforded. School psychologist accessibility could (a) allow for more inquiry and feedback with PL participants, (b) provide participants with access to ongoing support, and (c) permit additional discourse among participants about PL content. The typical school year-long appointments of school psychologists could allow PL support to be sustained over time with potentially more contact hours, both of which have been found to enhance learning outcomes and support sustained implementation (Banilower et al, 2007; Desimone et al, 2002).

In addition to accessibility, flexibility in role can also facilitate school psychologist participation in PL. The job descriptions of school psychologists encompass a range of services including “diagnostic, consultative, intervention, and prevention” (Riccio, Garcia-Vasquez, & Crespi, 2010, p.3). The amount of time devoted to each of these endeavors may be mediated in part by legal constraints (e.g. timelines for initial psycho-educational evaluation for special education) and school system priorities;
however some research supports the notion that school psychologists can prioritize how
they spend their time (Benson & Hughes, 1985). The flexibility in role appears to be
related somewhat to the student to psychologist ratio with lower student ratios allowing
more flexibility to provide psychologist preferred services (Curtis et al., 2002). Since the
current trend is toward lower school psychologist to student ratios (Curtis et al., 2008)
perhaps more autonomy in decision making by providers will be afforded. Thus, while
school psychologists typically do not have control over district resources and spending,
the nature of their role and their accessibility in schools make them well-suited to serve
as a resource to support implementation.

Considerations of School Psychologists as PL Providers

PL as “grand-scale consultation.” Gutkin and Conoley (1990) suggest that
school psychologists must change the underlying manner in which we approach practice.
They advocate movement away from a medical model, focused on the pathology of the
individual, to an indirect service delivery model focusing attention on developing the
expertise of the adults with whom the children come in contact. They assert,

School psychological practice must extend beyond the boundaries of traditional
practice … The field must evolve toward a focus that is significantly more adult-
centered than current practice if there is to be any real hope of attaining consistent
positive change for children (p. 211).

This change in mindset has been advocated for decades by proponents of consultation
services (Caplan, 1970; Meyers, 2002) and is supported by NASP’s most recent Blueprint
(Ysseldyke et al., 2006) and the more recent Practice Model (NASP Practice Model,
role, the provision of PL could be considered a “grand-scale” form of consultation (p. 129). The provision of PL activities could be a means by which school psychologists can effectively build the capacities of large numbers of adults in educational environments.

While working with all students would be logistically impossible for a school psychologist through a direct service delivery model, increases in consultation training and indirect service delivery models (Anton-LaHart & Rosenfield, 2004) offer the opportunity to broaden the profession’s scope of impact and place more emphasis on a preventive orientation. A preventive focus in school psychology practice has been advocated by NASP in its publications providing practice guidance (e.g., NASP, 2006; 2010) and for decades in the school psychology literature (Albee, 1988; Caplan, 1964; J. Meyers, Meyers, & Grogg, 2004; Meyers & Nastasi, 1999). In addition, school psychologists have consistently endorsed a preference for increasing time spent providing indirect services (Reschly, 1998). As posited by Bradley-Johnson and Dean (2000) this is a position of necessity, “there are too many children and adolescents in need of services for school psychologists to work with them on a one-to-one basis, instead we must attempt to change the behavior of those who work with the students daily” (p. 2).

A parallel can be drawn between consultation services and the provision of PL as both serve to help children indirectly while building the capacity of adults. Traditionally, consultation relationships tend to be thought of as 1:1 relationships, such as that of school psychologist (consultant) to teacher (consultee). The provision of PL to teachers can be thought of as a 1:many consultative relationship focusing on building capacity in multiple individuals simultaneously (i.e., one PL facilitator (school psychologist) to many participants (teachers)). These services are a way for school psychologists to have a great
impact on large numbers of teachers and thus students through preventive means, catching students before the cycle of failure begins (Meyers, 2002).

**PL as a school psychological service.** While research has found that school psychologists provide on average three inservices per year (Castillo et al., 2012) there is no specific information available regarding what these inservices entail (i.e. content, format, learning engagements, etc.). Information regarding current PL practices can assist in understanding whether current school psychologist PL practices conform to best practice standards (Learning Forward, 2011) or fall short, thus providing information about skill and practice gaps that may need attention. Based on available research in this domain, it appears that school psychologists engage in a range of PL delivery with some practitioners conducting over five inservices in a school year, while others conduct very few (Castillo et al., 2012).

The provision of PL as an indirect service delivery method may be becoming increasingly important as the profession continues to evolve. Shortages of school psychologists are predicted due to increasing numbers of retirees that will not be counterbalanced by the emergence of new professionals from training programs (Curtis et al., 2004). In addition, the current fiscal climate resulting from the national recession is requiring widespread budget cuts in all areas of education (NASP, 2009). Though it remains to be seen what impact this will have on the number of school psychology positions that are available, there will undoubtedly be implications for how school psychology as a field evolves. Both of these factors could logically lead to an increase in the ratio of school psychologists to students served. The estimated national ratio of 1:1671 reported by NASP (Charvat, 2008; Curtis et al., 2008; U.S. Department of
Education, 2008) falls short of the NASP recommended ratio of 1:1000 (Thomas, 2000). Research indicates that as this ratio increases so does the time spent performing assessment and special education functions for individual students (Curtis et al., 2002; Reschly & Wilson, 1995; Smith, 1984). Inversely, less time can be devoted to indirect services which can have larger scale impacts on the student population in general (Curtis et al., 2002). Given the current contextual factors, up to date information regarding practices would be timely. If less time is available for indirect service delivery, we may get more return on investment by engaging in PL for groups than in consultation with individuals.

**Motivations for providing PL.** Little is known about school psychologists’ motivations to provide professional learning at their schools. However, PL is a means by which school psychologists could potentially use their skill set and broad knowledge to help large numbers of educators and thereby even larger numbers of children; thus potentially increasing job satisfaction as it relates to feelings of competency at work.

Ryan and Deci (2000) have found that satisfaction of the three basic needs for competence, relatedness and autonomy is associated with feelings of well-being, positive attitudes, and favorable performance. Specifically in the work domain, need satisfaction has been associated with higher levels of job satisfaction (Cross & Wyman, 2006; Ilardi, Leone, Kasser, & Ryan, 1993), higher degrees of motivation for work (Gagne, 2003), and higher levels of work performance (Baard, Deci, & Ryan, 2004). When the unique contributions and skills of professionals are recognized in contexts that enhance feelings of competence, intrinsic motivation is improved. Historically, school psychologists have experienced a certain degree of disconnect between what they would prefer to do and
what they actually do (Reschly & Wilson, 1995). Some studies have attempted to ascertain the degree to which actual roles reported differ from what would be preferred by practitioners (Anthun, 1999; Curtis et al., 2008; Levinson, 1990; Reschly & Wilson, 1995; Roberts & Rust, 1994). These studies generally conclude that the desire to diversify the role of the school psychologist has been a persistent concern that remains evident today. School psychologists report they would prefer to spend more time engaged in preventive and indirect service delivery (i.e., providing direct interventions and engaging in problem solving consultation) than in conducting assessments for special education placement (Anthun, 1999; Levinson, 1990; Reschly & Wilson, 1995; Roberts & Rust, 1994). The disparity between what is preferred and what exists is dramatic. In fact, school psychologists would prefer to reduce their time spent engaged in traditional assessment activities by approximately 25% (from 50-55% to 32%; Reschly, 1998) and to increase time spent on indirect service delivery from 21% to a preferred 40% of time devoted to indirect service delivery. Huebner (1992) suggested, “Given the finding that organizational stressors are important contributors to burnout, school psychologists should consider increasing their attention to organizational change efforts and goals” (1992, p.135). In the present study, PL is conceptualized as a mechanism of organizational consultation aimed at large scale change. It represents a divergence from the traditional assessment related role to what school psychologists have expressed as a more preferred role (i.e., a focus on prevention, problem solving and large scale change.)

In spite of evidence pointing to school psychologists preferences diverging from actual roles, research over the last three decades indicates that most school psychologists experience a certain degree of satisfaction with the profession. The level of satisfaction...
that school psychologists experience has been positively correlated with the level of diversity evident in role (Levinson, 1991) and lower school psychologist to student ratios (Reschly & Connally, 1990). In a national study conducted in 1984, Anderson, Hohenshil and Brown found that 85% of school psychologists felt “satisfied” or “very satisfied” with their work. While some variability in this estimate has been apparent, this finding has been replicated in other nationwide surveys conducted more recently where the percent of satisfied practitioners ranged from 77% (Wilczenski; 1997) to 90% (Worrel, Skaggs, & Brown; 2006). Finally, in a meta-analysis of school psychology job satisfaction research conducted across two decades, VanVoorhis and Levinson (2006) estimated the job satisfaction rate of school psychologists to be 85% “satisfied” or “very satisfied” and indicated that in addition to the correlated factors reported above, the level of job satisfaction may also be related to opportunities to have autonomy in decision making about how school psychologists practice. The ability to exercise autonomous decision making in work-related activities improves motivation (Deci & Ryan, 2000, 2008).

Proctor and Steadman (2003) found that school-based school psychologists (i.e. those only serving one school) reported higher rates of satisfaction and lower rates of burnout than did traditional itinerant school psychologists (i.e., those serving more than one school). In addition, itinerant school psychologists experience a high degree of professional isolation and disconnect from their peers (Proctor & Steadman, 2003). Consistent with these findings are the discoveries of Huebner (1992) who investigated burnout as a subset of occupational well-being (or job satisfaction). His results indicated that as the number of school psychologists employed increased, measures of burnout
decreased. Huebner’s work also suggested that this finding was related to the subjective perceptions of the working conditions, rather than actual caseloads. Guest (2000) found that school psychologists reported looking to other school psychologists or mentors as helpful resources when presented with workplace challenges. Perhaps when one perceives the caseload as manageable (e.g., the school-based scenario investigated by Proctor & Steadman in 2003) or when one perceives a good deal of available support (e.g. Huebner, 1992; Guest, 2000), rates of burnout may decrease and job satisfaction may increase. When professionals feel connected to colleagues and can experience relatedness at work, motivation and job performance improve (Deci & Ryan, 2000, 2008).

**Summary**

American schools have endeavored to increase student competencies (USDOE, 2001; 2004; 2010) with variable results (NCES, 2011) while encountering the challenges of a continually diversifying student population (NCES, 2011) with more significant emotional needs (CDCP, 2010), and fewer resources associated with the economic recession (NASP, 2009). Best practice standards in the fields of school psychology (Ysseldyke et al., 2006) and PL (Learning Forward, 2011) agree that focus should be placed on increasing educator capacities and student competencies. Given the current economic climate, it may behoove educational systems to consider how best to use available resources to achieve these goals.

In the previous sections the argument was presented that school psychologists may possess training, characteristics, and skills that could potentially be used to build teacher capacities through PL. Historically, little is known about school psychologist practices in this realm, although based on the limited prior research available it appears
that the provision of PL is an activity in which school psychologists do endeavor to engage to varying degrees.

**Purpose of the Current Study**

The purpose of the current research study was to explore the perceptions and practices of school psychologists regarding the provision of PL to teachers and other educators. Personal and situational factors that predispose practitioners to provide more or less PL were investigated.

Specifically, a three stage electronic survey process was implemented as the method of research. A small convenience sample of practitioners participated in qualitative interviews (phase 1), then a survey was drafted based on qualitative analysis of the responses from these interviews. The survey was then piloted and refined using a focus group procedure (phase 2) and the final instrument was emailed to a national sample of practitioners ($N=650$, phase 3). Some survey questions focused on demographic variables and general practices; while more specific questions addressed particular practices in providing PL, situational variables that may impact PL practices, and whether school psychologists derive satisfaction and a sense of autonomy from delivering PL. Data were summarized using descriptive statistics to describe demographic characteristics, reported practices, and perceptions of the respondents. Inferential statistics were used to explore relationships between the personal and situational factors under study and the practitioner practices related to PL. Table 2 in the Research Questions section of this chapter outlines the statistical analyses for each research question in more detail. Explicit research procedures are outlined thoroughly in the Method section of this manuscript.


**Research Questions**

The specific research questions are outlined below while statistical analyses and measurement are presented in Table 2.

1. What do school psychologists report about the nature of their involvement in providing PL?
   a. Number of hours  
   b. Format of trainings  
   c. Audience characteristics (who and how many)  
   d. Collaborative or independent delivery  
   e. Topics of PL  
   f. Adherence to PL standards  
   g. PL preferences
2. Is school psychologist reported involvement in PL delivery related to personal variables such as age, degree, former teaching experience, years of experience as a school psychologist, or degree of training in PL?
3. Is school psychologist reported involvement in PL delivery related to situational variables such as student to psychologist ratio, time spent on evaluations, or job placement (i.e., school level, school type, and community served)?
4. What aspects within school environments do school psychologists report to facilitate the provision of PL and which aspects reportedly hamper efforts toward the provision of professional learning?
5. What do school psychologists report about:  
   a. Motivations for providing PL?
b. Deriving satisfaction from providing PL?

c. Feelings of autonomy associated with providing PL?

d. Connecting with faculty through providing PL?

Table 2

*Research Constructs, Measurement, and Data Analyses*

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Variable Measurement</th>
<th>Data Analysis</th>
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<tbody>
<tr>
<td><strong>Question 1</strong></td>
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<tr>
<td>School psychologist (SP) involvement in PL</td>
<td>Number of hours of PL delivered in the last year (ConV)</td>
<td><strong>Question 1</strong> Descriptive Analyses</td>
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<td></td>
<td>Format of training delivered (CatV)</td>
<td>Mean (M) and standard deviation (SD) and percentages of respondents</td>
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<tr>
<td></td>
<td>Audience Who (CatV) and how many (ConV)</td>
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<td></td>
<td>Collaborative or Independent (CatV)</td>
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<td></td>
<td>Topics of PL Delivered (CatV)</td>
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<td></td>
<td>Adherence to Standards (CatV)</td>
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<td></td>
<td>PL Preferences (CatV)</td>
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<td><strong>Question 2</strong></td>
<td>Personal Variables</td>
<td><strong>Questions 2 &amp; 3</strong> Descriptive Analyses</td>
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<td>Age in years (ConV)*</td>
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<td></td>
<td>Degree status</td>
<td>4 categorical levels (CatV)</td>
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<td>Teaching experience</td>
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<td></td>
<td>SP experience</td>
<td>Reported in years (ConV)*</td>
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<td>Training in PL</td>
<td>Types of training (CatV)</td>
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<td><strong>Question 3</strong></td>
<td>Situational Variables</td>
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<td></td>
<td>Student to SP ratio</td>
<td># of students served (ConV)*</td>
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<td>Number of evaluations</td>
<td># of evaluations/month (ConV)*</td>
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<td>Community served (CatV)</td>
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<td><strong>Question 4</strong></td>
<td>PL facilitators/enablers</td>
<td><strong>Question 4</strong> Descriptive Analyses</td>
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<td>PL barriers/disablers</td>
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**Question 5**

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<td>Descriptive Analyses</td>
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<td><em>M, SD, percentage of respondents</em></td>
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<td>Autonomy</td>
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<td>Relatedness</td>
<td>Relatedness items (CatV)</td>
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</tbody>
</table>

CatV= Categorical Variable, ConV = Continuous Variable

*Denotes data that will be collected as a continuous, then converted to categorical for data analysis

**Significance of the Current Study**

Because there is little research available that specifically explores the role of the school psychologists in teacher PL, this study represents a step toward exploring a gap in the literature base. While many survey studies have explored demographics, role, and job satisfaction, none to date have focused on the perspectives and practices of school psychologists as related specifically to PL as an indirect service approach to building capacity within schools, nor have they attempted to identify trends in personal or situational variables that might contribute to the likelihood of engaging in PL as a service.

Answers to the research questions posed in this study should help to shed light on current practices and provide direction for future research. Information obtained from this study could be used to inform those individuals involved in the training of school psychologists of needed skills, knowledge, and dispositions of future practitioners in training programs. This research may also increase awareness of the skills of school psychologists as a potential resource for PL to schools. In addition, this research may serve to inspire school psychologists currently in practice to work toward taking a more active role in the PL of teachers and to inspire other researchers to explore additional dimensions associated with these concepts.
Assumptions and Limitations

Several assumptions have been made in regards to the phenomena under investigation. First, PL is conceptualized as an indirect service delivery that has the potential to benefit many students, i.e. building capacity in educators should result in increases in student competencies. Second, it is assumed that since NASP has determined that building capacity in schools is of significant import to school psychologists, the results of this study will be meaningful and relevant to the stakeholders involved. There are additional assumptions associated with the methodology selected. It is assumed (a) respondents are reasonably accurate reporters of their activities, (b) the sampling frame selected accurately reflects the population of school psychologists as a whole, and (c) developed survey questions accurately measure the variables under consideration in this project.

There are several limitations of this research study that should be discussed before possible conclusions for the research can be explored. One limitation is that the study employed self-report methods rather than being based on verifiable independent data sources; thus the results of the survey can be said to reflect what people said they did which may contrast with what they actually did. In addition, the data gathered were retrospective and subject to the fallibility of participant memory or possible inaccuracies in record keeping. In addition, the author recognizes that selecting a sampling frame that did not exactly include all elements of the target population resulted in some bias in this survey research. This limitation stems from the possibility that the selected sampling frame may have contained members that differ substantially from those not included in beliefs, attitudes, and/or practices.
Though steps were taken to ensure an acceptable response return rate, lower response rates are considered a limitation in survey research. In addition, as with most survey research, data collected from survey responders may have differed from potential responses of the population as a whole. Finally, since the survey was completed in 2012, the current political and economic context must be taken into account as they may have influenced the roles and responsibilities of educational professionals, including school psychologists.

**Organization of the Manuscript**

Chapter 2 presents a comprehensive review of the literature on school psychology demographics and practices; professional learning, practices and efficacy; and, prior research on school psychologist work satisfaction. The available literature on school psychological services delivery as it applies specifically to the provision of PL to teachers is emphasized. Chapter 3 presents the research method in detail outlining specific procedures for survey development, sampling, and statistical analyses. The interview and survey instruments are shared, the method and design for obtaining the sample is outlined, and the statistical procedures to be implemented are discussed. Protection of human subjects in the study is also be detailed in Chapter 3. The results found in Chapter 4 discuss the data and statistical findings as related to the specific research questions outlined in Chapter 1. Chapter 5 discusses the implications of the research findings as well as limitations of the study and recommendations for future research in this domain.
Glossary of Terms

Accountability- Specifically in education, accountability has referred to holding educational institutions (and their employees) to established rules/responsibilities to meet specific outcomes/expectations.

Capacity Building- enhancing the skills, competencies and abilities of individuals to meet presented challenges and achieve measurable goals.

Collaboration- the process by which partners (individuals or organizations) work together to achieve common a goal or mutual objective.

Consultation- In school psychology, consultation refers to a method of indirect service delivery whereby the consultant (typically the school psychologist) engages n a collaborative partnership with the consultee (typically the teacher) in order to assist the consultee in solving a specific problem (typically a student or classroom concern).

Data-based Decision Making- analyzing data to measure the effectiveness of processes, procedures, or interventions and using that data to guide decisions about those processes, procedures or interventions.

Direct Services- those services in which the practitioner works directly with the student (e.g., individual counseling, or individual assessment, or direct observation, etc.)

Focus Group- a group of individuals assembled for the express purpose of providing feedback, opinions, or attitudes about a specific thing (in this case, the survey measure).

Indirect Service Delivery- those services in which the practitioner does not work directly with the student, but with other individuals who may have direct contact with
students such as teachers, parents, or educational institutions (e.g., consultation, training, parenting classes, professional learning, etc.)

Inservice Training- a type of professional learning. Typically short presentations to faculty aimed at providing information about a topic, skill or procedure.

Internet Protocol (IP) address- a numerical identifier assigned to each computer linked to a network which serves to identify the machine itself and provide an address as to its location.

Job Satisfaction- the degree of agreement between one’s preferred job experience and the actual job experience; as well as the degree to which people enjoy their job experience as a whole and how they feel about its discreet aspects.

Learning Community- An established PL environment that contains a group of learners committed to continuous improvement toward common goals actively engaged in learning together with a sense of collective responsibility for sharing knowledge, experience, and expertise with each other.

Learning Design- this refers to the type of PL experience delivered. Learning designs are the facets of the instructional experience that are best suited to needs of the learner and attainment of the intended goals.

Professional Learning (PL) - the process of learning new skills as related to one’s area of professional expertise.

Response to Intervention- a problem solving approach to intervention in education whereby, (a) students are periodically assessed at regular intervals to determine educational needs, (b) evidenced based intervention is provided for students found to be in need (i.e., below established benchmarks or standards), (c) student
progress is frequently monitored, and (d) data is used to make decisions regarding adequate progress toward closing gaps between actual and expected performance.

School Psychologist- a professional who is highly trained in both psychology and education with the focus of working collaboratively with educational institutions, teachers, and/or parents/families to assist students in succeeding academically, socially, and behaviorally or emotionally (Silva, 2003).

Self Determination Theory (SDT) - SDT is theory of motivation that is based on the essential premise that human beings have an innate tendency toward psychological growth and an integrated, unified sense of self.

Structured Interview - a method of research interviewing whereby the interviewer has a set of predetermined questions.

Service Delivery Model- for the purpose of this research, service delivery model refers the various treatment models that may be delivered by a school psychologist. Some may be direct (the professional works directly with the student) and some may indirect (the professional works with others who will in turn work with the student).

Student Standards- established criteria or standards determined by agencies governing educational practices that indicate the timeline for what students should know and be able to do.

Survey Monkey- a web-based survey company whereby users can author online surveys, collect survey data, and analyze survey responses.
Survey Research- A method of research that involves asking questions to gather data and using responses to those questions to provide information about a problem or answer research questions about a phenomena.

Think Aloud Technique- a method of gathering data about the interface between a user and a process or product. In this research, participants will make overt their thoughts (e.g. what are they thinking or feeling) while they take the survey to inform any necessary changes to the survey measure.
CHAPTER 2

Review of the Literature

Demographics of the Field

NASP estimated that there are about 35,400 credentialed school psychologists in the United States, 29,400 are employed primarily in public school settings (Charvat, 2008). This calculation was based on the number of credentialed school psychologists in the U.S. (Center for Mental Health Services, 2004) and adjusted by estimated rates of entrance and exit from the profession (Curtis et al., 2004). Curtis et al. (2004) reviewed survey research spanning three decades from the 1970’s to the year 2000 examining demographic trends of the field. Trends in demographic data collected over that time indicate that school psychology has become a largely Caucasian and female profession, with primarily specialist-level practitioners, who typically speak only English and practice in public schools. The most recent national survey data gathered by NASP (Castillo et al., 2012) indicate that these trends continue to hold true. Data suggest the percentage of women in the profession has increased from a minority of 46% in 1984 (Smith, 1984) to the current majority representation of 76.6% in 2008 (Castillo et al., 2012). This trend is likely to continue upward as roughly 80% of students in school psychology graduate programs are women (Fouad et al., 2000; Thomas, 1998). The exception to this trend was within school psychology university faculty where for decades men have continued to be more prevalent (Reschly & Wilson, 1995); however, recent data indicate this trend is changing. Little, Akin-Little, and Tingstrom (2004) found that “women have outnumbered men in entering the professorate every year since 1987” (p.299) and now make up 51% of school psychology faculty. In contrast to the
dramatic differences found in gender demographics, racial demographics have remained relatively stable across time. The field consistently has had a limited representation of practitioners from diverse racial and ethnic backgrounds. Smith found that Caucasians comprised 96% of the field in 1984 as compared to the 90.7% found in 2012 (Castillo et al., 2012). School psychology is also experiencing a “graying of the profession,” with gradually increasing means in age and years of experience. In 1984 the average age of school psychologists was 38.8 years old with a mean of 10.9 years experience (Smith, 1984) as compared to the current means of 47.4 years old with 14.8 years of experience (Castillo et al., 2012). In addition, Castillo and colleagues (2012) reported that 17.8% of school psychologists were 60 years of age or older. Trends in degree attainment among school psychologists indicate a movement toward higher degree status. In 1985, 38% of school psychologists held specialist degrees or higher (Smith, 1984) as compared to the most recent 70.9% (Castillo et al., 2012). Researchers predict that these trends will continue into the foreseeable future (Curtis et al., 2004).

The conclusions about contemporary demographic trends outlined above were based on data gathered using the NASP membership database as the sampling frame. In a recent study comparing demographics and practices of NASP member and non-NASP member school psychologists conducted by Lewis, Truscott, and Volker (2008), the authors found that, “using a sample of NASP members appears to provide an accurate picture of school psychology as practiced by most practitioners in most schools” (p. 478). They found no significant differences on the majority of demographic variables analyzed (i.e., gender, age, degree status, and years of experience) and no significant difference in the degree to which members and non-members engage in activities related to special
education. In contrast, ethnicity data gathered in this study suggest that there are significantly more school psychologists of color in practice than are represented in the NASP membership. Although there still appears to be inadequate representation of ethnically diverse groups in school psychology practice overall, the disparity may not be as great as NASP membership data suggest (Lewis et al., 2008).

**School Psychologist Role and Practice**

In efforts to promote school psychology awareness, NASP provides information to consumers about the services that school psychologists provide (Silva, 2003). They include among these: consultation, evaluation, intervention and prevention; and research and planning. The degree to which school psychologists *should do* and/or *actually do* engage in each of these activities has been the subject of debate for decades. The literature base addressing the role of the school psychologist has been so focused on defining the role and calling for role reform, that in the past the field has been accused of having an “identity crisis” (Grimley, 1978). School psychologists have been calling for role reform since the Thayer Conference held in 1954, where the general consensus was that school psychologists should work with all children, not just with those being identified for Special Education (Sheridan & Gutkin, 2000). In spite of this, approximations of school psychologist work time have ranged from 50-60% (Reschly & Connolly, 1990) to 80% (Curtis et al., 2008) of time devoted to students with disabilities.

For decades survey research has been conducted in an attempt to accurately describe the evolving role and function of the school psychologist (Benson & Hughes, 1985; Castillo et al, 2012; Curtis et al., 2002; 2004; 2008; Hosp & Reschly, 2002; Hutton et al., 1992; Lacayo et al., 1981; Levinson, 1990; Reschly & Wilson, 1995,1997; Roberts...
& Rust, 1994; Smith, 1984). The most recent survey data based on the 2009-2010 school year suggest the majority of school psychologists practice in school settings (83.7% public, 6.2% private, and 2.5% faith-based) while smaller proportions of school psychologists are employed by universities (7.4%), or in private practice (3.5%; Castillo et al., 2012). Trends in school psychologist to student ratio data indicate a gradual downtrend with more school psychologists (43.6%) practicing at the NASP (2000) recommended general ratio of 1000:1 (Castillo et al., 2012). The NASP Practice Model (2010) advocates for a 1000:1 ratio in general; however, it also suggests a ratio of 500-700:1 when comprehensive services are expected. The most recent NASP longitudinal survey data (Castillo et al., 2012; Curtis et al., 2012) did not clarify the percentage of school psychologists practicing at this ratio. Despite an apparent preference for diversification of role (Reschly & Wilson, 1995), a substantial amount of data exists suggesting that school psychologists spend the majority of their time (with estimates ranging from 50 - 80%) engaged in traditional assessment-related activities (Curtis et al., 2002; Curtis et al., 2008; Fagan & Wise, 2000; Hosp & Reschly, 2002; Reschly & Wilson, 1997).

Data were collected by NASP in a series of survey research projects conducted over a 15 year period in an attempt to identify trends in school psychology practices (Curtis et al., 1999; 2002; 2008; Castillo et al., 2012). Although differences in data reporting across years makes it difficult to make some comparisons, Table 3 summarizes the practice data collected across time. In general, the data indicate that over time more school psychologists are practicing in conditions closer to the NASP recommended psychologist to student ratio of 1:1000 (Thomas, 2000). Trends indicate that school
psychologists are completing fewer initial evaluations for special education, although it is difficult to determine if they are spending more or less time overall engaged in activities related to special education due to differences in data reporting. With regard to diversification of service delivery over the past decade, it is apparent that the numbers of school psychologists engaging in consultation and counseling activities has remained relatively stable across time. Finally, of specific import to this research study is the finding that over the past decade, fewer school psychologists appear to be conducting inservices for teachers, despite NASP’s push for increasing the capacity of educators. In 1994 78% of school psychologists conducted at least one inservice training, whereas in 2004 the number dropped to 67% and back to 71.4% in 2012.

Table 3

*School Psychology Practices Over Time*

<table>
<thead>
<tr>
<th>Approximate percentage of school psychologists who:</th>
<th>1994-95*</th>
<th>2004-05**</th>
<th>2009-10***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work under a 1:1000 ratio</td>
<td>25%</td>
<td>41%</td>
<td>43.6%</td>
</tr>
<tr>
<td>Work from a 1:1001-1500 ratio</td>
<td>23%</td>
<td>20%</td>
<td>24.3%</td>
</tr>
<tr>
<td>Participate in 504 plan development</td>
<td>Not reported</td>
<td>74%</td>
<td>75.4%</td>
</tr>
<tr>
<td>Conduct 25 or fewer initial evaluations</td>
<td>30%</td>
<td>43%</td>
<td>60%</td>
</tr>
<tr>
<td>Conduct 50 or fewer initial evaluations</td>
<td>61%</td>
<td>75%</td>
<td>90%</td>
</tr>
<tr>
<td>Conduct more than 100 initial evaluations</td>
<td>9%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Spend more than 70% of time conducting</td>
<td>59%</td>
<td>Not</td>
<td>Not</td>
</tr>
<tr>
<td>special education related activities</td>
<td>reported****</td>
<td>reported****</td>
<td></td>
</tr>
</tbody>
</table>
evaluations

Provided individual counseling to 34% more than 10 students
18% more than 15 students
8.5% more than 30 students

Served more than 10 students through group counseling 20% 23% Not reported

Conducted at least one inservice 78% 67% 71.3%

Notes: * (Curtis, et al., 1999) ** (Curtis et al., 2008) *** (Castillo et al, 2012)

**** Although not reported in this format, the authors did report that the mean percentage of time spent engaged in special education related activities was 80.4% in 2004-05 and 58.4% in 2009-10.

Several studies have attempted to parse out practice differences as a function of demographic and situational variables (e.g., Brown et al., 1998; Curtis et al., 2002; Hosp & Reschly, 2002). Brown and colleagues (1998) considered potential practice differences between doctoral and nondoctoral school psychologists and found very few practice differences. These findings were consistent with those of Benson and Hughes from a decade prior (1985). In general, doctoral level practitioners were more prevalent in urban areas, were found to have higher salaries, and were more likely to engage in private practice activities (Brown et al., 1998). In contrast, Curtis and colleagues (2002) conducted comparisons using the NASP national survey data and found that school psychologists with more years of experience and higher levels of training engaged in more consultative service delivery than their less experienced counterparts. Urban school psychologists were found to have more years of experience than their rural counterparts.
Rural practitioners tended to conduct more special education re-evaluations than urban practitioners (Curtis et al., 2002). Finally, there were few practice differences found between NASP member and Non-NASP member practitioners (Lewis et al., 2008) with the exception of significantly more use of Curriculum Based Measurement (CBM) by NASP members.

Hosp and Reschly (2002) explored potential regional practice differences. While in general the national practice trends held true, in some instances there was significant variability across geographic regions, indicating that school psychology could look substantially different depending on location of practice. For example, the student-to-psychologist ratios differed significantly across the nation with the highest ratios (1:3858) found in the East South Central area of the US (i.e. in AL, KY, MS, and TN) and the lowest (1:1049) found in the Northeast (i.e. in CT, MA, ME, NH, RI and VT). Reschly asserts (2000), “ratio is one of the most robust of the influences on school psychology practices in the public schools” (p.513). In keeping with data found in other empirical research (e.g., Curtis et al., 2002) the school psychologists in the East South Central region who work under the highest ratios reported spending significantly more time engaged in assessment related activities. School psychologists in the Midatlantic region (i.e., NY, NJ and PA) spent significantly more time in providing direct intervention than other regions. To some degree regional practice difference are dependent upon the adoption of diverse state and local service delivery models (Reschly, 2000). Reschly (2000) states, “service delivery models that use alternative special education eligibility criteria and place more emphasis upon intervention outcomes can produce rather dramatic changes in the roles of school psychologists” (p. 513).
Some studies have attempted to ascertain if the actual roles reported differ from what would be preferred by practitioners (Anthun, 1999; Curtis et al., 2008; Levinson, 1990; Reschly & Wilson, 1995; Roberts & Rust, 1994). These studies generally conclude that the desire to diversify the role of the school psychologist has been a persistent concern that remains evident today. School psychologists report they would prefer to spend more time engaged in preventive and indirect service delivery (i.e., providing direct interventions and engaging in problem solving consultation) than in conducting assessments for special education placement (Anthun, 1999; Levinson, 1990; Reschly & Wilson, 1995; Roberts & Rust, 1994). The disparity between what is preferred and what exists is dramatic. In fact, school psychologists would prefer to reduce their time spent engaged in traditional assessment activities by approximately 25% (from 50-55% to 32%; Reschly, 1998). The results reported in Table 3 above suggest that practices continue to differ from preferences since indirect service delivery rates have remained relatively constant over the last decade.

National survey data indicated an upward trend in special education activities where school psychologists reported spending 80.4% of their time in the 2004-05 school year (Curtis et al., 2008). This contrasts with previous studies where the percentage of time engaged in special education related activities has ranged from roughly 50-60% (Reschly & Wilson, 1995). The most recent NASP survey (Castillo et al., 2012) indicated that school psychologists reported spending 58.4% of time engaged in Special Education activities (i.e. conducting initial evaluations and participating on special education teams). Unfortunately, differences in reporting across years and differences in the way respondents were asked to report practices have made comparisons across years
in this area challenging. Currently, special education students comprise about 13 percent of the nation’s student population (USDOE, 2010); however, school psychologists spend much of their time devoted to working with this small subset (Castillo et al., 2012; Curtis et al., 2008; Smith, 1984). Identification for special education services involves multiple tests and substantial professional resources the cost of which is estimated to be over 100 times the cost of identification for other types of remedial intervention (Shepard, 1989). Unfortunately, research on the efficacy of special education as an intervention has been less than positive. Carlberg and Kavale (1980) in a meta-analysis of research found, “the results of existing research when integrated statistically demonstrated that special class placement is an inferior alternative to regular class placement in benefitting children removed from the educational mainstream” (p. 304). These results were consistent when potential confounds (i.e., IQ, type of outcome measurement, subject demographics, etc) were taken into account. There is some evidence that students with disabilities who participate in less restrictive, more inclusive service delivery models experience somewhat higher, though still substandard degrees of achievement than those in less inclusive placements (Leinhardt & Pallay, 1982). These findings have led to increases in inclusive service delivery across the nation (Schulte, Osborne & Erchul, 1998); however research has not shown accelerations in the rates of learning necessary for students with disabilities to close the achievement gap with nondisabled peers as mandated by recent legislative policies (Zigmond et al., 1995). Reschly & Ysseldyke (2002) stated “When performance over time is tracked, the gap in achievement performance of students in general and special education gets wider every year, with a continual decline in the performance of the group of students assigned to special education” (p. 7).
In the Curtis and colleagues study (2008) reporting in excess of 80% school psychologist work time devoted to special education activities cited above, respondents were not asked to provide a breakdown of their special education-related activities, merely to estimate the total amount of time spent engaged in such. Depending on how the respondent interpreted the question, it is possible that consultations with general educators and special educators as related to students with disabilities or nontraditional assessment activities (e.g., functional assessment or progress monitoring) could have been included in this overall percentage estimate rather than just more traditional disability identification related activities. Reschly (2000) suggests that although the amount of time that school psychologists devote to students with disabilities is not decreasing, the type of services being provided to students with disabilities may be diversifying. He suggests that assessment activities are trending toward the nontraditional (i.e., away from standardized intellectual assessment, toward functional assessment connected to intervention). Future researchers may wish to include estimates of the type of services provided to students with disabilities rather than estimating the overall percentage of time engaged in special education activities. It may be possible that school psychologists are providing diversified services, albeit to special needs populations; however, based on the data to date we are unable to deduce this.

If school psychologists have been calling for a reform in service delivery since 1954, yet the professional role has been slow to evolve (Fagan, 2002), what barriers are impeding this reformation? Sheridan and Gutkin (2000) suggest several reasons why, despite an identified need and desire to diversify school psychological service delivery, the profession on the whole fails to change. They suggest that the medical model in itself
impedes a diversification of service delivery by maintaining a focus on the internal pathology of the individual. Furthermore, contextual structures inherent in school practice such as limited time for meetings and work artifacts like written psychological reports may impede diversification of service delivery, communication, and understanding. Finally, Sheridan and Gutkin suggested that macro-level legislative and political contextual factors have a large impact on how school psychology is practiced. Thus, it is necessary for school psychologists to link practice to student outcomes if the field is to remain relevant.

Researchers have investigated the degree of control school psychologists have in determining their day to day practices. Benson and Hughes (1985) found that school psychologists have a good deal of autonomy in their role. That is, they found that previously hypothesized environmental determinants of role; such as school system size or setting and location of the department (special education versus student services, etc.), as well as personal factors; such as, degree attainment and previous work experience were not significantly related to school psychologist practices. What they found was that school psychologists for the most part were responsible for writing the job description, and thus theoretically should have ample influence on their daily activities, even if they perceive otherwise.

Watkins, Crosby and Pearson (2001) surveyed consumers of psychological services (teachers and administrators) and found another possible impediment to the evolution of school psychology practices. While school psychologists may express a desire to change their service delivery model, consumers appear to be differently inclined. Teachers and administrators valued the assessment role and advocated that these
services continue. At the same time, these consumers requested that additional diversified services such as counseling, prevention activities, and inservice training also be provided. On the positive side it is clear that diverse services are valued by consumers; however, this presents the practicing school psychologist with a conundrum. There is only so much time in the work day, and to engage in one activity requires the displacement of another unless the workday is extended or more psychologists are hired to share the load.

NASP policies recommend that the ratio of school psychologist to student not exceed 1:1000 (NASP, 2000). The rationale for this proportion stems from research supporting that more diversified service delivery (i.e. engagement in more prevention and intervention related activities) is inversely related to the ratio, with school psychologists serving fewer students providing more diverse services (Curtis et al., 2002; Reschly & Wilson, 1995; Smith, 1984). Unfortunately, projected shortages of available professionals are predicted for the field over the next 10 years (Curtis et al., 2004) and recent data published by NASP (2011) indicate the ratio of school psychologist to student to be approximately 1 to 1,671 at present. It remains to be seen what impact the current economic recession will have on the number of school psychologists; however the associated financial stressors to school systems (e.g., increased class sizes, reductions in staff, and budget cuts) could conceivably impact psychologist to student ratios (NASP, 2009) thereby impacting service delivery.

**School Psychologists Providing PL**

Little is known about the nature and extent of school psychologist PL practices. Survey research conducted over the last thirty years has attempted to explore and define the various services provided by school psychologists (e.g., Brown et al., 1998; Castillo
et al., 2012; Curtis et al., 2002; Curtis et al., 2008; Hosp & Reschly, 2002; Hutton et al., 1992; Lacayo et al., 1981; Levinson, 1990; Reschly and Wilson, 1995, 1997; Roberts and Rust, 1994; Smith, 1984); however, few of these studies included as a variable the nature and extent of school psychologist PL practices. PL was explored as a variable as part of NASP’s longitudinal national survey described above. NASP collected practice data at 5 year intervals over the last 15 years. The data was first published by Curtis and colleagues in 1999 and indicated that 77.8% of school psychologists reported conducting inservices in the 1994-95 school year. In addition, the authors reported, “about one of five school psychologists (18.4%) conducted five or more inservice programs” (Curtis et al., 1999, p.113). Data across years has fluctuated. There was a decrease in the provision of PL in the 2004-2005 school year when 67.1% of school psychologists reported delivering PL with a mean of 2.6 inservices (Curtis et al., 2008). Some of the slight loss was reportedly recouped. NASP survey data based on 2009-2010 practices, found 71% of school psychologists reported having conducted at least one inservice with an average number of 3 inservices conducted by school psychologists (Castillo et al., 2012). In addition, similar to the 1994-95 school year, 18% of school psychologists reported more than 5 inservices conducted in the 2009-10 school year. Finally, school psychologists in the 2009-2010 school year spent on average 2.8% of their work time on inservices (Castillo et al.; 2012). The authors concluded, “Together these data suggest that school psychologists do not often participate in activities that can build the capacity of other educational personnel” (Castillo et al., 2012, p.4). None of these survey studies collected data regarding PL specifics (i.e., type, format, duration, topics) so this is yet unknown. It appears that despite calls for more capacity building by professional organizations, PL
delivery by school psychologists may be decreasing; however, it is difficult to draw conclusions regarding national trends due to differences in data reporting in these publications.

Curtis and colleagues (2002) analyzed the NASP survey data collected in 2000 to consider, among other things, if demographic variables were associated with the provision of inservice programs. They concluded that school psychologists with more training (as defined by highest degree earned) and school psychologists with more years of experience conducted more inservice programs than their less experienced peers. This was in contrast to the less experienced and those with less training who spent more time engaged in traditional assessment activities for special education. It was also found that school psychologists who were employed in school districts with lower psychologist to student ratios were more likely to engage in activities outside the realm of special education eligibility. These included the provision of inservices and consultative services toward prevention and intervention activities.

Although previous studies have reported that school psychologists desire more time for indirect service delivery (most often specified as consultative services) and less for assessment (e.g., Reschly & Wilson, 1995), it has not been reported, nor researched whether the provision of PL is an activity to which school psychologists would prefer to devote more or less time. Consumers of school psychology services continue to value traditional assessment activities (Gilman & Gabriel, 2004); however there is evidence that elementary principals have consistently desired to see increases in both school psychologist traditional and non-traditional services (Gilman & Gabriel, 2004; Lesiak & Lounsbury, 1977; Senft & Snyder, 1980). Specifically, elementary principals requested
more counseling services, more preventive mental health services, and more inservice training (Senft & Snyder, 1980). In 2004, Gilman and Gabriel found that 43% of teachers and 57% of administrators desired more involvement of school psychologists in inservice training. Senft and Snyder (1980) conducted a national survey of elementary principals. Fifty-four percent of respondents reported that inservice training provided by school psychologists at their school was helpful, while 23.5% reported it was not helpful, 10.4% were uncertain as to whether it helped or not, and 11.8% reported that the service was not available. Of the principals reporting that inservice training was unavailable, 15.5% noted that it was ideally desired. These data suggest that a substantial percentage of elementary administrators see potential benefits in school psychologists taking a proactive role in PL within their buildings.

Hartshorne and Johnson (1985) asked secondary school administrators to rank actual and ideal school psychologist functions. Findings indicated secondary school principals ranked actual time spent and preferred time spent on the provision of inservice training by school psychologists as 9th out of 10 potential services provided. The school psychologist training and personality characteristics were rated as the most significant factors influencing the amount of time spent doing inservice delivery, while special education regulations were cited as having little influence. An important caveat is the tendency of secondary principals to rank more highly those school psychology practices that are significantly influenced by special education regulations (e.g., psychological testing and special education staffing/eligibility meetings; Hartshorne & Johnson, 1985). It is possible that school psychology professional development that aims to assist schools
with special education regulation related activities could potentially be highly regarded by school administrators.

Gilman and Gabriel (2004) found that the majority of teachers, and administrators indicated preferences for school psychologists to spend more time engaged in consultation activities and decidedly more time engaging in parent training. The majority of the administrator group endorsed a preference for school psychologists to provide more teacher inservice training, while the teacher and school psychologist group generally indicated that the current level of service provision (although not specified) was sufficient in this domain.

Current research indicates that school psychologists in higher ratio placements tend to deliver fewer inservice trainings (Curtis et al., 2002); however, at least one research study examined the effects of taking an opposing approach. Though this research is dated, there exists such diversity among school psychology placements, that the conditions experienced in this study continue to exist in some cases today. Shimoni (1978) discussed the dilemma of being the sole provider of psychological services to a school district with 15,000 students in 23 schools. To solve this dilemma, the author proposed, delivered, and evaluated a service delivery approach focusing on building capacity within the schools through inservice training and consultation. The first two goals aimed at increasing capacity through inservice training in two domains (intellectual screening and behavior modification) and the third used individual and group consultation to ameliorate maladaptive behavior problems. Shimoni found positive results in that skills and knowledge of the participants increased in regards to all three goals;
however data was not gathered regarding the impact of these services on student outcomes.

While there is little research on the provision of PL by school psychologists, it is clear that developing teacher capacity is a valuable outcome asserted by professional organizations and the best practices literature. NASP’s Blueprint for Training and Practice (Ysseldyke et al., 2006) and The NASP Practice Model (2010) as mentioned in Chapter 1 of this manuscript promote a vision of school psychology with the main focus aimed at building the capacity of systems (and the stakeholders within) to enhance student outcomes. Recent movement towards RTI implementation in schools has opened another door for school psychologists to accept a capacity building role. NASP (2006) advocates for school psychologists to use their unique knowledge and training (e.g., special education policy, collaboration, consultation, mental health, intervention, etc.) to make meaningful contributions to building RTI capacities in schools. Among a number of other potential roles, NASP (2006) suggests that school psychologists engage in the following PL activities: (a) to assist with building systemic infrastructure, school psychologists might engage in “planning for and conducting necessary staff training for implementation” (p. 3); or (b) as a member of a collaborative team, the school psychologist might assist in, “identifying team training needs and providing, or helping the team obtain, relevant training” (p.4); or (c) in assisting and serving individual students, a school psychologist may engage in “demonstrating (and training) progress monitoring strategies as part of the individual student intervention plan” (p. 4).

In addition to NASP advocacy toward a capacity building role, school psychology consultation texts (e.g. Conoley & Conoley, 1992 or Kampwirth, 2006) suggest that the provision of PL to teachers is a role that consultants may increasingly be called to fill.
Franklin and Duley (1991) described the importance of incorporating PL into the provision of psychological services in Amphitheater Public Schools (Amphitheater, AZ) after receiving the Award of Excellence for School Psychological Services Program. Best Practice (BP) Volumes published by NASP have historically devoted chapters to the topic (e.g. BP III’s chapter on Staff Development by Green in 1995 and more recently BP V’s chapter on developing training programs by Brown in 2008). Brown (2008) suggests that PL is a “significant strategy that can lead to increased capacity in the educational system” (p.2037). Despite numerous calls for PL delivered by school psychologists, there appears to have been less call for research in this domain to date. In addition, Brown (2008) suggests that although worthwhile to increase capacity and advance system initiatives, few professionals leave training programs prepared for PL delivery. Data to substantiate the veracity of this claim has not been gathered to date and is a subject of this manuscript.

School Psychology Training

In 2007, there were 238 graduate programs in the United States preparing school psychologists for practice, 99 of which offered Doctoral training in the specialty (i.e., PhD, PsyD, EdD, or DEd; Miller, 2008). Ninety-seven percent of these programs required in excess of 60 hours of graduate coursework to obtain an entry-level credential for the field. At the time of the Miller study (2008) there were almost 9000 students enrolled in school psychology programs in the United States and Canada with approximately 2000 graduates prepared to enter (or re-enter) the field.

The level of training for those entering the field has improved over the past decades with increasing percentages of graduates holding Specialist degrees or higher
and decreasing percentages graduating at the Masters level (Curtis et al., 2004). Curtis and Batsche (1991) contemplated the challenges facing school psychology training and wrote, “Despite increased levels of preparation, the nature of training seems to be a matter of serious concern” (p. 569). Training programs have been accused of retaining too strong a focus on traditional assessment despite the impetus for role reform, thus producing practitioners who may not have the skills necessary to perform the diverse role advocated by the field (Harrison et al., 2004; Shapiro, 1991). Given that the majority (73.7%) of the 238 graduate programs in the United States have been accredited by either NASP or APA or both simultaneously, with 61.2 percent of Specialist programs being NASP-approved (APA does not have an approval process for Specialist-level training; Miller, 2008); it would stand to reason that the majority of graduates should have had a variety of training experiences that would be considered critical to the development of entry-level competencies (i.e. meeting the essential domains of practice defined by NASP and/or APA). Both organizations mention PL delivery in their training guidelines. NASP’s Standards for Graduate Preparation of School Psychologists (2010), specifically highlight the following as an example skill, “design and implement evidence-based practices and policies in, for example, areas such as … staff training” (p. 14). The APA’s Position Papers on School Psychology (2004) specifically indicate that the school psychology internship experience should contain a focus on “interventions to improve the educational services and child care functions of school personnel, parents, and community agencies” (p.12). They include in this category skills and knowledge needed to deliver inservice training to school personnel, other school psychologists, and parents (APA, 2004).
NASP’s Principles for Professional Ethics (2010) contain the guiding principle of competence, (i.e. “school psychologists engage only in practices for which they are qualified and competent,” p. 309) and the NASP Blueprint for Training and Practice (Ysseldyke et al., 2006) asserts capacity building as an essential outcome, yet the extent to which school psychology graduates are prepared to deliver training to teachers is unknown. Studies examining the preparedness of individuals leaving school psychology graduate programs have typically not addressed this aspect of service delivery. A general survey aimed at presenting a picture of how doctoral psychology training programs (specifically, clinical, counseling, school, and combined/integrated programs) conduct the practicum experience was completed in 2011 by Hatcher, Grus, and Wise. The authors found that 80% of the programs surveyed contained a written list of competency goals for practicum; however the authors did not provide data specific to each subgroup. In this study, the competency goals closely aligned to the Council of Chairs of Training Councils (CCTC) Recommendations for Practicum Policies (2007); however, the CCTC document defines indirect psychological service activities as: observation of direct service activities, case management (record keeping, report writing, etc.), coordination with treatment teams, and outcome assessment and tracking. As a result, conclusions cannot be drawn about preparation for PL delivery from this study.

Hazel, Laviolette, and Lineman (2010) provided some, albeit limited, insight into the preparation of school psychologists to provide PL. The authors reviewed 25 consultation course syllabi from APA approved school psychology programs and found that some syllabi contained participation in experiences aimed at systems change.

“Assignments designed to promote systems change included providing teacher in-
services, measuring school climate, and designing school-wide programs (p.240).”

Unfortunately the authors do not report the percentage of syllabi containing this type of requirement, and only state that “some syllabi” included these “unique assignments” (Hazel et al., p. 240).

In general, studies examining practitioner and trainer perceptions of preparation programs have found the following: too much emphasis on assessment activities, research methods, and statistics (Graden, Christensen, Ysseldyke, & Meyers, 1984; Meacham & Peckham, 1978; Woody & Davenport, 1998). Conversely, practitioners and trainers report too little training in consultation (Guest, 2000), collaboration/collaborative teaming (Guest, 2000), and classroom management (Woody & Davenport, 1998). Tarquin and Truscott (2006) examined school psychology practicum student’s perceptions of their school–based experiences and found that 97% of students provided services to both general and special education students; however, the students reported the majority of practicum hours were spent in assessment-related activities. Seventy-one percent of students reported spending 0-25% of their time in counseling or consultation related activity. Results of this study confirm the findings from previous researchers that despite calls for change, school psychology practica continue to place a strong emphasis on assessment.

Some regional data from Ohio exists to suggest that conducting professional development activities is part of their state-wide internship training policy (Morrison, Graden, & Barnett, 2009). As part of a statewide university training initiative, Ohio has developed the Ohio Internship Training Manual using the NASP training standards to guide the development of core intern competencies. Data from student interns (N=266)
representing nine Ohio university training programs over a three year period were examined to assess improvements in competency toward the six domains of practice outlined by the training manual. One of the six core domains of practice identified was conducting professional development activities and was defined as:

- Conducts training activities for professional staff and parents/caregivers:
  a) Assesses potential training needs
  b) Develops training plan
  c) Conducts/assists with training, working toward an effective presentation style
  d) Evaluates training impact/outcomes

[Four universities use this same item]

- Plans, engages in, and evaluates staff development activities (e.g., presentation to staff or parents, ongoing technical assistance)
- Provides effective inservice
- [Under the subheading “Developing and Training Staff, Parents, and Students”] Designs and co-implements staff/parent/student development activities. (Morrison et al., 2009, pp.1003-1004)

Mean supervisor ratings of intern competency to conduct professional development improved from fall ($M=2.15$) to spring ($M=3.69$). The ratings ranged from 1= unsatisfactory to 4=mastery. While this study only represents a small sample of the nation, it does underscore the importance of capacity building as a domain of competence and provides some insight into how training programs in this region have approached development of this skill.
School Psychologists’ Motivations and Satisfaction

As part of this research, school psychologists’ motivations to provide PL and the degree of satisfaction derived from its provision were be explored. As such, reviewing the literature in these domains provides background information regarding the framework of motivation used to consider the motivational aspects of PL delivery and its connection to subsequent work-related aspects of job-satisfaction.

Motivations for providing PL through the lens of Self-Determination Theory.

Conceptualizing PL as a means to meet work-place needs may help understand underlying motivations that influence the prioritizing of work-related tasks. Self Determination Theory (SDT; Deci & Ryan, 2000, 2008) emphasizes the innate, universal needs for competence, relatedness and autonomy which are directly related to a person’s feelings of motivation and satisfaction. This applies to many life domains including the workplace. First, SDT posits that individuals have an innate need to feel competence, that is, to feel effective and capable. This need inspires individuals to seek challenges and enhance their skills. According to Ryan and Deci (2002), “Competence is not… an attained skill or capability, but rather is a felt sense of confidence and effectance in action” (p.7). When the unique contributions and skills of professionals are recognized in contexts that enhance feelings of competence, intrinsic motivation is improved. The apparent conflict between perceived demands and desired practices (Hosp & Reschley, 2002) may hamper feelings of competence and subsequent job satisfaction in practitioners. PL is a means by which school psychologists could potentially use their unique skill set and broad knowledge to help large numbers of educators and thereby even larger numbers of children, thus potentially satisfying the practitioner’s need for
competence.

Competence is enhanced by an additional sense of autonomy which is the second innate psychological need described by SDT. Research on autonomy in education settings has generally focused on the needs of the learner. For example, students who perceive that their autonomy is supported by their teachers have greater intrinsic motivation and put forth more effort leading to greater degrees of conceptual learning and higher academic performance (Grolnick & Ryan, 1987; Grolnick, Ryan, &Deci, 1991; Pelletier, Seguin-Levesque, & Legault, 2002). The worker who feels a sense of autonomy perceives that his or her actions are of their own volition, that is, they are acting from a self-determined motivational process (Deci & Ryan, 2000, 2008). School psychologists may experience autonomy in their professional lives when their role is flexible and they have choices about how they go about their service delivery. In order to choose PL as a service delivery, the school psychologist must first perceive that there is choice to begin with. School psychologists who have more autonomy in their work experience higher levels of job satisfaction than those who do not (Van Voorhis & Levinson, 2006).

The third need, the need for relatedness, refers to the innate desire to connect with other people or experience a sense of belonging. As outsiders to the schools which they serve, school psychologists may find meeting the need for relatedness in the workplace challenging, especially those serving multiple schools. Proctor and Steadman (2003) found that school-based school psychologists (i.e. those only serving one school) reported higher rates of satisfaction and lower rates of burnout than did traditional itinerant school psychologists (i.e., those serving more than one school). In addition, itinerant school
psychologists experience a high degree of professional isolation and disconnect from their peers.

Ryan and Deci (2000) have found that satisfaction of the three basic needs is associated with feelings of well-being, positive attitudes, favorable performance, and job satisfaction. Specifically in the work domain, need satisfaction has been associated with higher levels of job satisfaction (Cross & Wyman, 2006; Ilardi et al., 1993), higher degrees of motivation for work (Gagne, 2003), and higher levels of work performance (Baard et al., 2004).

**School psychologist job satisfaction.** Job satisfaction as defined by Locke (1976) is related to the degree of agreement between one’s preferred job experience and the actual job experience. Some models of job satisfaction emphasize the more discrepant the actual role and preferred role, the less satisfied the practitioner (Hughes, 1979). Job satisfaction has also been referred to as the degree to which people enjoy their job experience as a whole and how they feel about its discreet aspects (Spector, 1997). Traditionally, school psychologists have experienced a certain degree of disagreement between what they would prefer to do and what they actually do (Reschly & Wilson, 1995). Has the failure of the school psychology profession to evolve into a preferred model of practice impacted the level of job satisfaction among school psychologists? No: research over the last three decades on school psychologist job satisfaction indicates that most school psychologists experience a certain degree of satisfaction with their chosen profession (Van Voorhis & Levinson, 2006).

In a meta-analysis of research on school psychology job satisfaction from 1982 to 1999, Van Voorhis and Levinson (2006) concluded that, 85% of school psychologists
were either satisfied or very satisfied with their jobs. This meta-analysis looked at studies measuring job satisfaction using the Minnesota Satisfaction Questionnaire (MSQ). Individual studies examining school psychologist job satisfaction have been conducted using a variety of different measures, but most have yielded consistent results ranging from a low of 64% satisfied or very satisfied for a small regional sample from West Virginia (Solly, 1983) to a recent national high of 90% satisfied or very satisfied (Worrell et al., 2006).

The level of satisfaction that school psychologists experience has been positively correlated with a number of factors. The level of job satisfaction experienced by school psychologists appears to be related to autonomy in decision making about how school psychologists practice (Van Voorhis & Levinson, 2006). In 1991, Lenivson found that school psychologists who had more perceived control over their daily practice generally had higher levels of job satisfaction. Conversely, those with less practice autonomy had higher levels of dissatisfaction. Anderson and colleagues (1984) found that NASP members employed in public schools, although satisfied overall with their work, were generally not satisfied with the dearth of opportunity for advancement and school system policies and practices. More recent surveys have reiterated dissatisfaction with career advancement and school system policies (Reschly & Wilson, 1995; Wilczneski, 1997, Worrell et al., 2006). Job satisfaction has also been found to be related to practitioner age with older practitioners reporting more satisfaction in their work (Anderson et al., 1984). Finally, psychologist to student ratio has been found to be related to the degree of practitioner job satisfaction (Reschly & Connally, 1990). Huebner (1992) found that burnout and job satisfaction were inversely related; however, in the Huebner study actual
caseload was less related to burnout than the subjective experience of the school psychologist, i.e., school psychologists who perceived more of a discrepancy between actual and preferred caseloads, experienced higher degrees of burnout. The relationship between ratio and job satisfaction is likely to be complex since ratio could actually serve as a proxy variable for a number of other determinants such as diversity of services delivered or degree of autonomy in decision making. For example, as stated previously, lower ratios are correlated with more diverse service delivery (Curtis et al., 2002; Reschly & Wilson, 1995; Smith, 1984) which has been found to be related to job satisfaction (Levinson, 1991). In addition, with more opportunities for diverse service delivery, practitioners may experience more control over the types of services they provide; i.e., the degree of autonomy increases thereby increasing the level of satisfaction with one’s job (Van Voorhis & Levinson, 2006).

Mills and Huebner (1998) found that school psychologists experienced higher degrees of Emotional Exhaustion (EE) as measured by the Maslach Burnout Inventory (MBI) than the normative sample indicating that a career in school psychology presents stressful challenges that are persistent despite time of year. In addition, high degrees of emotional exhaustion were found to preclude higher degrees of work-place stress, which may lead to experiencing higher degrees of emotional exhaustion, and so on. In an earlier Huebner study (1992), school psychologists reported typically employing emotion-focused, internal change coping strategies to reduce stress, rather than problem-focused, external coping strategies. Huebner suggested, “Given the finding that organizational stressors are important contributors to burnout, school psychologists should consider increasing their attention to organizational change efforts and goals”
In the present study, PL is conceptualized as a mechanism of organizational consultation aimed at large scale change; as such, the relationship between PL and derived satisfaction has been explored.

**Features of Effective PL**

A substantial and growing body of research indicates teacher PL is essential to the improvement of education and student outcomes (e.g., Darling-Hammond, 1993 or Desimone, Smith, Hayes, & Frisvold, 2005). A substantial amount of resources are spent toward this aim on a yearly basis; for example, in the 2004-05 school year more than 1.5 billion federal dollars were spent on PL (Birman et al, 2007). In 1996, the Consortium for Policy Research in Education (CPRE) conducted a large scale survey of professional development across the nation. The data indicated inadequate PL practices in most states resulting in limited effects on teaching practices and thereby limited effects on student outcomes. Findings indicated the majority of professional development initiatives were not needs-based, individualized, nor content area specific; in addition, they were of low quality and lacked follow-up. These ineffective programs were also very expensive leading to questions about fiscal responsibility. A decade later, research indicates PL continues to be poorly designed and delivered with ineffective results (Easton, 2008). Wei and colleagues (2009) found PL initiatives often lacked coherence, were sporadic, and did not attend to individual teacher needs or authentic practice. The authors concluded, “the intensity and duration of professional development offered to U.S. teachers is not at the level research suggests is necessary to have noticeable impacts on instruction and student learning” (Wei, Darling-Hammond, Andree, Richardson, & Orphanos, 2009; p. 30).
Recognizing the continued struggle to provide high quality PL, the NSDC revised its Standards for PL and stated, “Increasing the effectiveness of PL is the leverage point with the greatest potential for strengthening and refining the day-to-day performance of educators” (Learning Forward, 2011, p.13). The NSDC put forth the seven best practice standards depicted in Table 1 in Chapter 1 of this manuscript. Seven distinct standards are presented; however, the authors emphasize their interconnectedness such that they work concomitantly to produce high-quality professional learning. Forty states have adopted standards for PL derived from the recommendations of the NSDC (Hirsh, 2009). In summary, standards-based PL is delivered in learning communities that establish and commit to shared goals and focus on continuous improvement. Skillful leadership supports initiatives to foster the growth and development of all learners in schools. Needed resources are available and coordinated to build capacities and sustain implementation. PL is delivered through planned purposeful learning designs based on sound theory and methodology in the given domain. Finally, data is used to plan, assess progress, and evaluate outcomes that are aligned with established professional and curriculum standards (Learning Forward, 2011).

Desimone (2009) reviewed the literature to summarize critical features of professional development and found consensus supporting five key features: “(a) content focus, (b) active learning, (c) coherence, (d) duration, and (e) collective participation” (p.183). Each of these will be discussed in turn below. Content focused PL is situated to a particular topic of content or specific learning objective (e.g., teaching number sense or algebra in math, or phonics in reading, etc.) and centered on how students can best learn that content or meet that objective. This notion agrees with learning theories that stress
situated cognition, i.e., learning of new knowledge and skills should be congruent with how that knowledge and skill will be applied in the real world (Brown et al., 1989). A growing body of research supports increases in teacher knowledge and changes in classroom practices when PL is content focused (Desimone, 2009; Kennedy, 1998). Substantial evidence also supports PL designs that incorporate active learning engagements over more traditional passive lecture style or stand-and-deliver types of PL (Desimone, 2009; Garet, Porter, Desimone, Birman, & Yoon, 2001; Hughes, Cash, Klingner, & Ahwee., 2001; Truscott & Truscott, 2004). This notion is grounded in adult learning theory which stresses adult learners as active, self-directed, and motivated to learn by a need to solve real-world problems (Merriam, Caffarella, & Baumgartner, 2007). The core element of coherence, proposed by Desimone, is a bi-level construct that involves coherence with individual teacher beliefs as well as coherence with organizational and legislative policies. PL initiatives are more successful when there is coherence at both levels (Desimone, 2009). More effective PL activities are of sufficient duration to create change. PL that is extended over time with more contact hours produces higher degrees of change in knowledge and practice (Banilower et al., 2007; Desimone et al., 2002). Learning and retention of complex information is improved when it occurs over time with distributed practice (Cepeda, Pashler, Vul, Wixted, & Rohrer, 2006; Donovan & Radojevic, 1999). Finally, collective participation refers to the establishment of groups of learners. Collaboration among learners has been found to increase opportunities for discourse that can in turn lead to increases in knowledge and skill (Desimone et al., 2002; Farmer et al., 2005).
The standards established by NSDC and the core elements identified by Desimone are supported by research that indicates ongoing and intense PL aligned with system practices and goals that is connected to content areas and fosters collaborative relationships among teachers is most effective (Darling-Hammond et al., 2009). Effective PL activities empower teachers (Lovett & Gilmore, 2003; Scribner, 1998), are supported by school leaders (Banilower et al., 2007, Joyce & Showers, 2002) occur in a collaborative setting (Desimone et al., 2002; Farmer et al., 2005), are extended over time with more contact hours (Banilower et al., 2007 & Desimone et al., 2002), and foster equity among members (Grundy et al., 2005; Truscott & Truscott, 2004). In spite of abundant research available, a recent comprehensive analysis of PL practices across the nation reveals that although some advances are evident, effective practices continue to be lacking (Darling-Hammond et al., 2009). The authors cite advances in content focus and mentoring support for new teachers; however their research indicates a continued need for, “the kind of high-intensity, job embedded collaborative learning that is most effective” (p. 4).

**Summary and Conclusion**

Over the past three decades, the field of school psychology has experienced a demographic transformation evolving into a majority white, female, English speaking pool of practitioners practicing in public school settings. While the face of school psychology may be changing, the way it has been practiced has remained relatively unchanged over the last three decades; despite continued calls for reform. Recently best practice standards established by the major organizational bodies governing the field (APA Division 16 and NASP) have emphasized capacity building within school
communities as a primary outcome focus for the field. Both organizations cite the delivery of PL (aka, inservice training or professional development) as a means to achieve this outcome. A substantial body of research in education has called for reform of PL practices across the nation; and, meta-analyses and comprehensive research studies have outlined the essential elements or best practices in successful PL delivery. Given that (1) school psychology as a field has called for diversification of practice, (2) school psychology professional organizations have called for capacity building initiatives be delivered by school psychologists, (3) teacher education literature has called for PL to advance reform and has outlined the best practices to achieve that goal, and (4) economic constraints are such that school systems will have to use existing resources to accomplish goals; it appears to be an opportune moment for school psychology to realize its potential.

The author made the argument in Chapter 1 that school psychologists are aptly suited to use their talents in this realm. Unfortunately, there is little information available regarding the nature and extent of training that school psychology graduate students obtain to prepare them to deliver PL in the schools they will serve. In addition, there is little literature available describing the nature and extent of school psychologist PL delivery practices or the perceptions of school psychologists regarding this type of service delivery. This research will shed light on both domains.
CHAPTER 3
Methodology

This research explored the perceptions and practices of school psychologists in the provision of PL for educators. Personal and situational factors that predispose practitioners to provide more or less PL were investigated. Because there is little research available that specifically explores the provision of PL by school psychologists, this study represents a step toward exploring this gap in the literature base. The specific research questions are outlined below:

1. What do school psychologists report about the nature of their involvement in providing PL?
   a. Number of hours
   b. Format of trainings
   c. Audience characteristics (who and how many)
   d. Collaborative or independent delivery
   e. Topics of PL
   f. Adherence to PL standards
   g. PL preferences

2. Is school psychologist reported involvement in PL delivery related to personal variables such as age, degree, former teaching experience, years of experience as a school psychologist, or degree of training in PL?

3. Is school psychologist reported involvement in PL delivery related to situational variables such as student to psychologist ratio, time spent on evaluations, or job placement?
4. What aspects within school environments do school psychologists report to facilitate the provision of PL and which aspects reportedly hamper efforts toward the provision of professional learning?

5. What do school psychologists report about:
   a. Motivations for providing PL?
   b. Deriving satisfaction from providing PL?
   c. Feelings of autonomy associated with providing PL?
   d. Connecting with faculty through providing PL?

In order to answer these research questions survey research methodology was employed (i.e., Bradburn, Sudman, & Wansink, 2004; Dillman, Smith, & Christian; 2009; Schaeffer, Mendenhall, & Ott, 2006; Sue & Ritter, 2007). Survey methodology is often employed when little is known about a phenomenon in question in order to garner a good deal of information to explore the novel topic. Survey methodology was selected to explore the current variables for a variety of reasons including: (a) the lack of existing data regarding school psychology involvement in PL, (b) a desire to make inferences about a large population (i.e., school psychologists) based on a smaller more attainable sample, and (c) the cost effectiveness and time efficiency of data gathering. The survey method for this study consisted of a three stage recursive process in which earlier stages informed necessary modifications to later stages based on qualitative analysis of participant feedback (Dillman et al., 2009; Fowler, 2002; Nastasi, Moore, & Varjas, 2004). The overall process will be presented here in summary (see Figure 1) and then outlined in more detail in the rest of this section.
Survey development began with a small stratified convenience sample of practitioners ($N=7$) who participated in structured interviews either face-to-face or via telephone. Based on qualitative analysis of the responses from these interviews, a survey was drafted. In Phase 2, the draft survey was pilot tested with two small groups ($N=6$ for each group) and revisions were made as needed. In Phase 3, the final revised survey was sent electronically to a stratified random sample of 650 practicing school psychologists.
Results from the survey were analyzed using descriptive and inferential statistics to answer the presented research questions (See Table 2).

**Phases 1 and 2- Survey Development**

**Phase 1- exploratory interviews.** This exploratory phase of the research involved participant structured interviews and was conducted to assist in the construction of the survey measure. This structured interview method provided the researcher with the insight and depth needed to construct a well-designed closed-question survey. This method has been endorsed as a successful means to developing closed questions with appropriate and representative potential response alternatives (Schaeffer et al., 2006) and thus should lend to higher quality and more representative results from the final survey measure. The initial interview questions were derived from the research questions and informed by the existing literature in the field.

**Participants.** The interviews were conducted with a small, convenience sample (N=7) of practicing school psychologists. This small sample was recruited by word of mouth from a variety of regions across the United States and was a sample of convenience. The criteria for participation in the interview phase of this research included being a practicing school psychologist and having a willingness to participate in the research process. Efforts were made to obtain a sample composed of at least 50% of practitioners who do engage in some form of PL delivery. Five out of the seven interview participants reported delivering PL to teachers, while 2 reported that they do not engage in PL delivery. Participants were recruited by word of mouth through professional contacts and contacted by the primary researcher either via telephone or email. Prior to obtaining consent for participation, the primary researcher explained the
purpose of the research, described what participation in the research entailed and informed the participant of the potential risks and benefits. See Appendix A.

**Instrumentation.** Two instruments were used during Phase 1 of the research. A demographic form was developed to obtain general information about the interview participants, to ensure that they meet the study criteria, and to assist in acquiring a diverse sample varying by general demographic variables (e.g., age, gender, etc.) as well as situational factors such as level of experience, work setting, degree status, etc. See Appendix B.

In addition to the demographic form an interview protocol was developed derived from a review of the existing literature base and the research questions under examination. The questions in the structured interview fell into several general areas including: (a) school psychologist role, (b) characteristics of PL in the work environment, (c) involvement of the psychologist in the provision of PL, (d) the type of PL delivered, (e) training received in the provision of PL, (f) strengths and weaknesses of psychologist involvement in teacher PL, (g) perspectives on successful PL, and (h) barriers and facilitators to PL delivery. See Appendix C.

**Procedures.** The interviews, conducted in person and by telephone, were digitally recorded and transcribed. Interview questions were at times supplemented to focus on additional themes that emerged throughout the process. The interview protocol (questions and prompts) can be found in Appendix C. The interviews were completed in one session which lasted approximately 45-60 minutes. Participants were contacted via email or phone with brief follow up questions regarding the interview when clarification
was needed. Responses to follow up questions took no more than 10-15 minutes to complete. These were also digitally recorded and transcribed.

The transcribed exploratory interview data was used to inform the construction of the closed ended questions in the survey measure. First, based on the identified areas of inquiry and informed by the literature review, an initial list of thematic categories was generated. The thematic categories were developed and organized in such a manner as to address each of the research questions proposed in the study. Next, the transcribed interview data was subjected to qualitative data analysis in order to identify additional relevant themes in each domain. Coding of the interview data was completed such that concepts extracted from the raw data set served to elaborate and extend the thematic categories so that they represented breadth and depth of the relevant phenomena under investigation (Corbin & Strauss, 2008). Keeping in mind the ultimate goal of developing a closed-question survey instrument with appropriate and representative potential response alternatives, significant concepts that emerged from the data were aligned with each theme (e.g., participant comments such as, “some schools are resistant to change” and “in our distract there’s a lack of support for a diverse role” were aligned with the theme “Barriers to PL Delivery”). In addition, duplicate concepts under each theme were collapsed (e.g., participants frequently made comments indicating the concept that PL delivery is hindered by demands on their time such as, “I get busy doing other things” and “I am just so busy all day, you know, doing this and that and this and that.” Additional themes were added as the coding process continued such that the final draft coding manual represented a combination of the researchers pre-existing ideas coupled with new ideas that sprung from the exploratory interviews.
**Phase 2- survey instrument pilot test and revision.** In order to further develop the survey measure, during the second phase of the process the initial draft survey was pilot tested and revised as described below.

**Participants.** Two focus groups were conducted. Each focus group consisted of 6 members and was composed of a mixture of school psychology graduate student interns and school psychologists. Participants for this process were recruited by word of mouth through professional contacts of the primary researcher from a variety of schools/systems in the local area.

**Procedure.** Pre-testing the survey questionnaire with the focus groups was conducted to solicit feedback and facilitate any necessary revision (Fowler, 2002). Focus groups were conducted at locations convenient to the participants and lasted approximately 2-3 hours. These focus groups were conducted by the primary researcher. The primary researcher facilitated the focus groups and took notes regarding the content and process of the groups. The focus group members completed an electronic version of the survey prior to meeting and discussion of individual questions was facilitated during the focus group (Dillman et al., 2009). Feedback was solicited to ascertain if respondents understood the questions as intended. Additional feedback was solicited regarding the survey format, the clarity of questions, and the scope of potential responses. Notes taken during the process, and any artifacts generated through the process, were used to inform the survey revisions. This procedure was completed first with one focus group to inform the initial revisions. Then the revised survey was piloted with the second group to inform any needed final revisions to questions and/or format. The final draft of the survey instrument developed has been provided in Appendix G.
Feasibility and special consideration in electronic survey research. Electronic survey methods were selected for this research study due in part to their efficient and cost-effective nature (Truell, Bartlett, & Alexander, 2002); however several factors were considered to ensure that this is a viable method to produce reliable and generalizable results given the parameters of this study. Research indicates that results from web-based surveys have not differed from those obtained by traditional paper and pencil means (Gosling et al., 2004; Huang, 2006) or via telephone interviewing (Braunsberger, Wybenga, & Gates, 2007). Studies concerning the response rates of electronic surveys as compared to traditional means found the method of data collection has no appreciable impact on decision to participate (Helgeson & Ursic, 1989; Sproull 1986); and, there are no preference differences between age, gender and familiarity with technology (Drummond, 1995). There is some evidence to suggest that the anonymity of web-based surveys may contribute to more honest responding (LaSalle, 1997) and may elicit more responses on the extreme ends of scaled questions (Sproull, 1986). In comparing the electronic and traditional formats, Herrero and Meneses (2006) found data collected from web-based versions was similar to paper-and-pencil versions of assessment in both reliability and factor analytic structure.

The final survey consisted of 40 items that adequately addressed the research questions. To minimize non-response and drop out rates, questions were developed to be short and direct (Dillman & Smyth, 2007; Ganassali, 2008) without embellished formatting or design (Dillman, Tortora, & Bowker, 1998). Hoerger (2010) found that 10% of electronic survey respondents drop out early in the completion process (i.e., in the first 12 questions) with only subsequent increases of approximately 2% for every 100
additional questions. The suggested rate of oversampling described in the subsequent Phase 3 sampling section was suggested to counter this rate of attrition. Graphics, sounds and animations were used sparingly as they have been known to influence responding (Couper, Traugott, & Lamias, 2001) and to increase download time possibly influencing non-response rate (Dillman & Smyth, 2007). Vertical alignment of potential responses was used rather than columnar alignment as data suggest that vertical alignment leads to respondents reading and processing all potential responses, rather than just some (Christian & Dillman, 2004). In addition, whenever possible the use of open-ended questions and questions formatted in tables was avoided as these have resulted in higher non-response rates (Knapp & Heidingsfelder, 1999 as cited in Ganassali, 2008).

**Phase 3- Conducting the Survey**

**Participants and sampling plan.** There are approximately 35,400 credentialed school psychologists in the United States (Center for Mental Health Services, 2004; Charvat, 2008; Curtis et al., 2004), working in a variety of environments including private schools and universities. There is no compiled data-base that contains the *entire* population of school psychologists in practice in school settings in the United States (Curtis et al., 2004); however, a comprehensive list of public schools in the United States is accessible on the National Center for Education Statistics (NCES) Website ([http://nces.ed.gov/ccd/schoolsearch/](http://nces.ed.gov/ccd/schoolsearch/)). This list was downloaded, stratified by state, and used as the sampling frame for the current study. This sampling method was employed by Lewis and colleagues (2008) in a survey study exploring potential differences between NASP members and Non-NASP members. The authors found that the NASP membership database, frequently used as the sampling frame in national surveys, had several
previously unidentified potential sources of bias. Lewis and colleagues found significant
differences between NASP members and Non-NASP members in ethnicity, membership
in professional organizations, and the use of Curriculum Based Measurement.

Given an estimated response rate of 30-50% the sample size of 650, provides
sufficient oversampling to yield the targeted number of participants (200-300). This
target sample size was selected taking into account the population size, acceptable margin
of error, and the level of confidence desired from the results (Dillman et al., 2009). An a
priori power analysis was performed for research question 2 (ANOVA with 5
independent/personal variables and 1 dependent variable/PL) using a power of .80 and
anticipating a medium effect size (Cohen,1977). A sample size of 200 was needed to
detect an effect size of 0.25. Running the same power analysis for a power of .95, a
sample of 305 would be needed to obtain the medium effect. Research question 3 also
uses ANOVA; however there are fewer independent/situational variables, thus the sample
size generated in the power analysis for research question 2 was ample to answer
question 3 as well. Overall, given an anticipated 30-50% return rate, a minimum of 200
participants was deemed ample to answer all research questions at power level .80 or
better. Should the return response rate surpass 30%, the sample size would approach the
number needed to achieve excellent power at .95. These analyses were run using
G*Power 3.1.3 (Faul, Erdfelder, Buchner, & Lang, 2009).

A random sample of 650 schools, stratified by state, was selected from the NCES
Public Schools database as described above. In general for electronic surveys, response
rates in excess of 40% are considered adequate, while 50% are considered good, thus 40-
50% was used as the standard for acceptability in this study (Sue & Ritter, 2007) and
would yield the desired number of participants. Email addresses for the school psychologist serving each selected school were acquired using the following procedures. First, an attempt was made to acquire the name and email address electronically from the school or district website. When this was not possible, a second attempt to identify the name and email address was made by contacting the school via telephone. Two phone contact attempts were made. If the researcher was still unable to acquire the name and email address of the school psychologist in question, a replacement school was randomly selected. A comprehensive Email address list was compiled for the entire sample and was used for each of the e-mailings that occurred. Of the final 650 participant sample, 53.85% \( (N=350) \) were obtained electronically, the remaining 46.15% \( (N=300) \) were obtained by phone.

A stratified sampling procedure was used in an effort to ensure that perspectives from across the nation were represented in the data gathered such that the sample reflected NASP membership percentages by state. NASP membership data was accessed from the NASP website. Data reflecting membership from regions outside of the United States were removed from the current NASP membership data and percentages for each state and the District of Columbia were calculated to yield the percentages that were used for the stratified sample (See Table 4).

Table 4

*Stratification of School Psychologists by State*

<table>
<thead>
<tr>
<th>State</th>
<th>Percentage of NASP membership</th>
<th>Number of participants per state</th>
<th>Percentage of sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>AK, AL, AR, DC, DE, HI, MS, MT, ND, NM, SD, VT, WV &amp;</td>
<td>0-.49%</td>
<td>3</td>
<td>6.46%</td>
</tr>
<tr>
<td>Region</td>
<td>Percentage</td>
<td>Count</td>
<td>Note Percentage</td>
</tr>
<tr>
<td>----------------------------</td>
<td>------------</td>
<td>-------</td>
<td>----------------</td>
</tr>
<tr>
<td>WY, NH, ME, &amp; ID</td>
<td>0.50 - 0.69%</td>
<td>4</td>
<td>1.85%</td>
</tr>
<tr>
<td>IA, MO, NV, OK, RI, &amp; UT</td>
<td>0.70 - 0.89%</td>
<td>5</td>
<td>4.62%</td>
</tr>
<tr>
<td>KS, &amp; LA</td>
<td>0.90 - 1.09%</td>
<td>6</td>
<td>1.85%</td>
</tr>
<tr>
<td>KY &amp; NE</td>
<td>1.10 – 1.29%</td>
<td>7</td>
<td>2.15%</td>
</tr>
<tr>
<td>OR, SC, &amp; TN</td>
<td>1.30-1.49%</td>
<td>8</td>
<td>3.69%</td>
</tr>
<tr>
<td>IN</td>
<td>1.62%</td>
<td>10</td>
<td>1.54%</td>
</tr>
<tr>
<td>GA &amp; MN</td>
<td>1.70-1.90%</td>
<td>11</td>
<td>3.38%</td>
</tr>
<tr>
<td>MI &amp; NC</td>
<td>2.00-2.19%</td>
<td>13</td>
<td>4.00%</td>
</tr>
<tr>
<td>WA &amp; WI</td>
<td>2.20-2.29%</td>
<td>14</td>
<td>4.31%</td>
</tr>
<tr>
<td>CO &amp; VA</td>
<td>2.30-2.39%</td>
<td>15</td>
<td>4.62%</td>
</tr>
<tr>
<td>AZ, CT, &amp; MD</td>
<td>2.40-2.90%</td>
<td>18</td>
<td>8.31%</td>
</tr>
<tr>
<td>MA</td>
<td>3.55%</td>
<td>23</td>
<td>3.54%</td>
</tr>
<tr>
<td>FL, NJ, &amp; OH</td>
<td>4.00-4.29%</td>
<td>27</td>
<td>12.46%</td>
</tr>
<tr>
<td>TX</td>
<td>4.38%</td>
<td>28</td>
<td>4.31%</td>
</tr>
<tr>
<td>IL</td>
<td>6.10%</td>
<td>40</td>
<td>6.15%</td>
</tr>
<tr>
<td>PA</td>
<td>6.29%</td>
<td>41</td>
<td>6.31%</td>
</tr>
<tr>
<td>NY</td>
<td>9.88%</td>
<td>64</td>
<td>9.85%</td>
</tr>
<tr>
<td>CA</td>
<td>10.60%</td>
<td>69</td>
<td>10.62%</td>
</tr>
<tr>
<td>Total National Sample</td>
<td></td>
<td>650</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

*Note.* Percentages above are based on NASP Membership Data

**Instrumentation.** The sole instrument for this portion of the project was the researcher constructed survey developed during phases 1 and 2 as described above.

**Procedure.** Participants were sent an introductory letter via email prior to the actual survey e-mailing. This letter served to introduce the survey, prepare participants for its impending arrival, and encourage participation. See Appendix D. One week later, participants were sent the solicitation email which explained the purpose of the research,
clarified the nature of the survey, specified confidentiality procedures, solicited voluntary participation, and contained the link to the web-based survey. See Appendix E.

Participants were asked to complete the web-based survey within two weeks. Web-based survey software was used to track responses, send reminder notices to non-respondents, and limit survey completion to one participant per Internet Protocol (IP) address (Sue & Ritter, 2007). To reduce survey non-response bias, reminder emails were sent to those participants who had not responded one week after the initial e-mailing and three subsequent reminders was sent at one week intervals. See Appendix F. This procedure has been found to yield acceptable response rates (i.e., response rates that exceed 50%; Kittleson, 1997; Sue & Ritter, 2007). All members of the sample were permitted to download a graphing tool authored by the primary researcher and provided in an attachment to the introductory email as a free gift. Access to the free gift was not contingent upon participation in the research. It has been found that incentives provided to on-line survey respondents increase participation thus reducing non-response bias (Dillman et al., 2009; Goritz, 2006). All email communications were sent to participants between 7:30 and 8:30 am as this has been shown to produce the highest number of responses (Granello & Wheaton, 2004). Late respondents, those who completed the survey more than 6 weeks after the initial survey e-mailing, were considered to represent non-respondents and were compared to the earlier respondents to ensure that there are no significant differences between these groups. An independent t-test was conducted to determine if the two groups (i.e., on-time respondents and late respondents) differed in the number of hours of PL they delivered during the 2011-12 school year. With the alpha level set at .05, the results indicate that there was no significant difference between the
number of hours of PL delivered by on-time respondents ($M=12.71, SD=27.64$) and the late respondents ($M=10.24, SD=15.89$), $t(203)= .363, p=.717$. These data suggest that the sample is an accurate representation of the general population of school psychologists as a whole. These data provide evidence that the survey respondents are likely a representative sample of the school psychologist population.

The researcher attempted to resolve problems resulting in bounced emails with the following procedures. In the event that an email was undeliverable, first the address was examined for errors and an attempt to resend was made. If the subsequent email was returned, alternative contact information was sought via the web or telephone. If the respondent could not be contacted through two attempts, a replacement participant was drawn from the sample.

Survey Monkey is the web-based online survey provider used in this study. Participants completed the survey online and the data was aggregated by the provider. At the close of the survey completion window the compiled data was exported into an excel spreadsheet and subjected to visual inspection by the researcher.

**Data analysis.** Data analysis procedures for each research question were offered specifically in Table 2 presented in Chapter 1 of this manuscript but will described below. Once the excel file compiled by Survey Monkey underwent visual inspection and was cleaned, the data was imported into the IBM Statistical Package for the Social Sciences (SPSS) Version 21. The descriptive and inferential data analyses described below were completed using SPSS.

Descriptive statistics were computed to describe the sample population across all variables. Specifically, means, standard deviations, and percentages of respondents were
calculated for (1) the personal variables (age, degree status, teaching experience, school psychology experience, and training in PL delivery); (2) the situational variables (student to psychologist ratio, number of evaluations, and job placements); (3) the measures of school psychologist PL involvement (number of hours, formats of trainings, audience characteristics, collaboration, topics, types of training, and adherence to standards); (4) facilitators and hindrances to PL endorsed; and, (5) the motivation, satisfaction, autonomy and relatedness items. Data from these descriptive analyses were used to address research question 1 describing the nature of school psychologist involvement in PL, research question 4 describing school psychologist perceived facilitators and hindrances to PL delivery, and research question 5 describing motivational factors associated with PL delivery.

To answer questions 2 and 3 addressing relationships between situational and personal variables and PL delivery the following inferential data analysis procedures were used. Degree status, training in PL delivery, prior teaching experience, and job placement are categorical variables and for the purpose of inferential data analysis were treated as such. For other variables data were collected as continuous variables. These include: age in years, years of school psychology experience, approximate number of students served, and number of evaluations conducted. These were then broken down into categorical units for the purposes of inferential data analysis, which also normalized the distributions for variables that were not normally distributed. Once categories were established, each of the aforementioned variables was analyzed using ANOVA to discern if differences existed on the dependent variable (number of hours of PL delivered) between the varying categorical levels. Holm-Bonferroni correction was used by ordering
the obtained $p$-values from smallest to largest, then testing the largest with simple Bonferroni correction ($p/k$, where $k =$ total number of comparisons), and each subsequent $p$-value is tested with one less comparison ($p/k-1$, $p/k-2$, $p/k-3$, etc.) Post hoc Fisher comparisons were used; and effect sizes were calculated using Cohen’s $d$.

**Summary**

This research study explored the perceptions and practices of school psychologists as they relate to the provision of PL to teachers. Personal and situational factors that predispose practitioners to provide more or less PL were investigated. Survey research methodology was employed and consisted of a three stage recursive process. Survey development began with a small stratified convenience sample of practitioners who participated in structured interviews. Based on qualitative analysis of the responses from these interviews, a survey was drafted. The draft survey was pilot tested with two small groups and revisions were made as needed. The final revised survey was sent electronically to a stratified random sample of 650 practicing school psychologists. Results from the survey were analyzed using descriptive and inferential statistics to answer the research questions under study (See Table 2).
CHAPTER 4

Results

The purpose of this research was to explore the perceptions and practices of school psychologists regarding the provision of PL to teachers. Personal and situational factors that predispose practitioners to provide more or less PL were investigated. Data were collected using survey methodology and are presented in this section. Descriptive statistics were used to describe demographic characteristics, reported practices, and perceptions of the respondents. Inferential statistics were used to explore relationships between the personal and situational factors under study and the practitioner practices related to PL. This section is organized such that data describing the sample are presented first, then each research question is addressed in turn.

Survey Response

From the pool of 650 schools, the researcher was able to obtain email contact information for a total of 90.6% of the assigned school psychologists through either email or phone call contact. Fifty-four percent ($N=350$) of the 650 email addresses were available on line, while 46% ($N=300$) required phone calls to obtain the final email survey list. Email addresses could not be obtained for a small portion of the pool (10.4%), thus replacement participants were drawn. Of the 650 total electronic surveys distributed to practitioners, 238 were completed and submitted online. One participant elected to not consent to the survey, thus yielding a total response rate of 36.46%. In general for electronic surveys, response rates in excess of 40% are considered adequate, (Sue & Ritter, 2007); thus, the lower response rate of 36.46% is of concern in this research. Lower response rates increase the potential likelihood that responders may not
adequately represent the population to which the results are being generalized introducing error into the study. Demographics of the respondents are reported below and consideration of how well the respondents align with the general population is presented in Chapter 5.

**Describing the Participants**

**Demographics.** Demographics of the participants closely mirrored those of the general population of school psychologists reported in prior studies and are presented in detail in Table 5. Of those responding, 80.6% (n=154) were female and 19.4% (n=37) were male. The racial distribution of the respondents was .5% (n=1) Asian American/Pacific Islander, 6.3% (n=12) Black/African American, 85.9% (n=164) Caucasian, 3.7% (n=7) Hispanic, 2.6% (n=5) Multiracial, and 1%, (n=2) Other. None of the respondents identified as American Indian/ Alaska Native. The mean age of respondents was 43.17 (SD=11.41) years. Of those responding 5.7% (n=11) held Masters Degrees, 34.4% (n=66) held Masters Degrees plus 30 credits, 41.1% (n=79) held Educational Specialist Degrees, and 18.8% (n=36) held Doctoral Degrees.

The responding school psychologists were asked to specify the setting where they spent most of their work hours during the 2011-12 school year. Respondents reported working in a variety of settings distributed as follows: 4.4% (n=10) Pre-school, 66.5% (n=151) Elementary School, 15.4% (n=35) Middle School or Junior High, 10.6%, (n=24) High School or Senior High, .4%, (n=1) Alternative School, and .4% (n=1) Psycho-educational Center/ Therapeutic Day School. None of the responding practitioners reported primarily working in Private Practice Hospital/ Residential Facilities or Juvenile Justice Facilities: however 2.2% (n=5) reported working in “other”
settings. Of those responding, 96% \((n=218)\) identified their work setting as a traditional public school/district, 3.1% \((n=7)\) public charter school/district, and .9% \((n=2)\) as a consortium/cooperative. The majority of communities served by participants were primarily in suburban areas 44.1% \((n=100)\); however 22.5% \((n=51)\) of responding psychologists reported working in urban areas, 31.7% \((n=72)\) in rural areas, and 1.8% \((n=4)\) reported working in “other” areas.

Table 5

Demographics of the Participants

<table>
<thead>
<tr>
<th>Variable</th>
<th>(n)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>37</td>
<td>19.4</td>
</tr>
<tr>
<td>Female</td>
<td>154</td>
<td>80.6</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Asian/Pacific Islander</td>
<td>1</td>
<td>.5</td>
</tr>
<tr>
<td>Black/African American</td>
<td>12</td>
<td>6.3</td>
</tr>
<tr>
<td>Caucasian</td>
<td>164</td>
<td>85.9</td>
</tr>
<tr>
<td>Hispanic</td>
<td>7</td>
<td>3.7</td>
</tr>
<tr>
<td>Multiracial</td>
<td>5</td>
<td>2.6</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 or below</td>
<td>30</td>
<td>15.7</td>
</tr>
<tr>
<td>31-40</td>
<td>54</td>
<td>28.3</td>
</tr>
<tr>
<td>41-50</td>
<td>54</td>
<td>28.3</td>
</tr>
<tr>
<td>51-60</td>
<td>40</td>
<td>20.9</td>
</tr>
<tr>
<td>61 and older</td>
<td>13</td>
<td>6.8</td>
</tr>
<tr>
<td>Highest Degree Earned</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------------------</td>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>Masters Degree</td>
<td>11</td>
<td>5.7</td>
</tr>
<tr>
<td>Master Plus 30</td>
<td>66</td>
<td>34.4</td>
</tr>
<tr>
<td>Educational Specialist</td>
<td>79</td>
<td>41.1</td>
</tr>
<tr>
<td>Doctoral Degree</td>
<td>36</td>
<td>18.8</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>School Level Served</th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Preschool</td>
<td>10</td>
<td>4.4</td>
</tr>
<tr>
<td>Elementary School</td>
<td>151</td>
<td>66.5</td>
</tr>
<tr>
<td>Middle School or Junior High</td>
<td>35</td>
<td>15.4</td>
</tr>
<tr>
<td>High School or Senior High</td>
<td>24</td>
<td>10.6</td>
</tr>
<tr>
<td>Alternative School</td>
<td>1</td>
<td>.4</td>
</tr>
<tr>
<td>Psycho-educational Center/ Therapeutic Day School</td>
<td>1</td>
<td>.4</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>2.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>School Placement Type</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional Public School/District</td>
<td>218</td>
<td>96.0</td>
</tr>
<tr>
<td>Public Charter School/ District</td>
<td>7</td>
<td>3.1</td>
</tr>
<tr>
<td>Consortium/Cooperative</td>
<td>2</td>
<td>.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Community Served</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>51</td>
<td>22.5</td>
</tr>
<tr>
<td>Suburban</td>
<td>100</td>
<td>44.1</td>
</tr>
<tr>
<td>Rural</td>
<td>72</td>
<td>31.7</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>1.8</td>
</tr>
</tbody>
</table>

The response rates from various regions in the United States closely reflected the NASP’s membership statistics for the 2010-11 fiscal year (NASP, 2011), which were
used to stratify the original sample pool. Figure 2 illustrates each of the four NASP regions and provides corresponding statistics for the percentage of NASP members from each region and the percentage of survey respondents from each region. Only slight differences were evident with a slightly higher sample representation from the Central Region of the United States (i.e., a difference of 2.4%) and slightly lower representation from the Western Region (i.e., 2.4%). There was less than .4% difference evident for both the Northeast and the Southeast Regions.

Figure 2. NASP Regions with Corresponding Percentages. NASP percentages reflect membership data from the 2010-11 fiscal year (NASP, 2011). Participants percentages reflect the percentage of survey respondents from the region.

Professional Experiences. Tables 6 and 7 present data gathered regarding the professional experiences of and services provided by the respondents. The overwhelming
majority, a total of 88.9%, reported their job title as School Psychologist (n= 201). Other job titles included Specialist in School Psychology (5.3%, n=5.3), Psychologist (.9%, n=2), and Other (4.9%, n=11). None of the responding practitioners identified themselves as Psychometrist or Diagnostian. On average, survey respondents had a mean of 12.20 (SD=9.62) years of experience in school psychology with a range from 0 to 42 years. Statistics of normality indicate a positively skewed distribution with skewness of .84 (SE=.162). The majority of school psychologists responding (66.4%, n= 150), reported having no prior experience as a teacher or instructor. Of those reporting prior teaching experience, 60.5% (n= 46) taught in grades PK-12, while 57.9% (n= 44) reported experience as a college or university instructor. Some participants (18.4%, n=18.4) reported teaching at both levels. Of those reporting prior teaching experience, the mean years of classroom teaching experience was 6.21 (SD=5.76) ranging from 1 to 25 years; while the mean number of university semesters taught was 8.68 (SD=11.08) ranging from 1-60 semesters. Statistics of normality indicate a positively skewed distributions for both classroom and university teaching with skewness of 1.45 (SE=.365) and 3.02 (SE=.37) respectively.

The majority of respondents reported practicing outside of the NASP recommended ratio during the 2011-2012 school year with only 42.7% (n=97) of respondents serving 1000 or fewer students. The mean ratio of respondents was 1695:1 (SD= 2568.05) with a wide range reported from 20 – 28,000 students served. This large standard deviation indicates a high degree of variability around the mean for this parameter. Analysis of skew and kurtosis indicates that ratio was positively skewed, with skewness of 6.77 (SE = .16) and kurtosis of 57.43 (SE = .32). On average those
responding worked 197.31 (SD=37.70) contracted days. During their 2011-2012 work days, respondents conducted a mean of 56.15 (SD=34.01) comprehensive evaluations/reevaluations for special education eligibility purposes. Controlling for various contract lengths the responding school psychologists conducted an average of 6.19 (SD=3.84) evaluations per month (using an approximation of 21.25 work days per calendar month). See Table 7 for a summary of additional data gathered regarding other services delivered during the 2011-2012 school year by the responding the school psychologists.

Table 6

*Professional Experiences of the Sample*

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Job Title</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Psychologist</td>
<td>201</td>
<td>88.9</td>
</tr>
<tr>
<td>Specialist in School Psychology</td>
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</tr>
<tr>
<td>Psychologist</td>
<td>2</td>
<td>.9</td>
</tr>
<tr>
<td>Other</td>
<td>11</td>
<td>4.9</td>
</tr>
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<td><strong>0-3</strong></td>
<td>42</td>
<td>18.5</td>
</tr>
<tr>
<td><strong>4-9</strong></td>
<td>68</td>
<td>30.0</td>
</tr>
<tr>
<td><strong>10-14</strong></td>
<td>38</td>
<td>16.7</td>
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<tr>
<td><strong>15-19</strong></td>
<td>27</td>
<td>11.9</td>
</tr>
<tr>
<td><strong>20-24</strong></td>
<td>21</td>
<td>9.3</td>
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<td><strong>25+</strong></td>
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<td>13.7</td>
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<td>Prior Experience as a Teacher in Grades PK-12</td>
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<td>20.3</td>
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<td>Years of Prior Classroom Teaching Experience</td>
<td>Count</td>
<td>Percentage</td>
</tr>
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<td>--------------------------------------------</td>
<td>-------</td>
<td>------------</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>12.2</td>
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<td>5-10</td>
<td>11</td>
<td>26.8</td>
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<td>11+</td>
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<td>19.5</td>
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</table>

<table>
<thead>
<tr>
<th>Prior Experience as College or University Instructor</th>
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<th>Percentage</th>
</tr>
</thead>
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<td></td>
<td>44</td>
<td>19.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semesters of College Teaching Experience</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
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<td>1 or 2</td>
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<td>7-10</td>
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<td>12.2</td>
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<tr>
<td>10+</td>
<td>10</td>
<td>24.4</td>
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<table>
<thead>
<tr>
<th>Students to Psychologist Ratio</th>
<th>Count</th>
<th>Percentage</th>
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</thead>
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<td>&lt;1001</td>
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<td>1001-1500</td>
<td>47</td>
<td>20.7</td>
</tr>
<tr>
<td>1501-2000</td>
<td>42</td>
<td>18.5</td>
</tr>
<tr>
<td>2001-3000</td>
<td>25</td>
<td>11.0</td>
</tr>
<tr>
<td>3001+</td>
<td>16</td>
<td>7.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th># Comprehensive Evaluations /Re-evaluations Conducted for Special Education Eligibility Purposes Per Month</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2</td>
<td>22</td>
<td>17.2</td>
</tr>
<tr>
<td>3-4</td>
<td>21</td>
<td>16.4</td>
</tr>
<tr>
<td>5-6</td>
<td>23</td>
<td>18.0</td>
</tr>
<tr>
<td>7-9</td>
<td>25</td>
<td>19.5</td>
</tr>
<tr>
<td>10-11</td>
<td>23</td>
<td>18.0</td>
</tr>
<tr>
<td>12+</td>
<td>14</td>
<td>10.9</td>
</tr>
</tbody>
</table>
Length of contract in days

<table>
<thead>
<tr>
<th>Range</th>
<th>Count</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-180</td>
<td>43</td>
<td>19.0</td>
</tr>
<tr>
<td>181-190</td>
<td>76</td>
<td>33.6</td>
</tr>
<tr>
<td>191-200</td>
<td>47</td>
<td>20.8</td>
</tr>
<tr>
<td>201-220</td>
<td>35</td>
<td>15.5</td>
</tr>
<tr>
<td>220+</td>
<td>25</td>
<td>11.1</td>
</tr>
</tbody>
</table>

*Note:* *To control for various contract lengths (e.g., full-time versus part time or 10, 11, 12 month positions) evaluations per month is reported (calculated using 21.25 work days per month).

**Table 7**

**Summary of Services Delivered**

<table>
<thead>
<tr>
<th>Service delivered during the 2011-2012 school year</th>
<th>Range</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td># of comprehensive evaluations or reevaluations conducted for special education eligibility</td>
<td>0-190</td>
<td>56.15</td>
<td>34.01</td>
</tr>
<tr>
<td># of screening evaluations conducted not related to special education eligibility</td>
<td>0-500</td>
<td>17.24</td>
<td>40.14</td>
</tr>
<tr>
<td># of students to whom individual counseling was provided</td>
<td>0-57</td>
<td>6.69</td>
<td>10.14</td>
</tr>
<tr>
<td># of students to whom group counseling was provided</td>
<td>0-65</td>
<td>5.57</td>
<td>10.60</td>
</tr>
<tr>
<td># of consultation cases with individual teachers or with multiple teachers for a student in common</td>
<td>0-1080</td>
<td>56.39</td>
<td>112.74</td>
</tr>
<tr>
<td># of hours spent doing organizational consultation (i.e., at the system level, school level, or grade level, etc.)</td>
<td>0-4000</td>
<td>100.15</td>
<td>305.61</td>
</tr>
</tbody>
</table>
Of specific import to this study are school psychologists’ practices and experiences as related to professional learning. The majority of school psychologists responding to the survey reported delivering some form of PL to teachers (72.6%, \( n=151 \)). Data regarding the respondents’ preparation to deliver PL indicate that 41.7% (\( n=85 \)), reported receiving only informal training in delivering PL. Some responding psychologists reported receiving formal training in PL delivery, 22.1% (\( n=45 \)) indicated they received “some” formal training, while 6.4% (\( n=13 \)) reported “a good deal” of formal training. The mean number of training hours reported by those formally trained to deliver PL was 40.25 hours (\( SD=114.80 \)) ranging from 0 to 900 hours. Analysis of skew and kurtosis indicates that hours of formal training was positively skewed, with skewness of 7.25 (SE = .31) and kurtosis of 54.83 (SE = .60). Almost a third of respondents (29.9%, \( n=61 \)) reported receiving no training in PL delivery. Table 8 reflects the data gathered regarding the types of training that the respondents reported receiving.

Table 8

*Training Experiences in PL Delivery*

<table>
<thead>
<tr>
<th>Training Experience</th>
<th>( n )</th>
<th>% of total</th>
<th>% of subgroup*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondents reporting no training in PL delivery</td>
<td>61</td>
<td>29.9</td>
<td>100.0</td>
</tr>
<tr>
<td>Learned from observing others</td>
<td>55</td>
<td>23.4</td>
<td>90.2</td>
</tr>
<tr>
<td>Learned from prior attempts/feedback</td>
<td>39</td>
<td>16.6</td>
<td>63.9</td>
</tr>
<tr>
<td>Learned by just winging it</td>
<td>34</td>
<td>14.5</td>
<td>55.7</td>
</tr>
<tr>
<td>I don’t know how to deliver PL</td>
<td>5</td>
<td>2.1</td>
<td>8.2</td>
</tr>
<tr>
<td>Respondents reporting informal training in PL delivery</td>
<td>85</td>
<td>41.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Learned by giving presentations in college classes</td>
<td>64</td>
<td>27.2</td>
<td>75.3</td>
</tr>
</tbody>
</table>
Applied knowledge of consultation to PL delivery 48 20.4 56.5
Learned by giving presentations at conferences 32 13.6 37.6
Learned about children’s learning and applied it to adults 24 10.2 28.2
Researched how to deliver PL 16 6.8 18.8

Respondents reporting some formal training in PL delivery 45 22.1 100.0
  Practicum/internship required PL or inservice delivery 31 13.2 75.6
  Attended a training or workshop on how to deliver PL 22 9.4 53.7
  Trained on the job to be a trainer for a specific topic 20 8.5 48.8

Respondents reporting a good deal of formal training in PL delivery 13 6.4 100.0
  Attended a college class on adult learning or instruction 7 3.0 53.8
  Attended a course or a workshop series on PL delivery 6 2.6 46.2
  Trained on the job to be a trainer for multiple topics 6 2.6 46.2
  Attended multiple trainings/workshops on PL delivery 6 2.6 46.2

*Subgroup refers to each of the four training subgroups (i.e., no training, informal training, some formal training, and a good deal of formal training).

**Note.** Participants were permitted to indicate multiple responses, thus percentages of subgroups does not total 100%.

Research Question 1: What do school psychologists report about the nature of their involvement in providing professional learning?

**Number of hours.** During the 2011-2012 school year, 72.6% (n=151) of school psychologists responding reported delivering some form of PL to teachers in their
district. The overall mean number of PL engagements delivered for all school psychologists reporting was 3.5 ($SD=6.15$) ranging from 0 – 55 engagements, with a mean of 12.7 ($SD=27.08$) hours delivered ranging from 0 to 200 hours delivered. The mean number of PL engagements for those who reported delivering PL last year was 4.83 ($SD=6.85$) with an average of 17.6 ($SD=30.52$) hours delivered. In total, those reporting PL delivery ($n=151$) conducted over 700 PL engagements consisting of 2549 hours of training. These school psychologists spent on average 20.6 ($SD=52.75$) hours of preparing for that PL. Sixty-one percent of responding school psychologists ($n=89$) reported using personal time to prepare for PL with a mean of 14.3 ($SD=27.50$) hours of personal time used.

**Format of trainings.** School psychologists were asked to report PL delivery practices throughout their careers. Responding school psychologists most frequently cited doing presentations that were less than hour in duration (74.7%, $n=139$); however, 70.4% ($n=131$) delivered 1-2 hour presentation/trainings. Some respondents reported delivering training of longer duration - 39.2% ($n=73$) delivered half day trainings, 23.1% ($n=43$) delivered full day trainings, and 12.9% ($n=24$) taught a course or extended class. Some respondents delivered PL through other non-traditional formats - 34.4% ($n=64$) engaged in consultee-centered consultation, 26.3% ($n=49$) participated in coaching activities, 7.5% ($n=14$) facilitated a book study, 2.7% ($n=5$) facilitated a lesson study as PL, and 12.4% ($n=23$) facilitated a learning community as PL. See Table 9.

**Audience characteristics.** The majority of respondents who reported delivering PL in the 2011-12 school year delivered it to teachers/certified staff (90.7%, $n=137$). Some respondents reported delivering training to paraprofessionals (31.8%, $n=48$) and
other support staff (9.3%, n=14). The mean number of faculty and/or staff trained by responding school psychologists during the 2011-2012 school year was 74.32 (SD=70.73) ranging from 5 to 320 participants.

**Collaborative or independent delivery.** Of the PL deliverers (n=151) responding to the survey, 64.2% (n=97) reported having delivered PL alone (as sole presenter), while 66.2% (n=100) reported delivering PL collaboratively. Of those who reported collaborating on PL delivery, 41.0% (n=41) delivered it in collaboration with school psychologist colleagues, 32.0% (n=32) with school administrators, 70.0% (n=70) with other school personnel (teachers, or guidance counselors, etc.), and 1% (n=1) collaborated with non-school professionals. See Table 9.

**Topics of PL delivery.** Responding school psychologists reported delivering PL on the wide variety of topics presented in Table 9. The most frequent topic of PL delivered by school psychologists appears to be Behavior Intervention Plans (66.7%, n=120). Other topics endorsed by over 50% of respondents included: Behavior Management/Classroom Management (61.7%, n=111), Response to Intervention (57.8%, n=104), Attention Deficit Hyperactivity Disorder (56.1%, n=101), Special Education Paperwork/Processes (53.9%, n=97), and Functional Behavioral Assessment (50.6%, n=91). Several topics were endorsed by between 25 and 50% of respondents. These included: Positive Behavioral Interventions and Supports (PBIS, 42.8% n=77), Autism (40%, n=72), Crisis Prevention/Intervention (378%, n=68), Understanding Test Results (33.9%, n=61), Overviews of Disability Categories (33.3%, n=60), Curriculum Based Measurement (30.6%, n=55), Social Skills Training (27.2%, n=49), and
Differentiating Instruction (i.e., how to vary instruction for different learners, 26.7%, \( n=48 \)).

Table 9

*Descriptors of PL Delivery*

<table>
<thead>
<tr>
<th>Variable</th>
<th>( n )</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Format of Trainings</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 1 hour presentation</td>
<td>139</td>
<td>74.7</td>
</tr>
<tr>
<td>1-2 hour presentation/training</td>
<td>131</td>
<td>70.4</td>
</tr>
<tr>
<td>Half-day training</td>
<td>73</td>
<td>39.2</td>
</tr>
<tr>
<td>Consultee-centered Consultation</td>
<td>64</td>
<td>34.4</td>
</tr>
<tr>
<td>Coaching</td>
<td>49</td>
<td>26.3</td>
</tr>
<tr>
<td>Full-day training</td>
<td>43</td>
<td>23.1</td>
</tr>
<tr>
<td>Course or class (more than 1 day)</td>
<td>24</td>
<td>12.9</td>
</tr>
<tr>
<td>Facilitated a learning community</td>
<td>23</td>
<td>12.4</td>
</tr>
<tr>
<td>Book Study</td>
<td>14</td>
<td>7.5</td>
</tr>
<tr>
<td>Lesson Study</td>
<td>5</td>
<td>2.7</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>1.6</td>
</tr>
<tr>
<td><strong>Audience</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers/ certified staff</td>
<td>137</td>
<td>90.7</td>
</tr>
<tr>
<td>Paraprofessionals</td>
<td>48</td>
<td>31.8</td>
</tr>
<tr>
<td>Other Support Staff</td>
<td>14</td>
<td>9.3</td>
</tr>
<tr>
<td><strong>Collaborative or Independent Delivery</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alone- as sole presenter</td>
<td>97</td>
<td>64.2</td>
</tr>
<tr>
<td>Collaborative Delivery</td>
<td>100</td>
<td>66.2</td>
</tr>
<tr>
<td>In collaboration with school psychologist colleagues</td>
<td>41</td>
<td>41.0</td>
</tr>
</tbody>
</table>
In collaboration with school administrators 32 32.0
In collaboration with other school personnel 70 70.0
In collaboration with non-school professionals 1 1.0

**Topics of PL Delivered**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavior Intervention Plans</td>
<td>120</td>
<td>66.7</td>
</tr>
<tr>
<td>Behavior Management/Classroom Management</td>
<td>111</td>
<td>61.7</td>
</tr>
<tr>
<td>Response to Intervention (RTI)</td>
<td>104</td>
<td>57.8</td>
</tr>
<tr>
<td>Attention Deficit Hyperactivity Disorder</td>
<td>101</td>
<td>56.1</td>
</tr>
<tr>
<td>Special Education Paperwork/Processes</td>
<td>97</td>
<td>53.9</td>
</tr>
<tr>
<td>Functional Behavioral Assessment</td>
<td>91</td>
<td>50.6</td>
</tr>
<tr>
<td>Positive Behavioral Interventions and Supports (PBIS)</td>
<td>77</td>
<td>42.8</td>
</tr>
<tr>
<td>Autism</td>
<td>72</td>
<td>40.0</td>
</tr>
<tr>
<td>Crisis Prevention/Intervention</td>
<td>68</td>
<td>37.8</td>
</tr>
<tr>
<td>Understanding Test Results</td>
<td>61</td>
<td>33.9</td>
</tr>
<tr>
<td>Overviews of Disability Categories</td>
<td>60</td>
<td>33.3</td>
</tr>
<tr>
<td>Curriculum Based Measurement</td>
<td>55</td>
<td>30.6</td>
</tr>
<tr>
<td>Social Skills Training</td>
<td>49</td>
<td>27.2</td>
</tr>
<tr>
<td>Differentiating Instruction (i.e., how to vary instruction for different learners)</td>
<td>48</td>
<td>26.7</td>
</tr>
<tr>
<td>Anxiety or Test Anxiety</td>
<td>43</td>
<td>23.9</td>
</tr>
<tr>
<td>Graphing Data</td>
<td>42</td>
<td>23.3</td>
</tr>
<tr>
<td>Suicide Risk Factors</td>
<td>41</td>
<td>22.8</td>
</tr>
<tr>
<td>Different Learning Strategies (i.e., strategies for different types of learners)</td>
<td>40</td>
<td>22.2</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>39</td>
<td>21.7</td>
</tr>
<tr>
<td>Interventions for Slow Learners</td>
<td>37</td>
<td>20.6</td>
</tr>
<tr>
<td>Bullying</td>
<td>36</td>
<td>20.0</td>
</tr>
<tr>
<td>Category</td>
<td>Count</td>
<td>Percentage</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-------</td>
<td>------------</td>
</tr>
<tr>
<td>Literacy Skills/Reading Intervention</td>
<td>35</td>
<td>19.4</td>
</tr>
<tr>
<td>DIBELS (Dynamic Indicators of Basic Early Literacy Skills)</td>
<td>29</td>
<td>16.1</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>29</td>
<td>16.1</td>
</tr>
<tr>
<td>Low Incidence Disabilities</td>
<td>27</td>
<td>15.0</td>
</tr>
<tr>
<td>Math Intervention</td>
<td>21</td>
<td>11.7</td>
</tr>
<tr>
<td>Multicultural Education</td>
<td>20</td>
<td>11.1</td>
</tr>
<tr>
<td>School Climate</td>
<td>18</td>
<td>10.0</td>
</tr>
<tr>
<td>Neurodevelopmental Disorders</td>
<td>15</td>
<td>8.3</td>
</tr>
<tr>
<td>English Language Learner (ELL) Strategies</td>
<td>14</td>
<td>7.8</td>
</tr>
<tr>
<td>Writing Intervention</td>
<td>13</td>
<td>7.2</td>
</tr>
<tr>
<td>Traumatic Brain Injury (TBI)</td>
<td>12</td>
<td>6.7</td>
</tr>
<tr>
<td>Bipolar Disorder</td>
<td>10</td>
<td>5.6</td>
</tr>
<tr>
<td>Team Teaching for Special Education Students</td>
<td>9</td>
<td>5.0</td>
</tr>
<tr>
<td>Post-traumatic Stress Disorder (PTSD)</td>
<td>8</td>
<td>4.4</td>
</tr>
<tr>
<td>Common Core Standards</td>
<td>6</td>
<td>3.3</td>
</tr>
<tr>
<td>Writing Intervention</td>
<td>13</td>
<td>7.2</td>
</tr>
</tbody>
</table>

**Adherence to PL standards.** Responding school psychologists reported varying degrees of adherence to the recommended PL standards of practice using the following scale: 1-Always, 2-Often, 3-Sometimes, 4-Never. The mean level of agreement with each of the PL standards was: (a) Learning Communities ($M=1.71, SD=.83$), (b) Leadership ($M=1.88, SD=.84$), (c) Resources ($M=2.37, SD=.75$), (d) Data ($M=2.25, SD=.92$), (e) Learning Designs ($M=1.63, SD=.77$), (f) Implementation ($M=2.27, SD=.87$), and (g) Outcomes ($M=2.04, SD=.87$). Additional information regarding respondents’ level of agreement with the standards of practice is reflected in Table 10.
Table 10

*Adherence to PL Standards*

<table>
<thead>
<tr>
<th>Standard</th>
<th>Always n</th>
<th></th>
<th>Often n</th>
<th></th>
<th>Sometimes n</th>
<th></th>
<th>Never n</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>When I deliver PL I try to create a community of learners with common goals focused on continuous improvement.</td>
<td>92</td>
<td>49.2</td>
<td>66</td>
<td>35.3</td>
<td>21</td>
<td>11.2</td>
<td>8</td>
<td>4.3</td>
</tr>
<tr>
<td>Through PL, I serve as a leader, advocating for and providing support to develop learner capacities.</td>
<td>67</td>
<td>36.2</td>
<td>83</td>
<td>44.9</td>
<td>25</td>
<td>13.5</td>
<td>10</td>
<td>5.4</td>
</tr>
<tr>
<td>Adequate resources are available to support implementation of PL skills I teach.</td>
<td>25</td>
<td>1.5</td>
<td>71</td>
<td>38.4</td>
<td>84</td>
<td>45.4</td>
<td>5</td>
<td>2.7</td>
</tr>
<tr>
<td>I use a variety of data to plan, assess, and evaluate my PL efforts.</td>
<td>41</td>
<td>22.3</td>
<td>75</td>
<td>40.8</td>
<td>49</td>
<td>26.6</td>
<td>19</td>
<td>10.3</td>
</tr>
<tr>
<td>The PL I deliver is based on sound theoretical models and established research in the domain of concern.</td>
<td>94</td>
<td>51.6</td>
<td>68</td>
<td>37.4</td>
<td>14</td>
<td>7.7</td>
<td>6</td>
<td>3.3</td>
</tr>
<tr>
<td>When providing PL I purposely plan supports to sustain implementation of the skills I teach.</td>
<td>36</td>
<td>19.5</td>
<td>78</td>
<td>42.2</td>
<td>56</td>
<td>30.3</td>
<td>15</td>
<td>8.1</td>
</tr>
<tr>
<td>I plan PL so that it is aligned with practice and curriculum standards.</td>
<td>62</td>
<td>33.9</td>
<td>67</td>
<td>36.6</td>
<td>39</td>
<td>21.3</td>
<td>15</td>
<td>8.2</td>
</tr>
</tbody>
</table>

**PL Preferences.** Many respondents (42.3%, n=80) reported that they were happy with the amount of PL that they currently deliver; however, 48.1% (n=91) reported a preference to deliver more (40.7%, n=77) or much more (7.4%, n=14) PL than they presently deliver. A total of 9.5% of respondents would prefer to deliver less (1.6%, n=3) or much less (.5%, n=1) PL than currently, or to not engage in PL delivery at all (7.4%, n=14). Respondents reported a mean number of 23.07 PL delivery hours (SD=53.25) as the optimal total amount of PL for an individual school psychologists to
Research Question 2: Is school psychologist reported involvement in PL delivery related to personal variables?

Data relating to the personal variables under investigation have been presented previously in Tables 5, 6, and 8. Results of inferential analyses conducted in response to research question 2 are reported below for each variable under investigation in turn. ANOVAs were conducted adjusting the alpha levels using the Holm-Bonferroni correction procedure to control for type 1 error (the family-wise error rate). Though some variables reported previously were not normally distributed in the sample, research on the robustness of ANOVA to violations of normality indicates that it is robust (i.e. the probability of making type I and type II errors remained constant despite violations of normality; Schmider, Keigler, Danay, Beyer, & Buhner; 2010) and this robustness improves with larger sample sizes ($n>5$; Khan & Rayner, 2003).

Age. Data relating to age are reported in Table 5. Analysis of variance (ANOVA) found no significant effect on the amount of PL delivered given the age of the practitioner. With alpha set at .017, there was no significant difference between group means, $F(4, 183) = 1.223, p=.303$ (see Table 11).

Degree. Data relating to degree status are reported in Table 5. An ANOVA was conducted and found no significant effect on the amount of PL delivered given the
highest degree earned by the practitioner. With alpha set at .05, there was no significant difference between group means, $F(3, 5185) = .070, p=.976$ (see Table 11).

**Former teaching experience.** Data relating to former teaching experience are reported in Table 6. An ANOVA was conducted and found a statistically significant effect on the amount of PL delivered given the prior teaching experience reported by the practitioner. With alpha set at .01, there was a significant difference between group means, $F(3, 197) = 4.010, p=.008$ (see Table 11). Post hoc Analyses were conducted using Tukey HSD procedure with alpha set at <.05. These analyses indicate that school psychologists with experience teaching in a PK-12 setting reported having delivered significantly more PL ($M=27.93, SD=50.40$) than those with either no teaching experience ($M=9.68, SD=8.44$) or those with university/college teaching experience ($M=9.07, SD=14.57$). These differences have Cohen’s effect sizes of $d=.481$ and $d=.508$ respectively, both of which suggest a moderate effect size based on Cohen’s effect size criterion.

**Years of experience as a school psychologist.** Data relating to years of experience in school psychology are reported in Table 6. An ANOVA was conducted and no significant effect on the amount of PL delivered given the years of school psychology practice experience. With alpha set at .025, there was no significant difference between group means, $F(5, 195) = 1.024, p=.405$ (see Table 11).

**Training in PL delivery.** Data relating to training experience in PL are reported in Table 8. An ANOVA was conducted and found no statistically significant effect on the amount of PL delivered given the extent of PL training reported by the practitioner.
With alpha set at .0125, there was not a significant difference between group means, $F(3, 197) = 3.381, p = .019$ (see Table 11).

Table 11

*Relationships Between Personal Variables and PL Delivery*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Hours of PL Delivered</th>
<th>ANOVA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 or below</td>
<td>9.33</td>
<td>20.75</td>
</tr>
<tr>
<td>31-40</td>
<td>9.56</td>
<td>1.67</td>
</tr>
<tr>
<td>41-50</td>
<td>19.17</td>
<td>5.03</td>
</tr>
<tr>
<td>51-60</td>
<td>16.21</td>
<td>5.14</td>
</tr>
<tr>
<td>61 and older</td>
<td>13.11</td>
<td>3.79</td>
</tr>
<tr>
<td>Highest Degree Earned</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masters Degree</td>
<td>14.36</td>
<td>21.05</td>
</tr>
<tr>
<td>Master Plus 30</td>
<td>13.17</td>
<td>28.93</td>
</tr>
<tr>
<td>Educational Specialist</td>
<td>14.28</td>
<td>31.99</td>
</tr>
<tr>
<td>Doctoral Degree</td>
<td>11.80</td>
<td>15.19</td>
</tr>
<tr>
<td>Former Teaching Experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Teaching Experience</td>
<td>9.68</td>
<td>18.43</td>
</tr>
<tr>
<td>Experience Teaching PK-12</td>
<td>27.93</td>
<td>50.40</td>
</tr>
<tr>
<td>Experience Teaching College/University</td>
<td>9.07</td>
<td>14.57</td>
</tr>
<tr>
<td>Experience Teaching at Both Levels</td>
<td>18.08</td>
<td>40.03</td>
</tr>
<tr>
<td>Years of Experience as a School Psychologist</td>
<td>1.024</td>
<td>.405</td>
</tr>
</tbody>
</table>
Research Question 3: Is school psychologist reported involvement in PL delivery related to situational variables?

Data relating to the situational variables under investigation are presented in Tables 5 and 6. Results of inferential analyses conducted in response to research question 3 are reported below for each variable under investigation in turn. ANOVAs were conducted adjusting the alpha levels using the Holm-Bonferroni correction procedure to control for type 1 error (the family-wise error rate). Though some variables reported previously were not normally distributed in the sample, research on the robustness of ANOVA to violations of normality indicates that it is robust (i.e. the
probability of making type I and type II errors remained constant despite violations of normality; Schmider, Keigler, Danay, Beyer, & Buhner; 2010) and this robustness improves with larger sample sizes (n>5; Khan & Rayner, 2003).

**Students to psychologist ratio.** Data relating to ratio are reported in Table 6. An ANOVA was conducted and found no significant effect on the amount of PL delivered given the ratio of students to school psychologist. With alpha set at .025, there was no significant difference between group means, \( F(4, 196) = 1.369, p = .246 \) (see Table 12).

**Time spent on evaluations.** Data relating to comprehensive evaluations conducted are reported in Table 6. An ANOVA was conducted and found a statistically significant effect on the amount of PL delivered given the number of evaluations conducted for eligibility purposes per month. With alpha set at .0125, there was a significant difference between group means, \( F(5, 118) = 3.217, p = .009 \) (see Table 12). Specifically, school psychologists conducting 0-2 comprehensive evaluations per month reported having delivered significantly more PL (\( M = 36.82, SD = 62.22 \)) than those conducting 3-4 (\( M = 5.50, SD = 9.04 \)), 7-9(\( M = 7.96, SD = 20.85 \)), & 10-11(\( M = 7.81, SD = 12.84 \)) evaluations per month. These differences have an effect sizes of \( d = .704 \), \( d = .622 \), and \( d = .646 \); which all indicate moderate to high effects based on Cohen’s effect size criterion.

**Job placement.** Data relating to school level served are reported in Table 5. An ANOVA was conducted and found no significant effects on the amount of PL delivered given the school level served. With alpha set at .0167, there was no significant difference between group means, \( F(4, 196) = 3.00, p = .020 \) (see Table 12). The initial intent was to conduct an additional ANOVA to determine if the type of school placement (i.e.,
traditional school district, public charter school/district, or consortium/cooperative) impacted PL delivery; however data regarding the school placement type resulted in significantly disproportionate group sizes \((n=192, n=7, and n=2)\) thus, this analysis was not conducted.

An ANOVA was conducted to determine if the community type served (i.e., urban, suburban, or rural) impacted PL delivery. No statistically significant effect was found on the amount of PL delivered given the location of the job placement. With alpha set at \(0.05\), there was no significant difference between group means, \(F(2, 195) = 0.343, p=0.710\) (see Table 12).

Table 12

*Relationships Between Situational Variables and PL Delivery*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Hours of PL Delivered</th>
<th>ANOVA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(M)</td>
<td>(SD)</td>
</tr>
<tr>
<td>Students to Psychologist Ratio</td>
<td>1.369</td>
<td>0.246</td>
</tr>
<tr>
<td>&lt;1001</td>
<td>11.76</td>
<td>26.64</td>
</tr>
<tr>
<td>1001- 1500</td>
<td>13.43</td>
<td>27.80</td>
</tr>
<tr>
<td>1501- 2000</td>
<td>7.24</td>
<td>10.52</td>
</tr>
<tr>
<td>2001- 3000</td>
<td>15.27</td>
<td>31.59</td>
</tr>
<tr>
<td>3001+</td>
<td>26.43</td>
<td>44.48</td>
</tr>
<tr>
<td>Number of Evaluation conducted per month</td>
<td>3.217</td>
<td>.009*</td>
</tr>
<tr>
<td>0-2</td>
<td>36.82</td>
<td>62.22</td>
</tr>
<tr>
<td>3-4</td>
<td>5.50</td>
<td>9.04</td>
</tr>
<tr>
<td>5-6</td>
<td>11.50</td>
<td>21.06</td>
</tr>
</tbody>
</table>
Research Question 4: What aspects within school environments do school psychologists report to facilitate the provision of PL and which aspects reportedly hamper efforts toward the provision of PL?

Table 13 presents data pertaining to the facilitators and barriers to PL delivery that respondents have personally experienced in their practice.

**Facilitators.** Respondents most frequently endorsed “Administrative support at the school” (75.5%, n=145) as a factor that facilitated the ability to provide PL to their students. Other frequently endorsed facilitators included:  
- **7-9 year-olds:** 7.96, 20.85, 8
- **10-11 year-olds:** 7.82, 12.84, 8
- **12+ year-olds:** 18.23, 18.32

**School Level Served**

<table>
<thead>
<tr>
<th>Level</th>
<th>7-9</th>
<th>10-11</th>
<th>12+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preschool</td>
<td>10.20</td>
<td>12.84</td>
<td></td>
</tr>
<tr>
<td>Elementary School</td>
<td>13.95</td>
<td>29.44</td>
<td></td>
</tr>
<tr>
<td>Middle School or Junior High</td>
<td>6.56</td>
<td>12.84</td>
<td></td>
</tr>
<tr>
<td>High School or Senior High</td>
<td>6.71</td>
<td>9.18</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>48.00</td>
<td>62.21</td>
<td></td>
</tr>
</tbody>
</table>

**Community Type Served**

<table>
<thead>
<tr>
<th>Type</th>
<th>7-9</th>
<th>10-11</th>
<th>12+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>14.43</td>
<td>27.89</td>
<td></td>
</tr>
<tr>
<td>Suburban</td>
<td>10.68</td>
<td>23.68</td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>13.08</td>
<td>29.37</td>
<td></td>
</tr>
</tbody>
</table>

*Notes.* *significant employing Holm-Bonferroni correction with p<.0125.*

**not significant employing Holm-Bonferroni correction (p<.0167).**
schools. No other facilitators were endorsed by more than 50% of respondents. Several facilitators were endorsed by more than 30% of respondents. These included: “Expertise or understanding of a particular content/topic” (49.5%, n=95), “Specific request made by the school” (44.3%, n=85), “Available PL days designated by the district” (34.9%, n=67), “Your leadership qualities” (34.4%, n=66), “Supervisor encouragement/support” (33.3%, n=64), and “Available resources (i.e., materials for training and implementation)” (32.8%, n=63). See Table 13 for other facilitators endorsed.

**Barriers.** Respondents most frequently endorsed “High demands on time/very busy” (89.1%, n=171) as a factor that inhibited the ability to provide PL to their schools. No other barriers were endorsed by more than 50% of respondents. Several barriers were endorsed by more than 30% of respondents. These include: “Too many assessments to do” (48.4%, n=93), “Limited release time for teachers” (46.4%, n=89), and “Schools resistant to change” (39.1%, n=75). See Table 13 for other barriers endorsed.

Table 13

<table>
<thead>
<tr>
<th>Facilitators and Barriers to PL Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Items endorsed</td>
</tr>
<tr>
<td>Administrative support at the school</td>
</tr>
<tr>
<td>Expertise or understanding of a particular content/topic area</td>
</tr>
<tr>
<td>Specific request made by the school</td>
</tr>
<tr>
<td>Available PL days designated by the district</td>
</tr>
<tr>
<td>Your leadership qualities</td>
</tr>
<tr>
<td>Supervisor encouragement/support</td>
</tr>
<tr>
<td>Available resources (i.e., materials for training and implementation)</td>
</tr>
</tbody>
</table>
Expertise aligned with the needs or goals of your school 56 29.2
Understanding how to use an interpret data 54 28.1
Changes in Special Education Law/legislative changes 51 26.6
New initiatives or programs adopted 48 25.0
An established PL community at your school 47 24.5
Needs assessments 44 22.9
PL is expected as part of job responsibilities 32 16.7
Training in consultation 32 16.7
Release time for teachers 31 16.1
Alignment of PL with educator practice standards 31 16.1
An understanding of individual and organizational change principles 31 16.1
Low psychologist to student ratio 29 15.1
Ongoing support for classroom implementation of skills taught 25 13.0
Short testing list/ low assessment load 21 10.9
Previous experience as a teacher 20 10.4
Compensation (e.g., monetary or comp time, etc.) 16 8.3
Expertise or understanding of a the process of PL delivery 12 6.3
Alignment of PL with student curriculum standards 11 5.7
Training in adult learning 5 2.6

Barriers

High demands on time/ very busy 171 89.1
Too many assessments to do 93 48.4
Limited release time for teachers 89 46.4
Schools resistant to change 75 39.1
Lack of school-level administrative support 48 25.0
Research Question 5: What do school psychologists report about (a) motivations to deliver PL, (b) deriving satisfaction from delivering PL, (c) feelings of autonomy associated with PL delivery, and (d) connecting with faculty through PL?

Motivations for providing PL. Respondents were asked to indicate the top 3 reasons why they deliver PL to educators from a list of potential motivators. The most

<table>
<thead>
<tr>
<th>Motivation</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of available resources (i.e., materials for training and implementation)</td>
<td>48</td>
<td>25.0</td>
</tr>
<tr>
<td>Lack of support for classroom implementation of skills taught</td>
<td>40</td>
<td>20.8</td>
</tr>
<tr>
<td>Reputation of psychologists as “just testers”</td>
<td>39</td>
<td>20.3</td>
</tr>
<tr>
<td>Lack of supervisor support</td>
<td>29</td>
<td>15.1</td>
</tr>
<tr>
<td>Not comfortable delivering PL/Shy</td>
<td>25</td>
<td>13.0</td>
</tr>
<tr>
<td>Teachers do not respect school psychologists opinion as a non-teacher</td>
<td>25</td>
<td>13.0</td>
</tr>
<tr>
<td>Yearly professional evaluation focused on testing and timelines</td>
<td>22</td>
<td>11.5</td>
</tr>
<tr>
<td>School is not committed to continuous improvement</td>
<td>20</td>
<td>10.4</td>
</tr>
<tr>
<td>Prefer to spend time with children instead of adults</td>
<td>15</td>
<td>7.8</td>
</tr>
<tr>
<td>Lack of knowledge of curriculum and instruction issues</td>
<td>14</td>
<td>7.3</td>
</tr>
<tr>
<td>Not confident to deliver PL/ not knowledgeable enough</td>
<td>12</td>
<td>6.3</td>
</tr>
<tr>
<td>Unclear about the needs or goals of my school</td>
<td>11</td>
<td>5.7</td>
</tr>
<tr>
<td>Lack of expertise/ understanding of the content of PL</td>
<td>10</td>
<td>5.2</td>
</tr>
<tr>
<td>Lack of knowledge of how to assess PL outcomes</td>
<td>7</td>
<td>3.6</td>
</tr>
<tr>
<td>Teachers do not trust the school psychologist</td>
<td>6</td>
<td>3.1</td>
</tr>
<tr>
<td>Lack of expertise/knowledge of the process of PL delivery</td>
<td>5</td>
<td>2.6</td>
</tr>
<tr>
<td>Lack of knowledge of educator practice standards</td>
<td>3</td>
<td>1.6</td>
</tr>
<tr>
<td>Sources of data to plan PL are not available</td>
<td>2</td>
<td>1.0</td>
</tr>
</tbody>
</table>
frequently endorsed motive was “To effect change on a larger scale than one
student/teacher at a time” (37.0%, \(n=71\)). Additional motives endorsed by over 25% of
respondents included “Increasing teacher capacities is good for all children” (33.9%,
\(n=65\)), “The school(s) asks me to do it” (33.3%, \(n=64\)), and “PL can help me make
changes outside of special education/ have more of an impact on general education
practices” 27.6%, \(n=53\)). See Table 14 for other motivations endorsed.

Table 14

Motivations for PL Delivery

<table>
<thead>
<tr>
<th>Items endorsed</th>
<th>(n)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>To effect change on a larger scale than one student/teacher at a time.</td>
<td>71</td>
<td>37.0</td>
</tr>
<tr>
<td>Increasing teacher capacities is good for all children.</td>
<td>65</td>
<td>33.9</td>
</tr>
<tr>
<td>The school(s) asks me to do it.</td>
<td>64</td>
<td>33.3</td>
</tr>
<tr>
<td>PL can help me make changes outside of special education/ have more of an impact on general education practices.</td>
<td>53</td>
<td>27.6</td>
</tr>
<tr>
<td>To increase my visibility on the job/ promote myself as a resource.</td>
<td>42</td>
<td>21.9</td>
</tr>
<tr>
<td>To be more involved in the school community.</td>
<td>41</td>
<td>21.4</td>
</tr>
<tr>
<td>I believe that it’s important to share what I know with teachers.</td>
<td>39</td>
<td>20.3</td>
</tr>
<tr>
<td>It is required as part of job responsibilities.</td>
<td>30</td>
<td>15.6</td>
</tr>
<tr>
<td>I enjoy delivering professional learning.</td>
<td>28</td>
<td>14.6</td>
</tr>
<tr>
<td>It is a time efficient way to share information.</td>
<td>24</td>
<td>12.5</td>
</tr>
<tr>
<td>I am frustrated with the status quo/just doing things the way they’ve always been done.</td>
<td>22</td>
<td>11.5</td>
</tr>
<tr>
<td>I do not deliver professional learning.</td>
<td>17</td>
<td>8.9</td>
</tr>
<tr>
<td>I would be open to delivering professional learning, but I don’t have the time.</td>
<td>14</td>
<td>7.3</td>
</tr>
<tr>
<td>In my graduate training I learned that it was part of my role and responsibilities.</td>
<td>6</td>
<td>3.1</td>
</tr>
</tbody>
</table>
To address an imminent need or crisis

---

**Deriving satisfaction from providing PL.** Respondents were asked to report their level of agreement with statements inquiring about satisfaction derived from PL delivery. These were rated on a 5-point scale from 1 Strongly Disagree to 5 Strongly Agree. Means and standard deviations for these ratings are reported in Table 15. The majority of respondents (78.6%) either agreed (52.9%, n=99) or strongly agreed (25.7%, n=48) that delivering PL is satisfying. In addition, most responding school psychologists (74.7%) either agreed (48.4%, n=90) or strongly agreed (26.3%, n=49) that delivering PL helps them feel accomplished at work.

**Feelings of autonomy associated with providing PL.** Respondents were asked to report their level of agreement (using the aforementioned 5-point scale) with statements inquiring about feelings of autonomy derived from PL delivery. See Table 15. The majority of respondents (66.8%) either agreed (49.7%, n=93) or strongly agreed (17.1%, n=32) that they are free to deliver PL in the way they think it should be done. Sixty-nine percent also agreed (55.1%, n=102) or strongly agreed (13.5%, n=25) that they are able to exercise choice about how they meet the needs of their school through PL.

**Connecting with faculty through providing PL.** Respondents were asked to report their level of agreement (using the aforementioned 5-point scale) with statements inquiring about PL delivery as a conduit to connect with faculty at their schools. See Table 15. The majority of respondents (79.4%) agreed (52.4%, n=97), or strongly agreed (27.0%, n=50) that delivering PL helps them connect with faculty members. Most
(84.9%) also agreed (54.3%, n= 101) or strongly agreed (30.6%, n=57) that PL can be used to promote themselves as a resource to faculty members.

Table 15

*Satisfaction, Autonomy, and Connectedness from PL Delivery*

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delivering PL is satisfying.</td>
<td>3.99</td>
<td>.81</td>
</tr>
<tr>
<td>Delivering PL helps me feel accomplished at work.</td>
<td>3.94</td>
<td>.89</td>
</tr>
<tr>
<td>I am free to deliver PL in the way I think it should be done.</td>
<td>4.01</td>
<td>.84</td>
</tr>
<tr>
<td>I am able to exercise some choice about how I meet the needs of my school through delivering professional learning.</td>
<td>4.12</td>
<td>.76</td>
</tr>
<tr>
<td>Delivering PL helps me connect with faculty members.</td>
<td>3.71</td>
<td>.93</td>
</tr>
<tr>
<td>By delivering PL I am able to promote myself as a resource to faculty members.</td>
<td>3.69</td>
<td>.91</td>
</tr>
</tbody>
</table>

*Note.* All items were rated on a 5-point scale (5=Strongly Agree, 4=Agree, 3=Neutral, 2=Disagree, 1=Strongly Disagree).
CHAPTER 5

Discussion

This chapter will review, summarize, and interpret this dissertation research. First a summary of the problem and method of exploration will be presented. Next, the results will be summarized and discussed, conclusions will be presented, and implications for future research and school psychology practice will be explored. Finally, the limitations and research implications will be presented.

Summary of the Problem

Numerous calls have been made expressing the importance for school psychology to make contributions to improving education for all students, not just those identified as having special needs (e.g., Grimley, 1978; Sheridan & Gutkin, 2000). In addition, flagship organizations in the field have expressed the importance of contributing to building capacity within educators (e.g., NASP Practice Model, 2010; APA Position Papers on School Psychology, 2004). Though calls for this type of reform have resonated for decades, research on school psychologist practices in this domain has been limited. Studies that have attempted to define school psychologist PL practices have done so as an aside, while exploring other factors of import. Though limited, the prior research has made it clear that many school psychologists report they attempt to build teacher capacities through the provision of PL; however, little has been revealed about their practices in this domain.
Method of Exploration

This study set out to explore a number of factors focused specifically on school psychologist practices in the provision of PL to teachers. It began with a review of the literature and exploratory interviews to provide sufficient information to construct a survey representing the depth and breadth of the topic under study. Focus groups were then conducted to revise the survey measure to improve the clarity and focus of the instrument. A comprehensive list of schools from across the nation was downloaded from the NCES. A stratified random sample of 650 schools was selected and contact information for the school psychologist serving each school was sought via web or telephone. A link to the survey instrument was then sent electronically to the sample and participants completed the web-based survey on Survey Monkey. Survey data were received from 237 practicing school psychologists yielding a response rate of 36.15%. Data were then summarized and analyzed using SPSS to address the research questions under investigation.

Summary and Discussion of the Results

Purpose and significance of the current study. Studies have described an evolution of the role of school psychology over the past few decades from largely direct assessment-focused service provision to a more indirect service orientation (e.g., Castillo, et al., 2012; Hosp & Reschly, 2002; Levinson, 1990; Roberts and Rust, 1994; Smith, 1984); as such, exploring the school psychologist as a provider of PL has not been as relevant in the past as it is today. Few studies have explored school psychologists’ efforts to build educators’ capacities on a large scale such as that offered by PL delivery. To date, no study has focused on the perspectives and practices of school psychologists as
related specifically to PL as an indirect service approach to building capacity within schools, nor have they attempted to identify trends in personal or situational variables that might contribute to the likelihood of engaging in PL as a service. This research study has attempted to fill this identified gap in the literature by providing information regarding school psychologist practices in the delivery of PL to educators. Survey methodology was implemented to: (a) examine school psychologist PL delivery practices, (b) investigate relationships between reported PL practices and the personal characteristics of the school psychologist, (c) investigate relationships between reported PL practices and situational variables impacting the school psychologist, (d) consider barriers and facilitators to PL delivery encountered by school psychologists, and (e) explore school psychologists’ motivations for providing PL.

Answers to the research questions posed in this study shed light on current practices, help generate ideas for future practice, and provide direction for future research. Information obtained from this study could be used to inform those individuals involved in the training of school psychologists of needed skills, knowledge, and dispositions of future practitioners in training programs, as well as training needs to competently provide PL as a service. This research may also increase awareness of the skills of school psychologists as a potential resource for PL to schools. In addition, this research may serve to inspire school psychologists currently in practice to work toward taking a more active role in the PL of teachers and to inspire other researchers to explore additional dimensions associated with these concepts.

**Representative Sample.** The conclusions below are drawn based on the data reported by the sample. Thus, it is important to consider how well the sample represents
the general population of practicing school psychologists. In general, demographic data describing the sample closely resembles demographics collected by prior researchers. Discussion of the similarities and difference as well as consideration of how these align with predicted trends from the literature are addressed below.

**Gender.** There was a slightly higher representation of female practitioners in the current sample (80.6%) than found in the most recent survey research conducted by NASP gathered in 2010 (76.1%; Castillo et al., 2012). This aligns with the trend predicted in the literature that the number of female practitioners will continue to increase (Fouad et al., 2000).

**Race.** Racial data for the sample confirmed prior studies that the field has limited diversity among practitioners. Eighty-six percent of the current sample identified themselves as Caucasian (86 %), while in prior studies this has ranged from 96% (Smith, 1984) to 90.7% (Castillo et al., 2012). The current data indicate a potential trend suggestive of increased diversity. This may indicate that efforts to recruit and retain minority practitioners in the field may be beginning to see results; however, the community has a long way to go to achieve diversity ratios that align with national demographics. Closer inspection of the data clarifies that differences found appear to be due to an increase among practitioners identifying as Black/African American. This racial category accounted for 6.3 % of the current sample whereas in the previous NASP survey data Black/African Americans represented only 3% of the sample. These data support the conclusion of Lewis et al., (2008) whose research suggested that although there still appears to be inadequate representation of ethnically diverse groups in school psychology practice overall, the disparity may not be as great as NASP membership data
suggest (Lewis et al., 2008). In the Lewis et al. (2008) study African American school psychologists represented 4% of their sample which, similar to the current investigation, did not employ the NASP database as the sampling frame. So while it is possible that recent efforts to recruit and retain minority practitioners in the field may be beginning to have an effect; it is also plausible that survey data gathered using the NASP database may be biased since diverse practitioners are less likely to be NASP members than their Caucasian counterparts. This is a question to be explored in future research.

**Age.** The average age of the respondents in this study (43.2 years) was somewhat younger than 2010 NASP survey data found (mean age 47.4 years; Castillo et al., 2012). Of the current sample, 9.4% percent identified as age 60 or older while in 2010, 17.8% of school psychologists fell within this range. It is important to note that the NASP data includes all categories of school psychologists while the current data includes only school-based practitioners. Thus, this potential difference may be attributable to older practitioners tending to be employed in faculty positions or administrative positions at a higher rate than their younger counterparts. It is also possible, that the field may be beginning to see the predicted increases in retirement (Curtis et al., 2004) of older practitioners resulting in a shift in trend. A potential source of influence accelerating a retirement trend may be the economic recession, which could be causing practitioners to seriously consider retirement at earlier ages than in the past due to decreases or freezes in salaries resulting from funding cuts or furlough days and their potential influence on retirement benefits. Future research on the “aging” of the profession may do well to include the influence of the economic context on rates of retirement and attrition in the field.
Degree. Sixty percent of the current sample indicated they held Specialist degrees or higher, with an additional 34.4% reporting Masters Plus 30 credit hours. The percentage of school-based practitioners in the sample holding doctoral degrees (18.8%) was higher than that reported by NASP (16.7%, Castillo et al., 2012). This aligns with predicted trends in degree attainment among school psychologists indicating a movement toward higher degree status.

Do school psychologists deliver PL? Yes: delivery of PL by school psychologists has persisted across a number of years and been marked by a number of studies. Visual inspection of national longitudinal data, shows there may have been a temporary downtrend where fewer school psychologists were conducting inservices for teachers (Curtis et al., 1999; 2008; Castillo et al., 2012); however as shown in Figure 3 the practice may be rebounding. Statistical tests would be needed to determine if these changes over time are significant; however, visual inspection of the data may warrant the investigation. During the 1994-95 school year, 78% of school psychologists conducted at least one inservice training, whereas in 2004-05 the number dropped to 67% and then rose back to 71.4% in 2009-10. The results of the current inquiry find 72.6% of responding school psychologists reported delivering PL in the 2011-12 school year; which remains less than the highpoint found in 1994, but is consistent with NASP’s most recent figures. Past research has indicated that school psychologists have provided on average 2.6 inservices per year (Curtis et al., 2008) with 18.4% of practitioners conducting 5 or more inservices in a school year (Curtis et al., 1999). The current inquiry shows practitioners reporting an overall average of 3.5 PL engagements delivered during
the 2011-12 year, with a mean of 12.7 hours delivered; and 19.8% of practitioners reportedly conducting 5 or more PL engagements.

The data gathered indicate a high degree of variability in school psychologist PL practices, with some school psychologists delivering no PL while others reported delivering 200 hours of PL. Data regarding these practices were not normally distributed and were significantly positively skewed. It is possible that looking at measures of central tendency for this parameter may not present an accurate picture of PL practices. In this case, the mean was pulled in the direction of higher scores (i.e. inflated by those practitioners doing a good deal of PL) and may not best reflect the PL practices of most practitioners. Although the ANOVA test statistic used in this research is considered a robust measure even when normality is violated (Schmider et.al., 2010) it makes interpretation difficult. Future research may consider using nonparametric analyses such as the Kruskal-Wallis test or multivariate analyses to consider potential interaction effects.

![Figure 3. Percentage of School Psychologists Reporting PL Delivery.](image)

Factoring out practitioners who reportedly did not deliver any PL at all during the 2011-12 school year allows presentation of a more detailed picture of those who did. This subset of practitioners on average delivered 4.83 PL engagements, with an average of 17.6 hours delivered per practitioner, to an average of 74 educators. In total for the 2011-12 school year, this group reported delivering over 700 PL engagements, consisting of about 2500 hours of training, to over 4,800 educators. Extrapolating these figures, given an approximate 29,400 school psychologists practicing in schools (Center for Mental Health Services, 2004; Charvat, 2008; Curtis et al., 2004) 72.6% of whom could be said to have delivered PL during the 2011-2012 school year, to on average 74 educators each (assuming no teachers attended more than one PL engagement); over 1.5 million educators across the nation are potentially receiving PL (in some form) delivered by school psychologists. Considering that there are approximately 3.2 million teachers in the entire nation (NCES, 2011), this figure approaches 50% of all educators and represents a substantial potential impact on U.S. education and the students served.

School psychologists have consistently reported they would prefer to spend more time engaged in preventive and indirect service delivery than in conducting assessments for special education placement (Anthun, 1999; Levinson, 1990; Reschly & Wilson, 1995; Roberts & Rust, 1994). These studies have generally focused on consultation and counseling as the prevailing indirect and preventative services explored; however, the results of the current inquiry indicate that PL is an additional service that school psychologists routinely engage in, that represents additional role diversity, and has the
potential to impact large numbers of children. In the age of accountability, school psychologists may do well to make a concerted effort to evaluate the impact of their PL practices on teacher competencies, dispositions, and practices, as well as student achievement. Unfortunately, this has proved challenging and there are very few studies evaluating the effectiveness of PL delivered by school psychologists. This likely has a good deal to do with the complexity of evaluating PL in schools in general, rather than evaluating PL delivered by school psychologists.

**To what degree have school psychologists been trained to deliver PL?** Though the potential impact on educator practices and students through psychologist delivered PL is large, the results of this study indicate that the vast majority of practitioners reported receiving either no training (29.9%) or only informal training (41.7%) in delivering PL. The majority of school psychologists reporting no training in PL delivery indicated that most often they learned from observing others. Given that historically the track record for PL delivery in schools has been less than adequate (Easton, 2008), it is possible that the PL reportedly observed and thus used as the model for school psychologist PL may not have adhered to best-practice standards. This cycle may contribute to the intractable persistence of traditional methods of inservice delivery. Of those reporting informal training, most stated that they learned by giving presentations in college classes. Although the extent to which the preparation for presentations in college classes aligns with standards-based PL practices or conforms to PL practices deemed effective in the PL literature was not included as a part of this study, it is unlikely that much alignment between the two would be found if investigated in a future inquiry. It could be argued that these presentations may inadvertently prepare school psychologists to deliver what
would closely resemble the “traditional inservice training” that the vast majority of PL research has found insufficient and ineffective at changing actual classroom practices (CPRE, 1996; Easton, 2008). Such trainings are typically short-lived, decontextualized, and disconnected from actual practice resulting in very few lasting changes in participants practices.

The group identified as PL deliverers in the current study reported spending on average 20.6 hours preparing for the training they delivered. The majority of which (approximately 14.3 hours on average) reportedly occurred on their personal time. In addition, 48 percent of responders reported they would prefer to do either more or much more PL than they do presently. These findings support the likelihood that there is a substantial number of school psychologists who believe that delivering PL to teachers is a worth-while endeavor; to such a degree that they want to spend more time doing it and are willing to invest their personal time toward its fruition. Given that a substantial amount of PL is reportedly being delivered by school psychologists, school psychologists appear dedicated to delivering PL as evidenced by the number of personal hours devoted to it, and that delivery of PL at the current rates is potentially impacting over a million and a half educators, why so few school psychologists report formal training in PL delivery is a subject for future inquiry. Further, it is important to use school psychologist and educator time in the most effective way possible so that PL endeavors may have an impact on classroom practices. Without training in PL delivery, school psychologists may simply repeat the mistakes of the past where PL that is “poorly conceived and deeply flawed” (p.2, Darling-Hammond et al., 2009) continues to hinder progress and tax the budgets of American schools.
**What is the PL delivered by school psychologists like?** Most of the responding school psychologists indicated that in the course of their career they have delivered either “less than one hour presentations” (75% of respondents) or “1-2 hour presentations” (70% of respondents). These data suggest the majority of PL delivered by school psychologists is likely to be of the “stand and deliver” genre of traditional inservice delivery. Some school psychologists reported having delivered PL of longer duration and/or multiple sessions; however, an inverse relationship was evident when this was reported; the longer the duration, the fewer respondents reported the practice. See Figure 4. This is consistent with prior research on PL in schools, which indicates that PL often consists of short workshops to provide information at the level of *first exposure* rather than the more intensive, extended learning opportunities incorporating practice, coaching and collaboration that have been shown to change teaching practices and sustain their implementation (Cooter, 2003; Darling-Hammmond et al., 2009).
It is important to note that the current inquiry presented a broader definition of PL than prior survey research which typically inquired about “inservice” delivery, but did not provide a definition of what that meant. This study intended to use language that reflected the evolution that has occurred in the PL literature from the limited traditional “inservice” approaches of the past to the broader PL approaches being designed presently. As a result, although some differences appear to be notable in terms of increases in PL delivery, it is important to consider that these may be the result of the expanded definition of PL presented in the study rather than changes in actual practices. Based on the specific practices reported by respondents this is unlikely; however, the potential remains. Regardless, it is important for the field of school psychology to use the language consistent with the field of education where the practice is situated. Movement from the perspective of PL as the traditional stand and deliver inservice to a broader expanded definition of PL may inspire the field to higher standards for PL in hopes to facilitate and support changes in teacher practices. Traditional forms of inservice training are typically brief and rely on stand and deliver didactic presentation which may or may not include some form of massed practice (Hughes et al., 2001; Truscott & Truscott, 2004). This creates participant learning that is disconnected from the classroom context where it is expected to be applied (Wei et al., 2009).

It is not surprising that the majority of school psychologists tend to deliver PL that is of shorter duration given that such PL is predominant in schools and school psychologists have limited time due to the multiple demands expected as part of their
role. What is surprising in these data is the number of school psychologists who report having engaged in alternative formats of PL delivery. Though not a subject of this inquiry, future research may investigate differences between non-traditional PL deliverers and traditional inservice deliverers (e.g., are those who provide non-traditional PL former teachers? Are these people who have been formally trained to deliver PL? etc.).

Mostly, the responding school psychologists reported delivering PL to teachers, though some reported that their audience included paraprofessionals and other support staff. Approximately equal percentages of school psychologists reported delivering PL alone (as sole presenter, 64%) and delivering it collaboratively (66%). Most often, the collaborative PL was reportedly delivered in collaboration with school staff such as teachers or guidance counselors (70%), though some was reportedly delivered with school psychologist colleagues (41%) or with school administrators (32%). Collaboration with outside agencies to deliver PL was rarely cited (1%) by responders. The reported degree of collaboration among school psychologists and other school professionals is encouraging given the focus on collaboration emphasized in the NASP Model for Comprehensive and Integrated School Psychological Services (2010). Given that teachers in schools today face the challenge of educating an increasingly diverse student population (NCES, 2011) with more significant emotional needs (CDCP, 2010) to reach higher standards (USDOE, 2010) with fewer resources (NASP, 2009) in a climate of accountability (USDOE, 2010), collaboration among varied school professionals with wide-ranging skills will likely be needed to meet these challenges (Sheridan & D’Amato, 2003).
In addition, the finding that 32% of school psychologists delivering PL reported collaborating with school administrators on this PL delivery is encouraging. The NASP *Model for Comprehensive and Integrated School Psychological Services* (2010), asserts, “School psychologists have knowledge of school and systems structure, organization, and theory; general and special education; technology resources; and evidence-based school practices that promote learning and mental health (p.6)” . In order to translate this expertise into tangible improvements in educational practices, school psychologists must find ways to influence decision-making in schools. To be effective agents of change, positive relationships with the decision-makers at the building level are likely essential. School psychologists collaborating with administrators to improve teacher capacities may be evidence that practitioners are attempting to impact practices and strategies to promote learning in schools as promoted by the NASP *Model* (2010).

The responding school psychologists reported presenting on a wide variety of topics; however, the clear favorites were topics related to behavior (e.g. assessing, behavior, intervening with behavior, disorders of behavior, PBIS, etc.). In light of findings indicating that nearly 80% of children needing mental health services do not get access to those services (Kataoka et al., 2002), the fact that school psychologists see this as an area where their expertise may be needed is encouraging. See Table 9 in Chapter 4 for a complete list of specific topics endorsed. In addition to the topics focused on behavior, it appears that many school psychologists have presented on RTI and Special Education (processes and disabilities). These findings are significant in that Darling-Hammond and colleagues (2009) found that teachers’ top three priorities for PL were their specific content area, classroom management, and teaching students in special
education. In 2001, NCES completed a national survey of teacher perspectives of PL and found that 29% of teachers felt ill prepared to address the needs of students with disabilities. This is up from comparable data in 1998 where 21% felt ill prepared indicating that the need continues to increase. In addition, less than one third of teachers reported receiving any training to help support students with special needs or student with limited English proficiency in their last three years (Darling-Hammond et al., 2009).

School psychologists’ specific training prepares them with knowledge to meet two priority learning needs of teachers (student behavior and special education); however, given that few school psychologists have received anything more than informal training in PL delivery there remains a concern that they may not be adequately prepared to fill this need.

What personal variables are predictors of school psychologist PL delivery?

Comparisons were made for a variety of personal variables including age, degree, former teaching experience, years of experience as a school psychologist and degree of training in PL delivery. The only significant predictor of PL delivery found was former teaching experience; however there is some indication that degree of training in PL may potentially be related and warrant further investigation. These personal variables are discussed below.

Age, years of experience, and degree. There were no significant relationships found between age, years of school psychologist experience, or degree and the amount of PL delivered in this study. The findings regarding degree are consistent with previous research conducted by Brown and colleagues (1998) who found few practice differences between doctoral and non-doctoral school psychologists. Age and years as a school
psychologist are likely to be highly correlated, thus it is predictable that findings were consistent across these two variables. Though age has not been previously studied as a predictor of PL delivery, years of experience has been studied and the results of the current inquiry are not consistent with prior research findings. Curtis and colleagues (2002) found a significant positive relationship between years of experience and numbers of inservices delivered. They also found a significant positive relationship between highest degree earned and the number of inservice programs delivered per year. The findings of the Curtis et al. study (2002) suggested that with more training and/or experience, school psychologists tended to deliver more PL to teachers; however the current inquiry found no significant relationship between these practitioner characteristics and number of PL hours delivered. Differences in these findings could be attributed to measurement. Questions were asked differently between the two studies with Curtis and colleagues (2002) analyzing number of inservices and the current study looking at number of PL hours delivered. The first research study employed a narrower definition of PL as “inservice delivery”, while the current investigation used a broader definition of PL to include a variety of learning engagements, including inservice, but also extending to less traditional formats of PL (e.g., consultation, book studies, extended learning engagements, etc). It is possible that experience or degree status continues to be related to traditional inservice delivery as suggested previously; however, the current data suggest that when a broader nontraditional approach to PL is considered this relationship disappears. It is possible that the data hint at a paradigm shift in school psychological service delivery whereby practitioners newer to the field may be providing services more aligned with emerging best practices than their more experienced counterparts.
**Former teaching experience.** Results from this research show a significant degree of relationship between former teaching experience and PL delivery indicating that school psychologists with a background in teaching PK-12 students tend to deliver significantly more PL than those without teaching backgrounds. See Figure 5. Given that rates of PL delivery of university instructors were less than those of school psychologists with no teaching experience at all, the data suggest the possibility that there might be something about prior experience teaching in K-12 settings that lends itself to PL delivery. Though the current inquiry provides little information regarding why this phenomenon is evident, it raises several questions for future research. What is it about having prior K-12 teaching experience that lends itself to delivering more PL? Do these school psychologists have more knowledge about what happens in classrooms, feel more confident that their knowledge is applicable to classroom processes, or feel they may be a more credible source of information to teachers because of their prior experience? Having been in the classroom, do they feel they understand the situations of classroom teachers and have more insight into their needs? Do they miss teaching and use PL to meet a need that they have? Why don’t practitioners with university instructor experience who might theoretically have more knowledge about how adults learn and more experience teaching adults, endeavor to do this at their schools? All of these questions may be the subject of future inquiry and answers to these questions may provide trainers of school psychologists with areas of needed skill development or provide additional considerations when making program admission decisions.
Figure 5. Hours of PL Delivered During the 2011-12 School Year by Teaching Experience

**Degree of training in PL delivery.** The Holm-Bonferroni corrections needed given the number of statistical analyses conducted in this research restricted the ability to find statistical significance. If studied as a sole variable, the amount of prior training in PL \((p=.019)\) would have been statistically significant. This result, coupled with a visual inspection of the data suggests the potential that some relationship may exist and that this as a potential area of future inquiry. See Figure 6. If this supposition is accurate then the data suggest that some degree of formal training in PL delivery may increase the likelihood that a school psychologist will provide PL in their career.
What situational variables are predictors of school psychologist PL delivery?

Comparisons were made for a variety of situational variables including ratio, number of evaluations conducted, and job placement (i.e., school level served and community type). The only significant predictor of PL delivery found was number of evaluations conducted; school psychologists who complete more evaluations are less likely to provide PL. However, there is some indication that job placement may potentially be related and this warrants further investigation (i.e., school psychologists serving in specialized placements such as alternative, autism, or psycho-educational settings may tend to provide more PL). These situational variables are discussed below.

**Ratio.** The ratio of school psychologist to students was not found to be related to hours of PL delivered by school psychologists. The mean ratio reported by respondents
in this study was 1:1695, which closely aligns with the national median ratio of 1:1671 reported by NASP (Charvat, 2008; Curtis et al., 2008), even though the distribution obtained in this research was significantly positively skewed for ratio. Results from this study are also consistent with the gradual downtrend in school psychologist to student ratio. The current study found 42.7% of school psychologists practicing below the NASP recommended ratio of 1:1000 (Thomas, 2000). Though slightly fewer, this is relatively consistent with the most recent NASP finding that 43.6% of school psychologists are practicing at the recommended ratio of 1000:1 (Castillo et al., 2012) and in significant contrast to earlier findings (Curtis et al., 1999) where only 25% of school psychologists practiced at this ratio. Researchers have found that as ratio increases so does the time spent performing assessment and special education functions for individual students (Curtis et al., 2002; Reschly & Wilson, 1995; Smith, 1984).

Prior studies have suggested that lower ratios might allow school psychologists some flexibility to engage in other preferred activities. In 2002 Curtis and colleagues found, “school psychologists with smaller student ratios counseled more students individually, conducted more counseling groups, and served more students through group counseling than did those with higher student ratios” (p.37). The authors did not explore whether ratio was related to PL delivery in this study. Given that lower ratios have been found to allow flexibility in service delivery and autonomy in what services might be delivered, and given that the majority of responding school psychologists in the current inquiry expressed a desire to increase the amount of PL they deliver; the finding that ratio was not a significant predictor of PL delivery is perplexing and a topic for future inquiry. In addition, a visual inspection of the data, see Figure 7, might suggest that in settings
with very high ratios there might be a threshold which necessitates more training of others. The barriers to PL delivery investigated in this inquiry to be discussed later may shed additional light on this finding.

![Bar graph showing mean hours of PL delivered by ratio](image)

**Figure 7.** Hours of PL Delivered During the 2011-12 School Year by Ratio

**Number of evaluations conducted.** National trends indicate that school psychologists on average are completing fewer initial evaluations for special education, although it is difficult to determine if they are spending more or less time overall engaged in activities related to special education due to differences in data reporting (Curtis et al., 1999; 2002; 2008; Castillo et al., 2012). In contrast to the national trends, the current sample reported a mean of 56.15 evaluations conducted during the 2011-2012. The most recent NASP survey found a mean of 27.3 evaluations conducted during the 2009-2010 school year, though the authors reported that this figure represented a surprising downtrend at the time. The current results indicating an uptick in evaluations represents a figure closer to the mean reported by NASP for the 1999-2000 school year of 39.9
evaluations conducted. These results could be a function of inherent practice differences for the pool of respondents. Another possibility may be that potential differences in numbers of evaluations conducted might be related to widespread implementation of the RTI model which at the outset could have caused the temporary drop in referrals for evaluation observed in 2009-10. Changes in referral processes associated with RTI/Problem Solving models may have led to subsequent confusion associated with those processes thus potentially delaying referrals for evaluation. The evaluation surge seen in the current data may be a rebound effect (i.e., catching up on delayed referrals; Bolling, Sirian-Stear, Rinks, Hicks, & Jenik, 2011).

There was a significant inverse relationship between the number of evaluations conducted per month and the hours of PL delivered, with school psychologists conducting the fewest evaluations (0-2 per month) engaging in significantly more PL delivery. Perhaps this finding is the result of increased autonomy for practitioner decision-making about how to spend their time once the legal evaluation mandate requirements have been met as suggested in the Curtis 2002 study. It may also be that the role of these school psychologists may be conceived as inherently different given their apparently low case load; however, this was not evaluated as part of the study. Practitioners who did not identify as school psychologists were eliminated from the response pool; however, the possibility remains that these school psychologists (those conducting fewer than 2 evaluations per month) may have job descriptions that differ from others conducting more evaluations. In addition, the notion that school psychology practice can look very different depending on the adoption of diverse state and local service delivery models that may employ alternative eligibility criteria or rely more
heavily on RTI data is one asserted by Reschly (2000) who studied regional practice
differences across the nation.

![Bar graph showing mean hours of PL delivered during the 2011-12 School Year by number of evaluations conducted per month.]

*Figure 8.* Hours of PL Delivered During the 2011-12 School Year by Number of Evaluations Conducted per Month

The finding that hours of PL delivery was less related to ratio and more related to the number of evaluations conducted is a surprising finding. It leads to questions about the skills, attitudes or attributes some school psychologists possess that keep their evaluation numbers down even if they are in larger districts with higher ratios. This is a potential area of future inquiry.

*Job placement.* There was no relationship found between the location of the job placement (i.e., urban, suburban, or rural) and the amount of PL delivered. Though prior studies have indicated that there exist some practice differences between urban, suburban and rural psychologists (e.g., Curtis et al., 2002) there do not appear to be differences in the amount of PL delivered.
The Holm-Bonferroni corrections needed given the number of statistical analyses conducted in this research restricted the ability to find statistical significance in the relationship between PL and job placement level (i.e., preschool, elementary, middle, high or other). If studied as a sole variable, the job placement level \( (p=0.020) \) would have been statistically significant. This result, coupled with a visual inspection of the data shown in Figure 9, suggests the potential that some relationship may exist and this is a prospective area of future inquiry. It is important to note; however, the group of school psychologists who indicated their primary practice as “other” was a very small group \( (N=7) \), consisting of practitioners who indicated responsibilities for serving all schools within a given system or with specialized placements such as “all schools with autism programming,” “alternative schools,” or “psycho-educational center”); thus any implications should be considered with caution. Based on the current data, it is evident that no differences in hours of PL delivery exist between those school psychologists serving in pre-k, elementary, or secondary school placements. A potential area of future inquiry might be investigating practice differences between school psychologists who primarily practice in more specialized job placement settings, versus those who practice in traditional school placements. The current data suggest that there might be substantial practice differences between these two groups.
What drives and what impedes school psychologist PL delivery? Certain contextual and personal factors were investigated as part of this study to ascertain what factors within systems or individuals might facilitate more PL delivery, as well as those contextual or personal factors that might be barriers to delivering PL in schools. When considered within the context of Standards-Based PL delivery (Learning Forward, 2011), several themes emerge from this data. First, it is apparent that leadership is an essential component for school psychologist PL delivery (i.e., school-level leadership and the leadership qualities of the school psychologist). Standards-based PL asserts that skillful leaders are necessary to provide support and engage in advocacy efforts to improve teacher capacities. School-level administrative support, specific requests made by school
leaders, and the school psychologist’s own leadership qualities were all reported as facilitators to PL delivery. School psychologists also reported that when school-level leadership support was not evident this was a barrier to their PL delivery. “Leaders develop their own and others’ capacity to learn and lead professional learning, advocate for it, provide support systems, and distribute leadership and responsibility for its effectiveness and results” (p. 28, Learning Forward, 2011).

Second, it is also apparent that resources play an important role in school psychologist PL delivery. Standards-Based PL emphasizes the importance of coordinating resources to support PL delivery and implementation. When a broad definition of resources is considered (i.e., “human, fiscal, material, technology, and time resources” p.32, Learning Forward, 2011) the barriers and facilitators experienced by school psychologists confirm that adequate resources facilitate the delivery of PL while a paucity of resources impedes PL delivery. School psychologist time and teacher time are valuable resources, i.e., if professional time is not set aside and devoted to PL, then PL is less likely to be implemented or more likely to be of insufficient duration or intensity to produce meaningful change. School psychologists cited high demands on their own time, limited release time for teachers, and lack of available resources as barriers to engaging in PL. Designated PL days and available resources were indicated as facilitators to PL delivery. When resources are devoted to PL, quality of the learning engagements themselves and resulting changes in practice are improved (Learning Forward, 2011).

Perceived receptivity to new skills or content (e.g., teachers’ openness to learn new skills, an established climate of continuous improvement, etc.) appears to facilitate PL delivery and is aligned with the Learning Community standard outlined by Learning
Forward (2011). “Professional learning within communities requires continuous improvement, promotes collective responsibility, and supports alignment of individual, team, school, and school system goals” (p. 24, Learning Forward, 2011). Facilitators to PL in this domain were expressed as an articulated school need or openness to new skills or processes. Assessment of school needs from a variety of sources reportedly influences school psychologists’ PL practices. School psychologists reported that schools’ resistance to change creates a barrier to PL delivery while, school-level specific requests, expertise aligned with school needs, and the adoption of new initiatives/programs facilitate school psychologist PL delivery. Understanding these dynamics and how to influence them must be a part of the school psychologist skill set so that they may recognize opportunities to become involved in and/or support the school improvement process.

As indicated by Learning Forward, Standards-Based PL practices are intertwined and work collectively to produce high-quality PL. The interaction between leadership, learning communities, and resources is supported by findings regarding reported barriers and facilitators in this research- leaders can devote resources to PL initiatives including personnel, time, money, and material. Leaders who view PL as a priority, may be more likely to designate specific time for the activity. PL is likely to be more effective when specific time is set aside to develop skills and practices, time is devoted to development of competencies associated with identified school needs anchored in daily practice, resources are designated to support PL, and the PL supports sustained implementation of new competencies (Darling Hammond et al., 2009; Learning Forward, 2011).
Figure 10. Barriers to PL Delivery Endorsed by More Than 25% of Respondents

Figure 11. Facilitators to PL Delivery Endorsed by More Than 25% of Respondents
Given the barriers and facilitators endorsed by practitioners, the school psychologist with an interest in doing PL at the school level is encouraged to establish and nurture relationships with building level administrators. Share your willingness to engage in collaborative PL to assist the school with its mission and goals. Be sure your administrator is aware of your areas of competence to promote yourself as a resource.

**What motivates school psychologists to deliver PL?** It was previously unknown why some school psychologists provided PL while others did not. This research set out to explore some of the motivating factors that might influence school psychologist PL delivery. Three of the top four reasons cited by respondents in this study indicate a desire to create change and improve education for all students (i.e., To effect change on a larger scale than one student/teacher at a time; Increasing teacher capacities is good for all children; and, PL can help me make changes outside of special education/have more of an impact on general education practices.) In considering this source of motivation, it is helpful to look at it through the lens of Self Determination Theory (SDT; Deci & Ryan, 2000, 2008). This theory of motivation emphasizes the innate, universal needs for competence, relatedness and autonomy which are related directly to a person’s feelings of motivation and fulfillment. This applies to many life domains including the workplace. Ryan and Deci (2000) have found that satisfaction of the three basic needs is associated with feelings of well-being, positive attitudes, and favorable performance. Specifically in the work domain, need satisfaction has been associated with higher levels of job satisfaction (Cross & Wyman, 2006; Ilardi, Leone, Kasser, & Ryan, 1993), higher
degrees of motivation for work (Gagne, 2003), and higher levels of work performance (Baard, Deci, & Ryan, 2004).

According to SDT, individuals have an innate need to feel competence, that is, to feel effective and capable. This need inspires individuals to seek challenges and enhance their skills in areas important to them. According to Ryan and Deci (2002), “Competence is not… an attained skill or capability, but rather is a felt sense of confidence and effectance in action” (p.7). School psychologists in this study reported a desire to be agents of change impacting large numbers of children. This need to effect changes to improve education for all students establishes the context which supports the valuation of building teacher capacities as a means to this end, thus providing motivation to feel competency in this domain. In addition, to the three motivators described above, school psychologists reported that they were frequently motivated to do PL because “the school asks [them] to do it.” When the unique contributions and skills of professionals are recognized in contexts that enhance feelings of competence, intrinsic motivation is improved. For some school psychologists feelings of competence may emerge when engagement in the challenging tasks of everyday practice gives rise to desired outcomes (e.g., feeling that they are impacting practices to create change and improve education for all students). At the same time, feelings of competence may be thwarted when school psychologists feel that they are actively struggling against established norms and when intractable patterns of behavior or disabling structures persist. In this study schools resistance to change was cited as a barrier to PL delivery. The apparent conflict between perceived demands and desired practices (Hosp & Reschly, 2002) may hamper feelings of competence in practitioners. PL is a means by which school psychologists can use
their unique skill set and broad knowledge to help large numbers of educators and thereby even larger numbers of children. From an SDT perspective PL could meet the practitioner’s need for competence. During this inquiry, the majority of all respondents (78.6%), including those who reportedly did not routinely deliver PL, either agreed or strongly agreed that delivering PL is satisfying and 74.7% either agreed or strongly agreed that delivering PL helps them feel accomplished at work.

Competence is enhanced by an additional sense of autonomy which is the second innate psychological need described by SDT. The worker who feels a sense of autonomy perceives that his or her actions are of their own volition, that is, they are acting from a self-determined motivational process (Deci & Ryan, 2000, 2008). School psychologists may experience autonomy in their professional lives when their role is flexible and they have choices about how they go about their service delivery. In order to choose PL as a service delivery, the school psychologist must first perceive that there is choice to begin with. School psychologists whose job responsibilities are dictated by lists of evaluations and stringent timelines may experience less autonomy satisfaction than those whose roles permit flexibility and choice. School psychologists who have more autonomy in their work also experience higher levels of job satisfaction than those who do not (VanVoorhis & Levinson, 2006). As is evidenced by this study, school psychologists who conduct fewer evaluations, may have more autonomous control of their time and thus may choose to deliver more PL to teachers. The majority of respondents in this study 66.8% either agreed or strongly agreed that they are free to deliver PL in the way they think it should be done. In addition, Sixty-nine percent also agreed or strongly agreed that they are able to exercise choice about how they meet the needs of their school through PL.
School psychologist’s also reported that they are motivated to do PL because it is a way to connect with faculty, (i.e., to increase visibility on the job/ and promote myself as a resource, or to be more involved in the school community.) The third need expressed by SDT, the need for relatedness, refers to the innate desire to connect with other people or experience a sense of belonging. As outsiders to the schools which they serve, school psychologists may find meeting the need for relatedness in the workplace challenging, especially those serving multiple schools. Proctor and Steadman (2003) found that school-based school psychologists (i.e. those only serving one school) reported higher rates of satisfaction and lower rates of burnout than did traditional itinerant school psychologists (i.e., those serving more than one school). In addition, itinerant school psychologists experience a high degree of professional isolation and disconnect from their peers. School Psychologists with high degrees of need for relatedness may need to more actively seek ways to integrate themselves into the school community and make meaningful connections with others. PL could serve as a vehicle to establish needed connectedness with others; especially when it incorporates collaboration and builds long-term relationships. The majority of respondents in the current study (79.4%) agreed or strongly agreed that delivering PL helps them connect with faculty members. Most (84.9%) also agreed or strongly agreed that PL can be used to promote themselves as a resource to faculty members.

Implications for Practice - What should high quality PL look like? A substantial and growing body of research indicates teacher PL is essential to the improvement of education and student outcomes (e.g., Darling-Hammond, 1993; Desimone et al., 2005). Unfortunately data from comprehensive studies researching PL
practices across the nation over the past decade have found PL practices to be inadequate resulting in limited effects on teaching practices and thereby limited effects on student outcomes (CPRE, 1996; Easton, 2008). Specifically, PL is often poorly designed and delivered with ineffective results (Easton, 2008). PL initiatives often lack coherence, are sporadic, and do not attend to individual teacher needs or authentic practice (Wei et al., 2009). Wei and colleagues (2009) concluded, “the intensity and duration of professional development offered to U.S. teachers is not at the level research suggests is necessary to have noticeable impacts on instruction and student learning” (Wei et al., 2009; p. 30).

Darling-Hammond and colleagues (2009) published a thorough review of the PL literature and found PL is effective when it is: (a) ongoing and intensive (i.e., in excess of 50 hours), (b) context specific (i.e., connected to school practices and initiatives), (c) content specific (i.e., situated in an academic content area), and (d) collaborative (i.e., builds relationships among teaching professionals).

Recognizing the continued struggle to provide high quality PL, the NSDC revised its Standards for PL and stated, “Increasing the effectiveness of PL is the leverage point with the greatest potential for strengthening and refining the day-to-day performance of educators” (Learning Forward, 2011, p.13). The NSDC put forth the seven best practice standards depicted in Table 1 in Chapter 1 of this manuscript. Seven distinct standards are presented; however, the authors emphasize their interconnectedness such that they work concomitantly to produce high-quality professional learning. Forty states have adopted standards for PL derived from the recommendations of the NSDC (Hirsh, 2010).

In summary, standards-based PL is delivered in learning communities that establish and commit to shared goals and focus on continuous improvement. Skillful school leadership
supports initiatives to foster the growth and development of all learners in schools.

Needed resources are available and coordinated to build capacities and sustain implementation. PL is delivered through planned purposeful learning designs based on sound theory and methodology in the given domain. Finally, data is used to plan, assess progress, and evaluate outcomes that are aligned with established professional and curriculum standards (Learning Forward, 2011).

As part of this study, school psychologists were asked to what extent they believe the PL they deliver meets the standards described above. A promising finding was that 85% of school psychologists reported that they either often or always try to create communities of learners with common goals that are focused on continuous improvement. Eighty-one percent said that they often or always serve as a leader advocating for and providing support to develop learner capacities; 89% said that often or always the PL delivered is based on sound theoretical models and established research in the domain of concern; and, PL is planned so that it is aligned with the curriculum.

Though school psychologists reported that the PL they deliver always or often meets the four standards above, this result is questionable. This conclusion is based on self-report data from respondents who for the most part reported little formal training in PL. It is possible that their responses could potentially be uninformed, i.e. they may have lacked the background knowledge needed to fully understand the essential elements of the questions as presented. Much of the PL provided in schools falls short of the recommended best practice standards for PL. Given the present data, it would likely be challenging, even for those with a good deal of formal training in PL, to develop a true learning community (i.e., a group of learners committed to continuous improvement
toward common goals actively engaged in learning together with a collective responsibility to learn from each other) when the learning design is a 1-2 hour presentation. It is possible that school psychologists may have insufficient background knowledge about the standards or the research associated with the standards to make accurate assessments in this domain. In considering the other standards, the numbers were less promising for often or always: (a) having adequate resources to support implementation (40%); (b) using data to plan, assess and evaluate PL (26 %), and (c) planning supports to sustain implementation (61%). How well school psychologists’ interpretations of the standards align with the actual intent of each standard, as well as, how school psychologists endeavor to enact these standards remain questions for future inquiry.

The argument was made in Chapter One that school psychologists by the nature of their skills, training, and role might be well suited to provide PL to teachers. The new standards set forth in the PL literature present an expanded view of PL that lends itself to incorporating PL into the daily practices at schools, rather than as the isolated traditional stand-and-deliver presentation of the past. Table 16 provides examples of what standard-based PL delivered by school psychologists might look like to assist readers with seeing the vision of PL as job-embedded. NASP’s school psychologist competency domains are used to link school psychologist competency areas with practical ways to deliver PL within the context of what school psychologists might already do in their daily practice.

Table 16

<table>
<thead>
<tr>
<th>NASP Practice Domain</th>
<th>Example of how a school psychologist might build capacity through PL in this domain.</th>
</tr>
</thead>
</table>
Data-Based Decision Making and Accountability

School psychologists may serve as members of RTI teams at schools. In this role, the school psychologist may: help team members understand data or RTI, model data-based decision making, facilitate the data-based decision making process with actual school data, provide support to team members as they endeavor to use data-based decision making processes, and act as a resource to sustain implementation throughout the year.

Consultation and Collaboration

A school psychologist may be approached by a team of middle school teachers to assist with a student who is having behavioral difficulties. In this role, the school psychologist may treat the team as a group of learners with the common goal of improving behavioral strategies. Using skills in consultation and collaboration, the school psychologist might facilitate discussion, walk through the problem solving process and assist with additional resources to help the team develop additional capacities to assist this one student as well as others that may be similar in the future.

Interventions and Instructional Support to Develop Academic Skills

After Tier 1 data analysis, the principal and lead special education (SPED) teacher may ask the school psychologist to assist with determining what the SPED team can do to improve performance of students with disabilities. The school psychologist may meet with the SPED teachers during their team meetings to facilitate discussion, assist with instructional planning, and act as a resource to improve instruction for these students. The school psychologist may facilitate the team to analyze the data, align IEP goals with expectations, consider additional instructional strategies needed, and adjust lesson plans accordingly. Together they may create a plan for less experienced SPED teachers to observe more knowledgeable others using the identified strategies and receive feedback on their own implementation.
<table>
<thead>
<tr>
<th>Interventions and Mental Health Services to Develop Social and Life Skills</th>
<th>School psychologists may serve as members of the Positive Behavior and Instructional Supports (PBIS) committee. Based on data gathered, the PBIS committee may see a need for helping teachers learn to de-escalate students with anger issues. A plan may be made for the school psychologist to meet with teachers during grade-level team meetings to provide PL in this domain. The school psychologist might teach the evidence based de-escalation strategy, model the strategy, facilitate practice opportunities, provide feedback, and assign in situ practice. The next time the groups meet, they may discuss their practical applications of the technique as well as any concerns the teachers may have had during implementation. Additional practice may be scheduled as needed.</th>
</tr>
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<tbody>
<tr>
<td>School-Wide Practices to Promote Learning</td>
<td>A school psychologist may be asked to provide assistance to a middle school that is in the initial stages of RTI implementation. The school psychologist may work with the leadership or RTI team to assess the needs of the school and develop a strategic plan to address those needs. They may create a plan for ongoing PL to gain staff consensus, build infrastructure, and support implementation over the next two years.</td>
</tr>
<tr>
<td>Preventive and Responsive Services</td>
<td>A school psychologist may be asked to consult with the leadership team at a middle school to help the school improve the attendance rate. The school psychologist might assist with conducting a needs assessment to gather data from teachers and students, facilitate discussion among the leadership team to analyze the data, provide information regarding risk and protective factors that impact truancy rates, and prioritize the needs of the school. In collaboration with the group the school psychologist might assist the team with developing a strategic plan to address the identified needs and assist the team with identifying and delivering additional PL to other members within</td>
</tr>
</tbody>
</table>
Family–School Collaboration Services

A school psychologist may be asked to do a presentation to parents at the school on strategies to improve early literacy skills. Instead of doing a one night parenting class, the school psychologist in collaboration with the kindergarten teachers might design a learning engagement that incorporates both parents and their children. The parents may be taught strategies to help their children experience reading practice in a positive way. The teachers could model the strategies. The parents would then experience one of the books with their children in the controlled training environment and encouragement and feedback could be provided by the facilitators. At the end of the training, the parents may be given a calendar with weekly activities for several books to read. The children may be given reward charts to document how many activities they complete.

Diversity in Development and Learning

In collaboration with the English Language Learners (ELL) support teacher, a school psychologist may design a PL activity to assist teachers with differentiating instruction to support these students. A plan might be made to provide needed background knowledge to grade-level teams, then the ELL teacher may model for the grade-level what differentiation in each content area might look like. Planning time might be scheduled for the teachers to meet with facilitation by the school psychologist and ELL teacher to create lesson plans that differentiate for ELL students. Ongoing feedback and support could be provided to the teachers regarding the instructional strategies. The team could monitor the progress of ELL students using specific progress monitoring tools for each content area.

Research and Program Evaluation

A school principal may approach the school psychologist for assistance with implementing a pilot project for single-gender
education at his middle school. In collaboration with a team of interested teachers the school psychologist might provide PL in this area, by facilitating discussion about seminal research articles in this domain and how teachers might modify instruction in their specific content areas based on the research. Later as a team the group may design the pilot project and with the guidance of the school psychologist, the team would determine what data will be collected to evaluate the effectiveness of the program. Once the pilot project is complete, the team might work collaboratively to develop a presentation to the school board evaluating the program.

A school psychologist might be asked to present an inservice to teachers about their role as mandated reporters of child abuse and neglect. In lieu of doing a whole group one-hour overview training the psychologist might decide to do a series of small group trainings by grade-level to address the issue. The meetings may be scheduled in short segments over an extended time. At each training, the school psychologist might address teacher concerns in each domain. The school psychologist could facilitate discussion, listen to teacher concerns, have teacher share personal experiences, provide knowledge and feedback to teachers about their responsibilities in each situation. Hypothetical cases and real life scenarios would be used in the learning design.

Note: Competency domains are derived from NASP’s Model for Comprehensive and Integrated School Psychological Services (2010)

Limitations and Research Implications

Several assumptions were made in regards to the phenomena under investigation. First, PL has been conceptualized as an indirect service delivery that has the potential to
benefit many students, i.e. building capacity in educators should result in increases in student competencies. Second, it was assumed that since NASP has determined that building capacity in schools is of significant import to school psychologists, the results of this study will be meaningful and relevant to the stakeholders involved. Neither of these assumptions have been tested empirically with school psychologists. In addition to these conceptual assumptions, there are also assumptions associated with the methodology selected. As with any survey, it was assumed (a) respondents are reasonably accurate reporters of their activities, (b) the sampling frame selected accurately reflects the population of school psychologists as a whole, and (c) developed survey questions accurately measured the variables under consideration in this project.

There are several limitations of this research study that should be discussed. One limitation is that the study employs self-report methods, rather than being based on verifiable independent data sources; thus the results of the survey can be said to reflect what people say they do which may contrast with what they actually do. In addition, the data gathered was retrospective and subject to the fallibility of the respondent’s memory or potential inaccuracies in record keeping. In addition, as with all survey research the possibility exists that the sample of responding school psychologists may be in some way fundamentally different from the entire population of school psychologists practicing in schools to which these results have been generalized. An attempt was made to employ a sampling frame (i.e., all schools in the United States) that theoretically encompassed the entire population of school psychologists practicing in schools; however, the possibility remains that this sampling frame may contain members that differ substantially from the population as a whole. In addition, as with most survey research, data collected from
survey responders may differ from potential responses of non-responders and/or the population as a whole. Steps were taken to ensure an acceptable response return rate, however, lower response rates are considered a limitation in survey research. Finally, since the survey was completed in 2012, the current political and economic context must be taken into account as they may influence the roles and responsibilities of educational professionals, including school psychologists.

Conclusion

The goal of this research was to paint a picture of school psychologist PL practices and the factors that contribute to these practices. Findings from this study indicate that School Psychologists endeavor to provide PL to teachers as an indirect service to children through a variety of means and to varying degrees. Providing PL is generally viewed as satisfying by school psychologists and has the potential to impact the practices of vast numbers of teachers. Ultimately the results of this research may inform school psychologists, school psychology trainers, and consumers of school psychological services (i.e., teachers and administrators) of the potential for school psychologists to engage in PL practices. School psychologists interested in performing PL may benefit from learning of the experiences of others, being inspired by new ideas or directions they hadn’t yet thought of, and seeing possibilities for role expansion that could have large impacts on the numbers children they serve. Developing an expanded vision of PL beyond isolated traditional inservice delivery can help school psychologists realize the potential for PL to be a job-embedded consultative service that can improve educator capacities and practices. School psychology trainers may better understand expectations in complex school environments, areas of needed training, and how to equip students to
navigate the barriers they may encounter. Consumers of psychological services may begin to see school psychologists as a potential resource to assist with teacher capacity building and to recognize the role they play in facilitating this.
References


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2011, from Learning Forward Web site:
http://www.learningforward.org/stateproflearning.cfm


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APPENDIXES
Appendix A

Georgia State University
Department of Counseling and Psychological Services
Informed Consent

Title: From Traditional to Reform: Exploring the Involvement of School Psychologists in the Provision of Teacher Professional Learning

Principal Investigator: Dr. Stephen Truscott
Student Investigators: Michelle Bolling, Lynnae Psimas, Kizzy Albritton, & Allison Schwartz

Sponsor: Georgia State University

I. Purpose:

You are invited to participate in a research study. You are being invited to participate because you are a practicing school psychologist. The purpose of the study is to investigate the expanding role of school psychologists, particularly in the area of providing PL in school districts. A total of approximately 5-8 participants will be recruited for this interview phase of the study. Participation will require approximately 45 minutes to 1 hour of your time.

II. Procedures:

If you decide to participate in the research, you will be asked to participate in a semi-structured interview regarding your role as a school psychologist and your involvement in the provision of professional learning. The interview is expected to require approximately 45 minutes to 1 hour of your time. The interviews will be audio recorded and transcribed verbatim for the purpose of data analysis. You may also be contacted via email or phone with brief follow up questions regarding your interview; responses to follow up questions should take no more than 10 – 15 minutes to complete.

III. Risks:

In this study, you will not have any more risks than you would in a normal day of life, and we expect that it will be a positive experience for you. However, if any part of the study makes you feel uncomfortable, we can provide you with the name of someone to talk to about this. You will be responsible for any costs associated with potential referrals.
IV. Benefits:

Benefits to you may include increased job satisfaction as a result of any knowledge gained. Participation in the research may include some satisfaction about contributing to the knowledge about the provision of PL by school psychologists.

Benefits to society include contributions to the literature base in the area of PL that will assist school districts in appropriate decision making regarding the use of resources such as personnel and funds. Understanding to what extent school psychologists are involved in providing PL in schools may assist school districts in making decisions about the efficient use of valuable educational resources including money, time, and effort.

V. Voluntary Participation and Withdrawal:

Participation in research is voluntary. You do not have to be in this study. If you decide to be in the study and change your mind, you have the right to drop out at any time. You may skip questions or stop participating at any time.

VI. Confidentiality:

We will keep your records private to the extent allowed by law. We not use your name on any study records. Only the researchers will have access to the information you provide. Data will be stored in a locked cabinet in the office of the primary student researcher. All emails or computer files will be stored on a computer with password access and firewall protection. Your name and other facts that might point to you will not appear when we present this study or publish its results. The findings will be summarized and reported in group form. You will not be identified personally.

VII. Contact Persons:

Call Dr. Stephen Truscott at (404) 413-8010 or email him at sdt55@gsu.edu if you have questions about this study. You may also call Michelle Bolling, School Psychology Doctoral Student, at (678) 699-2666 or email her at mfeltault1@student.gsu.edu with questions regarding this study. If you have questions or concerns about your rights as a participant in this research study, you may contact Susan Vogtner in the Office of Research Integrity at 404-413-3513 or email her at svogtner1@gsu.edu.

VIII. Copy of Consent Form to Subject:

We will give you a copy of this consent form to keep. If you are willing to volunteer for this research and be audio recorded, please sign below.

_________________________________________  ____________________
Participant                                      Date

_________________________________________  ____________________
Principal Investigator or Researcher Obtaining Consent  Date
### Appendix B

#### Demographic Survey

<table>
<thead>
<tr>
<th>1. Gender</th>
<th>Male</th>
<th>Female</th>
<th>Other</th>
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<tr>
<th>2. Age in years</th>
<th>25 &amp; below</th>
<th>26-35</th>
<th>36-45</th>
<th>46-55</th>
<th>55 +</th>
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<th>3. Race</th>
<th>Asian/Pacific Islander</th>
<th>Black/African American</th>
<th>Hispanic or Latino/Latina</th>
<th>White/European American</th>
<th>Native American</th>
<th>Mixed Race</th>
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<tr>
<th>4. Years of professional experience</th>
<th>0-3</th>
<th>4-9</th>
<th>10-14</th>
<th>15-19</th>
<th>20+</th>
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<tr>
<th>5. Approximate number of students served</th>
<th>0-999</th>
<th>1000-1499</th>
<th>1500-1999</th>
<th>2000-2499</th>
<th>2500+</th>
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<tr>
<th>6. Prior teaching experience excluding internship</th>
<th>0</th>
<th>1-3 years</th>
<th>4-9 years</th>
<th>10-15 years</th>
<th>15+ years</th>
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<tr>
<th>7. Settings</th>
<th>Public School</th>
<th>Private School</th>
<th>Psychoed/Residential</th>
<th>University trainer</th>
<th>Other</th>
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<tr>
<th>5. Highest degree earned</th>
<th>Student</th>
<th>Masters Degree</th>
<th>Masters Plus 30</th>
<th>Educational Specialist</th>
<th>Doctoral Degree</th>
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<tr>
<th>6. How many hours do you estimate you delivered structured professional development activities in the previous school year?</th>
<th>none</th>
<th>1-6 hours</th>
<th>7-12 hours</th>
<th>13-19 hours</th>
<th>20+ hours</th>
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Appendix C

Structured Interview Protocol

I am going to start by asking you a few general questions about your role as a school psychologist.

1. Could you describe your role as a school psychologist in your district?
2. Can you tell me the percentage of time you spend doing different activities within your district.

Let's shift gears a little and talk about the topic of professional development or professional learning.

1. Tell me about professional learning/development in your school district.
2. (clarification, what about specifically the PL teachers?)
3. What does PL look like in your district (how is it delivered, over what time period, what activities, etc.)?
4. Query- Who does do the PL in your district?
5. What topics have the PL activities covered?
6. Do you have any input in deciding topics or activities for PL in your district?
7. How much are you involved in providing PL to teachers in your school district/schools?
**IF YES:**

1. How are you involved? (describe your involvement..., tell me about your involvement with PL)
2. Do you volunteer or is it expected as part of your job? Tell me how you feel about your involvement.
3. What does your PL look like?
4. What are your goals for PL projects?

Now I want to ask you about a specific PL project. Tell me about something you thought went really well.

1. Did you pick the topic?
2. Do you design it or did you use a package? If yes, Did you change it? If no, What factors did you consider when you were designing the PL?
3. How many sessions?
4. How many people came?
5. Was it required or did they volunteer?
6. What are some activities you did?
7. Did you tailor it to your participants? How?
8. How did you assess it?
9. Did you do any formative assessment?
10. How did you measure the outcome?
11. Is there anything you’d change about it next time?
12. You just gave me an example of something went well how does that compare to other experiences? (query-what about other ones you did?)

Now I want to ask you about your general involvement in PL activities

1. What topics have the PL activities you’ve delivered covered?
2. Who usually comes to your PL?
3. Has the amount of time you have spent delivering PL changed since you started your job? Tell me about it. Query what was the% before and is it now?
4. How do you feel the skills you have taught teachers have generalized to their classroom practice?
5. How can you tell?

**IF NO:**

1. Who does do the PL in your district?
2. Have you wanted to be involved in PL? Why? If yes- what kind of things have you been interested in teaching?
3. Have you had any preparation about how to do PL? Was it part of your graduate training in school psych?
4. Would you feel comfortable providing PL? Tell me about it.
5. Describe a particular PL activity that you attended that went exceptionally well?
6. Who's responsible for that? Query - What are the participants’ responsibilities as learners in the PL you provide?

I'm going to change topics a little bit and ask you about how you learned how to do PL?

1. How did you learn how to provide PL?
   o Was it part of your graduate training in school psych?
   o Did you learn about how adults learn?

2. How did you become interested in PL?

3. Is this something you would like to spend more or less time doing? Why?

FOR ALL PARTICIPANTS

Now I'm going to ask you some questions about School Psychologists delivering PL.

1. How important is it for school psychologists to do PL?
2. What strengths do school psychologists bring to the provision of professional learning?
3. What are the limitations to having school psychologists do professional development?
4. Are there topics that you think School Psychs would be particularly good at?
5. What kind of things get in the way of school psychologists doing PL?

I have one last question for you that is kind of general.

1. Can you tell me four or five things that you think make a difference between PL that is successful and PL that isn't?
January 3, 2013

Dear School Psychology Practitioner,

As a school psychologist you provide a variety of invaluable services to the students and schools you serve, one of which may be teacher training and inservice. I am writing to ask for your help with an important study being conducted to understand the practices and perspectives of school psychologists related to providing professional development (i.e., inservice training and presentations) to teachers. In the next few days you will receive a request to participate in this project by answering questions about your experiences as a school psychologist in general as well as your experiences in providing professional development to your teachers.

I would like to do everything I can to make it easy and enjoyable for you to participate in the study. I am writing in advance because many people like to know ahead of time that they will be asked to fill out a questionnaire. This research can only be successful with the generous help of professionals like you.

To say thank you for participating, I have attached a document that you may find helpful. It contains an excel file that easily graphs data to help with Response to Intervention efforts. Whether you decide to participate in the study or not, feel free to download the file as a free gift. I hope you will take the 20-25 minutes of your time to help me. Most of all, I hope that you enjoy the questionnaire and the opportunity to voice your thoughts and opinions about teacher training and professional development.

Best Wishes,
Michelle A. Bolling
MichelleABolling@gmail.com
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5803 Yorktown Rd
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Appendix E

Solicitation Letter

January 10, 2013

Dear School Psychology Practitioner,

I am writing to ask for your help in understanding the practices and perspectives of school psychologists as related to providing professional development (i.e., inservice training and presentations) to teachers. Your email address is one of a small number that has been randomly selected to help in this study. To say thank you for participating, Last week I sent you a document that you may find helpful in your daily practice. It contains an excel file that easily graphs data to help with Response to Intervention efforts. Whether you decide to participate in the study or not, feel free to download the file as a free gift.

This link https://www.surveymonkey.com/s/School_Psychologist_PL_Delivery_Final will take you to the questionnaire. It has approximately 40 questions and should take 20-25 minutes to complete. Your responses are voluntary and will be kept confidential. The survey program being used will tack your IP address only for the purpose of sending a reminder and to ensure that only one survey is completed per IP address. Your answers to the survey questions will not be associated with your name or institution.

I hope you will take the 20-25 minutes of your time to help me. Most of all, I hope that you enjoy the questionnaire and the opportunity to voice your thoughts and opinions about teacher training and professional development.

Best Wishes,
Michelle A. Bolling
MichelleABolling@gmail.com
678-340-8469
Doctoral Candidate, Georgia State University
5803 Yorktown Rd
Douglasville, Georgia 30135

If you already know that you do not wish to participate please click the link below and you will be removed from my email list and I will not send you any reminder notices. https://www.surveymonkey.com/optout.aspx
This study has been reviewed and approved by the Georgia State University (GSU) Institutional Review Board (IRB). If you have any questions regarding your rights as a participant in this study, you may contact the primary researcher above, or you may contact Susan Vogtner in the Office of Research Integrity at 404-413-3513 or email her at svogtner1@gsu.edu.
January 17, 2013

Dear School Psychology Practitioner,

Recently you received an email asking you to respond to a brief questionnaire about your experiences as a school psychologist in general as well as your experiences in providing professional development to your teachers. The questionnaire has approximately 40 questions and should take about 20-25 minutes to complete.

If you have already completed the survey, I would like to thank you for your time, as your responses are very important to this research. If you have not yet answered the questionnaire, I’d like to encourage you to take a few minutes to do so. By sending this email with a link to the web survey, I thought it might be easier to respond.

https://www.surveymonkey.com/s/School_Psychologist_PL_Delivery_Final

Thank you for your help. This questionnaire is important. It is one of the few ways we can help understand the practices and perspectives of school psychologists related to providing professional development (i.e., inservice training and presentations) to teachers.

Sincerely,
Michelle A. Bolling
MichelleABolling@gmail.com
678-340-8469
Doctoral Candidate, Georgia State University
5803 Yorktown Rd
Douglasville, Georgia 30135

Please note: If you do not wish to receive further emails from us, please click the link below, and you will be automatically removed from our mailing list.
https://www.surveymonkey.com/optout.aspx
Appendix G

Survey Questions

The following questions refer to your professional practice(s).

1. Georgia State University
   Department of Counseling and Psychological Services
   Informed Consent

   Title: From Traditional to Reform: Exploring the Involvement of School Psychologists in the Provision of Educator Professional Learning

   Principal Investigator: Dr. Stephen Truscott
   Student Investigators: Michelle Bolling & Rachel Handschuh

   Sponsor: Georgia State University

   I. Purpose: The purpose of the study is to investigate the practices and perspectives of school psychologists regarding the provision of professional learning to educators. A total of approximately 250 participants will be recruited for this study and it will take approximately 15-25 minutes of your time to complete the web-based survey.

   II. Procedures: If you consent to participate, your web-browser will take you directly to the internet questionnaire which you will be asked to complete.

   III. Risks: You will not have any more risks than you would in a normal day of life.

   IV. Benefits: Benefits to you may include increased job satisfaction as a result of any knowledge gained. Participation in the research may include some satisfaction about contributing to the knowledge about the provision of professional learning by school psychologists. Benefits to society include contributions to the literature base in the areas of school psychology practices, professional learning, and school psychology training. Understanding to what extent school psychologists are involved in providing professional learning in schools may assist school districts in making decisions about the efficient use of valuable educational resources including money, time, and effort.

   V. Voluntary Participation and Withdrawal: Participation in this research is voluntary. You do not have to be in this study. If you decide to be in the study and change your mind, you may exit the survey at any time.

   VI. Confidentiality: We will keep your records private to the extent allowed by law. We will not use your name on any study records. Only the researchers will have access to the
information you provide. Web-based survey software will be used to track the Internet Protocol (IP) addresses of respondents only for the purpose of sending reminder notices to non-respondents and to ensure that only one survey is completed per IP address. Answers to the survey questions will not be associated with participant name, email address or institution. Data will be stored in the primary researcher’s account on the survey monkey internet database. This data base is secured. Emails and computer files will be stored on a computer with password access and firewall protection. Participants names and other facts that might point to participants will not appear when findings are presented or published. The findings will be summarized and reported in group form.

VII. Contact Persons: Call Dr. Stephen Truscott at (404) 413-8010 or email him at sdt55@gsu.edu if you have questions about this study. You may also call Michelle Bolling, School Psychology Doctoral Student, at (678) 340-8469 or email her at mfeltaul@student.gsu.edu with questions regarding this study. If you have questions or concerns about your rights as a participant in this research study, you may contact Susan Vogtner in the Office of Research Integrity at 404-413-3513 or email her at svogtner1@gsu.edu.

VIII. Copy of Consent Form to Subject: You may print out a screen shot of this question or request a hard copy of this consent form from the principal investigator at the email address above.

If you are willing to volunteer for this research and wish to proceed with the survey, please indicate your consent below. Thank you in advance for your participation.

☐ I consent to this research study.

☐ I do not consent to this research study.
2. What is your job title?
- School Psychologist
- Specialist in School Psychology
- Psychologist
- Psychometrist
- Diagnostican
- Other (please specify)

3. Please indicate the categories that best describe your practice setting during the 2011-2012 school year.
Check ALL that apply.
- Preschool
- Elementary School
- Middle School or Junior High
- High School or Senior High
- Alternative School
- Private Practice
- Psycho-educational Center: Therapeutic Day School
- Hospital / Residential Facility
- Juvenile Justice Facility
- Other (please specify)
4. Where did you spend most of your work time during the 2011-2012 school year? (If you spent equal amounts of time in multiple settings, select the setting where more work was completed or where you were the busiest.)

- Preschool
- Elementary
- Middle School or Junior High
- High School or Senior High
- Alternative School
- Private Practice
- Psycho-educational Center/Therapeutic Day School
- Hospital / Residential Facility
- Juvenile Justice Facility
- Other (please specify)

5. During the 2011-2012 school year, your work setting was primarily:

- Urban
- Suburban
- Rural
- Other (please specify)

6. During the 2011-2012 school year your work setting was primarily a:

- Traditional public school/district
- Public charter school/district
- Private school
- Consortium/Cooperative (serving multiple districts or institutions)
- Hospital/psychiatric institution
- Juvenile Justice facility
- Other (please specify)

7. Psychologist to Students Ratio

Please approximate the total number of students in your assigned setting(s) during the 2011-2012 school year (how many total students were in the school/setting that you were assigned?).
8. Contract Length
What was the length of your contract in days (i.e., the number of days you were contracted to work in the 2011-2012 school year)?

9. School Psychology Experience
How many years of experience as a school psychologist did you have up to and including the 2011-2012 school year? (Exclude internship/practicum years.) Round to the nearest year.

10. Do you have prior experience as a classroom teacher in grades pre-K-12? (Do not include experience in other roles such as guidance counselor, paraprofessional, etc.)
☐ Yes
☐ No
If yes, how many years of experience (excluding internship/practicum)? Round to the nearest year.

11. Do you have prior experience as a college or university instructor (i.e., as instructor of record, excluding teaching assistant experience)?
☐ Yes
☐ No
If yes, how many semesters of experience? (2 quarters = 1 semester)

12. During the 2011-2012 school year, please indicate the number reflecting your actual service delivery. Close approximations are acceptable when actual counts are not available.
● # of comprehensive evaluations or re-evaluations conducted during the 2011-12 year that were used for special education eligibility determination
● # of screening evaluations conducted during the 2011-12 year not related to special education eligibility determination (i.e., brief academic evaluation for instructional planning, brief screening of attention or behavior, etc.)
● # of students to whom individual counseling was provided
● # of students to whom group counseling was provided
● # of consultation cases with individual teachers or with multiple teachers for a student in common
● # of hours spent doing organizational consultation (i.e., at the system level, school level, or grade level, etc.)
13. For the following questions, a broad conceptual definition of "professional learning" as a continuum of learning experiences is presented. This broad continuum includes activities such as: inservice presentations, classes for teachers, courses delivered at worksites, the facilitation of learning communities, structured book studies, lesson studies, coaching, consultee-centered consultation, etc.

Did you deliver some form of professional development/learning during the 2011-2012 school year?

☐ Yes
☐ No
These questions refer to professional development/learning provided to educators.

14. Delivering Professional Learning
How many professional learning engagements (i.e., trainings/services/etc.) did you deliver during the 2011-2012 school year? (i.e., number of training programs conducted, not number of sessions)

15. Delivering Professional Learning
How many hours do you estimate you spent delivering professional learning activities to educators in the 2011-2012 school year? (Do not include preparation hours, which will be covered in the following question.)

16. Preparing for Professional Learning
How many hours do you estimate you spent preparing the professional learning you delivered in the 2011-2012 school year?

17. Did all of these hours (for preparation and presentation) occur during your regularly scheduled work day?
- [ ] Yes
- [ ] No

If you answered No above, how many hours of your personal time did you spend on this?

18. When you delivered professional learning during the 2011-2012 school year, who did you deliver it with:
Check all that apply.
- [ ] Alone – as sole presenter
- [ ] In collaboration with peer psychologists
- [ ] In collaboration with school administrators
- [ ] In collaboration with other school personnel (with teachers, or guidance counselors, etc.)
- [ ] In collaboration with non-school professionals
- [ ] Other (please specify)

19. For the professional learning you delivered in the 2011-2012 school year, who was your primary audience?
- [ ] Teachers/certified staff
- [ ] Paraprofessionals (e.g., teaching assistants, classroom aids, etc.)
- [ ] Other support staff (e.g., bus drivers, custodians, cafeteria, etc.)

Please indicate the approximate # of attendees to whom you delivered training in the 2011-2012 school year.
20. Please indicate how you primarily learned how to deliver professional learning
Check the statement that best describes your preparation to deliver professional learning:

☐ I received no training in delivering professional learning (e.g., never really learned or got any instruction, learned by observing others or winging it).

☐ I received informal training in delivering professional learning (e.g., giving college or conference presentations, adapting knowledge from other domains such as child learning or consultation, or doing research on how to deliver professional development/learning).

☐ I received some formal training in delivering professional learning (e.g., specific practicum or internship experiences, attended at least one training/workshop specifically on professional learning delivery, trained to deliver a specific professional learning-train the trainer model, etc.).

☐ I received a good deal of formal training in delivering professional learning (e.g., attended a college class on adult learning, adult instruction, professional development; attended several trainings/workshops on professional learning delivery; etc).

21. You indicated that you have had no training in professional learning delivery. Check all the statement(s) that describe your experience.

☐ I learned from observing others.

☐ I learned from prior attempts/feedback.

☐ I learned by just winging it.

☐ I don't know how to deliver professional learning.

Other (please specify)

22. You indicated that you have had informal training in professional learning delivery. Please select the statement(s) that best describe your experience. Check all that apply.

☐ I researched how to deliver professional learning (e.g., read books or articles, researched on line, etc.)

☐ I learned how by giving presentations in college classes.

☐ I learned how by giving presentations at professional conferences.

☐ I learned about how children learn and adapted it to adults.

☐ I applied my knowledge of consultation to professional learning delivery.

Other (please specify)
23. You indicated that you have had some formal training in professional learning delivery. Check all the statement(s) that describe your experience.

- [ ] My practicum/internship required professional learning or inservice delivery.
- [ ] I attended a training/workshop on how to deliver professional learning.
- [ ] I was trained on the job to be a trainer for a specific professional learning program or topic (train the trainer model)

Other (please specify):

24. You indicated that you have had a good deal of formal training in professional learning delivery. Check all the statement(s) that describe your experience.

- [ ] I attended a college class on facilitating adult learning or adult instruction.
- [ ] I attended a course or a workshop series on delivering Professional Learning.
- [ ] I was trained on the job to be a trainer for multiple types of professional learning programs or content areas (train the trainer model).
- [ ] I have attended multiple trainings/workshops on how to deliver professional learning.

Other (please specify):

25. Professional Learning Training Hours

If you have had formal training in professional learning delivery, please estimate the total number of hours of training. (Hours refers to the number of contact hours. For example, if you attended a semester long university class, that would equal approximately 30 hours.)
26. Throughout your career, which formats have you used to deliver professional learning in your work setting(s)? Check all that apply.

- Less than 1 hour presentation
- 1-2 hour presentation
- Half-day training
- Full day training
- Course or extended class (more than 1 day)
- Consultee-centered consultation
- Coaching
- Book study
- Lesson Study
- Facilitation of a learning community
- Other (please specify)

27. Please indicate your level of agreement with the following statements:

When I deliver PL, I try to create a community of learners with common goals focused on continuous improvement.

Through PL, I have served as a leader, advocating for and providing support to develop learner capacities.

Adequate resources are available to support implementation of PL skills I teach.

I use a variety of data to plan, assess and evaluate my PL efforts.

The PL I deliver is based on sound theoretical models and established research in the domain of concern.

When providing PL, I purposely plan supports to sustain implementation of the skills I teach.

I plan PL so that it is aligned with practice and curriculum standards.
28. Throughout your career, on what topics have you delivered professional learning to educators? Check all that apply.

- Anxiety or Test Anxiety
- Attention Deficit - Hyperactivity Disorder
- Autism
- Behavior Intervention Plans
- Behavior Management/Classroom Management
- Bipolar Disorder
- Bullying
- Common Core Standards
- Crisis Prevention/Intervention
- Curriculum Based Measurement
- DIBELS (Dynamic Indicators of Basic Early Literacy Skills)
- Different Learning Strategies (i.e., strategies for different types of learners)
- Differentiating Instruction (i.e., how to vary instruction for different learners)
- English Language Learner (ELL) Strategies
- Functional Behavioral Assessment
- Graphing Data
- Interventions for Slow Learners
- Literacy Skills/Reading Intervention
- Low Incidence Disabilities
- Math Intervention
- Multicultural Education
- Neurodevelopmental Disorders
- Overviews of Disability Categories
- Positive Behavioral Interventions and Supports (PBIS)
- Post-traumatic Stress Disorder (PTSD)
- Problem Solving
- Response to Intervention (RTI)
- School Climate
- Social Skills Training
- Special Education Paperwork/Processes
- Suicide Risk Factors
- Team Teaching for Special Education Students
- Traumatic Brain Injury (TBI)
- Understanding Test Results
- Writing Intervention

Other (please specify):
29. Why do you deliver professional learning? Please check the top 3 reasons. Select no more than 3.

- I do not deliver professional learning.
- I would be open to delivering professional learning, but I don’t have the time.
- To increase my visibility on the job/ promote myself as a resource.
- To be more involved in the school community.
- It is required as part of job responsibilities.
- In my graduate training I learned that it was part of my role and responsibilities.
- The school(s) asks me to do it.
- Increasing teacher capacities is good for all children.
- I am frustrated with the status quo (just doing things the way they’ve always been done).
- To effect change on a larger scale than one student/teacher at a time.
- I enjoy delivering professional learning.
- I believe that it’s important to share what I know with teachers.
- Professional learning can help me make changes outside of special education/ have more of an impact on general education practices.
- It is a time efficient way to share information.
- Other (please specify)

30. Please indicate your level of agreement with each of the following statements:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delivering professional learning is satisfying.</td>
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<tr>
<td>Delivering professional learning helps me feel accomplished at work.</td>
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<tr>
<td>Delivering professional learning helps me connect with faculty members.</td>
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<td>I am able to promote myself as a resource to faculty members.</td>
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<tr>
<td>I am free to deliver professional learning in the way I think it should be done.</td>
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<tr>
<td>I am able to exercise some choice about how I meet the needs of my school through delivering professional learning.</td>
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</tbody>
</table>
31. Please select the response that best describes your preference

- I would prefer not to deliver any professional learning.
- I would prefer deliver much less professional learning than I do now.
- I would prefer to deliver less professional learning than I do now.
- I am happy with the amount of professional learning that I deliver now.
- I would prefer to deliver more professional learning delivery than I do now.
- I would prefer to deliver much more professional learning delivery than I do now.

32. Preferred Professional Learning Delivery

Please indicate the number of professional learning hours that you think would be optimal for a school psychologist to deliver annually. (Indicate the optimum total hours of professional learning, not per school.)

33. Preferred Professional Learning Delivery

Please indicate the number of professional learning hours that you think would be optimal for a school psychologist to deliver annually per school (or site)

34. In your practice, what factors have made it easier for you to provide professional learning? Please check only those that you have personally experienced. Barriers will be discussed in the next question.

- Administrative support at the school
- Alignment of PL with educator practice standards
- Alignment of PL with student curriculum standards
- An established professional learning community at your school
- An understanding of individual and organizational change principles
- Available PL days designated by the district
- Available resources (i.e., materials for training and implementation)
- Changes in Special Education Law/legislative changes
- Compensation (e.g., monetary or comp time, etc.)
- Expertise aligned with the needs or goals of your school
- Expertise or understanding of a particular content/topic area
- Expertise or understanding of a the process of PL delivery
- Low psychologist to student ratio
- Needs assessments
- New initiatives or programs adopted
- Ongoing support for classroom implementation of skills taught
- Previous experience as a teacher
- Professional learning is expected as part of job responsibilities
- Release time for teachers
- Short testing list/ low assessment load
- Specific request made by the school
- Supervisor encouragement/ support
- Training in adult learning
- Training in consultation
- Understanding how to use an interpret data
- Your leadership qualities

Other (please specify)
35. In your practice, what factors have made it more difficult for you to provide professional learning? Please check only those that you have personally experienced.

- High demands on time/very busy
- Lack of available resources (i.e., materials for training and implementation)
- Lack of expertise/understanding of the content of PL
- Lack of expertise/knowledge of the process of PL delivery
- Lack of knowledge of curriculum and instruction issues
- Lack of knowledge of educator practice standards
- Lack of knowledge of how to assess PL outcomes
- Lack of school-level administrative support
- Lack of supervisor support
- Lack of support for classroom implementation of skills taught
- Limited release time for teachers
- Not comfortable delivering PL/Shy

Other (please specify)
Demographic Questions

36. What is your highest degree earned?
- Masters Degree
- Masters Plus 30
- Educational Specialist
- Doctoral Degree
- Other (please specify)

37. What is your gender?
- Male
- Female
- Other (please specify)

38. What is your ethnicity?
- American Indian/Alaska Native
- Asian American/Pacific Islander
- Black/African American
- Caucasian
- Hispanic
- Multiracial
- Other (please specify)

39. How old are you in years?

40. In what state do you practice?
State: