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THE STATE OF INDUCTION AND MENTORING  
IN INDIANA K-12 PUBLIC SCHOOLS

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**ABSTRACT**

The purpose of this study was to examine how school corporation officials in Indiana's K-12 public schools support first and second year teachers through induction and mentoring practices. An analysis was made to determine the adequacy of novice teacher support based on state and national recommendations for effective induction and mentoring practices. The collected data was analyzed to determine if the level of support that Indiana school corporation officials provide novice teachers differed due to student enrollment and/or school location (i.e. rural or urban/suburban) across the 2009/10 school year to the 2010/11 school year.

A self-administered survey, *Indiana School Corporation Induction and Mentoring Survey*, was designed specifically for this study, and included statements based on state and federal recommendations for supporting novice teachers as well as the National Center for Educational Statistics' Schools and Staffing Survey and the Teacher Follow-up Survey. The survey was sent to all 293 Indiana K-12 Public School Superintendents. The sample consisted of 112 completed surveys, which equated to an overall response rate of 38.2%. The data was analyzed based upon two enrollment categories, 2,000 or fewer students and 2,001+ students. Fifty-five respondents indicated enrollments of 2,000 or fewer (49%), while 57 indicated enrollments of 2,001+ (51%). The data was also analyzed by location, rural and suburban/urban with 69 respondents (62%) indicating a rural location and 43 respondents (48%) indicating a suburban/urban location. Data analysis revealed no significant differences between novice teacher support through mentoring and induction by enrollment or location. There was,

however, a significant difference in the amount of support provided to novice teachers from the 2009/10 school year (more support) to the 2010/11 school year (less support).

Additionally, superintendents were asked to report the average number of new teachers hired in the past five years and the number of new teachers they expected to hire for the 2010/11 school year. Superintendents were also asked if the IDOE's revocation of the mentor component of IMAP and/or the recent budget shortfall impacted the assignment of mentors to novice teachers.

School corporation officials reported a reduction in the number of new teachers hired in the previous five years (mean, 14.90) as compared to the number of new teachers expected to be hired for the 2010/11 school year (mean, 6.88). The majority of the respondents ( $n = 71$ , 63.4%) indicated that they had not or did not plan to change their assignment of mentors to novice teachers due to the IDOE's revocation of the mentor requirement. The majority of the respondents ( $n = 64$ , 57.1%) indicated that they had not or did not plan to change their assignment of mentors to novice teachers due to the recent budget shortfall.

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## CHAPTER 1

### **Introduction**

#### **Statement of Problem**

Teacher attrition comes at a high price to school districts. When teachers leave they take with them the training that has been provided over their tenure as well as the knowledge they have gained while practicing the art of teaching. According to Berliner (1994) it takes teachers at least five years to reach the proficient level. Theobald and Michael (2001) completed a study of teachers leaving school districts in the Midwest, including Indiana, within their first five years in the profession. Of the 11,787 surveyed, over 50% of the teachers reported leaving their initial district within five years. Additionally, of that 50%, 25% left the teaching profession altogether (Theobald & Michael, 2001).

The National Commission on Teaching and America's Future (NCTAF) provided a calculator to determine the financial cost to school districts based upon teacher turnover. According to the NCTAF the estimated cost to one Indiana school corporation that had to replace 23 teachers to begin the 2008/09 school year was \$374,750. This financial cost estimate did not include any federal or state costs nor did it include the expected loss of achievement of students. The Alliance for Excellent Education reported (2004) that "the most critical cost associated with attrition is poorer teacher quality that negatively impacts student achievement" (p. 8).

Researchers have studied teacher attrition and practices that school officials have implemented in an attempt to retain teachers. Kapadia, Coca, and Easton (2007) completed a study of the influences of induction in the Chicago Public Schools. They concluded that new teachers who receive high levels of mentoring and support are more likely to report a good teaching experience and are more likely to remain in the same school.

Ingersoll and Smith (2003) examined the School and Staffing Survey (SASS) and the Teacher Follow-up Survey (TFS) conducted by the National Center for Educational Statistics (NCES). They reported that having a mentor does make a difference on new teacher attrition. Ingersoll and Smith reported the data indicating that only 11.8% of teachers who participated in a mentoring program left teaching after the first year as compared to 18.6% of new teachers that did not have a mentor.

Ingersoll and Kralik (2004) completed a meta-analysis of 10 studies regarding the impact of teacher induction and mentoring programs on teacher retention. They reported that the impact of induction and mentoring was significantly different between the 10 studies. However, Ingersoll and Kralik reported that “collectively the studies do provide empirical support for the claim that assistance for new teachers and, in particular, mentoring programs have a positive impact on teachers and their retention” (p. 2).

In 2006, the Indiana State Legislature cut funding for mentors for new teachers, yet the mentor requirement remained. In 2009, the Professional Standards governing board revised the Indiana Mentoring and Assessment Program (IMAP). Through this revision, the requirement that schools provide mentors for new teachers in their first two years of teaching was lifted and the portfolio assessment was replaced by an assessment tool to be completed by the building principal, which is based on the 10 Interstate New Teacher Assessment and Support Consortium

(INTASC) principles. If school leaders chose to provide mentors for new teachers, the Indiana Department of Education (IDOE) recommended that the teacher mentor have at least five years of teaching experience.

### **Purpose of the Study**

The purpose of this study was to examine how school corporation officials in Indiana's K-12 public schools support first and second year teachers through induction and mentoring practices. An analysis was made to determine the adequacy of novice teacher support based on state and national recommendations for effective induction and mentoring practices. The collected data was analyzed to determine if the level of support that Indiana school corporation officials provide novice teachers differed due to student enrollment and/or school location (i.e. rural or urban/suburban) across the 2009/10 school year to the 2010/11 school year.

Additionally, superintendents were asked to report the average number of new teachers hired in the past five years and the number of new teachers they expected to hire for the 2010/11 school year. Superintendents were also asked if the IDOE's revocation of the mentor component of IMAP and/or the recent budget shortfall impacted the assignment of mentors to novice teachers.

### **Research Questions**

1. What affect did student enrollment have on pre 2009/10 school year mentoring and induction practices and 2010/11 school year predicted mentoring and induction practices provided to novice teachers?
2. What affect did a school corporation's location (i.e., rural, urban/suburban) have on pre 2009/10 school year mentoring and induction practices and 2010/11 school year predicted mentoring and induction practices provided to novice teachers?

3. Did the number of new teachers hired to work in Indiana Public Schools change from the reported past five years average to the anticipated number hired for the 2010/11 school year?
4. Did school corporation officials reduce or discontinue assigning mentors to novice teachers due to the fact that mentors are no longer a requirement of IMAP?
5. Did school corporation officials reduce or discontinue assigning mentors to novice teachers as a cost containment strategy?

### **Definition of Terms**

**Induction.** For the purpose of this study, induction is the support, guidance and orientation programs for beginning elementary and secondary teachers during the transition into their first teacher jobs (Ingersoll & Smith, 2004).

**Mentor.** For the purpose of this study, a mentor is a fellow teacher who provides support to a novice teacher for at least one year around effective teaching competencies including planning, classroom management, instruction and assessment of student learning (Indiana Department of Education, 2004).

**Novice teacher.** For the purpose of this study, a novice teacher is a certified teacher in grades K-12 who has less than two years teaching experience in a public or private school setting.

**Teacher attrition.** For the purpose of this study, teacher attrition falls into two categories (a) migration, moving from one school to another intra or inter district and (b) attrition, leaving the teaching profession altogether (Feng, 2005, Ingersoll, 2000).

**Delimitations**

The time frame established for data collection was the summer between the 2009/2010 school year and the 2010/11 school year. The sample included 112 Indiana School Corporations. The survey was directed to the school superintendents.

**Limitations**

Superintendents are very busy, even in the summer months. Some may not have taken the time to complete this survey. Superintendents who do not believe their school corporation does an adequate job supporting novice teachers may not have completed the survey. Superintendents who do not place value on supporting novice teachers may not have completed the survey.

**Summary and Organization of the Study**

The study is divided into five chapters. Chapter 1 provided the introduction to the study, a statement of the problem, purpose of the study, research questions, a definition of terms, delimitations, and limitations. Chapter 2 presents a review of the literature regarding teacher attrition, mentoring and induction. Chapter 3 presents the design of the study, including information about the instrument, and how the data was collected and analyzed. Chapter 4 presents findings of the study. Chapter 5 presents a summary of the findings, conclusions, and a discussion of implications of the findings.

## CHAPTER 2

### **Literature Review**

#### **Cost of Attrition**

Barnes, Crowe, and Schaefer (2008) examined the costs of teacher turnover in five public school districts which included, Chicago Public Schools, Milwaukee Public Schools, Granville County Schools, Jemez Valley Public Schools and Santa Rosa Public Schools. These districts were chosen to incorporate large and small districts as well as urban and rural districts. The researchers included the costs of recruiting, hiring and training replacements in their calculations and found the following breakdown of replacement in each district to be:

In Granville County, North Carolina, the cost of each teacher who left the district was just under \$10,000. In a small rural district such as Jemez Valley, New Mexico, the cost per teacher leaver was \$4,366. In Milwaukee, the average cost per teacher leaver was \$15,325. In a very large district like Chicago, the average cost was \$17,872 per leaver. The total cost of turnover in the Chicago Public Schools is estimated to be over \$86 million per year. It is clear that thousands of dollars walk out the door each time a teacher leaves. (pp. 4-5)

The financial cost of teacher turnover can be attributed to several factors, including recruitment, hiring processes, payroll processing for those leaving and those arriving, orientation and training (Barnes et al., 2008, Markow & Cooper, 2008; Shockley, Guglielmino &

Watlington, 2006). Berry (2006) suggested that when districts attempt to save money by hiring new and, therefore, less expensive teachers they create a *Catch-22*. While the district leadership does initially save on salaries when hiring inexperienced teachers they set themselves up for attrition by not investing some of those savings in a mentoring program. Several studies have examined the financial cost of teacher attrition. Afolabi, Nweke, Eads, and Stephens (2007) estimated that the state of Georgia lost close to \$400 million due to teacher attrition. An August 2005 Issue Brief entitled *Teacher Attrition: A Costly Loss to the Nation and to the States*, estimated that Indiana lost \$426,843,846 due to teachers leaving the profession and a total of \$74,313,045 for total teacher cost including teacher transfers from one school corporation to another during the 2002/2003 school year (Alliance for Excellent Education, 2005). The National Commission on Teaching and America's Future (NCTAF) provided a web-based calculator, which was created from the Barnes et al. (2008) study, to determine the financial cost to school districts based upon teacher turnover. According to the NCTAF the estimated cost to one central Indiana school corporation, enrollment of 4,500 students that had to replace 23 teachers to begin the 2008/09 school year was \$374,750, which equated to almost \$16,300 per teacher. The estimated cost to replace a teacher is broken into two components, district cost and school-based cost. District costs include recruiting, hiring, processing, and training teachers while school-based costs include interviewing, hiring process, orientation and developing new teachers. This cost estimate did not include any federal or state costs. Wong (2003) described teacher attrition as "a serious drain on a school districts limited and shrinking financial resources" (p. 20). Barnes et al. (2008) defined eight categories of costs of teacher attrition, which included:

1. Recruitment and advertising, including the cost of advertising space, the cost of travel to job fairs and interview sites, the design of advertising formats, website design and development costs, posting information on recruitment websites, responding to inquiries from prospective candidates, coordinating recruitment activities with state programs, working with teacher preparation programs to identify strong candidates, training student teachers, special costs associated with overseas recruiting, etc.
2. Special incentives, including signing bonuses, payment of moving expenses, salary supplements, housing allowances, rent subsidies, relocation bonuses, day care subsidies, reduced teaching loads, etc.
3. Administrative processing of new hires and costs associated with separation, including criminal background checks, health record checks, reference checks, meeting with candidates and members of search committees, completing affirmative action paperwork, corresponding with applicants, drafting letters of acceptance/rejection, setting up interview and visitation schedules, purchasing equipment for digital fingerprinting, archiving teacher records, adding new teachers to payroll and benefit programs, conducting exit surveys, removing teachers from payroll and health plans, processing refunds of retirement contributions that may be due, etc.
4. Training for new hires, including introducing new hires and teacher transfers to school goals and governance procedures; integrating new hires into the community of teachers, staff, parents, and students; explaining benefit programs; conducting tours of facilities and school resources; etc.

5. Training for first-time teachers, including mentoring programs and related forms of structured induction, stipends for mentors, payments to substitutes who replace mentors with reduced teaching loads, travel to training sessions, etc.
6. Training for all teachers, including instruction on the goals and specific elements of the state's testing programs, training mentor teachers, workshops and professional development activities, salaries for substitutes used to cover for teacher at training activities, tuition and fee reimbursements, travel to professional meetings, etc.
7. Learning curve, including the cost to student learning at the school that results from having new teachers each year and from having a teaching staff with little experience.
8. Transfer, including paperwork to change a teacher's school sites, time and effort spent matching a teacher with a new school, salaries for substitutes used to cover for teachers who transfer during the school year, etc. (pp. 13-14)

The cost of teacher attrition is not only financial. The Alliance for Excellent Education (2004) reported that the greatest cost of teacher attrition is the negative impact it has on student achievement. Reasons provided for this impact included the loss of teacher knowledge due to experience and professional development. Sanders and Rivers (1996) analyzed data from the Tennessee Value-Added System (TVAAS). Through this data analysis the researchers concluded that the effects of individual teachers were both additive and cumulative. In addition, the data analysis revealed that "the residual effects of both very effective and ineffective teachers were measurable two years later, regardless of the effectiveness of teachers in later grades (Sanders & Rivers, 1996, p. 6). Keeler (1973) found when studying teacher turnover and reading ability in San Diego Schools, that "lower SES students have significantly less reading ability, and teacher turnover is negatively related to reading ability of schools" (Appendix B, p. 31). Darling-

Hammond (2001) indicated that students learn less from less experienced teachers. According to Berliner (1994) it takes teachers at least five years to reach the proficient level. Berry (2006) pointed out that since high turnover often occurs in the most challenging schools those schools often have difficulty providing an adequate number of effective mentors to support new teachers. This lack of support can lead to great attrition. Ingersoll and Smith (2003) stated that “One type of cost that is less easily quantified includes the negative consequences of high turnover for organizational stability, coherence, and morale” (p. 32). This lack of community can compound the issues leading to an even greater attrition rate.

Public school officials are operating their educational institutions on over-strapped financial budgets and are facing ever-increasing accountability measures. They cannot afford to increase these costs due to unnecessary teacher attrition. It is imperative that school officials review their attrition data and determine strategies to ameliorate this situation.

### **Attrition Data**

Teacher attrition is not a new issue in the United States. Haberman and Stinnett (1973) reported that “between 1939 and 1945 over 600,000 entered and left teaching” (p. 3). The Haberman and Stinnett (1973) study suggested that most teachers left the profession for better paying defense jobs. Grissmer and Kirby (1991) wrote that most Indiana teachers leave the profession within the first five years. Ingersoll (2003) reported that the National Center for Educational Statistic’s (NCES) Schools and Staffing Survey (SASS) data indicated that 14% of new teachers leave in the first year; within three years 33% quit; and between 40% and 50% of teachers leave the profession within the first five years of teaching. Plecki, Elfers, and Knapp (2006) completed a five year study from 2000/05 of teacher attrition, retention and mobility rates in the state of Washington. They found that 20% of the teachers left teaching in Washington

during the identified five-year study. Twenty-two percent of the novice teachers left within their first five years of teaching. Their study also revealed that as years of experience increased the incidence of moving or leaving decreased.

Grissmer and Kirby (1987) suggested that the likelihood a teacher will leave a school follows a U-shaped curve where 20% to 25% of new teachers will leave, only 5% to 15% of teachers in mid-career will leave, and 20% to 25% will retire. Grissmer and Kirby went on to clarify that between 67% and 75% of total teacher attrition is due to retirement, illness, death or promotion within the teaching field while 25% to 33% leave for outside employment or involuntarily. More recently Allen (2005) described a similar curve stating that “the likelihood of a teacher leaving declines significantly after he or she has been in the classroom for four to five years, and then increases again markedly after 25-30 years in the profession” (p. vi). Allen (2005) also reported that 50% of beginning teachers are most likely to leave their first teaching assignment in the first five years of their career, but suggested that not all of these leavers drop out of the profession. Ingersoll (2000) supported the U-shaped curve of teachers departing from the profession when he stated that “beginning teachers have very high rates of departure, these rates significantly decline through the mid-career period, and then rise again in the retirement years” (pp. 5-6).

The Southwest Educational Development Laboratory (2000) reported on a study of new teacher mentorship in Texas. This study was conducted in hopes of identifying factors in addressing the teacher shortage in Texas. The researchers found that middle school teachers were more likely to leave as well as teachers assigned to highly diverse or lower performing schools. In addition, teachers with less than five years of teaching were more likely to leave.

Hudson, Grissmer and Kirby (1991) studied the state of Indiana's Beginning Teacher Internship Program's role in retaining new teachers. They reported that almost 40% of new teachers would not be teaching in Indiana within the following five years and that first and second year teachers were the most likely to leave the profession. Specifically, 10% to 16% of Indiana teachers were likely to leave the profession within their first year. Theobald and Michael (2001) completed a study of teachers leaving school districts in the Midwest, including Indiana, within their first five years in the profession. The researchers reported that of the 11,787 surveyed, over 50% of the teachers reported leaving their initial district within five years. Additionally, of that 50%, 25% left the teaching profession altogether. Research indicates that almost 30% of teachers leave in the first five years of teaching and more often than not they are from disadvantaged schools (Allen, 2005; Darling-Hammond, 2001).

Mary Tiede Wilhelmus, former Director of School Data Reporting for the Indiana Department of Education, reported the percentage of teachers who returned to their same Indiana school corporation for a five school years period (M. T. Wilhelmus, personal communication October 27, 2008). The data are as follows: 2003/04, 83%; 2004/05, 82%; 2005/06, 98%; 2006/07, 87%; and 2007/08, 88% of first year teachers returned to their same school corporation the following year (M. T. Wilhelmus, personal communication October 27, 2008). The Indiana Department of Education provides a stability index for public school teachers remaining in Indiana schools from the prior school year. According to the school data, 90.6% of public school teachers returned to an Indiana public school for the 2004/05 school year, 90.7% returned for 2005/06 and 89.7% returned for 2006/07. The Indiana Department of Education also posted full time equivalent numbers for public teachers ranging from the 1987/88 school year through the

2008/09 school year. This data revealed the need for new teachers has increased from year to year since 1987. The data retrieved on March 1, 2009 are contained in Table 1.

Table 1

*Teachers, Full Time Equivalent*

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Year	State Total (Public)
2008/09	62,516
2007/08	62,196
2006/07	61,183
2005/06	60,486
2004/05	60,470
2003/04	59,830
2002/03	59,891
2001/02	59,560
2000/01	59,206
1999/00	58,748
1998/99	57,937
1997/98	57,219
1996/97	56,697
1995/96	55,740
1994/95	55,239
1993/94	54,987
1992/93	54,493
1991/92	54,214

Table 1 (continued)

Year	State Total (Public)
1990/91	54,563
1989/90	54,220
1988/89	53,998
1987/88	53,515

*Note.* Indiana Department of Education (2009)

It is important for school officials to review their attrition data and to pinpoint the factors leading to attrition in their particular districts. Teacher attrition due to retirement is generally not something that a district can control. However, those teachers leaving with-in the first five years of their career is a huge concern. School officials should ask themselves, what are the leading factors of this type of attrition?

### **Reasons Behind Attrition**

Research finds two components of teacher turnover, (a) migration, moving from one school to another (intra or inter) district and (b) attrition, leaving the teaching profession altogether (Feng, 2005; Greenberg & McCall, 1974; Grissmer & Kirby, 1987, 1991; Ingersoll, 2000). Research on teacher attrition has been conducted for decades. Greenberg and McCall studied reasons behind teacher attrition in California and Michigan (Greenberg & McCall, 1973, 1974). They found that inexperienced teachers were more likely to leave their school districts or leave teaching altogether than their more experienced colleagues. They also reported that teachers were more likely to make intra-district moves than inter-district ones. Grissmer and Kirby (1987) suggested that between 15% and 40% of a school's attrition is due to teachers

moving to other districts. Grissmer and Kirby stated that this “interdistrict” mobility is often connected to normal career progression and life cycle events. Retirement has been found to account for a relatively small portion of those leaving the teaching profession (27%) and only accounts for 12% of total turnover, including movers and leavers (Ingersoll, 2001). Ingersoll (2001) reported that school staffing cutbacks due to layoffs and school closings account for greater attrition than retirement (41% migration and 21% leavers).

The Consortium on Chicago School Research surveyed new teachers at the conclusion of each school year. In 2005, several questions were added to look at the effects of induction. Kapadia et al. (2007) reviewed this survey data and identified components that led to a new teacher’s self-reported likelihood of remaining in education and whether or not his or her first year of experience was considered good or bad. New teachers assigned to poorer schools were more likely to leave education. Elementary teachers who participated in an induction program were more likely to stay than their high school colleagues. Teachers with a master’s degree or higher were more likely to leave, especially at the secondary level. New teachers with a large number of students with behavior problems were more likely to report a poor first year experience. High school teachers with a high percentage of bilingual students were more likely to leave than elementary teachers. Larger class size had a negative impact on elementary teachers, but did not appear to be an issue for most high school teachers. Those who had previously worked in an outside field were more likely to report a positive experience. A positive impact on first year teachers’ reported experience was due to a welcoming faculty and strong school leadership. New teachers who reported a good mentoring experience were more likely to report a good teaching experience with plans to stay in the profession. New teachers reported three supports that were associated with a good school experience: principal support,

participation in a network of new teachers and opportunities to collaborate with grade/subject level peers.

Freemyer, Townsend, Freemyer and Baldwin (2010) analyzed over 1,500 surveys of second year teachers in Indiana who completed the portfolio assessment for the Indiana Mentoring and Assessment Program at the conclusion of the 2007/08 school year. The researchers suggested that the frequency with which new teachers met with their mentors correlated to positive survey responses regarding their length of stay in education and their effectiveness as an educator. The researchers also compared this data to similar surveys completed and submitted with the portfolio assessment at the conclusion of the 2004/05 school year. The data indicated that when comparing paid mentors to unpaid mentors, the paid mentors spent significantly more time meeting and supporting their interns.

Ingersoll (2001) noted that 42% of leavers reported leaving due to job satisfaction or desire to find a better career. Reasons for migration included low salaries, lack of support from school administration, student discipline problems and lack of teacher influence over decision making. Huggett and Stinnett (1956), Huling-Austin (1992), Feng (2005), Berry (2006), and Kopkowski (2008) reported that the least experienced teachers are often given the low performing students in low performing facilities and are most often given the more time-consuming extra-curricular activities to direct, which lead to high stress levels. Boyd, Grossman, Lankford, Loeb and Wyckoff (2007) found that teachers' assigned lower-performing students were more likely to leave as well as those who were less successful in raising student achievement scores. In the report by the National Commission on Teaching and America's Future (2003), the researchers found that over 50% of new teachers leave urban schools within the first three years of teaching.

Fulton, Yoon, and Lee (2005) reported that new teachers who can adapt to a school's culture often stay, while those who cannot leave. Feng (2005) found a negative correlation between teacher pay and attrition in his study of Florida public school teachers. Harman (2001) indicated that a common frustration of first year teachers is a lack of support. Gilbert (2005) suggested that time pressures, paperwork and non-instructional meetings all serve as sources of stress for new teachers. Breaux and Wong (2003) provided a list of reasons that new teachers leave such as lack of support, disenchantment with teaching assignments, difficulty balancing personal and professional demands, excessive paperwork, inadequate classroom management, inadequate discipline and high stress.

Marvel, Lyter, Peltola, Strizek, and Morton (2007) analyzed data from the 2004/05 *Teacher Follow-up Survey* and found that 65% of people who left the teaching profession reported a lighter work load and more time for a personal life than they did as classroom teachers. Kirby, Grissmer and Hudson (1991) reported that new Indiana teachers were likely to leave due to low beginning salary, poor work environment, and the extracurricular demands required of teachers. Johnson and Birkeland (2002) conducted a longitudinal study of new teachers in Massachusetts. Through this study they found that "new teachers achieve success and find satisfaction primarily at the school site; unless their experiences with students and colleagues are rewarding, they will likely transfer schools or leave teaching altogether" (p. 40). Regardless of how or why teachers leave the net result is the same, a decrease in staff which generally must be replaced (Ingersoll, 2001).

Markow and Martin (2005) reported that "two in 10 (18%) new teachers are very or fairly likely to leave the profession. New teachers who are likely to leave the profession in the next five years are less satisfied than others with their school relationships" (p. 5). This same study

identified factors that significantly predicted why a teacher would leave teaching in the first five years of his career in favor of a new career. Identified factors include a lack of satisfaction of career choice, stress and anxiety due to a number of indicators including discipline, interactions with colleagues, workload, pay, not being valued by their supervisor and personal factors.

Patton and Kritsonis (2006) recommended five laws for increasing teacher retention.

Those five laws included:

1. Recruit teachers who are passionate about and who love children.
2. Provide new teachers with a highly qualified mentor.
3. Support teachers with classroom and school concerns.
4. Train new teachers on their curriculum, teaching strategies, etc.
5. Empower new teachers by promoting input into decision-making. (p. 4)

School officials do not have much control over teacher pay. They do, however, have control over many other factors identified as indicators of teacher attrition. Induction and mentoring programs should be implemented based upon the identified needs of the novice educators hired by individual school corporations.

### **Induction**

Lortie (1975) stated that “mediated entry is probably the classic form of work induction” (p. 59). He described the importance of induction in a variety of professions. Lortie indicated that these professions have a common set of steps. “Typically, the neophyte takes small steps from simple to more demanding tasks and from small to greater responsibility under the supervision of persons who have attained recognized position within the occupation” (Lortie, 1975, p. 59). He suggested that teaching, in comparison, has only a primitive plan of induction.

American Federation of Teachers (2001) decreed that induction is an essential building block for new teachers. In this policy brief the main considerations of their July 1998 *Resolution on Teacher Education and Teacher Quality* are described as:

Graduation from a teacher education program cannot be considered the end of training for teachers. The demands of the pre-college degree-acquiring subject matter knowledge, and clinical training do not allow sufficient time for teacher candidates to develop the skills and experience necessary for completely independent practice in their initial teaching assignments. Nonetheless, after graduation most new teachers are assigned a class, often with the most hard-to-reach students, and left to “sink or swim” on their own. By contrast, other countries with high-achieving students induct new teachers into the profession through clinical, real-world training processes by which inductees develop and perfect their teaching skills under the mentorship of more experienced and skilled colleagues. (American Federation of Teachers, 2001, p. 1)

An August 2005 issue brief from the Alliance for Excellent Education, stated that “Comprehensive induction programs are designed to address the roots of teacher dissatisfaction by providing teachers with the supports and tools they need for success” (p. 2). According to Glazerman et al. (2008), “one of the main policy responses to the problems of turnover and inadequate preparation among beginning teachers is to support them with a formal, comprehensive induction program” (p. vii). Berry, Hopkins-Thompson, and Hoke (2002) suggested that such a program might include school and district orientation sessions, special in-service training, professional development, mentoring by an experienced teacher, classroom observation, and formative assessments. Doerger (2003) stated that “induction should be the vital link between the transmission of a specific educational culture and the successes of the

beginning teacher in that culture” (p. 8). Cherubini (2007) found that when new teachers were able to identify and receive professional development in self-perceived areas of need they reported a more positive induction experience. Johnson and Birkeland (2002) reported that at minimum, supporting new teachers involves:

ensuring that new teachers have an appropriate assignment and manageable workload, that they have sufficient resources with which to teach, that their principals and fellow teachers maintain a stable school and orderly work environment, and that they can count on colleagues for advice and support. (p. 40)

Wong (2007) defined induction as “... a comprehensive, coherent, sustained process designed to train and acculturate new teachers to the academic standards and vision of the district” (p. 8). He suggested important aspects of a comprehensive induction program should include:

1. Initial four-five days preschool workshops
2. Continuum of professional development activities for two or more years
3. A strong sense of administrative support with a campus coordinator
4. A mentoring component utilizing trained mentors
5. A structure for networking with new and veteran teachers
6. Opportunities to visit demonstration classrooms
7. A welcome center that provides help to settle into a new community
8. A bus tour of the community, led by the superintendent
9. A formative assessment process that helps the new teacher develop skills for student achievement. (pp. 8-9)

Johnson (2007) researched teacher induction in the Kansas City area. The new teachers surveyed in her study reported the most important induction program components included, “support from and interactions with colleagues, support from mentors, and new teacher seminars” (Johnson, 2007, p. 22). Huling-Austin (1992) recommended that induction programs should include:

1. the use of cohort groups for beginning teachers,
2. the use of a differentiated evaluation system, and
3. the inclusion of new content in mentor training programs such as information on schema theory and how to use case studies and to conduct discussions about subject matter. (p. 179)

Manley, Siudzinski and Varah (1989) outlined four main goals of teacher induction.

1. To establish a collaborative professional team responsible for providing assistance and support for the first-year teacher
2. To help the new teacher develop the skills and judgment that successful teachers possess
3. To explore numerous teaching strategies
4. To provide in-service experiences for the mentors in the participating schools. (pp. 16-17)

The authors suggested that each new teacher should have an induction team. The team’s job is to assist the new teacher with developing and implementing his or her professional development plan. They suggest that the goals of the professional development plan should consist of six areas including, “management of student conduct, planning, instructional organization and development, presentation of subject matter, communication and testing” (Manley, Siudzinski &

Varah, 1989, p. 17). Once the plan has been established the authors suggested that the induction team meet with the new teacher on a weekly basis to facilitate the plan. In addition, the induction team and the new teacher should attend a series of seminars together to ensure success of the new teacher. Seminar titles include, (a) Orientation, (b) Classroom Management, (c) Parent-Teacher Conferences, (d) Evaluation and Grading, (e) Student Motivation, (f) A New Look at Mainstreaming, (g) Gifted and Talented and Creative Learner, and (h) Anatomy of a Lesson.

The Alliance for Excellent Education (2004) outlined a comprehensive induction program for new teachers. Important induction program components include; high quality mentoring, common planning time, ongoing professional development, an external network of teachers, and standards-based evaluations. In that same document, the Alliance suggested what comprehensive induction is not. The components identified as not being included in comprehensive induction are as follows; a crash course in teaching, an orientation session, a stand-alone mentoring program, a string of disconnected one-day workshops, a top-down, unidirectional approach to teacher learning, just a benefit to beginning teachers, a way to help teachers cope with dysfunctional schools.

Ingersoll and Smith (2003) identified that beginning teachers who receive comprehensive induction packages have far higher retention rates than those who receive fewer supports. A comprehensive list of induction components includes, mentor from same field, beginner's seminars, common planning time, collaboration with others, external teacher network, supportive communication, reduced schedule, reduced preparations and teacher aide. By analyzing the National Center for Educational Statistics' Schools and Staffing Survey and the Teacher Follow-up Survey, they found that the following components were most often associated with reduced

attrition of new teachers; “having a mentor in the same field, having common planning time with other teachers in the same subject, having regularly scheduled collaboration with other teachers, and being part of an external network of teachers” (p. 35). The data suggested that the more induction components received, the more likely the new teacher would be retained. Specifically, for those receiving all suggested induction components, their retention rate was 50% greater than those receiving no induction.

Ingersoll and Perda (2008) noted that in addition to training and preparation professionals require formal and informal methods of induction, which can include internships, apprenticeships or mentoring. This additional training/support allows new practitioners an opportunity to adjust to their new environment, become familiar with the realities of their job and to filter out substandard levels of skill and knowledge. Public schools appear to have recognized the need for supporting new teachers. During the 1990/91 school year approximately 50% of new teachers participated in some form of induction, this number increased to 86% during the 2003/04 school year.

Andrews, Gilbert and Martin (2007) conducted a state-wide study in Georgia to determine which mentoring and induction support strategies beginning teachers’ value and what support strategies they actually received. The perceived support was looked at from the perspective of the new teachers and of their principals. An analysis of the survey data revealed that the strategies most valued by new teachers provided opportunities for collaboration and learning from their colleagues. Interestingly, these strategies were perceived as not occurring often by the new teachers while most of the administrators indicated that they did occur often. Both the new teachers (87.3%) and the administrators (90.3%) showed similar results on the importance and availability of a mentor teacher. Specifically, four main components of support

were identified through the surveys. These four main components were ranked by the new teachers in the following order of importance starting with the most important; (a) opportunity to observe other teachers, (b) co-planning time with other teachers, (c) smaller class sizes, and (d) feedback or nonevaluative classroom observations.

Kardos and Johnson (2007) discuss the importance of an integrated professional culture for supporting new teachers. They describe components of such a culture:

In this environment, there was ongoing, two-way interaction about teaching and learning among novices and experienced teachers. New teachers were granted special status as novices: they were given assistance, encouraged to seek help, and expected to be learning and improving their teaching practice. In addition, new teachers and their colleagues shared responsibility for the school, its students, and each other. Integrated professional cultures enabled both novice and veteran teachers to succeed in their work, and new teachers felt sustained and supported by their experienced colleagues (p. 2,088).

Kardos and Johnson (2007) surveyed first and second year teachers in California, Florida, Massachusetts and Michigan to determine their level of experience with an integrated professional culture. The authors found that “the new teachers’ reports show them working as solo practitioners, expected to be prematurely expert and able to work without the support of a school-based professional network” (p. 2,100).

Humphrey, Wechsler, Bosetti, Park, and Tiffany-Morales (2008) completed a two-year study of teacher induction programs in Ohio and Illinois during the 2005/06 and 2006/07 school years. Based upon these studies a report outlining seven recommendations for new teacher support was created. Those seven recommendations are:

1. Invest in high-quality induction and attend to the school environment.

2. Integrate preparation and induction supports for alternative certification teachers.
3. Frontload supports for late hires.
4. Conduct formative assessments of beginning teachers and tailor induction supports to their individual needs.
5. Support teachers in learning how to address the needs of special populations.
6. Set minimum expectations for mentor support and ensure those expectations are met.
7. Provide adequate time for mentors and mentees to engage in useful activities. (p. 1)

Wong (2004) described the important distinction between induction and mentoring. He stated that:

There is much confusion and misuse of the words mentoring and induction. The two terms are not synonymous, yet they are often used incorrectly. Induction is a process - a comprehensive, coherent, and sustained professional development process – that is organized by a school district to train, support, and retain new teachers and seamlessly progresses them into a lifelong learning program. Mentoring is an action. It is what mentors do. A mentor is a single person, whose basic function is to help a new teacher. Typically, the help is for survival, not for sustained professional learning that leads to becoming an effective teacher. Mentoring is not induction. A mentor is a component of the induction process. (p. 42)

Research indicates that comprehensive induction programs are crucial components of retaining teachers. Research also indicates that the specific induction practices needed varies from state to state, school district to school district and teacher to teacher. School leaders should assess the needs of their novice teachers through the lens of the novice teachers and their

supervisors on an on-going basis and adjust their induction practices to meet those identified needs.

### **Mentoring**

According to Anderson and Shannon (1988) the beginnings of the term mentor are found in Homer's epic poem *The Odyssey*. In the poem Mentor was a trusted friend of Odysseus, a royal warrior in the Trojan War. Odysseus charged Mentor with watching over and advising his son Telemachus and his entire family while Odysseus was away. From Homer's classic work Anderson and Shannon make four conclusions regarding the act of mentoring. Those are:

First, mentoring is an intentional process. Second, mentoring is a nurturing process, which fosters the growth and development of the protégé toward full maturity. Third, mentoring is an insightful process in which the wisdom of the mentor is acquired and applied by the protégé. Fourth, mentoring is a supportive, protective process (p. 38).

The importance of veteran teachers mentoring new teachers is not a new phenomenon. It was described by Huggett and Stinnett (1956) when they noted that a new teacher could not tell his administrator about troubles he was having because the administrator served as his evaluator. This left the local association to acclimate new teachers to the school and to support them as they entered the teaching profession. Little (1990) suggested that formal mentoring programs have two goals. According to the author the goals are "to reward and inspire experienced teachers, while tapping their accumulated wisdom in the service of teachers and schools" (p. 345). Playko (1990) suggested that mentors are important in establishing the foundation on which future teacher leadership is built.

Martin (2008) reported that the New Teacher Center at the University of California, Santa Cruz, has been researching teacher induction for more than nine years. Through this research the

New Teacher Center has developed a comprehensive induction program with the following elements:

1. The supportive engagement of the principal is a fundamental requirement to establish the context for a successful program.
2. Mentor selection is based on a formal application and review process, with an interview by a panel that includes administrators, veteran teachers, union leaders, and current and former mentors.
3. Mentors are prepared for their roles through well-defined and continuous training.
4. Mentors are released from full-time classroom duties for one to three years, after which they return to the classroom or take another educational role. A full-time released mentor's caseload normally covers 12 to 15 new teachers.
5. New teachers receive 1.2 to 2.5 hours of formally scheduled weekly mentoring support for two years.
6. Professional standards provide a clear vision of best practice goals and provide a framework for the mentor's work with the novice teacher. Standards language helps structure learning-focused conversations and teacher goals.
7. Mentors employ a comprehensive formative assessment system to guide the evaluation of a new teacher's work. The system is framed by professional standards and involves formal data collection and analysis of teacher practice, including examination of student work.
8. A mentor's grade-level and subject-area backgrounds are matched with those of new teachers. This allows mentoring to focus effectively on content, subject matter knowledge, and alignment of instruction with standards and curriculum initiatives.

9. Mentors ensure that the teacher's instructional priorities align with those of school administrators and the community by meeting separately with school principals on a regular basis. (Martin, 2008, p. 43)

Martin (2008) indicated that the costs of mentoring a new teacher for two years through incorporating the elements described above ranges from \$6,000 to \$12,000. Benefits associated with that price include increased student achievement, lower teacher attrition, which in turn leads to lower costs related to recruitment, hiring and induction. The biggest pay-off, according to Martin (2008), is effective and committed teachers.

Boreen, Johnson, Niday and Potts (2009) recommended that mentor/protégé pairings should be delayed until the protégé can get to know his/her colleagues. This would allow new teachers to select a mentor who would best fit his/her needs. The authors provided criteria to consider when selecting mentors.

1. Have a minimum of three to five years of teaching experience.
2. Be teaching in the same content area or at the same grade level as the beginning teacher.
3. Have a classroom close to that of the beginning teacher.
4. Be significantly older than the beginning teacher.
5. Be aware of gender differences, although the importance of this factor may depend upon circumstances. (pp. 11-12)

Fulton et al. (2005) reminded us that mentoring is an important part of induction, but mentoring alone does not constitute new teacher induction. This report identifies key goals that should be established to sustain induction programs in the 21<sup>st</sup> century. These goals include:

building and deepening teacher knowledge; integrating new practices into a teaching community and school culture that support the continuous professional growth of all teachers; supporting the constant development of the teaching community in the school; and encouraging a professional dialogue that articulates the goals, values, and best practices of a community. (Fulton et al., 2005, p. 4)

In addition, the authors suggested that developing new teachers is the responsibility of the entire school community. “Fostering a supportive environment that helps new teachers become good teachers; and good teachers become great teachers; is critical to providing a rewarding career path for educators and a quality learning environment for students” (Fulton et al., 2005, p. 24).

Gehrke (1988) reminded us that mentors are teachers first. She suggested that those who are called mentors find themselves in the company of some of the greatest teachers in history, “Sigmund Freud, the mentor of Carl Jung; Socrates, the mentor of Plato; Aristotle, the mentor of Alexander the Great; Anne Sullivan, the mentor of Helen Keller; and Ruth Benedict, the mentor of Margaret Mead” (Gehrke, 1988, p. 43). Gehrke went on to suggest that the mentor-protégé relationship shares components of deep friendships and parent-child bonds. Because of these similarities she recommended that the mentor and protégé should each have a say in choosing their partner to ensure a successful relationship. Galvez-Hjornevik (1986) also recommended that mentor-protégé relationships should be voluntary and suggested that age and gender should be considered when forming mentor-protégé pairings.

Smith (2003) studied elementary mentor and protégé pairs in a large suburban school district in Virginia. The findings showed that a strong relationship should be developed between the mentor and protégé, including friendship. This allows the new teachers to feel comfortable in turning to their mentor for assistance. Because of this, close attention should be paid in

establishing mentoring pairs. A variety of things should be considered in making pairings including, personalities, age, proximity of classrooms, grade level assignment and schedules. Finding time to meet was found to be one of the greatest detriments to the success of the mentor/protégé relationship. The most successful relationships were established with mentors and protégés who had 10 years or less difference in age. The protégés in these pairings felt the closeness in age helped the mentor be more empathetic and more similar in teaching style.

McEwan (2002) stated that “moving from one side of the desk to the other side is a shock to most brand new teachers. They are no longer passengers; they are in the driver’s seat” (p. 157). Mandel (2006) suggested that new teachers have one important goal in mind – surviving their first year. Holloway (2001) recommended that to be effective, mentoring programs need focus and structure. He indicates that a trained and caring mentor is an important factor in a new teacher’s survival of the first year. A key component to a successful mentor experience is training (Rowley, 1999). Rowley (1999) targeted six properties of a good mentor, including; (a) commitment, (b) acceptance of beginning teacher, (c) skilled at instructional support, (d) effective in interpersonal contexts, (e) continuous learner and communicates hope and (f) optimism. Danielson (2007) noted that an important component of mentoring is that the mentor serves as someone that the new teacher can be completely honest, with whom they can admit their difficulties and seek professional advice. Mentors can serve as coaches to help prepare new teachers for formal observations and evaluations conducted by administrators. Stansbury and Zimmerman (2000) suggested that new teacher support should start with basic personal and emotional support and then evolve to support in specific areas of need. The relationship should culminate with the mentor guiding the protégé to self-reflection.

Portner (2005) listed four essential mentoring components; (a) relating, (b) assessing, (c) coaching, and (d) guiding. Relating allows mentors to develop a genuine understanding of mentees ideas and needs and allows the mentee to honestly share and reflect upon experiences. Assessing a mentees' strengths and weaknesses helps the mentor identify areas in need of growth and improvement and assists the mentor with providing guidance and to determine mentees ability to handle given situations. Coaching allows mentors to help mentees fine-tune their professional skills, enhance subject matter knowledge and to expand their repertoire of teaching strategies. Coaching also provides opportunities for mentors to model appropriate practices and skills. Guiding aids mentors in moving mentees away from dependence to the processes of reflecting on decisions and actions for themselves and to construct their own teaching and learning approaches.

Barnett (1990) recommended that mentors and interns build a professional relationship by incorporating two important components of mentoring; observation and feedback. To do this he suggested utilizing shadowing and reflective interviewing. Shadowing provides the opportunity to gather descriptive observational data. Reflective interviewing allows the mentor and intern to participate in a feedback conference. This feedback conference allows the pair to discuss what was observed during the shadowing session.

Odell and Ferraro (1992) surveyed fourth year elementary teachers who had been mentored during their first year of teaching to determine if they had remained in teaching and their retrospective on their mentoring experience. Of the original first year cohort approximately 96% were found to still be teaching. The follow-up survey results indicated that after four years of teaching the component of mentoring that was most valued was the emotional support provided by their mentor.

Gonzales and Sosa (1993) examined over 730 mentor teaching logs during the 1991/92 school year. They found that the needs of new teachers changed over the course of their first school year. For example, lesson preparation and presentation were main concerns as each new teacher's first formal evaluation was scheduled and as parent/teacher conferences approached many conversations evolved around how to communicate with parents. The mentor logs showed a 50% decline between the first and second semesters in regard to student discipline. There was an increase during the second semester in conversations regarding grading and assessment.

In the Metlife Survey of the American Teacher (2008) it was suggested that "mentoring is an important strategy for retaining new teachers and for career-long, teacher-to-teacher professional development as a method of capturing wisdom that comes with experience" (p. 144). As a component of this same survey educational leaders were asked to identify characteristics of a successful mentor program and then rate the importance of each on a scale of 1 to 10. The identified areas and ratings included:

1. Allowing time for both parties to be involved in the program (9.8 points)
2. Buy-in, by both parties of the value and responsibility of the program (9.0 points)
3. Effective matching of the mentor and mentee (8.9 points)
4. Collaboration with other colleagues with what is working and what is not in the program (8.8 points)
5. Minimizing paperwork and maximizing interaction (8.8 points)
6. Upfront training about what makes an effective mentoring program (8.8 points)
7. Genuine enthusiasm by the mentor about education in general, and the mentoring program specifically (8.7 points)
8. The ability to change a relationship if it is not working (8.5 points)

9. Acknowledging the need for flexible scheduling for participants in the program (8.3 points)
10. Adequate time for the relationship to develop (8.1 points)
11. A focus on communication and dialog to support the relationship (8.0 points)
12. A set of rules for the participants (7.2 points). (p. 145)

Bas-Isaac (1989) suggested that a mentor should model a variety of instructional techniques for his/her protégé. She recommended that this modeling occur through a three-part process. First, the pair should meet to discuss what should be observed followed by the observation. The observation process should conclude with a meeting between the mentor and the protégé to discuss what was observed and how the protégé could incorporate these techniques in his/her classroom. This process should then be continued with the mentor observing the protégé. As before, both a pre- and post-conferences are essential. This will allow the protégé to receive critical yet, friendly feedback on his/her instructional practices.

Carr, Herman and Harris (2005) identified six topics they deemed critical for mentors and protégés to discuss. These critical topics included information, instruction, personal, management, results and collaboration. The topic of information encompassed important policies, how the school works, where to go for materials, supplies, etc. and helping the protégé understand the school climate and culture. Instruction ranged from standards to curriculum and effective strategies to implement both. Information regarding a protégé's personal well-being included time management, balancing personal and professional life, stress management, personal wellness and organizational skills. Management components required classroom management and classroom procedure plans as well as tracking and completing required paperwork. Results required protégés to understand how to use assessments, both state and

local, to drive instruction. Collaboration is important for new teachers to reflect, problem-solve and to grow professionally.

Bova and Phillips (1984) completed a study of mentors and protégés. They found that protégés learning could be placed in four categories; (a) risk-taking behaviors, (b) communication skills, (c) political skills, and (d) profession-specific skills. They found the skills learned through the mentor-protégé relationship are critical in developing the protégé into a professional.

Hellsten, Ebanks and Lai (2008) surveyed new teachers in Saskatchewan, Canada. The researchers found that “having a mentor for support during the first year of teaching was very important to beginning teachers” (p. 9). However, their research indicated that having an assigned mentor was not always necessary. In a supportive school, without one assigned mentor, new teachers are provided “more comparisons, contrasts, and higher levels of reflection on the part of the beginning teachers would have multiple role models to emulate as mentee” (Hellsten et al., 2008, p. 14). The researchers noted that not having an official mentor could backfire if the new teacher is in an unsupportive environment. Tellez (1992) found that not having an assigned mentor did not prohibit new teachers from seeking assistance. In general, the new teachers that he surveyed sought help from those teachers who appeared friendly and knowledgeable.

Hiffman and Leak (1986) found that the mentor role was viewed as an essential component of induction by 96% of the respondents surveyed in their study. The protégés indicated that “mentors were able to provide assistance in addressing their needs by providing encouragement, collegiality, and specific helpful suggestions for the improvement of teaching” (p. 23). An additional important finding of the study was that the majority of the protégés indicated that the mentor should teach the same subject and/or grade level as the protégé.

Galvez-Hjornevik (1985) completed a literature review of teacher mentors. From this review she created a list of skills that mentors should possess including:

1. Orchestrate cognitive dissonance and consonance through such approaches as questioning, feedback and coaching
2. Provide solid experience as a context for examining ideas and actions
3. Demonstrate strong commitment to personal growth and development include continued learning, self-reflection, analysis and critique
4. Foster self-direction in others by encouraging independence and self-analysis
5. Understand the stages of a mentoring relationship, altering the interaction in response to growing autonomy
6. Demonstrate flexibility by knowing when to be a teacher, facilitator, listener, inquirer
7. Demonstrate skills as an action researcher
8. Understands persuasion, facilitation and change processes
9. Serve as a model adult learner
10. Demonstrate strong collegial skills—including critique, support, and reciprocity
11. Understand and communicate knowledge of effective teaching
12. Evidence capacity for mutual trust and regard. (p. 39)

Wildman, Magliaro, Niles and Niles (1992) completed a study of almost 150 mentor/protégé pairs. Through this study they identified key personality characteristics of effective mentors. These suggested characteristics included:

1. Willing to be a mentor
2. Sensitive; that is, they know when to back off
3. Helpful, but not authoritarian

4. Emotionally committed to their beginners
5. Astute – that is, they know the right thing to say at the right time
6. Diplomatic, for example, they know how to counteract bad advice given to their beginner by others
7. Able to anticipate problems
8. Nurturing and encouraging
9. Timely in keeping the beginners apprised of their successes
10. Careful to keep the beginners' problems confidential
11. Enthusiastic about teaching
12. Good role models at all times. (p. 211)

Chiang (1989) conducted a study of first year elementary teachers who were employed in the State of Indiana during the 1988/89 school year. This was the first official year for Indiana's Beginning Teacher Internship Program. Based upon her study Chiang recommended the following strategies to implement mentoring:

1. Mentors should be selected from school teachers who have the positive attitudes and are willing to assume the responsibilities of mentoring.
2. Mentors should meet beginning teachers before the school begins so they can get acquainted before school starts.
3. A supportive team including college and department of education persons should be formed and funded by the state in order to offer continuous consultation to beginning teachers and their mentors. The committee members should focus upon discipline and classroom management and, curriculum design, and problems with individual differences in students.

4. Principals should be reimbursed for their efforts in order to work more effectively with beginning teachers and mentors.
5. The first month of a beginning teacher's teaching should consider a half day of teaching and a half day of observing the mentor and other teachers teaching. The second month may release mentors to observe beginning teachers teaching or offer consultation.
6. Second year teachers should participate in beginning teachers conferences in order to share experiences and learn new teaching methods from other teachers. (pp. 5-6)

Johnson (2002) studied survey data from almost 100 first year Indianapolis Public School teachers. The data indicated a significant impact on teacher efficacy through building climate, instructional guidance and principal support. However, the data did not support mentoring as having a significantly positive impact on teacher efficacy. The researcher suggested that requiring teachers to mentor protégés while carrying a full teaching load could limit their effectiveness.

Stanulis and Floden (2009) used the AIMS (Arizona's Instrument to Measure Standards) assessment to measure the impact of intensive mentoring on improving new teacher quality as linked to student engagement. The researchers studied two groups. Group one received basic mentoring components while group two received intensive mentoring components. Intensive mentoring components included, (a) mentors were released one day each week to mentor their protégés, (b) mentors and protégés were matched based on content area assignments, and (c) mentors led monthly seminars for their protégés. The researchers went on to specify that "this intensive mentoring involved close work in the classroom, where mentors observe, co-planned, analyzed student work, and collected and analyzed teaching data together" (Stanulis & Floden,

2009, p. 120). The researchers found that the experimental group had significantly higher gains in the areas of atmosphere, instruction/content, and student engagement as measured by the AIMS assessment.

Roehrig, Bohn, Turner and Pressley (2006) studied mentors and protégés. They found that more effective teacher ability equated to more effective mentoring ability. In addition, the most effective new teachers were more reflective, better able to self-assess and were open to being mentored.

Allen and Eby (2008) studied 91 mentor/protégé relationships. They found that the more committed the protégé believed the mentor was to the relationship the higher the quality the protégé rated the relationship. In addition, the lower the mentor rated him/herself regarding commitment to the relationship the higher the protégé related the commitment.

Research has highlighted the benefits of mentoring as a critical component of retaining and supporting new teachers. However, simply assigning a mentor to a novice teacher does not begin to scratch the surface of the mentoring component of effective induction programs. New teachers should be matched with mentors who can support their individual needs. Mentors should be trained in how to support novice teachers effectively. Time must be allotted for mentors and novice teachers to work together and to observe each other.

### **Benefits to Mentors**

Studies have noted benefits to the mentors in addition to the benefits that are provided to new teachers. The American Federation of Teachers (1998) reported that mentors in New York City had an increase in professional satisfaction and their awareness of their own teaching methods. The mentors also reported the relationship to be a conduit for discussing new techniques and they felt more connected to their school.

Newcombe (1988) described the benefits gained by mentors. She suggested that mentors reflect on their own teaching practices while supporting new teachers. The fact that they are asked to share their expertise provides mentors with job satisfaction. In addition, most mentors receive training, which leads to further professional growth.

Healy and Wechert (1990) defined mentoring for new teachers as “a dynamic, reciprocal relationship in a work environment between an advanced career incumbent (mentor) and a beginner (protégé) aimed at promoting the career development of both” (p. 17). The authors went on to indicate that as the mentor guides the new teacher he grows in his own professional abilities.

The Alliance for Excellent Education (2005) found that mentoring provided growth opportunities for the mentor as well as the benefit of more pay. Additional group planning time was also reported, which was found to create a community of educators committed to raising performance of their school and entire district.

Wellington (2001) suggested that mentors benefit by the recognition they receive through being chosen to share their expertise with new teachers. Mentors professional connections grow as they make new contacts through their protégé. Additionally, mentors gain skills in working with a new generation.

Portner (2005) identified pride and accomplishment as benefits mentor teachers experience through assisting new teachers as they begin their educational career. He went on to indicate that this pride and accomplishment leads to a sense of community and heightened morale.

Krueger, Blackwell, and Knight (1992) indicated that mentors will experience professional growth. This growth can be initiated by the enthusiasm that protégés bring to their

new position. In addition, protégés bring new researched-based methods to the classrooms that are shared with the mentor. The authors go on to suggest that “the mentor relationship prompts practitioners to find the time to reflect, analyze, and evaluate themselves, to refine critical thinking skills, and to articulate a renewed commitment to the practice of school administration” (Krueger et al., 1992, p. 58).

Benefits to the mentors should be considered when selecting experienced teachers to serve as mentors for novice teachers. However, the greatest consideration should be given to how the novice teacher will benefit from the pairing and the specific needs of the novice teacher. Selecting a veteran teacher who needs a boost to their own practice or personal satisfaction could lead to an ineffective support for the novice teacher. In this event, any benefit the mentor might have gained would also likely be diminished.

### **History of Induction and Mentoring in Indiana**

According to the Indiana Beginning Teacher Internship Program (BTIP) manual (Indiana Department of Education [IDOE], 1994), “The Beginning Teacher Internship Program was established by the legislature in 1987; the program was implemented the following year” (p. 1). The BTIP required each school corporation to develop and implement a local plan describing the one year internship process for all new teachers. Each local school’s plan had to include:

1. responsibilities of the superintendent, principal, mentor, and beginning teacher
2. state and local beginning teacher performance competencies (the Beginning Teacher Assessment Inventory and the corporation’s evaluation procedures)
3. orientation program requirements for beginning teachers, including the mandatory conference for the beginning teacher, mentor, and principal before the beginner starts the first teaching day

4. procedures for selection of mentors
5. training requirements
6. minimum number of classroom observations by the principal
7. minimum number of pre-observation and post-observation conferences by the principal
8. minimum number of observations by the mentor. (p. 3)

The BTIP manual claimed that “the internship fosters strong relationships among faculty, makes formative evaluation easier for the administrator, improves staff morale, and involves little paperwork and establishes a very distinct for the induction of the beginning teacher” (IDOE, 1994, p. 7). When the legislature established the program it included a \$600 stipend for mentors and money to pay for released time for beginning teachers and their mentors. According to the BTIP manual “program law describes a mentor as someone, who, when possible, has five years teaching experience, teaches at a similar grade and subject level, teaches in the same building, is certified, and who has outstanding teaching skills” (IDOE, 1994, p. 26). The BTIP manual defined five main responsibilities of mentors, including; (a) “be a professional listener, (b) be an observer, (c) be an adult educator, (d) be a professional resource and (e) be a coach” (IDOE, 1994, pp. 26-27).

It was reported in the BTIP manual that from the first year of the program through the 1993/94 school year over 10,000 new teachers participated in BTIP. In addition, the 2002 Indiana Professional Standards Board Annual Report indicated that over 23,000 new teachers participated in BTIP during the 1994/95 through 2001/02 school years (Indiana Professional Standards Board [IPSB], 2003). The BTIP manual went on to note that 99% of new teachers pass BTIP in the first year and of those that must complete the program a second year 97% are

successful. As outlined in the BTIP manual it was the responsibility of the principal to determine if the new teacher passed or failed the BTIP. The principal used the BTIP's *Beginning Teacher Assessment Inventory* to determine if the new teacher passed his/her BTIP. If a new teacher did not pass their BTIP, as determined by the *Beginning Teacher Assessment Inventory*, he or she could still be retained by the school corporation. If the new teacher failed the program, but was retained his/her building principal was required to implement an individual assistance plan, which had to be approved by the IPSB.

The Indiana Mentoring and Assessment Program (IMAP) has become a major component of a new teacher's first two years of professional service in Indiana. The original program, the Indiana Beginning Teacher Internship Program (BTIP) started out as a one year experience, which included being assigned a mentor. Eventually the program evolved into the two-year process, which included a portfolio assessment. According to the Indiana Beginning Teacher Internship Program Manual (IDOE, 1994), the Beginning Teacher Internship Program was established by the legislature in 1987. The program was implemented the following year. The Manual (IDOE, 1994) indicates that "thousands of teachers have been inducted into the teaching profession working collegially with mentors dedicated to helping them succeed" (p. 1). The BTIP Manual (IDOE, 1994) states that "the Internship Program fosters strong relationships among faculty, makes formative evaluation easier for the administrator, improves staff morale, and involves little paperwork" (p. 7).

Stoelting (2005) described the processes of transitioning from the Rules 46-47 licensure (BTIP) to Rules 2002 licensure (IMAP) internship requirement for beginning teachers:

The Indiana Department of Education, Division of Professional Standards (DPS) is in the process of implementing the new standards and performance based system of preparation

and licensing. This new system is known as Rules 2002. We are in a four-year transition period where persons are completing Rules 46-47 and Rules 2002 programs. The first Rules 2002 licenses were issued in August 2003. The final original Rules 46-47 licenses will be issued June 2006. (p. 1)

The *2004-2005 School Year District Facilitator's Guide to the Indiana Mentoring and Assessment Program* indicates that IMAP is “designed to provide a program of support and assessment for initial practitioners” (IDOE, 2004, p. 4). The Facilitator's Guide described two components of the program: “support through mentorship and professional development, and assessment of performance through both general pedagogical skills and content-focused teaching and leadership skills through a standards-based assessment” (IDOE, 2004, p. 4).

The IDOE (n.d.) *Performance Assessment Content Area Resource Guide* specifies five goals of IMAP including:

1. ensuring that all students have high quality, committed and caring teachers
2. promoting effective teaching practice leading to increased student learning
3. providing effective support and feedback to new teachers so that they continue to develop their knowledge base and skills and choose to remain in the profession
4. providing standards-based professional development for both novice and experienced teachers
5. developing teacher leaders by recognizing and using the expertise of Indiana's exemplary teachers as mentors, scorers, and trainers of beginning teachers and as resources for their colleagues. (p. 3)

The Resource Guide goes on to describe the organization of the portfolio. The Guide states that:

Teachers are asked to organize the unit of instruction around an essential concept with their discipline, engage students in an exploration of that essential concept in a series of lessons, assess student learning, and reflect on their students' learning and the quality of teaching. (IDOE, n. d., p. 5)

In 2006, the Indiana State Legislature cut funding for mentors for new teachers yet the mentor requirement remained. In 2009, the Professional Standards governing board revised the Indiana Mentoring and Assessment Program (IMAP). Through this revision, the requirement that schools provide mentors for new teachers in their first two years of teaching was lifted and the portfolio assessment was replaced by an assessment tool to be completed by the building principal, which is based on the 10 Interstate New Teacher Assessment and Support Consortium (INTASC) principles. If school leaders chose to provide mentors for new teachers, the Indiana Department of Education (IDOE) recommended that the teacher mentor have at least five years of teaching experience.

Induction and mentoring in Indiana has come full circle. The program evolved from supporting teachers to assessing teachers. Unfortunately, new teachers are being left behind in the process. The state should give the control of assessing a new teacher's readiness to teach back in the hands of the universities entrusted with preparing them and give school leaders the tools they need to support novice teachers once they join the teaching ranks.

### **Suggestions for State-Mandated Programs**

Berry et al. (2002) suggested that new teachers should be assessed with a "formal evaluation that links their teaching to student achievement through observations and portfolios, is tied to state standards, and has implications for certification or continued employment" (p. 10). They recommended that policymaker's consider the importance of building consensus in regard

to effective induction components, bridging collaboration of resources among state and local officials, recognizing the critical role of mentors, investing in “hard-to-staff” schools and studying the effectiveness of their induction programs (Berry et al., 2002, p. 10).

Colbert and Wolff (1992) suggested important steps to retaining new teachers.

Administrators and mentor teachers must be trained in appropriate peer coaching and observation strategies. Opportunities must be provided for mentors and their protégés to meet on a regular basis. Experienced teachers need to be involved in supporting new teachers. University schools of education and local schools must collaborate to provide support to new teachers and their mentors. New teachers must be provided with ongoing, structured support for the first few years of teaching. In addition, policymakers need to consult with universities, state departments of education and local schools prior to implementing new policies regarding new teacher support.

Angelle (2006) reviewed a state-mandated assistance/assessment program. Based upon her findings she suggests the items below should be considered by state departments.

1. State-mandated assistance/assessment programs should be frequently monitored...to ensure the program is being implemented as originally intended.
2. State-mandated assistance/assessment programs should minimize paperwork associated with the programs so that the components of the program intended to support new teachers remain the priority.
3. STAMP (State Teacher Assistance and Mentoring Program) and other state programs like it should be evaluated regarding the ability of new teachers to “perform” for outside assessors.
4. Principals should take an active role in the induction of new teachers, including frequent discussion, monitoring, and feedback regarding professional practice.

5. Principals should refrain from relegating all aspects of new teacher induction to other staff members.
6. Professional development for principals whether during preparation or as part of continuing education should include development of skills in socializing employees to the culture of the school. (p. 332)

Bartlett, Johnson, Lopez, Sugarman, and Wilson (2005) studied teacher induction in Illinois, Wisconsin and Ohio. They concluded that linking teacher credentialing to induction provides an important reason for schools to provide induction and for the state to support it. The researchers recommend states define clear expectations and best practices for school-based induction programs. Specific components recommended for state policy include; (a) State clear goals regarding teacher learning, teacher retention, student learning and cost savings (b) provide districts with guidelines that emphasize “best practices” and (c) avoid overly restricting regulations-leave room for local adaption (Bartlett et al., 2005, p. 18).

Darling-Hammond, Gendler, and Wise (1990) discussed the importance of paid internships in professions such as medicine, psychology, architecture and engineering. They suggested that these paid experiences offer new professionals a chance to establish important skills and gain support prior to taking on the full responsibilities of the profession. They made the case that new teachers should be provided these same opportunities before the education of our nation’s youth are left in their hands. Like other professions, Darling-Hammond et al. (1990) suggested that a teaching internship should be a component of the process of teacher licensure. The researchers have identified important aspects of the internship in the fields of medicine, psychology, architecture and engineering, which they recommend for the teaching profession.

1. The intern has a special title (e.g. intern-architect, resident, etc) that denotes a special role vis-à-vis responsibilities to clients.
2. The internship takes place full time in a clinical setting.
3. The intern assumes a progressive degree of responsibility.
4. The intern receives regular guidance and supervision from practicing professionals as well as professional educators.
5. The intern has an opportunity to observe professionals interacting with clients.
6. Didactic training accompanies clinical experience.
7. The intern is exposed to broad aspects of the field, not simply areas of personal interest.
8. The intern receives periodic formal evaluation.
9. Training goals for the intern outrank service goals.
10. The intern is paid, at less than a full professional salary. (pp. 11-12)

Fulton et al. (2005) proposed important considerations for state policymakers.

1. Create and support comprehensive mentored induction programs for new teachers.  
Funding is critical. States also can set guidelines, offer training, provide guidance, and encourage districts to design innovative programs.
2. Adopt standards for teaching and learning for schools in which these standards can be met.
3. Provide additional resources to schools and teacher preparation programs that work together in a professional development school.
4. Encourage and provide support for teacher preparation programs and districts that develop extended intern/residency models.

5. Develop a tiered teacher licensing/certification system that enables the state to monitor the effectiveness of induction programs in each district and the outcomes of each teacher education program in the state.
6. Develop a P-16 council that focuses on the collaborative relationships among various education institutions involved in the state's teacher quality initiatives, including induction.
7. Set up incentives for districts to staff vacancies in high-need schools with the most experienced teachers, rather than with new teachers. New teachers should only be assigned to these schools with extra supports (e.g., in a team teaching assignment with a master teacher) and special training. (p. 23)

Policy-makers should take note of the recommendations to support novice teachers as they write and/or amend administrative codes. A poorly written or ineffective code can do more harm than not supporting new teachers at all. It is important for school officials to contact their state representatives to address the need for adequately supporting novice teachers.

### **Limitations of Research on Induction and Mentor Programs**

Ingersoll and Kralik (2004) suggested limitations of many of the research studies conducted on induction and research programs.

Most of these studies do not or are not able to control for other factors that could impact the outcomes under investigation. For example, it is reasonable to assume that the type of school in which teachers are employed will have an effect on outcomes such as teacher job commitment and retention, regardless of the existence of an induction or mentoring program. In order to determine whether there is a relationship between induction and these outcomes, it is necessary to control for, or hold constant, these other kinds of

factors. Moreover, most of these studies do not or are not able to clarify the criteria for selection and program participation. As with school characteristics, the persons who do or do not participate in programs also could have an impact on outcomes, regardless of the effect of the program itself. Finally, the content, duration and delivery of programs are so varied from one site to another it is not clear to what extent general conclusions about mentoring and induction can be drawn from any given study. (pp. 21-22)

It is difficult to control for all factors relating to novice teacher attrition. Researchers must clearly identify the components of their study. It is important to complete a thorough review of the literature and identify factors that should be considered when conducting research on supporting and retaining teachers.

### **Research Opportunities**

Ingersoll and Smith (2003) suggested limitations of the majority of the induction/mentor research studies that have been undertaken. Many studies do not include a control group of non-mentored new teachers; they cannot discuss what might have happened if the new teachers in the research study had not received induction/mentoring. Most studies concentrate on the feelings of the protégés, but do not follow-up to examine the attrition rate or the effectiveness of those surveyed. These limitations make it difficult to draw true conclusions about the effectiveness of induction/mentoring programs on teacher retention and student achievement. Ingersoll and Kralik (2004) emphasized the importance of not only surveying new teachers' intentions to continue teaching, but to also collect their actual retention data. Bartlett et al. (2005) recommend that states should trace outcomes of induction by measuring teacher attrition and student achievement. Ingersoll (2007) stated that policy-makers need to focus less on recruitment of new teachers in favor of methods to retain them. These recommendations outline the need for

my study regarding induction and mentoring opportunities for novice teachers in Indiana's K-12 public schools.

School officials cannot hope to retain teachers effectively unless we identify why they leave and what factors contribute to their retention. Effectively identifying both why they leave and why they stay will provide state officials and school district leaders with the knowledge necessary to create and support effective induction and mentoring programs. Completing research studies in this area are crucial as school officials look to the future of supporting novice educators.

## CHAPTER 3

### **Method**

#### **Research Questions**

A review of related literature looked at the reasons behind teacher attrition, the cost associated with teacher attrition, the history of induction and mentoring practices, current trends in induction and mentoring, and recommended strategies to support novice teachers through induction and mentoring practices. Recommended strategies were translated to specific recommendations for superintendents regarding novice teacher induction and mentoring practices in hopes of appropriately supporting and retaining teachers. Research questions were based upon this bank of recommendations. A survey was designed to explore these questions.

#### **Purpose of the Study**

The purpose of this study was to examine how school corporation officials in Indiana's K-12 public schools support first and second year teachers through induction and mentoring practices. An analysis was made to determine the adequacy of novice teacher support based on state and national recommendations for effective induction and mentoring practices. The collected data was analyzed to determine if the level of support that Indiana school corporation officials provide novice teachers differed due to student enrollment and/or school location (i.e. rural or urban/suburban) across the 2009/10 school year to the 2010/11 school year.

The 2009/10 school year was a natural break as the Indiana Department of Education revoked the mentor requirement of IMAP and did not define the assessment component of the Indiana Mentoring and Assessment Program (IMAP) for second year teachers until mid-December, 2009. In addition, Indiana school corporation officials had to react to a budget shortfall beginning in January, 2010.

Additionally, superintendents were asked to report the average number of new teachers hired in the past five years and the number of new teachers they expected to hire for the 2010/11 school year. Superintendents were also asked if the IDOE's revocation of the mentor component of IMAP and/or the recent budget shortfall impacted the assignment of mentors to novice teachers.

### **Research Methods**

**Assessment.** A self-administered survey, *Indiana School Corporation Induction and Mentoring Survey* (Appendix B), was designed specifically for this study, and included statements based on state and federal recommendations for supporting novice teachers as well as the National Center for Educational Statistics' Schools and Staffing Survey and the Teacher Follow-up Survey, which were discussed in the literature review completed in chapter two of this dissertation. The National Center for Educational Statistics is a division of the U.S. Department of Education's Institute of Educational Sciences. As such, the survey questions were not copyrighted and are available for use by educational researchers not affiliated with the Institute of Educational Sciences. The survey included 30 items in three parts. Part one covered school location, school size and the average number of new teachers hired in the last five years as well as the number of new teachers the superintendents expected to hire for the 2010/11 school year. Part two examined induction and mentoring adequacy available to novice teachers prior to the

2009/2010 school year and is covered in twelve statements. Part three examined induction and mentoring adequacy available to novice teachers beginning with the 2010/2011 school year and is covered in twelve statements. In addition, part three asked school superintendents to address the impact of the revocation of the mentor component of IMAP as well as the budget shortfall.

Research questions included the following considerations:

1. What affect did student enrollment have on pre 2009/10 school year mentoring and induction practices and 2010/11 school year predicted mentoring and induction practices provided to novice teachers?
2. What affect did a school corporation's location (i.e., rural, urban/suburban) have on pre 2009/10 school year mentoring and induction practices and 2010/11 school year predicted mentoring and induction practices provided to novice teachers?
3. Did the number of new teachers hired to work in Indiana Public Schools change from the reported past five years average to the anticipated number hired for the 2010/11 school year?
4. Did school corporation officials reduce or discontinue assigning mentors to novice teachers due to the fact that mentors are no longer a requirement of IMAP?
5. Did school corporation officials reduce or discontinue assigning mentors to novice teachers as a cost containment strategy?

**Participants.** The participants of this study were 112 Indiana Public School Superintendents.

**Method.** The survey questions were based upon the National Center for Educational Statistics' Schools and Staffing Survey and the Teacher Follow-up Survey, which were discussed in the literature review completed in Chapter 2.

The time frame established for data collection was June 19, 2010 through July 30, 2010. The survey was directed to all 293 Indiana K-12 public school superintendents' e-mail addresses, which were obtained from the IDOE website as well as the 2009 Indiana School Directory.

The e-mail included the url link to the survey (Appendix B), cover letter and informed consent (Appendix C), and a message in the body of the email describing the purpose of the survey and the request to participate.

**Type of study** This study employed a quantitative mode of inquiry. Survey methodology was used to determine novice teacher induction and mentoring practices by student enrollment and by school location both pre 2009/10 and 2010/11 school years. In addition the study looked at how induction and mentoring practices for novice teachers have been impacted by the revocation of the mentor requirement of the Indiana Mentoring and Assessment Program (IMAP) as well as the recent budget shortfall.

### **Quantitative Analysis of Data**

The purpose of this study was to examine how school corporations support first and second year teachers through induction and mentoring practices (dependent variable) by looking at how strategies in Indiana schools compare with state and other expert recommendations for supporting novice teachers using quantitative (statistical trends) data.

Using data from 112 public schools in Indiana, Parts Two and Three, items 1 – 12 were measured using a Likert scale, with response “a” equating to three points, response “b” equating to two points and response “c” equating to one point. The scores of the 12 items were averaged for both Parts Two and Three. A high score on Parts Two and Three would indicate a high level of adequacy of novice teacher support through induction and mentoring practices, whereas a low score would indicate a low level of adequacy. The Statistical Package for the Social Sciences

(SPSS) version 16 was used to code and tabulate scores collected from the survey and provide summarized values where applicable including the median, mean, central tendency, variance, and standard deviation. In addition, demographic data was processed using frequency statistics and reliability analysis was conducted using Cronbach's alpha test. Finally, profile analysis, was used to detect amount of shared variance and strength of relationship between the variables of interest.

Prior to analyzing the two main research questions, data hygiene and data screening were conducted to ensure the variables of interest met appropriate statistical assumptions. Thus, the following analyses followed a similar analytic strategy in that the dependent variables were first evaluated for parametric assumptions. Next, profile analysis was run to determine if any relationships existed between variables of interest.

Each survey included a cover letter, introducing the purpose of the survey, the items of the instrument and instructions (Appendices B and C). Further, each cover letter included language regarding confidentiality and anonymity for all participants. The survey was determined to be exempt by Indiana State University's Institutional Review Board.

### **Summary**

The purpose of this study was to examine how school corporation officials in Indiana's K-12 public schools support first and second year teachers through induction and mentoring practices. An analysis was made to determine the adequacy of novice teacher support based on state and national recommendations for effective induction and mentoring practices. The collected data was analyzed to determine if the level of support that Indiana school corporation officials provide novice teachers differed due to student enrollment and/or school location (i.e. rural or urban/suburban) across the 2009/10 school year to the 2010/11 school year.

Additionally, superintendents were asked to report the average number of new teachers hired in the past five years and the number of new teachers they expected to hire for the 2010/11 school year. Superintendents were also asked if the IDOE's revocation of the mentor component of IMAP and/or the recent budget shortfall impacted the assignment of mentors to novice teachers.

## CHAPTER 4

### Results

#### Introduction

Researchers have studied teacher attrition and practices that school officials have implemented in an attempt to retain teachers. Kapadia et al. (2007) completed a study of the influences of induction in the Chicago Public Schools. They concluded that new teachers who receive high levels of mentoring and support are more likely to report a good teaching experience and are more likely to remain in the same school.

Ingersoll and Smith (2003) identified that beginning teachers who receive comprehensive induction packages have far higher retention rates than those who receive fewer supports. A comprehensive list of induction components includes, mentor from same field, beginner's seminars, common planning time, collaboration with others, external teacher network, supportive communication, reduced schedule, reduced preparations and teacher aide. By analyzing the National Center for Educational Statistics' Schools and Staffing Survey and the Teacher Follow-up Survey, they found that the following components were most often associated with reduced attrition of new teachers; "having a mentor in the same field, having common planning time with other teachers in the same subject, having regularly scheduled collaboration with other teachers, and being part of an external network of teachers" (p. 35). The data suggested that the more induction components received, the more likely the new teacher would be retained. Specifically,

for those receiving all suggested induction components, their retention rate was 50% greater than those receiving no induction.

### **Purpose of the Study**

The purpose of this study was to examine how school corporation officials in Indiana's K-12 public schools support first and second year teachers through induction and mentoring practices. An analysis was made to determine the adequacy of novice teacher support based on state and national recommendations for effective induction and mentoring practices. The collected data was analyzed to determine if the level of support that Indiana school corporation officials provide novice teachers differed due to student enrollment and/or school location (i.e. rural or urban/suburban) across the 2009/10 school year to the 2010/11 school year.

Additionally, superintendents were asked to report the average number of new teachers hired in the past five years and the number of new teachers they expected to hire for the 2010/11 school year. Superintendents were also asked if the IDOE's revocation of the mentor component of IMAP and/or the recent budget shortfall impacted the assignment of mentors to novice teachers.

### **Instrumentation**

A self-administered survey, *Indiana School Corporation Induction and Mentoring Survey*, was designed specifically for this study, and included statements based on state and federal recommendations for supporting novice teachers as well as the National Center for Educational Statistics' Schools and Staffing Survey and the Teacher Follow-up Survey, which were discussed in the literature review completed in Chapter 2. The survey included 30 items in three parts. Part one covered school location, school size, and the average number of new teachers hired in the last five years as well as the number of new teachers the superintendents

expected to hire for the 2010/11 school year. Part two examined induction and mentoring adequacy available to novice teachers prior to the 2009/10 school year and is covered in 12 statements. Part three examined induction and mentoring adequacy available to novice teachers beginning with the 2010/11 school year and is covered in twelve statements. In addition, part three asked school superintendents to address the impact of the revocation of the mentor component of IMAP as well as the budget shortfall.

### **Data Collection Process**

The time frame established for data collection was June 19, 2010 through July 30, 2010. The survey was directed to all 293 Indiana K-12 public school superintendents' e-mail addresses, which were obtained from the IDOE website as well as the 2009 Indiana School Directory.

The e-mail included the url link to the survey (Appendix B), cover letter and informed consent (Appendix C), and a message in the body of the email describing the purpose of the survey and the request to participate.

The sample consisted of 112 completed surveys, which equated to an overall response rate of 38.2%. The data was analyzed based upon two enrollment categories, 2,000 or fewer students and 2,001+ students. Fifty-five respondents indicated enrollments of 2,000 or fewer (49%), while 57 indicated enrollments of 2,001+ (51%). The data were also analyzed by location, rural and suburban/urban with 69 respondents (62%) indicating a rural location and 43 respondents (48%) indicating a suburban/urban location.

### **Data Analysis Procedure**

Inferential statistics were used to draw conclusions from the sample population tested. The Statistical Package for the Social Sciences (SPSS) version 16 was used to code and tabulate data collected from the survey and provide summarized values where applicable including the

median, mean, variance, and standard deviation. In addition, demographic data were processed using frequency statistics and reliability analysis was conducted using Cronbach's alpha test. Finally, profile analysis was used to detect amount of shared variance and strength of relationship between the variables of interest.

Prior to analyzing the two main research questions, data hygiene and data screening were conducted to ensure the variables of interest met appropriate statistical assumptions. Thus, the following analyses followed a similar analytic strategy in that the dependent variables were first evaluated for parametric assumptions. Next, profile analysis was run to determine if any relationships existed between variables of interest.

### **Summary of Analysis**

Research question one asked: What affect did student enrollment have on pre 2009/10 school year mentoring and induction practices and 2010/11 school year predicted mentoring and induction practices provided to novice teachers by school corporation leaders? The question was tested using profile analysis, which tests if the two groups ( $\leq 2,000$  enrollment,  $>2,000$  enrollment) have the same pattern of means across the two years (2009/10, 2010/11). Research question two asked: What affect did school location have on pre 2009/10 school year mentoring and induction practices and 2010/11 school year predicted mentoring and induction practices provided to novice teachers by school corporation leaders? The question was tested using profile analysis, which tests if the two groups (rural location, suburban/urban location) have the same pattern of means across the two years (2009/10, 2010/11).

In profile analysis, three distinct tests were run including parallelism test, levels test, and flatness test. The parallelism test determined if  $\leq 2,000$  enrollment and  $>2,000$  enrollment lead to the same pattern of teacher support across years 2009/10 and 2010/11. The levels test

determined if the main effect of condition, enrollment group, affected overall novice teacher support. That is, did type of group ( $\leq 2,000$  enrollment,  $>2,000$  enrollment) differ on overall novice teacher support. The flatness test determined if the two dependent variables, teacher support 2009/10 and teacher support 2010/11 elicited the same response across years. The same tests were run for research question two, with location data (rural, suburban/urban) substituted for enrollment data ( $\leq 2,000$ ,  $> 2,000$ ). Both sets of significance data are presented in Table 2.

Results from the profile analysis, as depicted in Table 2, revealed that the within subjects test (flatness) was significant, for enrollment and location,  $p < .001$ . The levels test for both enrollment and location were not significant,  $p = .119$ ,  $p = .316$ . And finally, for the parallelism test, no significant interaction was found for enrollment nor location,  $p = .844$  and  $p = .212$ .

Table 2

*Results Indicating Two Research Questions Reached Statistical Significant Differences*

Research Question	Analysis	DVs	IVs	Sig.
RQ1	Profile analysis	Teacher's Support	Enrollment	
	Parallelism			$p = .844$
	Levels			$p = .119$
	Flatness			$p = < .001$
RQ2	Profile Analysis	Teacher's Support	Location	
	Parallelism			$p = .212$
	Levels			$p = .316$
	Flatness			$p = < .001$

## Reliability Analysis

Reliability analysis allows one to check the reliability of the measurement tool utilized in a study, meaning the degree to which the items consistently measure the same construct.

Cronbach's alpha reliability analysis procedure calculates a reliability coefficient that ranges between 0 and 1. The reliability coefficient is based on the average inter-item correlation. For Cronbach's alpha, a score of  $\geq .70$  is considered to be sufficiently reliable (Gall, Gall, & Gorg, 1999).

Answers to the survey's twelve questions in both part two and part three were used to calculate an average composite score, which included data from all 112 respondents. Each question presented a three-point scale from *strong support* to *minimal support*, with the latter representing the greatest new teacher support. Each individual's responses were included in the average to determine the level of new teacher support for the 2009/10 school year and the 2010/11 school year.

Reliability analysis was run for each of the two sub-constructs of new teacher support.

These two sub-constructs include:

1. 2009/10 Novice Teacher Support through Induction and Mentoring Practices
2. 2010/11 Novice Teacher Support through Induction and Mentoring Practices

Table 3 depicts the summary of the reliability analysis for each of the sub-constructs.

Five fields are represented including the sub-construct, Cronbach's alpha, inter-item correlation mean, minimum correlation, and max correlation. Cronbach's alpha ( $\alpha$ ) coefficients equal to or greater than 0.70 were assumed to be reasonably reliable. Results from the analysis revealed that the 2010/11 construct was reliable and the 2009/10 construct was marginally reliable, yet still acceptable.

Table 3

*Novice Teacher Support Through Induction and Mentoring Practices Reliability by Sub-construct*

Sub-construct	Chronbach's alpha	Inter-item Correlation Mean	Minimum Correlation	Maximum Correlation
2009/10	0.634	0.135	-1.124	0.455
2010/11	0.779	0.214	-0.095	0.606

*Note.*  $n = 112$ .

#### **2009/10 Novice Teacher Support through Induction and Mentoring Practices.**

Twelve questions were used to capture information about new teacher support in the school year 2009/10. The 12 questions were assumed to represent the latent new teacher support construct. To determine if the construct was reliable, a Cronbach's alpha reliability analysis was run. Accordingly, for the construct, Cronbach's alpha was calculated at .634 for the 12 items tested. Response items were scaled from 1 – 3 with 3 = *maximum support*, 2 = *moderate support*, and 1 = *minimal support*. Inter-item correlation mean = .135, with a minimum correlation of -.124 and maximum correlation of .455.

#### **2010/11 Novice Teacher Support through Induction and Mentoring Practices.**

Twelve questions were used to capture information about new teacher support in the school year 2010/11. The 12 questions were assumed to represent the latent new teacher support construct. To determine if the construct was reliable, a Cronbach's alpha reliability analysis was run. Accordingly, for the construct, Cronbach's alpha was calculated at .779 for the 12 items tested. Response items were scaled from 1 – 3 with 3 = *maximum support*, 2 = *moderate support*, and 1

= minimum *support*. Inter-item correlation mean = .214, with a minimum correlation of -.095 and maximum correlation of .606.

### **Research Question 1**

What affect did student enrollment have on pre 2009/10 school year mentoring and induction practices and 2010/11 school year predicted mentoring and induction practices provided to novice teachers by school corporation leaders?

Research Question one was analyzed using profile analysis. Profile analysis was employed to determine if a relationship exists between new teacher support and enrollment. The dependent variables, new teacher support for 2009/10 and 2010/11, were derived by adding up scores across relative questions and then dividing by the number of questions asked. For the 2009/10 school year sub-construct, scores ranged from 1.33 to 2.83 with a mean of 2.06 and standard deviation of .29. For the 2010/11 school year sub-construct, scores ranged from 1.00 to 2.83 with a mean of 1.96 and standard deviation of .38.

Table 4 presents the descriptive statistics for the two dependent variables school year 2009/10 and school year 2010/11 by enrollment categories, 2,000 or fewer students ( $n = 55$ ) and 2,001+ students ( $n = 57$ ). For the 2009/10 school year, enrollment category 2,000 students or fewer the minimum score was 1.33 and the maximum score was 2.83 with a mean of 2.02, standard deviation, .31, skew, .076, standard error of skew, .322, kurtosis, .074 and standard error of kurtosis, .634. For the 2010/11 school year, enrollment category 2,000 students or less the minimum score was 1.00 and the maximum score was 2.75 with a mean of 1.91, standard deviation, .39, skew, -.244, standard error of skew, .322, kurtosis, -.417 and standard error of kurtosis, .634. For the 2009/10 school year, enrollment category 2,001+ students the minimum score was 1.33 and the maximum score was 2.75 with a mean of 2.10, standard deviation, .26,

skew,  $-.536$ , standard error of skew,  $.316$ , kurtosis,  $.798$  and standard error of kurtosis,  $.623$ . For the 2010/11 school year, enrollment category 2,001+ students the minimum score was 1.08 and the maximum score was 2.83 with a mean of 2.01, standard deviation,  $.36$ , skew,  $-.718$ , standard error of skew,  $.316$ , kurtosis,  $.612$  and standard error of kurtosis,  $.623$ .

Table 4

*Descriptive Statistics for the Two Dependent Variables by Enrollment Year*

Enroll	DV	Min	Max	Mean	SD	Skew	SE	Kurtosis	SE
0-2000	0910	1.33	2.83	2.02	.31	.076	0.322	.074	0.634
	1011	1.00	2.75	1.91	.39	-0.244	0.322	-0.417	0.634
2,001+	0910	1.33	2.75	2.10	.26	-0.536	0.316	0.798	0.623
	1011	1.08	2.83	2.01	.36	-0.718	0.316	0.612	0.623

*Note.* For total 2009/10,  $n = 55$ ; for total 2010/11,  $n = 57$

**Missing data and univariate outliers.** Cases with missing data were investigated by running frequency counts in SPSS version 16.0. No cases with missing data were found in the data set; thus, for Research Question one, 55 responses from participants were received for enrollment group 0-2000 and 57 were responses from participants were received for enrollment group 2001+.

A test for univariate outliers was conducted and none were found to exist within the two dependent variables (Novice Teacher Support 2009/10 and 2010/11). Univariate outliers were investigated by converting observed scores to Z scores and then comparing case values to the critical value of  $\pm 3.30$ ,  $p < .001$ . Case z-scores that exceed this value were greater than three standard deviations from the normalized mean.

**Tests of normality.** Before Research Question one was analyzed, basic parametric assumptions were assessed. That is, for the criterion variable, assumptions of normality, linearity, and homogeneity of variance were evaluated. Specifically, a standardized frequency histogram was produced, Figures 1-4, to provide visual evidence of normality or non-normality for the two dependent variables. As depicted in Figure 1, the normalized histogram suggests no detectable *skewness* and no identifiable *kurtosis*; For 2009/10 with enrollment of 2,000 or fewer ( $n = 55$ ), skewness = .076, kurtosis = .074.

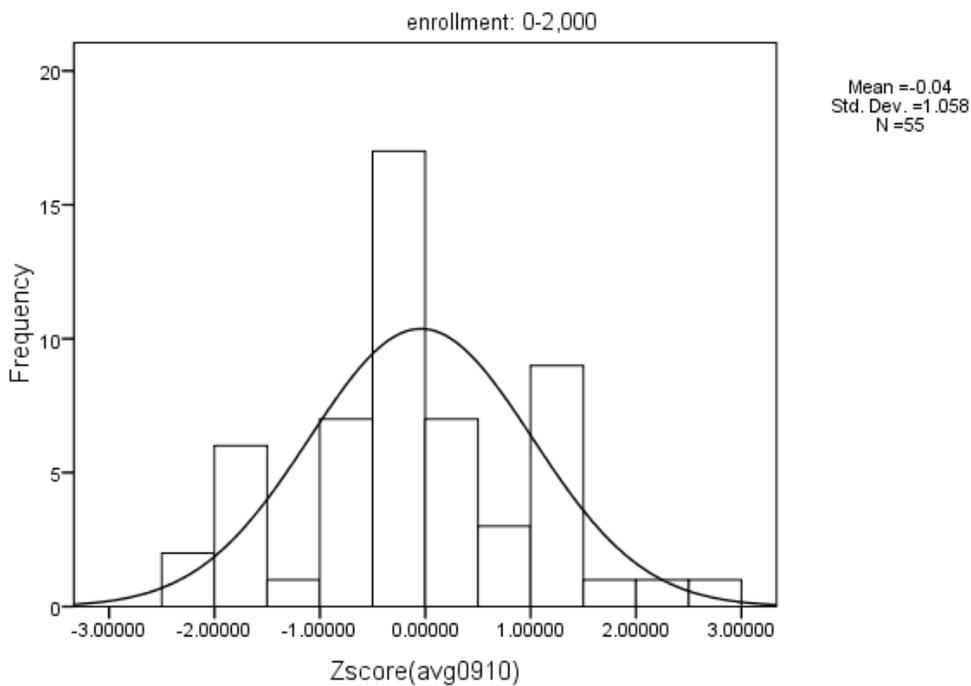


Figure 1. Standardized histogram of the 2009/10 dependent variable

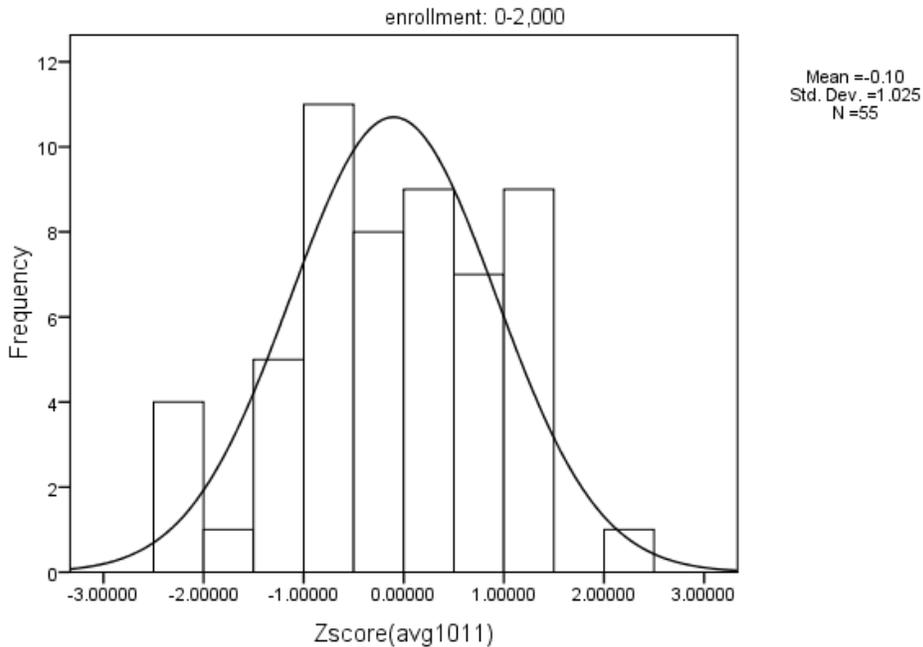


Figure 2. Standardized histogram of the 2010/11 dependent variable

As depicted in Figure 2, the normalized histogram suggested no detectable *skewness* and no identifiable *kurtosis*; for 2010/11 with enrollment of 2,000 or fewer ( $n = 55$ ), skewness =  $-.244$ , kurtosis =  $-.417$ . Associated descriptive statistics for the two dependent variables by enrollment group were presented in Table 4. Using z-scores to evaluate normality, the dependent variable is assumed to meet parametric assumptions. That is, z-scores were created by dividing the skewness coefficient ( $.076$  and  $-.244$ ) by the standard error of skewness ( $.322$ ). The resulting z-score coefficient of  $0.236$  and  $-.758$  respectively, was compared to  $\pm 3.30$ ,  $p > .001$  and found to not exceed this critical value. Gravetter and Wallnau (2007) suggest that z-scores exceeding this critical value may represent a non-normal distribution. The dependent variables cut by

enrollment group were investigated in the same manner and all were found to be normally distributed. As depicted in Figure 3, the normalized histogram suggests no detectable *skewness* and no identifiable *kurtosis*; For 2009/10 with enrollment of 2,001+ ( $n = 57$ ), skewness =  $-.536$ , kurtosis =  $.798$ .

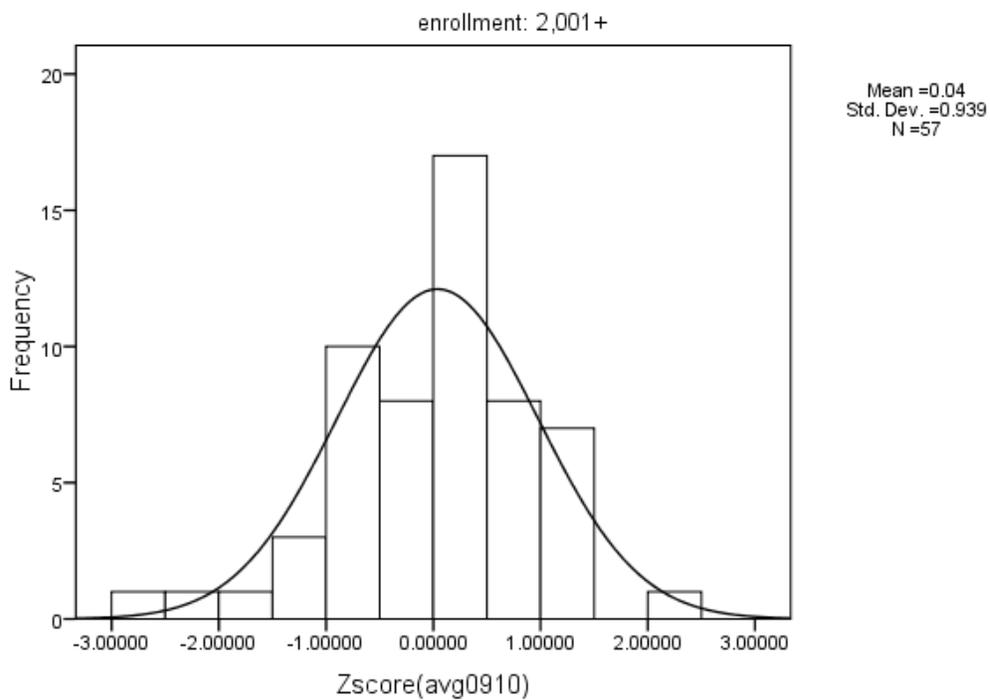


Figure 3. Standardized histogram of the 2009/10 dependent variable

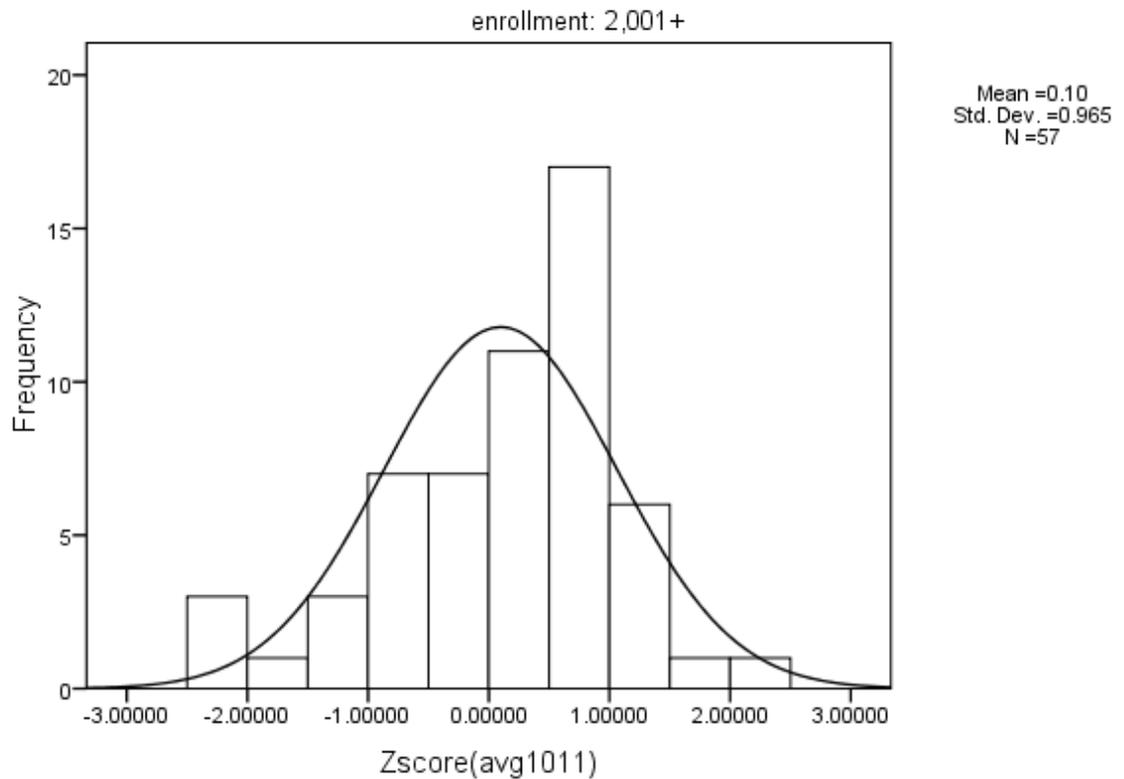


Figure 4. Standardized histogram of the 2010/11 dependent variable

As depicted in Figure 4, the normalized histogram suggests no detectable *skewness* and no identifiable *kurtosis*; For 2010/11 with enrollment of 2,001+ ( $n = 57$ ), skewness =  $-.718$ , kurtosis =  $.612$ .

Associated descriptive statistics for the two dependent variables by enrollment group were presented in Table 4. Using  $z$ -scores to evaluate normality, the dependent variable is assumed to meet parametric assumptions. That is,  $z$ -scores were created by dividing the skewness coefficient ( $-.536$  and  $-.718$ ) by the standard error of skewness ( $.316$ ). The resulting  $z$ -

score coefficient of -1.696 and -2.272 respectively, was compared to  $\pm 3.30$ ,  $p > .001$  and found to not exceed this critical value.

**Homogeneity of dispersion.** The assumption of homogeneity of dispersion was investigated by running *Box's M* test in SPSS version 16. *Box's M* test yields an approximation to the *F* distribution, and tests the assumption of homogeneity of the variance-covariance matrices (Green & Salkind, 1997). Results from the test suggested that the distributions were equal despite the unequal sample size across groups (0-2000 =  $n = 55$  and 2000+ =  $n = 57$ ); *Box's M* = 3.708,  $F(3, 2272194) = 1.212$ ,  $p = .304$ .

**Levene's test.** To examine the assumption of homogeneity of variance Levene's test was run. Homogeneity of variance was evaluated to determine if distributions were equal across levels of the Independent variables ( $\leq 2,000$ ,  $>2,000$ ). Results from Levene's test found that the distributions were equal across groups of the independent variables for each dependent variable; 2009/10,  $F(1,110) = .879$ ,  $p = .351$  and 2010/11,  $F(1,110) = .770$ ,  $p = .382$ . These results suggested that the respective distributions were equally distributed.

Based upon the evidence provided, normality of the dependent variables was affirmed. That is, after examining the Normalized Frequency Histograms, descriptive statistics and *Box's M* test, the variables were assumed to mostly meet parametric assumptions.

**Profile analysis of research question 1.** Research question one asked: What affect did student enrollment have on pre 2009/10 school year mentoring and induction practices and 2010/11 school year predicted mentoring and induction practices provided to novice teachers by school corporation leaders?

The question was tested using profile analysis which tested if the two groups ( $\leq 2,000$  enrollment,  $>2,000$  enrollment) had the same pattern of means across the two years (2009/10,

2010/11). In profile analysis, three distinct tests were run including parallelism test, levels test, and flatness test. The parallelism test determined if  $\leq 2,000$  enrollment and  $> 2,000$  enrollment led to the same pattern of teacher support across years 2009/10 and 2010/11. The levels test determined if the main effect of condition, Enrollment group, affected overall novice teacher support. That is, does type of group ( $\leq 2,000$  enrollment,  $> 2,000$  enrollment) differ on overall novice teacher support. The flatness test determined if the two dependent variables elicited the same response across years.

Results from the profile analysis revealed that the within subjects test (flatness) was significant, Wilks-Lambda = .863,  $F(1,110) = .17.416a$ ,  $p < .001$ , partial eta squared = .137, power = .985. Mean score for school year 2009/10 = 2.059 and mean score for school year 2010/11 = 1.958. In addition, for the levels test, there was no significant difference in overall school year score between school enrollment ( $\leq 2,000$ ,  $> 2,000$ )  $F(1,110) = 2.474$ ,  $p = .119$ , partial eta-squared = .022, power = .344. Estimated means for  $\leq 2,000 = 1.962$  and estimated marginal means for  $> 2,000 = 2.054$ . And finally, for the parallelism test, no significant interaction was found, Wilks-Lambda = 1.00,  $F(1,110) = .039a$ ,  $p = .844$ , partial eta squared =  $< .001$ , power = .054.

Table 5

*Inferential Statistics for Each of the Three Tests (Flatness, Levels, and Parallelism)*

Effect	Wilks' Lambda	<i>F</i>	Sig.	$\eta$	Power <sub>b</sub>
School Year (Flatness)	0.863	17.416a	0.000	0.137	0.985
Enrollment (Levels Test)		2.474	0.119	0.022	0.344
School Year * Enrollment	1.000	.039a	0.844	0.000	0.054

Note. a = exact statistic; b = computed using alpha = .05; \*\*\* =  $p < .001$

Figure 5 presents a graphical depiction of the parallelism tests. Results suggest that no interaction was evident. Further, a main effect of condition (levels test) was not detected. However, the flatness test or within subjects test was significant at  $p < .001$ .

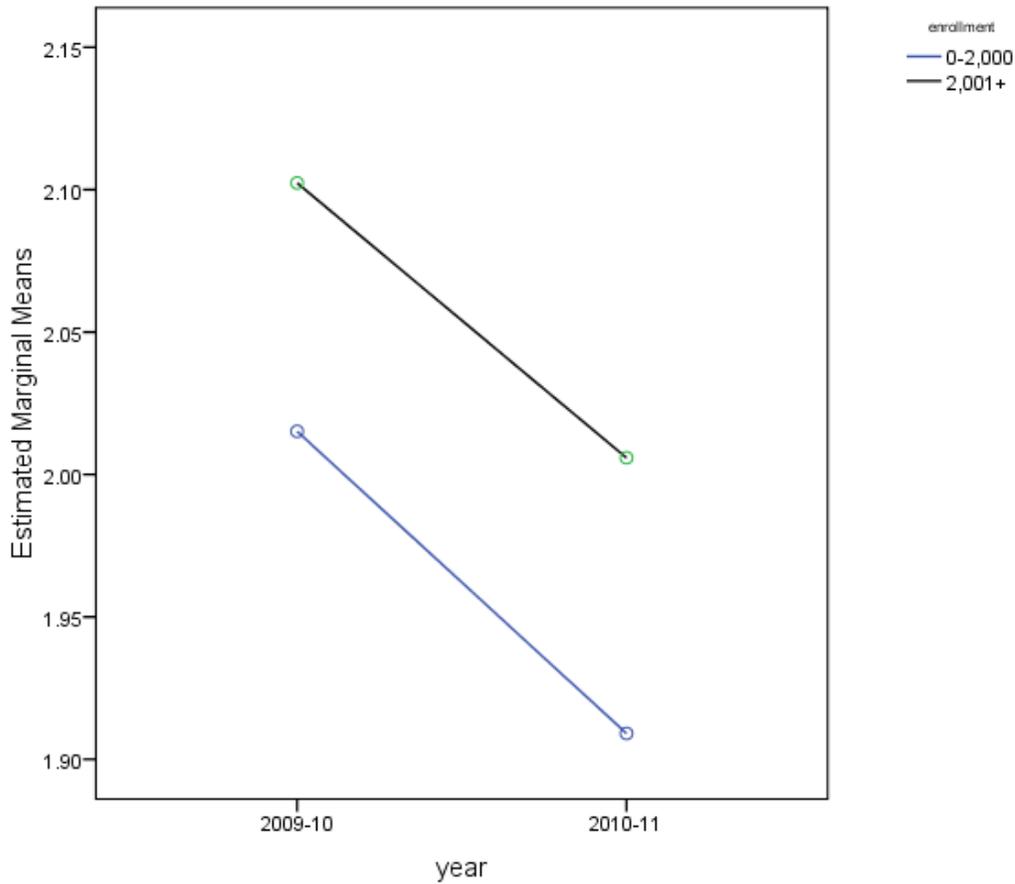


Figure 5. Estimated marginal means of school years (2009/10, 2010/11) by school enrollment

## Research Question 2

What affect did school location have on pre 2009/10 school year mentoring and induction practices and 2010/11 school year predicted mentoring and induction practices provided to novice teachers by school corporation leaders?

Research Question two was analyzed using profile analysis. Profile analysis was employed to determine if a relationship existed between new teacher support and school location. The dependent variables, new teacher support for 2009/10 and 2010/2011, were derived by adding up scores across relative questions and then dividing by the number of questions asked. For the 2009/10 school year sub-construct, scores ranged from 1.33 to 2.83 with a mean of 2.059 and standard deviation of .288. For the 2010/11 school year sub-construct, scores ranged from 1.00 to 2.83 with a mean of 1.96 and standard deviation of .38.

Table 6 presents the descriptive statistics for the two dependent variables school year 2009/10 and school year 2010/11 by school location categories, rural ( $n = 69$ ) and suburban/urban ( $n = 43$ ). For the 2009/10 school year, location category rural the minimum score was 1.33 and the maximum score was 2.83 with a mean of 2.02, standard deviation, .29, skew, .020, standard error of skew, .289, kurtosis, .163 and standard error of kurtosis, .570. For the 2010/11 school year, location category rural the minimum score was 1.00 and the maximum score was 2.75 with a mean of 1.95, standard deviation, .38, skew, -.401, standard error of skew, .289, kurtosis, -.420 and standard error of kurtosis, .570. For the 2009/10 school year, location category suburban/urban the minimum score was 1.33 and the maximum score was 2.75 with a mean of 2.12, standard deviation, .27, skew, -.674, standard error of skew, .361, kurtosis, 1.101 and standard error of kurtosis, .709. For the 2010/11 school year, location category suburban/urban the minimum score was 1.08 and the maximum score was 2.83 with a mean of 1.98, standard deviation, .38, skew, -.604, standard error of skew, .361, kurtosis, .643 and standard error of kurtosis, .709.

Table 6

*Descriptive Statistics for the Two Dependent Variables by School Location*

Enroll	DV	Min	Max	Mean	SD	Skew	SE	Kurtosis	SE
Rural	0910	1.33	2.83	2.02	.29	.020	0.289	.163	0.570
	1011	1.00	2.75	1.95	.38	-0.401	0.289	-0.420	0.579
Suburban/Urban	0910	1.33	2.75	2.12	.27	-0.674	0.361	1.101	0.709
	1011	1.08	2.83	1.98	.38	-0.604	0.361	0.643	0.709

*Note.* For total 2009/10,  $n = 70$ , for total 2010/11,  $n = 43$

**Missing data and univariate outliers.** Cases with missing data were investigated by running frequency counts in SPSS 16.0. No cases with missing data were found in the data set; thus, for Research Question two, 69 responses from participants were received for location group rural and 43 were responses from participants were received for location group suburban/urban.

A test for univariate outliers was conducted and none were found to exist within the two dependent variables (New Teacher Support 2009/10 and 2010/11). Univariate outliers were investigated by converting observed scores to  $z$ -scores and then comparing case values to the critical value of  $\pm 3.30$ ,  $p < .001$ . Case  $z$ -scores that exceeded this value were greater than three standard deviations from the normalized mean.

**Tests of normality.** Before Research Question two was analyzed, basic parametric assumptions were assessed. That is, for the criterion variable, assumptions of normality, linearity, and homogeneity of variance were evaluated. Specifically, a standardized frequency histogram was produced to provide visual evidence of normality or non-normality for the two dependent variables (Figures 6-9). As depicted in Figure 6, the normalized histogram suggests

no detectable *skewness* and no identifiable *kurtosis*; For 2009/10 with rural location ( $n = 69$ ), skewness = .020, kurtosis = .163.

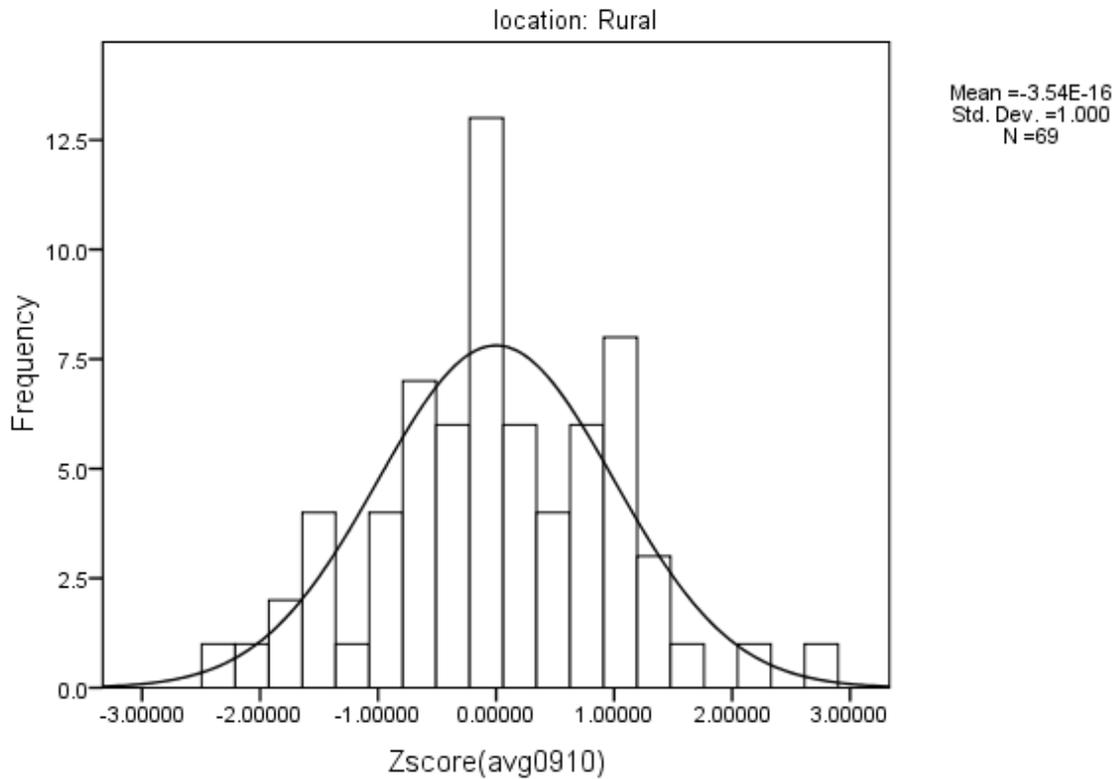


Figure 6. Standardized histogram of the 2009/10 dependent variable

As depicted in Figure 7, the normalized histogram suggests no detectable *skewness* and no identifiable *kurtosis*; for 2010/11 with rural location ( $n= 69$ ), skewness = -.401, kurtosis = -.420. Associated descriptive statistics for the two dependent variables by enrollment group were presented in Table 6. Using  $z$ -scores to evaluate normality, the dependent variable was assumed to meet parametric assumptions. That is,  $z$ -scores were created by dividing the skewness coefficient (.020 and -.401) by the standard error of skewness (.289). The resulting  $z$ -score

coefficient of 0.069 and -1.388 respectively, was compared to  $\pm 3.30$ ,  $p > .001$  and found to not exceed this critical value. Gravetter and Wallnau (2007) suggested that  $z$ -scores exceeding this critical value may represent a non-normal distribution. The dependent variables cut by enrollment group were investigated in the same manner and all were found to be normally distributed.

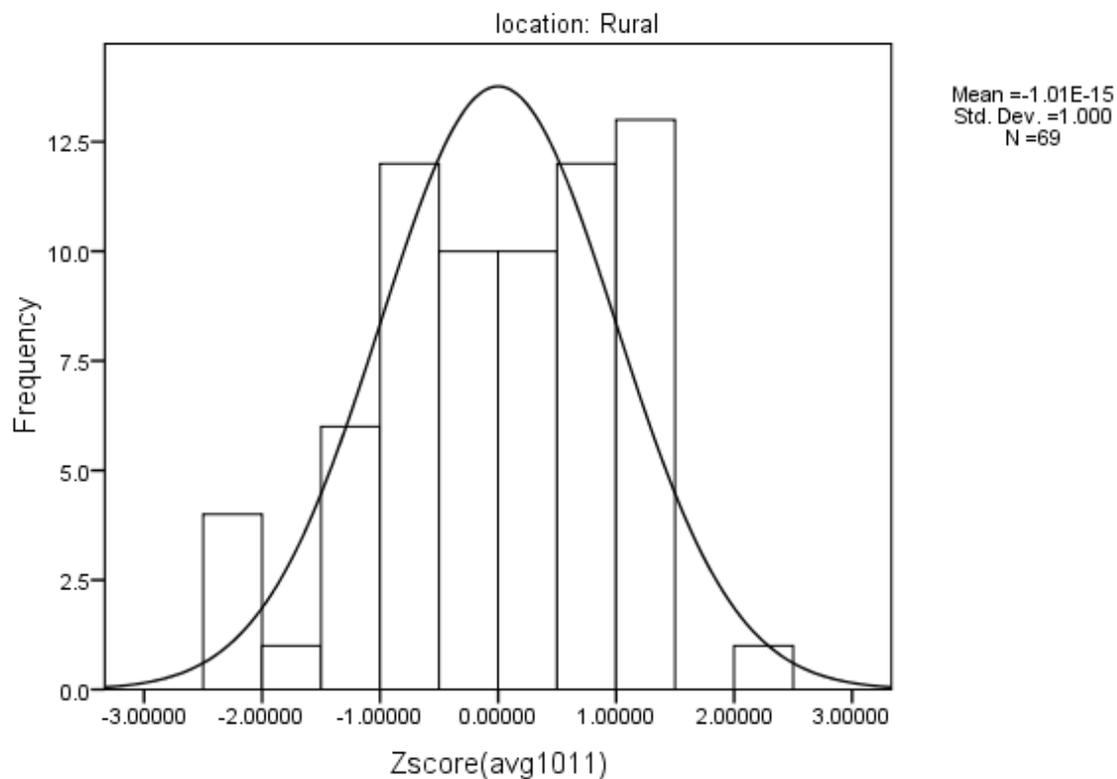


Figure 7. Standardized histogram of the 2010/11 dependent variable

As depicted in Figure 8, the normalized histogram suggests no detectable *skewness* and no identifiable *kurtosis*; For 2009/10 with suburban/urban location ( $n = 43$ ), skewness =  $-0.674$ , kurtosis =  $1.101$ .

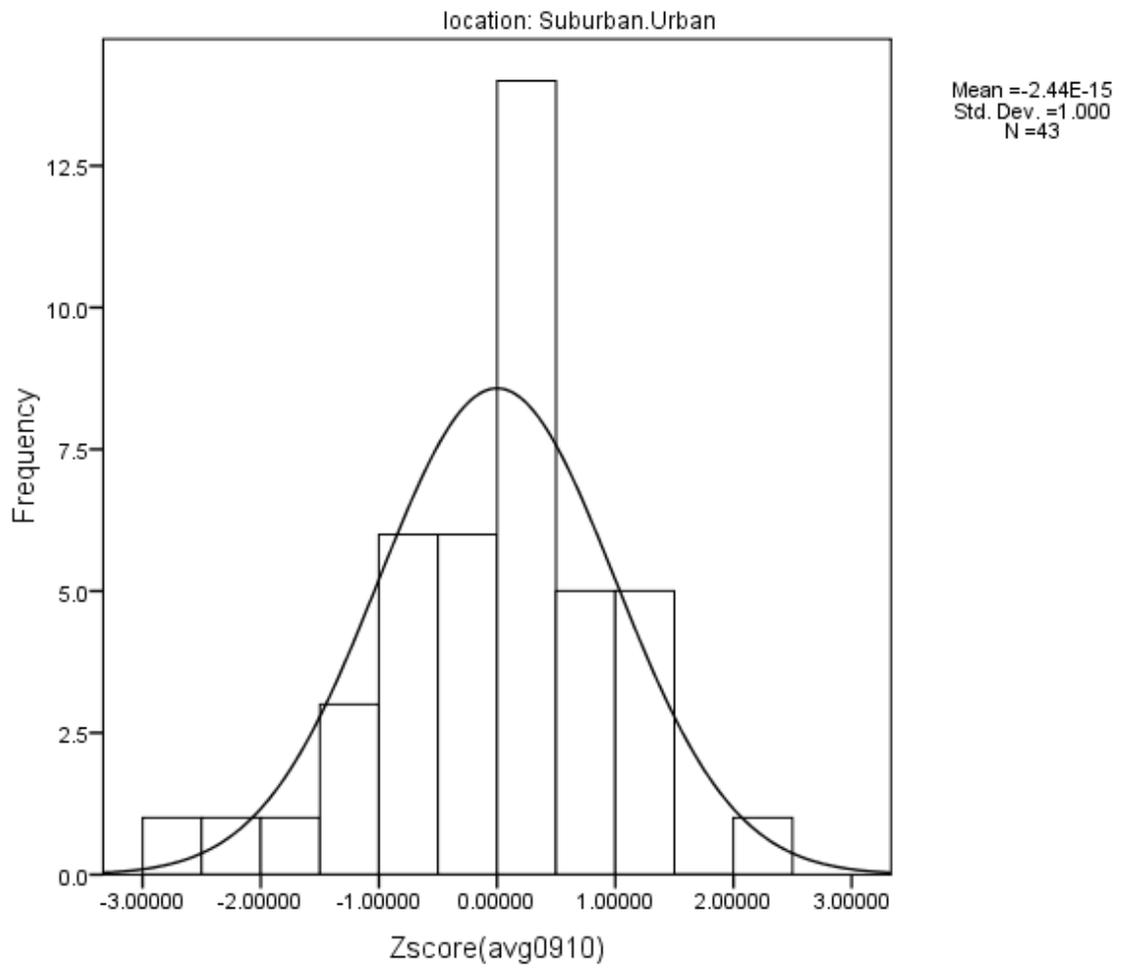


Figure 8. Standardized histogram of the 2009/10 dependent variable

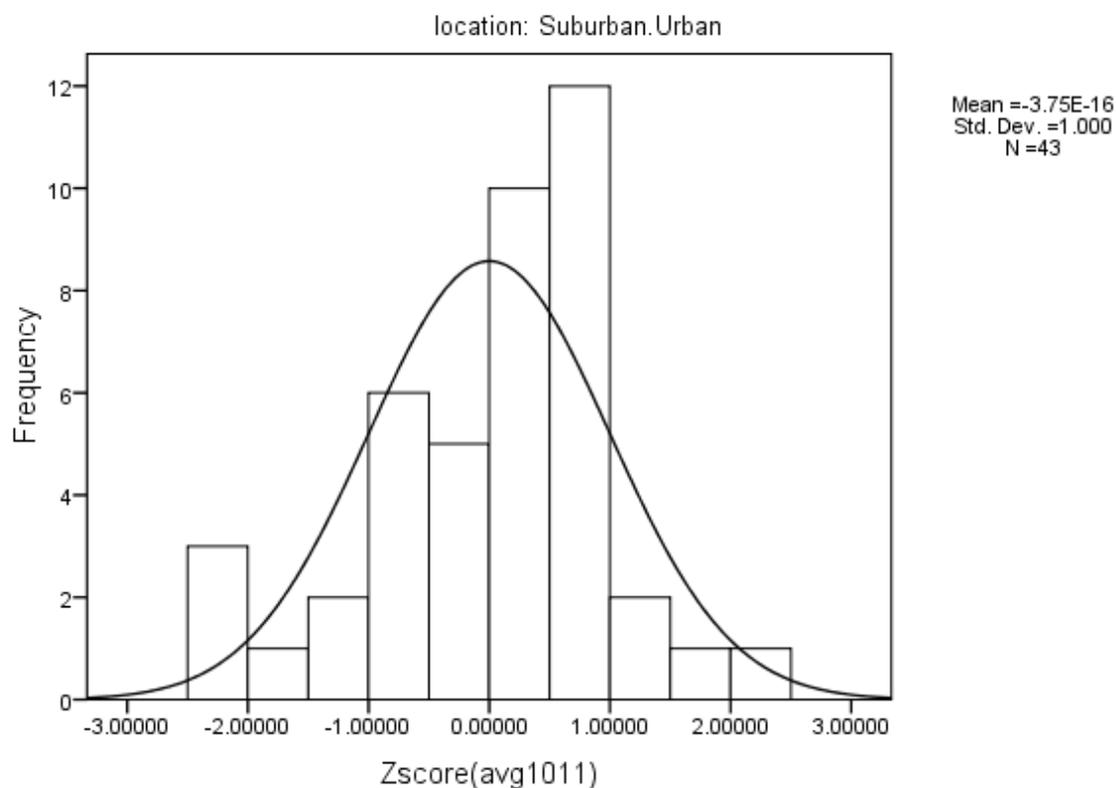


Figure 9. Standardized histogram of the 2010/11 dependent variable

As depicted in Figure 9, the normalized histogram suggests no detectable *skewness* and no identifiable *kurtosis*; for 2010/11 with suburban/urban location ( $n=43$ ), skewness =  $-.604$ , kurtosis =  $.643$ . Associated descriptive statistics for the two dependent variables by school location were presented in Table 6. Using  $z$ -scores to evaluate normality, the dependent variable is assumed to meet parametric assumptions. That is,  $z$ -scores were created by dividing the skewness coefficient ( $-.674$  and  $-.604$ ) by the standard error of skewness ( $.361$ ). The resulting  $z$ -

score coefficient of -1.867 and -1.673 respectively, was compared to  $\pm 3.30$ ,  $p > .001$  and found to not exceed this critical value.

**Homogeneity of dispersion.** The assumption of homogeneity of dispersion was investigated by running *Box's M* test in SPSS version 16. *Box's M* test yields an approximation to the  $F$  distribution, and tests the assumption of homogeneity of the variance-covariance matrices (Green & Salkind, 1997). Results from the test suggested that the distributions were equal despite the unequal sample size across groups (Rural =  $n = 69$  and Suburban/Urban =  $n = 43$ );  $Box's M = .993$ ,  $F(3, 324638) = .324$ ,  $p = .808$ .

**Levene's test.** To examine the assumption of homogeneity of variance Levene's test was run. Homogeneity of variance is evaluated to determine if distributions are equal across levels of the Independent variables (Rural, Suburban/Urban). Results from Levene's test found that the distributions were equal across groups of the independent variables for each dependent variable; 2009/10,  $F(1,110) = .389$ ,  $p = .534$  and 2010/11,  $F(1,110) = .358$ ,  $p = .551$ . These results suggested that the respective distributions were equally distributed.

Based upon the evidence provided, normality of the dependent variables was affirmed. That is, after examining the Normalized Frequency Histograms, descriptive statistics and *Box's M* test, the variables were assumed to mostly meet parametric assumptions.

**Profile analysis of research question 2.** Research question two asked: What affect did school location have on pre 2009/10 school year mentoring and induction practices and 2010/11 school year predicted mentoring and induction practices provided to novice teachers by school corporation leaders?

The question was tested using profile analysis which tests if the two groups (rural location, suburban/urban location) had the same pattern of means across the two years (2009/10,

2010/11). In profile analysis, three distinct tests were run including parallelism test, levels test, and flatness test. The parallelism test determined if rural location and suburban/urban location led to the same pattern of teacher support across years 2009/10 and 2010/11. The levels test determined if the main effect of condition, school location, affected overall novice teacher support. That is, does type of group (rural location, suburban/urban) differ on overall novice teacher support. The flatness test determined if the two dependent variables elicited the same response across years.

Results from the profile analysis revealed that the within subjects test (flatness) was significant, Wilks-Lambda = .852,  $F(1,110) = .19.152a$ ,  $p < .001$ , partial eta squared = .148, power = .991. Mean score for school year 2009/10 = 2.059 and mean score for school year 2010/11 = 1.958. In addition, for the levels test, there was no significant difference in overall school year score between school location (rural, suburban/urban)  $F(1,110) = 1.017$ ,  $p = .316$ , partial eta-squared = .009, power = .170. Estimated means for rural location = 1.99 and estimated marginal means for suburban/urban location = 2.05. And finally, for the parallelism test, no significant interaction was found, Wilks-Lambda = .986,  $F(1,110) = .1.578a$ ,  $p = .212$ , partial eta squared = .014, power = .238.

Table 7 displays the inferential statistics for each type of test, flatness, levels, and parallelism. As evidenced, only the flatness test was significant. That is, participants reported more support for school year 2009/10 compared to school year 2010/11.

Table 7

*Inferential Statistics for Each of the Three Tests (Flatness, Levels, and Parallelism)*

Effect	Wilks' Lambda	<i>F</i>	Sig.	$\eta$	Power <sub>b</sub>
School Year (Flatness)	0.852	19.152a	0.000	0.148	0.991
Location (Levels Test		1.017	0.316	0.009	0.170
School Year * Location	.986	1.578a	0.212	0.014	0.238

Note. a = exact statistic; b = computed using alpha = .05;  $p < .001$

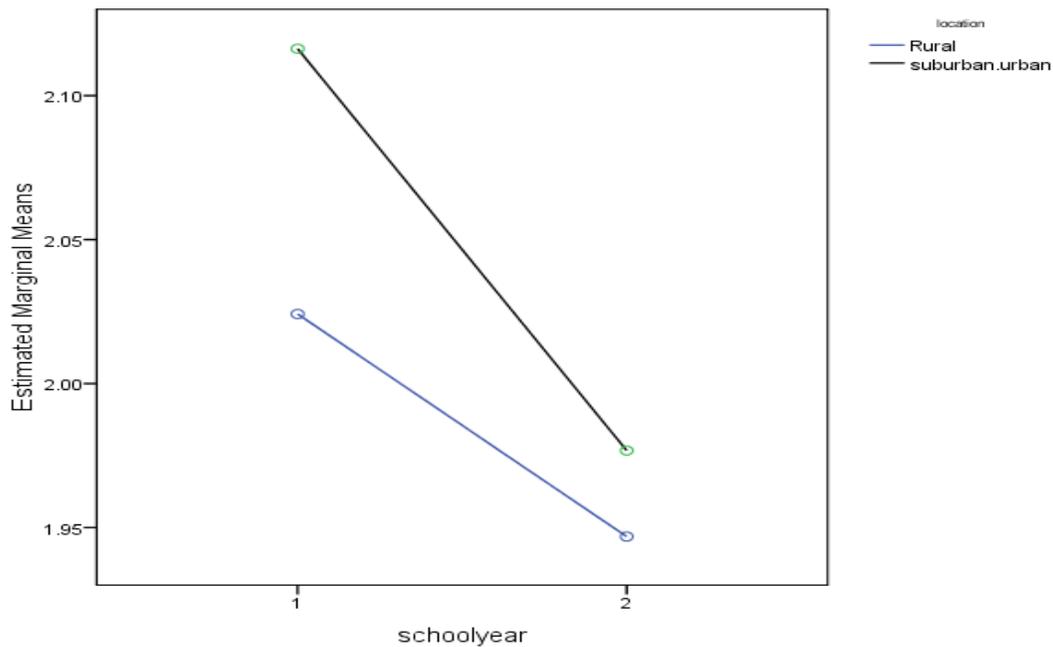


Figure 10. Estimated marginal means of school years (2009/10, 2010/11) by school location

Figure 10 presents a graphical depiction of the parallelism tests. Results suggest that no interaction was evident. Further, a main effect of condition (levels test) was not detected.

However, the flatness test or within subjects test was significant at  $p < .001$ .

## **Descriptive Analysis**

Superintendents were asked to report the average number of new teachers hired in the past five years and the number of new teachers they expected to hire for the 2010/11 school year. Superintendents were also asked if the IDOE's revocation of the mentor component of IMAP and/or the recent budget shortfall impacted the assignment of mentors to novice teachers.

**Data report for research question 3.** Research question three asked: Did the number of new teachers hired to work in Indiana Public Schools change from the reported past five years average to the anticipated number hired for the 2010/11 school year?

Respondents ( $n = 112$ ) were asked, on average, how many new teachers have you hired in the past five years? As shown in Figure 11, the responses had a mean of 14.90. Table 8 shows the breakdown of responses. The minimum of zero new teachers hired was reported by one respondent (.9%) and the maximum of 100 new teachers hired was reported by two respondents (1.8%). The highest rate of response was an average of five new teachers hired in the past five years with 21 respondents (18.8%). This was followed by 12 responding (10.7%) with an average of two new teachers hired and 10 responding (8.9%) with an average of four new teachers hired.

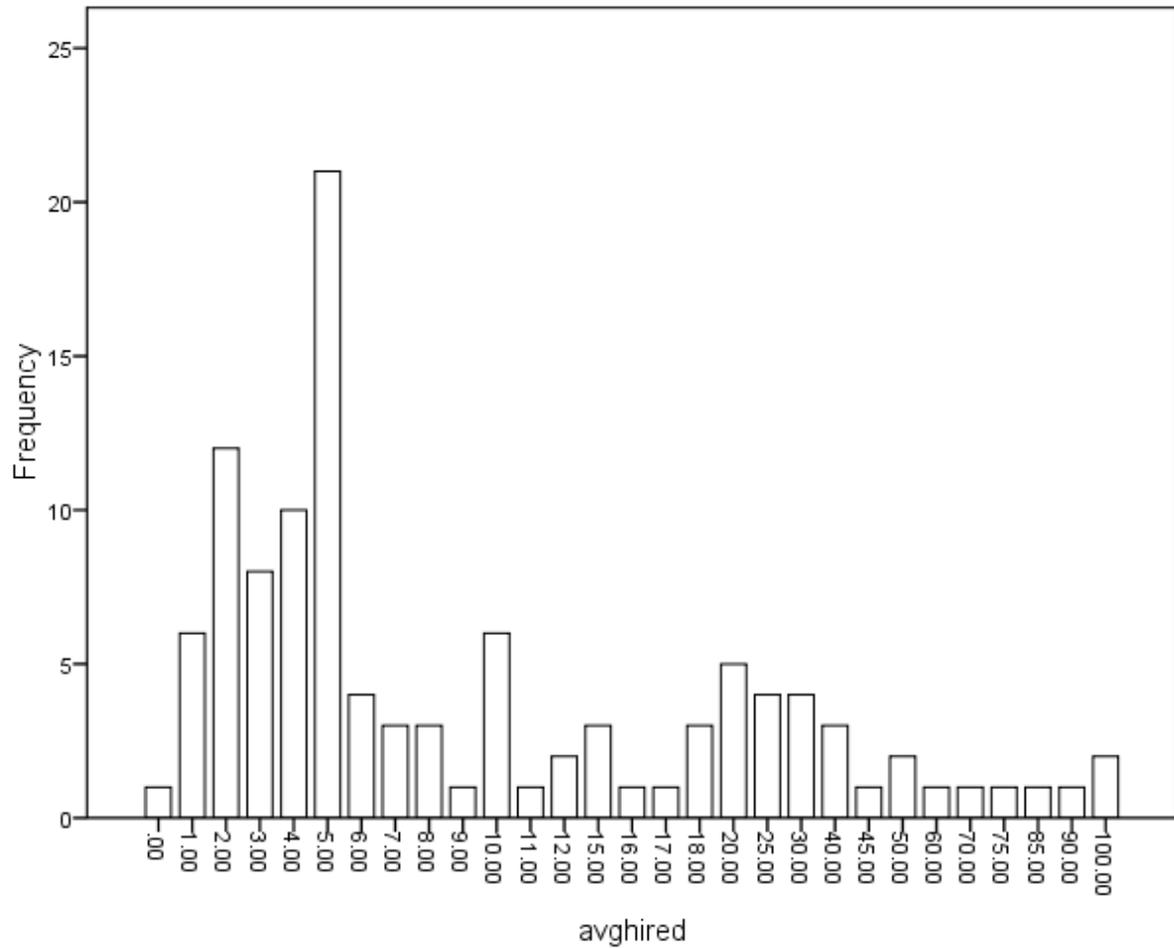


Figure 11. Reported average number of new teachers hired in the last five years

Table 8

*Responses for On Average, How Many New Teachers Have You Hired in the Past Five Years*

Average Number Hired	F	%	Cumulative %
0	1	0.9	0.9
1	6	5.4	6.2
2	12	10.7	17.0
3	8	7.1	24.1

Table 8 (continued)

Average Number Hired	<i>F</i>	%	Cumulative %
4	10	8.9	33.0
5	21	18.8	51.8
6	4	3.6	55.4
7	3	2.7	58.0
8	3	2.7	60.7
9	1	0.9	61.6
10	6	5.4	67.0
11	1	0.9	67.9
12	2	1.8	69.6
15	3	2.7	72.3
16	1	0.9	73.2
17	1	0.9	74.1
18	3	2.7	76.8
20	5	4.5	81.2
25	4	3.6	84.8
30	4	3.6	88.4
40	3	2.7	91.1
45	1	0.9	92.0
50	2	1.8	93.8
60	1	0.9	94.6
70	1	0.9	94.6

Table 8 (continued)

Average Number Hired	<i>F</i>	%	Cumulative %
75	1	0.9	96.4
85	1	0.9	97.3
90	1	0.9	98.2
100	2	1.8	100.0

Respondents ( $n = 112$ ) were asked how many new teachers do you expect to hire for the 2010/11 school year? As shown in Figure 12, the responses had a mean response of 6.88. Table 9 shows the breakdown of responses. The minimum of zero new teachers expected to be hired was reported by 23 respondents (20.5%) and the maximum of 85 new teachers expected to be hired was reported by one respondent (.9%). The highest rate of response was zero new teachers expected to be hired. This was followed by 15 responding (13.4%) with one new teacher expected to be hired and 14 responding (12.5%) with two new teachers expected to be hired.

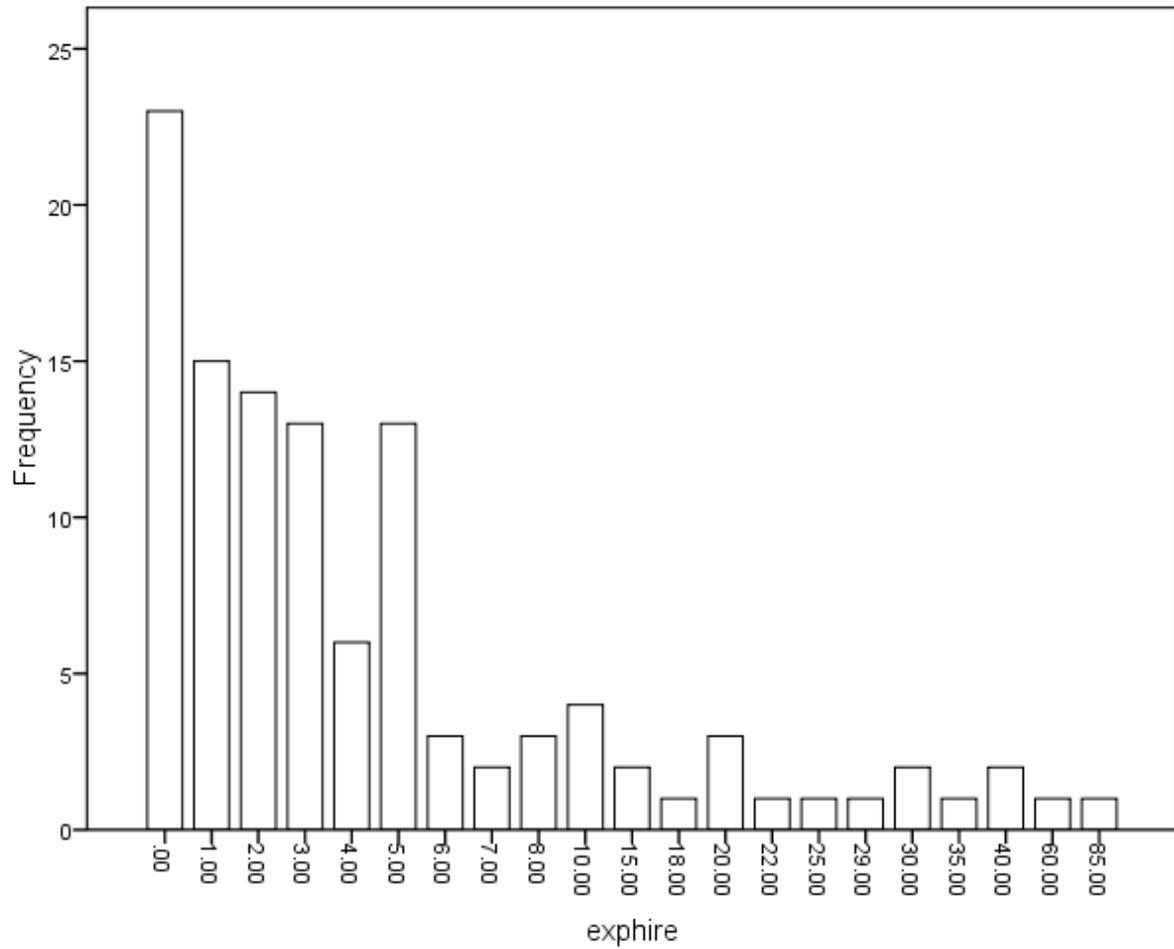


Figure 12. Reported number of new teachers expected to hire for the 2010/11 school year

Table 9

Reported Number of New Teachers Expected to Hire for the 2010/11 School Year

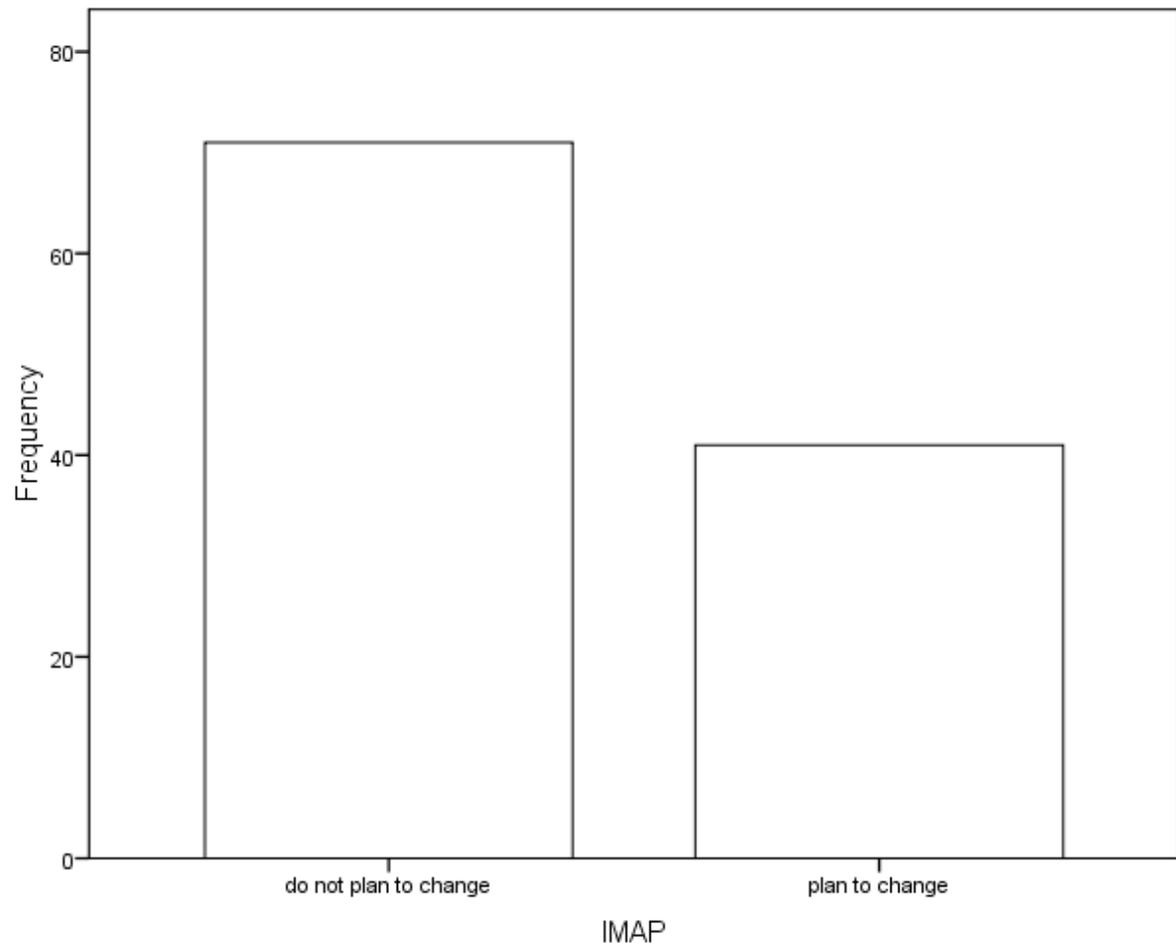
Average Expected to Hire	F	%	Cumulative %
0	23	20.5	20.5
1	15	13.4	33.9
2	14	12.5	46.4
3	13	11.6	58.0

Table 9 (continued)

Average Expected to Hire	<i>F</i>	%	Cumulative %
4	6	5.4	63.4
5	13	11.6	75.0
6	3	2.7	77.7
7	2	1.8	79.5
8	3	2.7	82.1
10	4	3.6	85.7
15	2	1.8	87.5
18	1	0.9	88.4
20	3	2.7	91.1
22	1	0.9	92.0
25	1	0.9	92.9
29	1	0.9	93.8
30	2	1.8	95.5
35	1	0.9	96.4
40	2	1.8	98.2
60	1	0.9	99.1
85	1	0.9	100.0

**Data report for research Question 4.** Research question four asked: Did school corporation officials reduce or discontinue assigning mentors to novice teachers due to the fact that mentors are no longer a requirement of IMAP? The majority of the respondents ( $n = 71$ ,

63.4%) as shown in Table 10 indicated that they had not or did not plan to change their assignment of mentors to novice teachers due to the IDOE's revocation of the mentor requirement.



*Figure 13.* Response to IMAP question

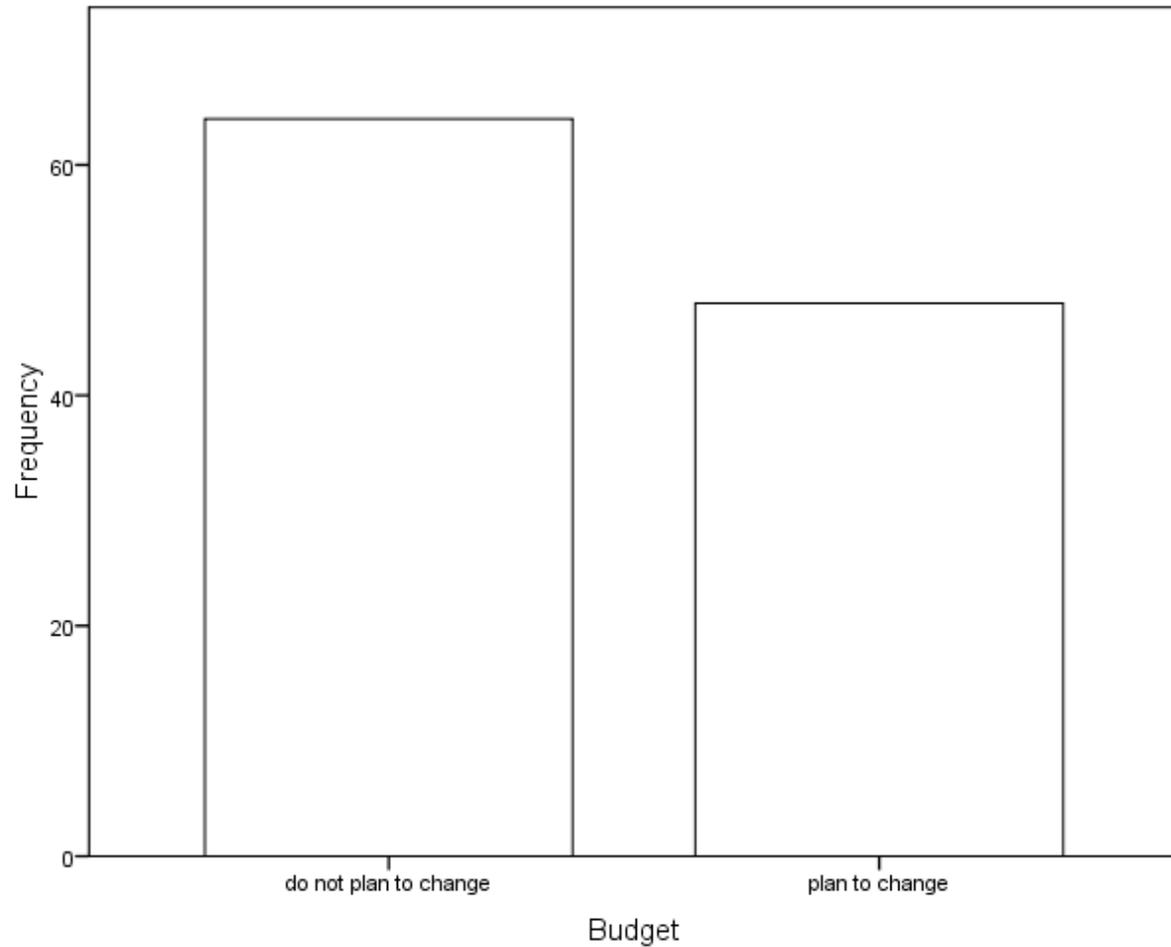
**Data report for research question 5.** Research question five asked: Did school corporation officials reduce or discontinue assigning mentors to novice teachers as a cost containment strategy? The majority of the respondents ( $n = 64$ , 57.1%) as shown in Table 11 indicated that they had not or did not plan to change their assignment of mentors to novice teachers as a cost containment strategy.

Table 10

*Response to Changes in Assignment of Mentors Due to Change in IMAP Requirements by IDOE*

Strategy Statement	<i>F</i>	%
Did not plan to change	71	63.4
Planned to change	41	36.6

*Note.* Responses were made on a dichotomous scale (yes = 2; no = 1); a yes response indicate they have changed or planned to change assigning mentors to novice teachers due to a change in IMAP requirements.



*Figure 14.* Response to budget question

Table 11

*Response to Changes in Assignment of Mentors as a Cost Containment Strategy*

Strategy Statement	<i>F</i>	%
Did not plan to change	64	57.2
Planned to change	48	42.9

*Note.* Responses were made on a dichotomous scale (yes = 2; no = 1); a yes response indicate they have changed or planned to change assigning mentors to novice teachers due to a change in IMAP requirements.

**Summary**

A self-administered survey, *Indiana School Corporation Induction and Mentoring Survey*, was sent to all 293 Indiana K-12 Public School Superintendents. The sample consisted of 112 completed surveys, which equated to an overall response rate of 38.2%. The data were analyzed based upon two enrollment categories, 2,000 or fewer students and 2,001+ students. Fifty-five respondents indicated enrollments of 2,000 or fewer (49%), while 57 indicated enrollments of 2,001+ (51%). The data were also analyzed by location, rural and suburban/urban with 69 respondents (62%) indicating a rural location and 43 respondents (48%) indicating a suburban/urban location.

The Statistical Package for the Social Sciences (SPSS) version 16 was used to code and tabulate scores collected from the survey and provide summarized values where applicable including the median, mean, central tendency, variance, and standard deviation. In addition, demographic data was processed using frequency statistics and reliability analysis was conducted using Cronbach's alpha test. Finally, profile analysis, was used to detect amount of shared variance and strength of relationship between the variables of interest.

Prior to analyzing the two main research questions, data hygiene and data screening were conducted to ensure the variables of interest met appropriate statistical assumptions. Thus, the following analyses followed a similar analytic strategy in that the dependent variables were first evaluated for parametric assumptions. Next, profile analysis was run to determine if any relationships existed between variables of interest.

Profile analysis was conducted to determine if the two enrollment groups ( $\leq 2,000$ ,  $> 2,000$ ) differed on overall novice teacher support between 2009/10 and 2010/11. Statistical significance was not found between enrollment groups regarding novice teacher support. Profile analysis was also conducted to determine if the two location groups (rural, suburban/urban) differed on overall teacher support between 2009/10 and 2010/11. Statistical significance was not found between location groups regarding novice teacher support. Profile analysis did indicate a significant difference between the reported support provided to novice teachers during the 2009/10 school year as compared to the support predicted to be provided during the 2010/11 school year.

School corporation officials reported a reduction in the number of new teachers hired in the previous five years (mean, 14.90) as compared to the number of new teachers expected to be hired for the 2010/11 school year (mean, 6.88). The majority of the respondents ( $n = 71$ , 63.4%) indicated that they had not or did not plan to change their assignment of mentors to novice teachers due to the IDOE's revocation of the mentor requirement. In addition, the majority of the respondents ( $n = 64$ , 57.1%) indicated that they had not or did not plan to change their assignment of mentors to novice teachers as a cost containment strategy.

Chapter 5 addresses what factors could be responsible for the statistical significance found in the overall change in novice teacher support provided by school corporation officials

from the 2009/10 school year to the predicted support provided in the 2010/11 school year.

Recommendations for further study are also suggested in Chapter 5.

## CHAPTER 5

### **Findings and Recommendations**

#### **Purpose of the Study**

The purpose of this study was to examine how school corporation officials in Indiana's K-12 public schools support first and second year teachers through induction and mentoring practices. An analysis was made to determine the adequacy of novice teacher support based on state and national recommendations for effective induction and mentoring practices. The collected data was analyzed to determine if the level of support that Indiana school corporation officials provide novice teachers differed due to student enrollment and/or school location (i.e. rural or urban/suburban) across the 2009/10 school year to the 2010/11 school year.

Additionally, superintendents were asked to report the average number of new teachers hired in the past five years and the number of new teachers they expected to hire for the 2010/11 school year. Superintendents were also asked if the IDOE's revocation of the mentor component of IMAP and/or the recent budget shortfall impacted the assignment of mentors to novice teachers.

Ingersoll and Smith (2003) identified that beginning teachers who receive comprehensive induction packages have far higher retention rates than those who receive fewer supports. A comprehensive list of induction components includes, mentor from same field, beginner's seminars, common planning time, collaboration with others, external teacher network, supportive

communication, reduced schedule, reduced preparations and teacher aide. By analyzing the National Center for Educational Statistics' Schools and Staffing Survey and the Teacher Follow-up Survey, they found that the following components were most often associated with reduced attrition of new teachers; "having a mentor in the same field, having common planning time with other teachers in the same subject, having regularly scheduled collaboration with other teachers, and being part of an external network of teachers" (Ingersoll & Smith, 2003, p. 35). The data suggested that the more induction components received, the more likely the new teacher would be retained. Specifically, for those receiving all suggested induction components, their retention rate was 50% greater than those receiving no induction.

### **Research Questions**

1. What affect did student enrollment have on pre 2009/10 school year mentoring and induction practices and 2010/11 school year predicted mentoring and induction practices provided to novice teachers?
2. What affect did a school corporation's location (i.e., rural, urban/suburban) have on pre 2009/10 school year mentoring and induction practices and 2010/11 school year predicted mentoring and induction practices provided to novice teachers?
3. Did the number of new teachers hired to work in Indiana Public Schools change from the reported past five years average to the anticipated number hired for the 2010/11 school year?
4. Did school corporation officials reduce or discontinue assigning mentors to novice teachers due to the fact that mentors are no longer requirement of IMAP?
5. Did school corporation officials reduce or discontinue assigning mentors to novice teachers as a cost containment strategy?

## Summary of Findings

**Research Question 1.** What affect did student enrollment have on pre 2009/10 school year mentoring and induction practices and 2010/11 school year predicted mentoring and induction practices provided to novice teachers?

The question was tested using profile analysis which tests if the two groups ( $\leq 2,000$  enrollment,  $> 2,000$  enrollment) had the same pattern of means across the two years (2009/10, 2010/11). In profile analysis, three distinct tests are run including parallelism test, levels test, and flatness test. The parallelism test determines if  $\leq 2,000$  enrollment and  $> 2,000$  enrollment lead to the same pattern of teacher support across years 2009/10 and 2010/11. The levels test determines if the main effect of condition, Enrollment group, affects overall novice teacher support. That is, does type of group ( $\leq 2,000$  enrollment,  $>2,000$  enrollment) differ on overall support provided to novice teachers. The flatness test determines if the two dependent variables elicit the same response across years.

Results from the profile analysis revealed that the within subjects test (flatness) was significant, Wilks-Lambda = .863,  $F(1,110) = 17.416a$ ,  $p < .001$ , partial eta squared = .137, power = .985. Mean score for school year 2009/2010 = 2.059 and mean score for school year 2010/2011 = 1.958, based upon a scale from 1 – 3 with 3 = *maximum support*, 2 = *moderate support*, and 1 = *minimal support*. This data analysis indicates that there was a change in support provided to novice teachers between the 2009/10 school year (more support) and the 2010/11 school year (less support).

In addition, for the levels test, there was no significant difference in overall school year score between school enrollment ( $\leq 2,000$ ,  $> 2,000$ )  $F(1,110) = 2.474$ ,  $p = .119$ , partial eta-squared = .022, power = .344. Estimated means for  $\leq 2,000 = 1.962$  and estimated marginal

means for  $> 2,000 = 2.054$ . These results are interpreted to mean that there was not a relationship between school enrollment and support provided to novice teachers. And finally, for the parallelism test, no significant interaction was found, Wilks-Lambda = 1.00,  $F(1,110) = .039a$ ,  $p = .844$ , partial eta squared =  $< .001$ , power =  $.054$ . These results indicate that there was no interaction between school year and enrollment regarding induction and mentoring support provided to novice teachers.

**Research question 2.** What affect did school location have on pre 2009/10 school year mentoring and induction practices and 2010/11 school year predicted mentoring and induction practices provided to novice teachers?

The question was tested using profile analysis which tests if the two groups (rural location, suburban/urban location) had the same pattern of means across the two years (2009/10, 2010/11). In profile analysis, three distinct tests were run including parallelism test, levels test, and flatness test. The parallelism test determined if rural location and suburban/urban location led to the same pattern of teacher support across years 2009/10 and 2010/11. The levels test determined if the main effect of condition, school location, affected overall novice teacher support. That is, does type of group (rural location, suburban/urban) differ on overall support provided to novice teachers. The flatness test determined if the two dependent variables elicited the same response across years.

Results from the profile analysis revealed that the within subjects test (flatness) was significant, Wilks-Lambda =  $.852$ ,  $F(1,110) = 19.152a$ ,  $p < .001$ , partial eta squared =  $.148$ , power =  $.991$ . Mean score for school year 2009/10 =  $2.059$  and mean score for school year 2010/11 =  $1.958$ , based upon a scale from 1 – 3 with 3 = *maximum support*, 2 = *moderate support*, and 1 = *minimum support*. This data analysis revealed that there was a change in

support provided to novice teachers between the 2009/10 school year (more support) and the 2010/11 school year (less support).

In addition, for the levels test, there was no significant difference in overall school year score between school location (rural, suburban/urban)  $F(1,110) = 1.5017, p = .316$ , partial eta-squared = .009, power = .170. Estimated means for rural location = 1.986 and estimated marginal means for suburban/urban location = 2.047. These results are interpreted to mean that there was not a relationship between school location and support provided to novice teachers. And finally, for the parallelism test, no significant interaction was found, Wilks-Lambda = .986,  $F(1,110) = 1.578a, p = .212$ , partial eta squared = .014, power = .238. These results indicated that there was no interaction between school year and location regarding induction and mentoring support provided to novice teachers.

**Research question 3.** Did the number of new teachers hired to work in Indiana Public Schools change from the reported past five years average to the anticipated number hired for the 2010-11 school year?

Respondents ( $n = 112$ ) were asked, on average, how many new teachers have you hired in the past five years? The responses had a mean of 14.90. The minimum of zero new teachers hired was reported by one respondent (.9%) and the maximum of 100 new teachers hired was reported by two respondents (1.8%). The highest rate of response was an average of five new teachers hired in the past five years with 21 respondents (18.8%). This was followed by 12 responding (10.7%) with an average of two new teachers hired and 10 responding (8.9%) with an average of four new teachers hired.

Respondents ( $n = 112$ ) were asked how many new teachers to you expect to hire for the 2010/11 school year? The responses had a mean of 6.88. The minimum of zero new teachers

expected to be hired was reported by 23 respondents (20.5%) and the maximum of 85 new teachers expected to be hired was reported by one respondent (.9%). The highest rate of response (23 respondents) was zero new teachers expected to be hired. This was followed by 15 responding (13.4%) with one new teacher expected to be hired and 14 responding (12.5%) with two new teachers expected to be hired.

The reported difference between the average number of new teachers hired in the past five years (14.90) versus the number expected to be hired for the 2010/11 school year (6.88) was not surprising due to the recent budget shortfall. State officials did not provide school corporation officials much time to react to the budget shortfall and many school officials had to cut staff to stay with-in their allotted budgets. In August 2010, Indiana University's Center for Evaluation & Education Policy (CEEP), the Indiana Association of Public School Superintendents (IAPSS) and the Indiana School Boards Association (ISBA) released the results of a survey, *IAPSS-ISBA-CEEP School Corporation Financial Management Issues*, which was completed by 204 Indiana Public School Superintendents. The report indicates that prior to the 2010/11 school year "in total, the corporations surveyed eliminated the full-time equivalent of 1,267 teachers, 45 other certified staff, 154 administrators and 1,058 non-certified positions" (p. 5).

Based upon the reduction in force indicated by the IAPSS, ISBA, CEEP survey, it is not surprising that there was a significant difference in the amount of support provided to novice teachers through induction and mentoring practices 2009/10 versus the reported expected support provided to novice teachers for the 2010/11 school year as reported in this dissertation. Both certified staff and classified staff were required to provide the support suggested to be crucial to

novice teachers in areas such as, trained mentors, reduced preparations, extra class assistance, common planning time, reduced teaching schedule and professional development.

**Research question 4.** Did school corporation officials reduce or discontinue assigning mentors to novice teachers due to the fact that mentors are no longer a requirement of IMAP? The majority of the respondents ( $n = 71$ , 63.4%) indicated that they had not or did not plan to change their assignment of mentors to novice teachers due to the IDOE's revocation of the mentor requirement, while 41 (36.6%) indicated that they had stopped or plan to stop providing mentors to novice teachers due to the change in IMAP requirements. It should be noted that this data could have been impacted by the number of responses ( $n = 23$ ) indicating that no new teachers would be hired for the 2010/11 school year.

**Research question 5.** Did school corporation officials reduce or discontinue assigning mentors to novice teachers as a cost containment strategy? The majority of the respondents ( $N = 64$ , 57.1%) indicated that they had not or did not plan to change their assignment of mentors to novice teachers as a cost containment strategy, while 48 (42.9%) indicated that they had stopped or planned to stop providing mentors to novice teachers as a cost containment strategy.

The fact that the majority of the respondents did not indicate a change in providing mentors to novice teachers provides hope that school officials recognize the importance of a mentor in novice teacher support and have made concessions in other areas in order to be able to continue to provide mentors to novice teachers. Research has highlighted the benefits of mentoring as a critical component of retaining and supporting new teachers. Unfortunately, simply assigning a mentor to a novice teacher does not begin to scratch the surface of the mentoring component of effective induction programs. New teachers should be matched with mentors who can support their individual needs. Mentors should be trained in how to effectively

support novice teachers. Time must be allotted for mentors and novice teachers to work together and to observe each other.

## **Discussion**

Educators are experiencing ever-increasing pressures regarding educating our youth. We are a year and a half into the American Recovery and Reinvestment Act of 2009 (ARRA), a portion of which is dedicated to improving education in America. According to the Race to the Top Program Executive Summary, the ARRA provided \$4.35 billion for the Race to the Top Fund, a competitive grant, which was designed to "...improve results for students, long-term gains in school and school system capacity, and increased productivity and effectiveness" (U.S. Department of Education, p. 2, 2009). One component of the Race to the Top (RttT) grant requirements is addressing how state leaders will ensure great teachers and leaders. Indicators of this requirement include how state leaders should develop principals and teachers "...by providing relevant coaching, induction support, and/or professional development" (p. 9, 2009). In a March 4, 2010 press release by Dr. Tony Bennett, Indiana's Superintendent of Public Instruction, announced that Indiana was not selected as a RttT grant finalist. However, Dr. Bennett indicated that this did not change the reform agenda, which has been titled Indiana's Fast Forward Reform. The press release quotes Dr. Bennett as stating "the scope and trajectory of reform will remain aggressive despite the results of Race to the Top." Indiana's Fast Forward Plan includes two indicators for providing effective support to teachers and principals (components of the RttT grant) quality professional development and measure effectiveness of professional development, unfortunately, Indiana's document leaves out two key components of support suggested by RttT, providing relevant coaching and induction support.

The revocation of the mentor requirement of IMAP, Indiana's budget shortfall, and the deletion of the coaching and induction support components of Indiana's Fast Forward plan does not bode well for the support of Indiana's novice teachers. The data analysis conducted for this dissertation revealed that when considering support for novice teachers, neither school enrollment ( $\leq 2,000$ ,  $> 2,000$ ) nor location (rural, suburban/urban) impacted novice teacher support through mentoring and induction practices. Unfortunately, there was a significant difference between the reported support provided to Indiana's novice teachers through induction and mentoring practices from the 2009/10 school year (more support) to the 2010/11 school year (less support).

Teacher attrition comes at a high price to school districts. When teachers leave they take with them the training that has been provided over their tenure as well as the knowledge they have gained while practicing the art of teaching. According to Berliner (1994) it takes teachers at least five years to reach the proficient level. Theobald and Michael (2001) completed a study of teachers leaving school districts in the Midwest, including Indiana, within their first five years in the profession. Of the 11,787 surveyed, over 50% of the teachers reported leaving their initial district within five years. Additionally, of that 50%, 25% left the teaching profession altogether (Theobald & Michael, 2001).

The National Commission on Teaching and America's Future (NCTAF) provided a calculator to determine the financial cost to school districts based upon teacher turnover. According to the NCTAF the estimated cost to one Indiana school corporation that had to replace 23 teachers to begin the 2008/09 school year was \$374,750. This financial cost estimate did not include any federal or state costs nor did it include the expected loss of achievement of students. The financial cost of teacher turnover can be attributed to several factors, including recruitment,

hiring processes, payroll processing for those leaving and those arriving, orientation and training (Barnes et al., 2008, Markow & Cooper, 2008; Shockley, Guglielmino & Watlington, 2006). Berry (2006) suggested that when districts attempt to save money by hiring new and, therefore, less expensive teachers they create a *Catch-22*. The Alliance for Excellent Education reported (2004) that “the most critical cost associated with attrition is poorer teacher quality that negatively impacts student achievement” (p. 8). Sanders and Rivers (1996) analyzed data from the Tennessee Value-Added System (TVAAS) and concluded that the effects of individual teachers were both additive and cumulative. In addition, the data analysis revealed that “the residual effects of both very effective and ineffective teachers were measurable two years later, regardless of the effectiveness of teachers in later grades (Sanders & Rivers, 1996, p. 6).

Researchers have studied teacher attrition and practices that school officials have implemented in an attempt to retain teachers. Kapadia et al. (2007) completed a study of the influences of induction in the Chicago Public Schools. They concluded that new teachers who receive high levels of mentoring and support are more likely to report a good teaching experience and are more likely to remain in the same school. Johnson (2007) researched teacher induction in the Kansas City area. The new teachers surveyed in her study reported the most important induction program components included, “support from and interactions with colleagues, support from mentors, and new teacher seminars” (Johnson, 2007, p. 22). The Alliance for Excellent Education (2004) outlined a comprehensive induction program for new teachers. Important induction program components include; high quality mentoring, common planning time, ongoing professional development, an external network of teachers, and standards-based evaluations.

Ingersoll and Smith (2003) examined the School and Staffing Survey (SASS) and the Teacher Follow-up Survey (TFS) conducted by the National Center for Educational Statistics (NCES). They reported that having a mentor does make a difference on new teacher attrition. Ingersoll and Smith reported the data indicating that only 11.8% of teachers who participated in a mentoring program left teaching after the first year as compared to 18.6% of new teachers that did not have a mentor. Ingersoll and Smith identified that beginning teachers who receive comprehensive induction packages have far higher retention rates than those who receive fewer supports. By analyzing the National Center for Educational Statistics' Schools and Staffing Survey and the Teacher Follow-up Survey, they found that the following components were most often associated with reduced attrition of new teachers; "having a mentor in the same field, having common planning time with other teachers in the same subject, having regularly scheduled collaboration with other teachers, and being part of an external network of teachers" (p. 35). A comprehensive list of induction components identified from this study included, mentor from same field, beginner's seminars, common planning time, collaboration with others, external teacher network, supportive communication, reduced schedule, reduced preparations and teacher aide. The data suggested that the more induction components received, the more likely the new teacher would be retained. Specifically, for those receiving all suggested induction components, their retention rate was 50% greater than those receiving no induction.

Stanulis and Floden (2009) used the AIMS (Arizona's Instrument to Measure Standards) assessment to measure the impact of intensive mentoring on improving new teacher quality as linked to student engagement. The researchers studied two groups. Group one received basic mentoring components while group two received intensive mentoring components. Intensive mentoring components included, (a) mentors were released one day each week to mentor their

protégés, (b) mentors and protégés were matched based on content area assignments, and (c) mentors led monthly seminars for their protégés. The researchers went on to specify that “this intensive mentoring involved close work in the classroom, where mentors observe, co-planned, analyzed student work, and collected and analyzed teaching data together” (Stanulis & Floden, 2009, p. 120). The researchers found that the experimental group had significantly higher gains in the areas of atmosphere, instruction/content, and student engagement as measured by the AIMS assessment.

If Indiana’s state leadership truly desires to improve education in Indiana, they must provide Indiana school officials with the resources necessary to provide effective support to novice teachers. The omission of providing relevant coaching and induction support to novice teachers from Indiana’s Fast Forward plan does not indicate that Indiana’s state officials understand these critical components of novice teacher support. Without adequate support for novice teachers, Indiana’s school children will continue to suffer as they encounter roadblocks to learning due to inadequate teachers as they progress through Indiana’s P-16 educational system. State officials should take note of the old adage “an ounce of prevention is worth more than a pound of cure” as decisions are made regarding novice teacher support in Indiana’s K-12 public schools.

Regardless of our state official’s omissions regarding recommendations for supporting novice teachers, school leaders must consider the consequences of not providing adequate support. Research has highlighted the cost of inadequate induction and mentoring support for novice teachers including the cost of recruiting, hiring and training new teachers and most important the loss of student achievement due to inexperienced teachers. School leaders are charged with the responsibility of educating Indiana’s youth. This is a humbling and awesome

responsibility that cannot be taken lightly. Research provides school leaders with the necessary information to make appropriate and effective decisions. The youth of Indiana deserve the best education possible. One important component of meeting this goal is supporting novice teachers effectively through comprehensive mentoring and induction practices.

### **Recommendations for Further Study**

This study would offer additional insight by expanding the survey pool to include novice teachers, mentors and principals. Novice teachers and those working directly with novice teachers might be able to provide greater insight into how adequately the recommended components of novice teacher support are implemented at the building level. Andrews et al. (2007) conducted a state-wide study in Georgia to determine which mentoring and induction support strategies beginning teachers value and what support strategies they actually received. The perceived support was looked at from the perspective of the new teachers and of their principals. An analysis of the survey data revealed that the strategies most valued by new teachers provided opportunities for collaboration and learning from their colleagues. Interestingly, these strategies were perceived as not occurring often by the new teachers while most of the administrators indicated that they did occur often. The benefits of mentoring and induction practices can only impact those novice teachers who actually receive them; not the ones whose principal's falsely believe they are receiving those practices.

A study could be conducted to determine if there is a correlation between the adequacy of novice teacher support and student achievement data. It should not be the goal to retain all teachers. Instead we should strive to retain those who facilitate student learning. It would be beneficial to determine if the level of support provided to novice teachers made a difference on ISTEP+ scores as was noted in the Stanulis and Floden (2009) AIMS study in Arizona. In this

study the researchers found that the experimental group (the group receiving intensive induction components) had significantly higher gains in the areas of atmosphere, instruction/content, and student engagement as measured by the AIMS assessment.

This study could be expanded to research if there is a difference in novice teacher support provided to primary and secondary educators. Research studies have noted that novice teachers differ on induction/mentoring needs. For example, Kapadia et al. (2007) identified components that led to a new teacher's self-reported likelihood of remaining in education and whether or not his or her first year of experience was considered good or bad. The researchers noted differences in novice teacher needs associated with his or her level of teaching assignment. Elementary teachers who participated in an induction program were more likely to stay than their high school colleagues. High school teachers with a high percentage of bilingual students were more likely to leave than elementary teachers. Larger class size had a negative impact on elementary teachers, but did not appear to be an issue for most high school teachers.

Research could be conducted to identify the barriers of implementing each component of induction and mentoring practices, which include, mentor from same field, beginner's seminars, common planning time, collaboration with others, external teacher network, supportive communication, reduced schedule, reduced preparations and teacher aide. Once the barriers to implementing each component of induction are identified, state leaders and school officials can implement strategies to remove those barriers.

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**APPENDIX A: INDIANA SCHOOL CORPORATION INDUCTION  
AND MENTORING SURVEY**

This survey looks at the various induction and mentoring strategies and practices used to support new teachers in Indiana public school corporations. Please respond to all items as they pertain to you. Your responses will remain confidential. Thank you.

**Part One: Corporation Information**

*Please mark the appropriate response.*

1. School Demographics:
  - a. Rural
  - b. Urban
  - c. Suburban
  
2. School Corporation Enrollment:
  - a. 0-2,000
  - b. 2,001-4,000
  - c. 4,001-6,000
  - d. 6,001-8,000
  - e. 8,001-10,000
  - f. 10,000+
  
3. On average, how many teachers have you hired to start a new school year in the last five years?  
\_\_\_\_\_
  
4. How many teachers do you expect to hire to start the 2010-11 school year?  
\_\_\_\_\_

**Part Two: Induction, Mentoring & New Teacher Support Prior to the 2009-10 School Year**

*Please read each of the following induction and mentoring plan statements and circle the answer(s) that best indicates your response for induction and mentoring activities offered annually prior to the 2009-10 school year.*

1. We offered mentors for novice teachers enrolled in IMAP
  - a. Yes, we offered paid mentors to novice teachers enrolled in IMAP
  - b. Yes, we offered unpaid mentors to novice teachers enrolled in IMAP
  - c. No, we did not offer mentors to novice teachers enrolled in IMAP
  
2. We provided training for our mentors of novice teachers enrolled in IMAP
  - a. Yes, all of our mentors were trained
  - b. Some of our mentors were trained
  - c. No, we did not provide training to our mentors
  
3. We provided novice teachers with mentors in the same subject and/or grade level
  - a. Yes, we provided novice teachers with mentors in the same subject/grade level
  - b. We attempted to provide novice teachers with mentors in the same subject/grade level
  - c. No, we did not attempt to provide novice teachers with mentors in the same subject/grade level
  
4. We required mentors to meet with their assigned novice teachers on a regular basis
  - a. Yes, we required mentors to meet with novice teachers on a regular basis
  - b. We suggested mentors meet with novice teachers on a regular basis
  - c. No, we did not set expectations for mentors to meet with novice teachers on a regular basis
  
5. We provided regularly scheduled collaboration opportunities with other teachers on issues of instruction
  - a. Yes, we provided regularly scheduled collaboration opportunities with other teachers on issues of instruction
  - b. We provided regularly scheduled collaboration opportunities with other teachers on issues of instruction
  - c. No, we did not provide regularly scheduled collaboration opportunities with other teachers on issues of instruction

6. We provided common planning time for novice teachers with other teachers in their subject area
  - a. Yes, we provided common planning time for novice teachers with other teachers in their subject area
  - b. We provided common planning time for some of our novice teachers with other teachers in their subject area
  - c. We did not provide common planning time for novice teachers with other teachers in their subject area
  
7. We provided reduced teaching schedules for our novice teachers (e.g., less classes per day/week than veteran teachers)
  - a. Yes, we provided reduced teaching schedules for all of our novice teachers
  - b. We provided reduced teaching schedules for some of our novice teachers
  - c. We did not attempt to provide reduced teaching schedules for our novice teachers
  
8. We provided reduced number of preparations for our novice teachers (e.g. only Algebra I instead of Algebra I and Geometry)
  - a. Yes, we provided reduced number of preparations for all of our novice teachers
  - b. We provided reduced number of preparations for some of our novice teachers
  - c. We did not attempt to provide reduced number of preparations for our novice teachers
  
9. We provided extra classroom assistance (e.g., teacher aides) to our novice teachers
  - a. Yes, we provided extra classroom assistance for all of our novice teachers
  - b. We provided extra classroom assistance for some of our novice teachers
  - c. We did not attempt to provide extra classroom assistance for our novice teachers
  
10. Our novice teachers had regular supportive communications with their principal, other administrators, or department chair
  - a. Yes, all of our novice teachers had regular supportive communications with their principal, other administrators, or department chair
  - b. Some of our novice teachers had regular supportive communications with their principal, other administrators, or department chair
  - c. No, we did not attempt to offer regular supportive communications with novice teachers' principal, other administrators, or department chair

11. Our novice teachers had the opportunity to participate in seminars or classes for beginning teachers
  - a. Yes, all of our novice teachers had the opportunity to participate in seminars or classes for beginning teachers
  - b. Some of our novice had the opportunity to participate in seminars or classes for beginning teachers
  - c. No, we did not attempt to offer our novice teachers the opportunity to participate in seminars or classes for beginning teachers
  
12. Our novice teachers had the opportunity to participate in a network of teachers (e.g., one organized by an outside agency or over the internet)
  - a. Yes, all of our novice teachers had the opportunity to participate in a network of teachers
  - b. Some of our novice teachers had the opportunity to participate in a network of teachers
  - c. No, we did not attempt to offer our novice teachers the opportunity to participate in a network of teachers

**Part Three: Induction, Mentoring & New Teacher Support Beginning with the 2010-11 School Year**

*Please read each of the following induction and mentoring plan statements and circle the answer(s) that best indicates your response for induction and mentoring activities beginning with the 2010-11 school year.*

1. We plan to offer mentors for novice teachers enrolled in IMAP
  - a. Yes, we plan to offer paid mentors to novice teachers enrolled in IMAP
  - b. Yes, we plan to offer unpaid mentors to novice teachers enrolled in IMAP
  - c. No, we did not plan to offer mentors to novice teachers enrolled in IMAP
  
2. We plan to provide training for our mentors of novice teachers enrolled in IMAP
  - a. Yes, all of our mentors were trained
  - b. Some of our mentors were trained
  - c. No, we did not provide training to our mentors

3. We plan to provide novice teachers with mentors in the same subject and/or grade level
  - a. Yes, we provided novice teachers with mentors in the same subject/grade level
  - b. We attempted to provide novice teachers with mentors in the same subject/grade level
  - c. No, we did not attempt to provide novice teachers with mentors in the same subject/grade level
  
4. We plan to require mentors to meet with their assigned novice teachers on a regular basis
  - a. Yes, we plan to require mentors to meet with novice teachers on a regular basis
  - b. We will suggest that our mentors meet with novice teachers on a regular basis
  - c. No, we will not set expectations for mentors to meet with novice teachers on a regular basis
  
5. We plan to provide regularly scheduled collaboration opportunities with other teachers on issues of instruction
  - a. Yes, we provided regularly scheduled collaboration opportunities with other teachers on issues of instruction
  - b. We provided regularly scheduled collaboration opportunities with other teachers on issues of instruction
  - c. No, we did not provide regularly scheduled collaboration opportunities with other teachers on issues of instruction
  
6. We plan to provide common planning time for novice teachers with other teachers in their subject area
  - a. Yes, we plan to provide common planning time for novice teachers with other teachers in their subject area
  - b. We plan to provide common planning time for some of our novice teachers with other teachers in their subject area
  - c. We do not plan to provide common planning time for novice teachers with other teachers in their subject area
  
7. We plan to provide reduced teaching schedules for our novice teachers (e.g., less classes per day/week than veteran teachers)
  - a. Yes, we plan to provide reduced teaching schedules for all of our novice teachers
  - b. We will attempt to provide reduced teaching schedules for some of our novice teachers
  - c. We will not attempt to provide reduced teaching schedules for our novice teachers

8. We plan to provide reduced number of preparations for our novice teachers (e.g. only Algebra I instead of Algebra I and Geometry)
  - a. Yes, we plan to provide reduced number of preparations for all of our novice teachers
  - b. We plan to provide reduced number of preparations for some of our novice teachers
  - c. We will not attempt to provide reduced number of preparations for our novice teachers
  
9. We plan to provide extra classroom assistance (e.g., teacher aides) to our novice teachers
  - a. Yes, we provided extra classroom assistance for all of our novice teachers
  - b. We provided extra classroom assistance for some of our novice teachers
  - c. We did not attempt to provide extra classroom assistance for our novice teachers
  
10. We plan to provide our novice teachers with regular supportive communications with their principal, other administrators, or department chair
  - a. Yes, we plan to provide all of our novice teachers with regular supportive communications with their principal, other administrators, or department chair
  - b. We plan to provide some of our novice teachers with regular supportive communications with their principal, other administrators, or department chair
  - c. No, we will not attempt to offer regular supportive communications with novice teachers' principal, other administrators, or department chair
  
11. Our novice teachers will have the opportunity to participate in seminars or classes for beginning teachers
  - a. Yes, all of our novice teachers will have the opportunity to participate in seminars or classes for beginning teachers
  - b. Some of our novice will have the opportunity to participate in seminars or classes for beginning teachers
  - c. No, we will not attempt to offer our novice teachers the opportunity to participate in seminars or classes for beginning teachers

12. Our novice teachers will have the opportunity to participate in a network of teachers (e.g., one organized by an outside agency or over the internet)
  - a. Yes, all of our novice teachers will have the opportunity to participate in a network of teachers
  - b. Some of our novice teachers will have the opportunity to participate in a network of teachers
  - c. No, we will not attempt to offer our novice teachers the opportunity to participate in a network of teachers
  
13. Have you or do you plan to reduce or discontinue assigning mentors to novice teachers due to the fact that mentors are no longer a requirement of IMAP?
  - a. We plan to continue to offer mentors to novice teachers
  - b. We plan to continue to offer mentors to only first year teachers
  - c. We plan to or have discontinued providing mentors to novice teachers
  
14. Have you or do you plan to reduce or discontinue assigning mentors to novice teachers as a cost containment strategy?
  - a. We plan to continue to offer mentors to novice teachers
  - b. We plan to continue to offer mentors to only first year teachers
  - c. We plan to or have discontinued providing mentors to novice teachers

**APPENDIX B: LETTER TO SUPERINTENDENTS**

June 19, 2010

Dear Indiana Public School Superintendent:

Teacher attrition comes at a high price to school districts. When teachers leave they take with them the training that has been provided over their tenure as well as the knowledge they have gained while practicing the art of teaching. In addition, school corporation officials lose crucial time and money in replacing those teachers that are lost. The financial cost of teacher turnover can be attributed to several factors, including recruitment, hiring processes, payroll processing for those leaving and those arriving, orientation and training. Research has indicated that comprehensive induction and mentoring programs are effective at retaining teachers.

I am currently a doctoral candidate at Indiana State University, and I am working on my dissertation. I am requesting your assistance in my research. My goal is to gather information from all 293 K-12 public school superintendents in the state of Indiana regarding strategies and practices they use to support and retain novice teachers. In addition, I hope to determine how the revocation of the mentor requirement of the Indiana Mentoring and Assessment Program (IMAP) and the recent budget shortfall has impacted induction and mentoring practices in our public schools. Your input is important in order to create an accurate understanding of novice teacher support in Indiana.

Your participation in this survey is completely voluntary. Your answers are anonymous and I will have no way to track who has or has not responded. Participants will not be identified in any way. There is no penalty for those choosing not to participate in this project.

I would greatly appreciate it if you will please complete the survey at the following url:<http://apps.gcsc.k12.in.us/limesurvey/index.php?sid=96667&lang=en> by July 30, 2010. If you have any questions regarding this study, please contact my advisor, Dr. Terry McDaniel at [Terry.McDaniel@indstate.edu](mailto:Terry.McDaniel@indstate.edu) or 812-237-2900 or me at 317-437-2311 or [chilton2@indstate.edu](mailto:chilton2@indstate.edu). If you have any questions about your rights as a research participant, please contact the Indiana State University Institutional Review Board at [isu-irb@indstate.edu](mailto:isu-irb@indstate.edu), or 812-237-8217.

Thank you for your participation in this study.

Sincerely,  
Christina L. Hilton