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Support for beginning teachers in North Carolina is mandated by the State Board of Education and supported through legislative mandates and. Teacher induction programs have been developed to help support and guide new teachers toward a successful career; however each Local Educational Agency (LEA) has the flexibility to establish the induction program in their district, creating a variety of models of induction across the state supporting beginning teachers (BTs). The goal of this research was to better understand the impact of induction programs in North Carolina on beginning teachers' retention. This mixed-methods study examined the current state of induction in 11 of North Carolina's LEAs in order to better understand how varying models of induction impact beginning teachers and to gather the LEAs' and BTs' perspectives about induction. The research questions investigate how the components of induction programs are implemented in North Carolina's LEAs and the perceptions of both the LEAs and BTs about the importance of these components in influencing teacher retention.

This study focused on several components of LEA's induction programs (e.g., orientation, mentoring, professional development, and other resources) and explored the impact of these programs by examining the relationships between the components of induction and beginning teacher retention. The study used quantitative and qualitative data collection and analysis to document, describe and compare approaches to induction and BT perception about them. The results indicated that a wide variety of induction

components are used across the 11 participating North Carolina LEAs, including various types of orientation, mentoring, and professional development. All 11 participating LEAs reported that their induction programs were beneficial in supporting their beginning teachers. However, the 378 participating BTs provided varying reports about their perceptions of the induction components offered in their districts. Overwhelmingly, BTs acknowledged that their mentor and/or resources were the most induction beneficial component.

TEACHER INDUCTION IN NORTH CAROLINA:
RELATIONSHIPS TO RETENTION

by

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Post hoc ergo propter hoc

TABLE OF CONTENTS

	Page
LIST OF TABLES	vi
LIST OF FIGURES	ix
CHAPTER	
I. INTRODUCTION	1
Beginning Teachers	1
Statement of the Problem.....	2
Purpose of the Study	4
Research Questions.....	7
Issues in Studying Induction and Mentoring of Beginning Teachers.....	8
Assumptions.....	10
Definition of Terms.....	12
Summary	16
II. REVIEW OF THE LITERATURE	17
Induction and Mentoring.....	17
Historical View of Induction	21
Induction Research.....	27
Mentoring.....	30
Teacher Development	33
Variety of Induction Program Components	40
Criteria for Successful Induction Programs	43
Perceptions of Beginning Teachers	45
III. METHODOLOGY	48
Research Design.....	48
Research Questions	51
Settings and Participants	52
Data Sources	53
Data Collection Procedures.....	58
Data Analysis Procedures	62
Validity and Reliability.....	69
Role of the Researcher and Biases.....	69
Limitations and Delimitations of the Methodology	73
Summary	76

IV. DATA ANALYSIS AND FINDINGS	79
Data and Participants	79
Findings Regarding Research Question 1	82
Findings Regarding Research Question 2.....	106
Findings Regarding Research Question 3.....	122
Summary.....	140
V. DISCUSSION AND IMPLICATIONS	144
Summary of the Findings.....	145
Variability of the Findings	154
Implications.....	155
Recommendations.....	158
Limitations of the Study.....	161
Future Research	163
Summary.....	166
REFERENCES	168
APPENDIX A. LEA CONSENT AND SURVEY	186
APPENDIX B. BT CONSENT AND SURVEY	195
APPENDIX C. LEA FOLLOW-UP INTERVIEW PROTOCOL.....	203
APPENDIX D. EXPERT SURVEY FEEDBACK REQUEST.....	206
APPENDIX E. LEA RECRUITMENT FLYER	207
APPENDIX F. LEA REQUEST FOR SURVEY PARTICIPATION.....	209
APPENDIX G. BT REQUEST FOR SURVEY PARTICIPATION.....	210
APPENDIX H. DATA CROSSWALK	211
APPENDIX I. DATA COLLECTION AND ANALYSIS TIMELINE.....	214

LIST OF TABLES

	Page
Table 1. Participating LEAs.....	60
Table 2. BT Participant Data	62
Table 3. Data Connections	66
Table 4. Participating LEAs with Descriptive Terms	80
Table 5. Beginning Teacher Descriptive Terms	81
Table 6. Participating LEAs and Induction Components	84
Table 7. LEA Orientation components LEA response compared with BT responses	89
Table 8. School Orientation components LEA response compared with BT responses	91
Table 9. LEA Professional Development component LEA response compared with BT responses	92
Table 10. School Professional Development component LEA response compared with BT responses	94
Table 11. Mentor component LEA response compared with BT responses.....	96
Table 12. Online Support components LEA response compared with BT responses	97
Table 13. Number of LEAs with Varying Orientation Components compared by LEA Location, Size and Turnover	100
Table 14. Number of LEAs with Varying School Orientation Components compared by Location, Size and Turnover	100
Table 15. Number of LEAs with Varying Professional Development Components compared by Location, Size and Turnover	101
Table 16. Number of LEAs with Varying Mentoring Components compared by Location, Size and Turnover.....	102

Table 17. Number of LEAs with Varying Online Support Components compared by Location, Size and Turnover.....	103
Table 18. Ranking by LEAs and BTs of Most Important Orientation Components	107
Table 19. Ranking by LEAs and BTs of Most Important Professional Development Components.....	108
Table 20. Ranking by LEAs and BTs of Most Important Mentor Components.....	109
Table 21. Ranking by LEAs and BTs of Most Important Resources	110
Table 22. Ranking by LEAs and BTs of Most Beneficial Induction Components.....	111
Table 23. Comparison of Induction Component Ranking by LEAs and BTs in Coded Qualitative Analysis	112
Table 24. Comparison of Most Important Mentor Component Rankings by LEAs and LEA Mentor Program	116
Table 25. BT Responses on future plans in teaching to answer “Which best describes your future intentions for your professional career?”	124
Table 26. Comparison of BT responses Impact of Induction and Future Plans in Teaching	125
Table 27. Comparison of Orientation Components and BT Retention Sorted by Number of Days Offered	127
Table 28. Comparison of Professional Development Components and BT Retention Sorted by Amount Offered.....	129
Table 29. Comparison of Mentoring Components and BT Retention Sorted by Program Type	130
Table 30. Comparison of Online Resource Components and BT Retention Sorted by Resource Type	131
Table 31. Impact of Induction on Decision to Remain in Teaching.....	133
Table 32. Do you feel the induction program impacts your decision to remain in teaching?	133

Table 33. Qualitative Coded Responses of Induction Components from BT perspectives.....	135
Table 34. Qualitative Coded Responses of Induction Components from BTs that responded Induction did not impact their decision to remain in teaching	136
Table 35. Induction Impact on Teacher Retention LEA responses	137
Table 36. Induction Impact on Teacher Retention Qualitative LEA responses	137
Table 37. Beginning Teacher Future Plans to Remain in Teaching	139
Table 38. Beginning Teacher Induction Component Impact on Decision to Remain in Teaching.....	140

LIST OF FIGURES

	Page
Figure 1. Map of North Carolina indicating the Local Education Agencies	14
Figure 2. Percent of new teachers with some formal induction experience	24
Figure 3. States which offer induction programs for new teachers Education Week, Quality Counts 2006	25
Figure 4. States which require and finance induction programs for new teachers Education Week, Quality Counts 2006.....	26
Figure 5. Phases of First Year Teacher’s Attitude Toward Teaching (Moir, 1999).....	36
Figure 6. Teacher Induction Research Design.....	50
Figure 7. Comparison of Most Important Orientation Component Rankings by LEAs	113
Figure 8. Comparison of Most Important Professional Development Component Rankings by LEAs	114
Figure 9. Comparison of Most Important Mentoring Component Rankings by LEAs	115
Figure 10. Comparison of Most Important Resource Component Rankings by LEAs	117
Figure 11. Quantitative Comparison of Most Beneficial Induction Component Rankings by LEAs	118
Figure 12. Qualitative Comparison of Most Beneficial Induction Components from LEA responses	119
Figure 13. Quantitative Comparison of Most Beneficial Induction Components from BT responses	121

CHAPTER I

INTRODUCTION

“Teaching is something that my heart was into, something that was making a difference in the lives of others, and I knew that teaching was the job for me” (Oliver in Rose, 2008b). Kimberly Oliver, 2006 National Teacher of the Year and a Kindergarten teacher in Maryland has described her desire to become a teacher similarly to many beginning teachers who idealistically begin their teaching careers with a “sense of mission that is deeply embedded in their reasons for teaching” (Nieto, 2005, p.204). It is with this desire to make a difference and serving the common good that beginning teachers enter classrooms each year, either with formal teacher training or through alternative certification routes, but with the courage, attitudes and dispositions to begin their career as a teacher.

Beginning Teachers

In North Carolina, teachers are considered to be beginning teachers (BT) for the first three years of their teaching career, also described as the induction period when they are introduced into the teaching culture of their school and district and assisted through various forms of support. During this time, many school districts provide teacher induction activities with the goal of inducting a teacher into their district using a variety of program components. At the beginning of their careers, teachers are introduced

to the procedures, routines, and fundamentals of teaching in a specific context, building on the skills they may have obtained during their college teacher education program.

In addition to being directed towards new college graduates, induction programs are also provided for teachers who enter the profession through alternative certification routes. The induction period is a time of transition for orienting new teachers, regardless of prior preparation for the school culture, and introducing them to the challenges of the profession. During the induction period, schools and districts provide a system of supports that typically include orientation to the school, mentoring, and professional development (Villani 2002). While the primary goal of teacher induction programs is to help support and guide teachers during the beginning years of their career, the goals of socialization and cultural assimilation are also relevant.

Therefore, teacher induction programs have been developed to help support and guide new teachers toward a successful career. These goals are important because the experiences beginning teachers have not only affect their perceptions of teaching and learning, but also aid in helping them develop into the kinds of teachers they will become and influence their decisions as to whether they will continue teaching (Adelman, 1991; McDonald, 1980).

Statement of the Problem

First-year beginning teachers in public schools after 2004-2005 had a national attrition rate of 20% (Marvel, Lyter, Peltola, Strizek, Morton, Rowland, 2007). In comparison to the national average, teachers in North Carolina had an attrition rate of

12.31% after the 2006-07 school year and a five-year average of 12.53% (North Carolina Department of Public Instruction 2007a). Teachers may leave for many reasons, and Ingersoll and Smith (2003) have pointed out through their research that 15% of beginning teachers actually leave the profession while another 15% simply transfer to other schools. Although to a school or district that loses a teacher, the loss is apparent regardless of a transfer or leaving the profession and leads to what Ingersoll (2001) identifies as the “revolving door” of teacher attrition.

Teacher attrition is a nation-wide issue (Ingersoll, 2001). Approximately one-third of beginning teachers leave within their first three years and that number increases to one-half over the first five years (Ingersoll, 2002; Ingersoll & Smith, 2004; NCTAF, 2003; Johnson, 2004). In large urban districts teacher turnover is even higher among beginning and experienced teachers (Hanushek, Kain, & Rivkin, 1999; Johnson, 2006). The cost of a teacher leaving the school varies depending on the size of the district. NCTAF has determined through one study that it costs Granville County in North Carolina a little less than \$10,000 per teacher who leaves the profession, however in larger districts, such as Chicago it was estimated at \$17,872 per teacher leaving with a total cost of teacher turnover at over \$86 million per year (Barnes, Crowe & Schaefer, 2007). Because of the cost and loss of teachers, supporting and preparing new teachers to enter and remain in the profession should be one of the primary concerns of school and district leaders as the turnover of teachers each year impacts schools and districts in many ways. In order to better support beginning teachers, many states are turning to induction programs as one path to improve teacher retention.

North Carolina addresses teacher retention problems in part through support provided by induction programs at the district level. These programs for beginning teachers in North Carolina include state funding for mentors for first and second-year teachers. In an effort to support and retain teachers throughout the state, school districts, known in North Carolina as local education agencies, provide induction support at different levels by offering varying program components. Despite the statewide mandate and funding, school districts are left to create their teacher induction programs and support systems for beginning teachers, including the writing of waivers for using state mentoring funds in varying ways. This approach has led to a wide variety of programmatic approaches to induction support throughout the state.

Purpose of the Study

The purpose of this study is to describe the components of induction programs implemented in 11 of North Carolina's Local Education Agencies (LEAs) and examine how various types of induction components influence the retention of Beginning Teachers (BT). In this mixed-methods study, both quantitative and qualitative data were collected using formats including: online surveys with LEA induction personnel, follow-up interviews with LEA induction personnel, review of LEA informational documents, a beginning teacher online survey, and a review of state reports of LEA teacher retention rates to investigate the impact these program components have on retaining beginning teachers.

Beginning teacher perceptions were important in this study to determine how BTs view the support they receive from their schools and districts. Induction not only assists BTs with the job specifications such as curriculum, planning and classroom management but also directly impacts BTs perceptions of their job demands. Therefore, quantitative rankings from BTs and qualitative data from open-ended questions were used to gather the BTs' perceptions regarding induction program components, the value of support provided and their intention to remain in teaching. Wildman, Niles, Magliaro and McLaughlin (1989) studied induction in Virginia districts and reported "induction is affected by characteristics of a beginning teacher and the socializing influences in the school context" (p.272). Beginning teachers have their own unique experiences in their careers, which are influenced by many factors including school context and experience. In this study, the perceptions of BTs aid in determining how beneficial induction program components are across North Carolina LEAs.

Teacher perceptions are gathered in current research studies by involving teachers in case studies or by collecting their perceptions from survey responses. In 1989, Wildman, Niles, Magliaro and McLaughlin found the BT perspective useful, but "not yet well understood" (p.485). And nearly 20 years later, some still see that teachers do not always have a voice. As Randi Weingarten stated "they [teachers] are powerless, everything is thrown at them" (Rose, 2008a). Weingarten in her role as president of the United Federation of Teachers vocally advocates for teachers, but feels teachers' perceptions are not valued in the development and implication of educational policies and practices. However, I believe this is changing as teachers exercise their professionalism

outside of the classroom so that the implications of their perceptions are felt in the development and implementation of policies and practices. Two months after interviewing Weingarten, Charlie Rose interviewed four National Teachers of the Year including Jason Kamras, a middle school math teacher who began teaching through Teach for America. He was recognized as the 2005 National Teacher of the Year, and currently serves as the director of human capital strategy for teachers in Washington DC public schools. In the interview, which focused on current issues, Kamras supported the professional development of teachers when he said, “I think we spend too much time focused on how people become teachers when we should be spending more time on what they do once they’re in the classroom” (Rose, 2008b). Beginning teachers need choices and a voice when determining what kinds of support and induction are needed for them to thrive, and this study offers one avenue for giving BTs a voice.

Support for beginning teachers in North Carolina is mandated by the State Board of Education and supported through legislative mandates and funding for mentoring and induction programs. Each LEA has the flexibility to establish induction in their district for their teachers, creating a variety of models of induction across the state. This study investigated these programs in two ways. First, it seeks to document and describe the different induction components used in 11 LEAs across the state. Second, it investigates the impact and effects to examine how various components of induction programs influence the retention of beginning teachers. This research focused on several components of LEA’s induction programs (e.g., orientation, mentoring, professional development, and other resources) and searched for a connection among these

components to the retention of beginning teachers. Lastly, the research utilized the perceptions of beginning teachers to inform the research questions and compare what LEAs and BTs view as beneficial during induction. The perceptions of BTs are invaluable in the analysis of the data, and they offer a broad view of induction based on the varying perspectives of 378 BTs who contributed to this study.

Research Questions

The comprehensive question directing and framing this study was: *How do the components of induction programs implemented in North Carolina's Local Education Agencies (LEA) influence the retention of beginning teachers (BT)?*

The following research questions guided the study:

- 1 What components of induction are LEAs in North Carolina providing to support beginning teachers during induction?
 - a. How do the differences among LEAs (e.g. location, size, turnover) influence the components of induction implemented?
 - b. How do the differences among BTs (e.g. years in teaching, grade-level, location, turnover) influence the components of induction implemented?
- 2 What components of induction do LEAs and BTs identify as beneficial?
 - a. How do the differences among LEAs (e.g. location, size, turnover) influence which components of induction seem beneficial?

- b. How do the differences among BTs (e.g. years in teaching, grade-level, location, turnover) influence which components of induction seem beneficial?
- 3 What is the relationship between teacher induction components offered in North Carolina LEAs and Beginning Teacher retention?
- a. How do the differences in LEAs (e.g. location, size, turnover) influence the relationship that their induction components have with teacher retention?
 - b. How do the differences in BTs (e.g. years in teaching, grade-level, location, turnover) influence the relationship that the induction components have with BTs' decision to remain in teaching?

These questions were posed to examine how beginning teachers in North Carolina are supported during induction and what LEAs and BTs find beneficial. In identifying these factors, the goal of this study was to enable schools to improve induction programs based on this information, with the intention of increasing the possibility that teachers will remain in the profession.

Issues in Studying Induction and Mentoring of Beginning Teachers

One issue in describing induction programs and identifying program components is the different names and phrases that are used across the state to personalize the components of each LEA's induction program. For example, the terms mentoring and induction are often used interchangeably (Ingersoll & Smith 2004). Even though

mentoring has been included in North Carolina state law since 1985 and quality induction is included in the federal No Child Left Behind act, mentoring and induction are defined by the participants and practices of those involved. Mentoring has been “the dominant form of teacher induction” in the past 20 years (Ingersoll & Smith, 2004, p.29) and because it is a funded mandate North Carolina provides for a monthly stipend to the mentor of each beginning teacher.

However, the use of mentors varies from full-time mentors supporting one or more beginning teachers in their first few years of teaching, to mentor teachers who continue teaching and mentor one or more beginning teachers on a part-time basis outside of the instructional day. Furthermore, North Carolina’s funding for mentors, mandated for teachers in their first and second year, can be used by school districts in different ways if the district writes a waiver to the North Carolina State Board of Education. In 2005-06, 19 districts implemented their own induction programs using the mentoring funds in a variety of ways (SBE, 2006). For example, Winston-Salem/Forsyth County Schools used retired teachers as full-time mentors for some schools and the \$100 monthly stipend funded by the state can be multiplied depending on the number of beginning teachers a mentor has (personal communication, NC mentor conference, 2005). Guilford County Schools (GCS) has also used their discretion with state funding to fund full-time mentors employed as Induction Coaches, increasing the GCS Department of Induction and Success staff from two in 2004-05 to 12 in 2005-06.

Believing in the impact of the mentor programs on teacher retention, each North Carolina LEA has the discretion to utilize personnel and funding to support beginning

teachers in its district. According to Dr. Kathy Sullivan, Director, Human Resource Management Division for the North Carolina Department of Public Instruction, in a State Board of Education meeting in October 2006,

The 2003 Budget Bill contained a special provision to allow LEAs flexibility in the use of mentor funds provided the local board submits a detailed plan on the use of the funds to the State Board and the State Board approves that plan. Since the provision was first approved in the 2003 Budget Bill, the Board has approved plans from 28 LEAs (SBE, 2006, p.2).

This study used this report plus other evidence, including direct communication with LEAs and surveys to investigate induction programs supporting beginning teachers in North Carolina in order to examine the variety of induction programs and processes across the state. Furthermore, the perspectives of first-year beginning teachers (BT1s) and second-year beginning teachers (BT2s) were solicited through online surveys. Finally, this study attempted to uncover relationships between various models of teacher induction used across North Carolina and teacher retention rates.

Assumptions

The retention of teachers in North Carolina has become a serious concern of LEAs, schools and the state. The cost of teachers leaving has been reported at almost \$10,000 per teacher in one North Carolina LEA (Barnes, Crowe & Schaefer, 2007) and the number of teachers not returning to teach within the first five years has been reported as high as 50% (Ingersoll and Kralik, 2004). In a review of 10 studies, Ingersoll and

Kralik (2004) concluded that there is supporting evidence that teacher induction programs have a positive impact on beginning teachers and their decisions to remain in teaching. This would suggest that the induction programs occurring in North Carolina do support beginning teachers and I assume that those LEAs with induction programs with more than one component, such as mentoring, plus at least one other activity will influence the retention rate for their beginning teachers.

Data collected from multiple groups may be impacted by the differences in perceptions of those groups. The LEA representatives and Beginning Teachers varying perceptions of the induction components effectiveness is one assumption that impacts data analysis and understanding of the participants' responses. Another variable in this study are the demographic differences among LEAs and BTs due to the size, location and turnover in the districts as well as BTs' years in teaching and teaching assignment. Attributing these differences across a group of data is one variable impacting the differences in the data collected and could impact the perceived impact of induction on teacher retention or the connection of this impact across varying differences. One example, are the turnover rates of the participating LEAs, which had been fairly stable over the past five years and may or may not align with the implementation of induction program components. Lastly, for analysis purposes, induction components are grouped by similar attributes, such as orientation and mentoring, however each LEA's induction program may conduct induction components in varying manners with varying impacts on BTs and their decision to remain in teaching. Attributing teacher retention to varying induction components was not the purpose, however a connection between induction

component implementation and Beginning Teachers' desire to remain in teaching is one assumption of this study as the teacher induction components are viewed as a support system for beginning teachers.

Definition of Terms

Beginning Teachers

Teachers new to the profession are defined in North Carolina as Beginning Teachers (BTs) who are entering the profession and continuing through their first 3 years of teaching until they are recommended for a continuing license. In this study the focus is on first and second year BTs. They will be referred to as BT1s and BT2s, or just BTs throughout this study.

Induction

Teacher induction refers to the first three years of teaching and to the components of support offered to beginning teachers during this period. Teacher induction programs are implemented to help beginning teachers become socialized into the educational community. Harry Wong describes induction as,

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 (Wong, 2004, p.42)

The United States Department of Education defines teacher induction as “those practices used to help beginning teachers become competent and effective professionals in the

classroom” and the teacher induction program as “the actual process or procedures that are implemented in your education system to assist beginning teachers” (Moskowitz & Stephens, 1996, p.197). The United States Department of Education differentiates a “successful” teacher induction program as “a program that leads to increased teacher retention and/or to development of effective skills and positive attitudes toward teaching” (Moskowitz & Stephens, 1996, p.197).

Local Education Agency

The Local Education Agency (LEA) is the term used in North Carolina to define the school district or school system. The LEA is typically defined by the parameters of each county’s boundaries; however there are some counties that are broken up into several LEAs that include city and county school districts. Each LEA, as shown in the map below, is located within one of three geographical regions in North Carolina. According to the 2007-08 North Carolina public school directory, there are 2484 schools and 115 LEAs (North Carolina Department of Public Instruction, 2007). In this study, data will be aggregated by LEA and compared within regions (Mountains, Piedmont, and Coastal) in order to represent induction programs statewide.

Figure 1 Map of North Carolina indicating the Local Education Agencies



<http://dpi.state.nc.us/>

Mentor

The United States Department of Education defines mentors as “individuals who play a significant role in offering guidance and assistance to beginning teachers” (Moskowitz & Stephens, 1996, p.197). More explicitly, a mentor teacher is a more experienced colleague of the beginning teacher, typically at their same school, and possibly in the same grade-level or subject area, who assists the beginning teacher with becoming part of the school and the profession. In North Carolina, funding has been provided to school districts to support mentors for beginning teachers during their first two years of teaching since 1985. Although mentoring and induction are often referred to interchangeably, these terms will not be used interchangeably in this study because a mentor can also be one component of an induction program.

Professional Culture

Professional culture refers to the school and community context in which the beginning teachers works. It is “the distinctive blend of norms, values, and accepted modes or professional practice, both formal and informal that prevail among colleagues” (Kardos et al, 2001, p.254). Professional culture can be influenced by: the school buildings, teachers, students, parents, administrators, LEA personnel, resources available, and LEA or school policies.

Professional Development

Professional development refers to the participation of the teacher in an activity or situation that is planned to enhance the development of the teacher professionally. This includes, but is not limited to, workshops at the school or other levels, meetings with a mentor or others, staff development, conferences, and training. The North Carolina Department of Public Instruction has aligned with the National Staff Development Council and states the goal of professional development “is to help educators develop the knowledge, skills, behavior, and insights needed to become effective classroom teachers and school leaders” (North Carolina Public Schools, n.d., p.1)

Retention

Teacher attrition, turnover and retention are used interchangeably in the research and the discussion of teachers’ employment. The National Commission on Teaching and America’s Future (NCTAF) estimated in June 2007 that teacher turnover – the number of public school teachers leaving the profession, was costing the United States over \$7.3

billion a year due to teachers leaving the profession (p.1). I will use the term retention to refer to teachers continuing to teach and stay in the profession of teaching.

Summary

This study was formulated to examine the current state of induction in 11 of North Carolina's LEAs to better understand how varying components of induction impact beginning teachers and to gather the LEAs' and BTs' perspectives about induction. Teacher retention will be compared to the induction models for teachers in each LEA to look for any relationships between the components of induction and teacher retention. This process will lead to a better understanding of the range and benefits of induction programs in North Carolina.

CHAPTER II

REVIEW OF THE LITERATURE

Induction and Mentoring

The first three years of a teacher's career are described as the induction period, which coincides with the time in North Carolina a teacher is labeled as a Beginning Teacher (BT). Teacher induction is a time for teachers to become part of the teaching profession as they are enculturated into the procedures, routines, and fundamentals of teaching while putting into practice all they have learned during their teacher education program. This time of transition is intended to orient new teachers to the academic and professional cultures of the school and the challenges of the profession. During the induction period, schools and districts provide a system of supports that typically include orientation to the school, mentoring, and professional development. Teacher induction programs have been developed to help support and guide new teachers into a successful career (Wong, 2004). The experiences of beginning teachers not only affects their perceptions of teaching and learning but develops them into the kind of teacher they will become and influences their decisions whether or not to continue teaching (Adelman, 1991, McDonald 1980).

Support for beginning teachers in North Carolina is mandated by the State Board of Education and supported through legislative mandates and funding for mentoring and

induction programs. The terms mentoring and induction are often used interchangeably (Ingersoll & Smith 2004). Even though mentoring has been included in North Carolina state law since 1985, and quality induction is mandated in the federal No Child Left Behind act, mentoring and induction are usually defined by the participants and practices of those involved. Mentoring has been “the dominant form of teacher induction” in the past 20 years (Ingersoll & Smith, 2004, p.29) and since it is a funded mandate, North Carolina provides a monthly stipend to the mentor of each beginning teacher.

Ideally, induction goes beyond just assigning a mentor to beginning teachers or defining the time of a teacher’s introduction to the profession. Harry Wong, co-author of *The First Days of School* and former high-school science teacher, sees induction covering not only the time involved, but also the how a teacher is inducted through the resources provided to develop the beginning teacher.

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 (Wong, 2004, p.42)

Seeing induction as a process supports the socialization of teachers. Lortie’s (1975) study referred to socialization – teachers becoming part of the context of their “group” – such as their school and contends the common isolation of beginning teachers (Goodlad, 1984)

Socialization is a subjective process – it is something that happens to people as they move through a series of structured experiences and internalize the subculture of a group. (Ingersoll, 2002, p.61)

For the purpose of this study, induction will be viewed theoretically as the process of socialization and professionalization involving many components. A support system for beginning teachers including the professional development teachers participate in at their school and possibly district level, the support of colleagues, perhaps in a mentor or “buddy” role, and any other support provided to or sought out by the beginning teacher, are all part of a teacher’s socialization and professionalization into the teaching profession. As Kardos and Johnson (2007) report, this can be a challenge for principals and schools to create, implement and support professional cultures to support BTs.

A comprehensive induction program as Wong (2004) suggests has different components designed to assist in the support of a beginning teacher. One support mechanism is to assign a mentor to each beginning teacher. In North Carolina, this is supported monetarily by state law for the first two years of a teacher’s career. Mentors in North Carolina are paid a stipend of \$100 monthly when they are mentoring a first or second year teacher. Mentoring is only one part of the induction process, but in many cases, it may be the only support a beginning teacher receives.

Hilton School district in New York defines their mentoring program as,

A process that facilitates instructional improvement wherein an expert teacher (mentor) works with a novice or less experienced teacher (intern) collaboratively and nonjudgementally to study and deliberate on ways instruction in the classroom may be improved (Bower, 2005, p.22)

Although mentoring is provided to improve instruction and is a collaborative process, often mentors are assigned to beginning teachers with little connection. Mentor

teachers' only relationship with their mentees may be through the school they teach in, which at least puts them in similar contexts. Mentors often have training, which is required for mentoring in the state of North Carolina, and may have follow-up professional development and support while mentoring the beginning teachers. Some believe the mentorship should be a collegial relationship where both parties gain from the experiences (Bartell, 2005; Coppola, Scricca, & Connors, 2004). A mentor can only do so much. As Bartell states, "The support and mentoring that occur in a well-designed induction program are not a substitute for strong academic preparation, but an adjunct to and extension of that preparation" (2005, p.15).

Induction programs are developed to support beginning teachers starting during their first year and continuing through the first three years. Even with dissimilar requirements, the goal of each program is to help the teacher, school and students. Bartell (2005) makes the case that this goes beyond the survival of the first year, and states "the goal of a systematically planned program of induction is to help new teachers not just survive, but to succeed and thrive" (p.6).

Because the components of induction programs are so varied, it is understandable that there is more than one agency that creates and provides the support for beginning teachers. Induction programs can not be defined as something that just happens at one level, such as school induction activities, local school district components or state induction models. Teachers may be fortunate and offered induction support provided by several different programs. As Clement, Enz, and Pawlas discovered,

Induction programs may be mandated by state departments of education as part of the standard certification process, implemented by school districts or regional offices of education as a staff-development requirement, or offered by university personnel as part of a master's program" (Clement, Enz & Pawlas, 2000, p.53)

Historical View of Induction

Teacher induction, which is defined as indoctrination or socialization during the first three years of teaching, has always been a part of each teacher's career. However, organized programs supporting beginning teachers only began in the 1960's. The Conant Report, published in 1963, recommended supporting beginning teachers. This may be the first mention of support needed by teachers in a reform document. Only eleven programs for beginning teachers were created between 1968 and 1978 (Galvez-Hjornevik 1985). In the 1970's research focused on beginning teacher problems and programs that could help teachers. In the 1980's as programs were developed, the American Educational Research Association published a monograph in the annual meeting program on teacher induction (Brooks, 1987).

Teacher induction emerged as a priority in the 1980's in the era of *A Nation at Risk*. The focus for teacher retention was on induction and mentoring (Blair-Larsen, 1998; Odell 1986). Florida was the first state that reported having a support program for teachers. The Florida program, which started as a result of a renewed focus on professionalism and accountability, had mentoring and assessment components (Feinman-Nemser, Schwille, Carver, & Yusko, 1999). As interest grew other states began to mandate induction programs with names including *Entry Year Assistance Program*, *Beginning Teacher Helping Program*, *Assistance/Assessment* and *Teacher Mentor*

Program, which varied by program content and design. By 1986, Arizona, Florida, Georgia, North Carolina, Oklahoma, Oregon and South Carolina had state mandated programs to support beginning teachers. According to the Office of Educational Research and Improvement, programs in Nevada, New Mexico, and Pennsylvania (1986) were also developed during the 1980's. Those programs that were developed and evaluated during the 1980's were the California Mentor Teacher Program (California Department of Education, 1983), the Oklahoma Entry Year Assistance Program (Eisner, 1985), multiple induction programs studied by researchers from the Research and Development Center for Teacher Education (R&DCTE) at the University of Texas at Austin (Griffin, 1985; Huling-Austin, 1985) and the Career Development Program of Charlotte-Mecklenburg, North Carolina (Schlechty, 1985). Due to many programs being developed and implemented in the 1980's researchers in the field began to analyze these programs and their impact.

Also impacting beginning teachers during the late 1980's was the development of a consortium of chief state school officers that spearheaded the development of a national education agenda titled the Interstate New Teacher Assessment Support Consortium (INTASC), which was created in 1987. This consortium was part of the reform movement focusing on teacher education, teacher licensure and continuing professional development. The INTASC standards for what beginning teachers should know and be able to do are still in use in North Carolina during the first three years of a teacher's career.

As a product of site-based management programs, part of the educational reform of the late 1980's, school districts developed induction programs more specific to the nature of their local districts in the 1990's. These programs ranged from an orientation including lectures used to introduce teachers to the district, to more developed programs that used methods that resulted from research and experience. Induction programs in the early years ranged from a few days' orientation before the teacher's first day at school to programs with sustained mentoring from experienced teachers (National Council for Teacher Quality, 2004).

The number of states with induction programs rose to 31 by 1991 (Gold 1996) and at the end of the decade fell to 26 states and the District of Columbia (Andrews & Andrews, 1998). Growth of state-supported programs was seen as a reemergence in the field of teacher induction and support, although the reduction of state-appropriated funding caused some states to eliminate and decrease programs (Weiss, 1999). As programs changed and research grew, it was evident that mentoring was becoming a prominent topic in educational research (Feiman-Nemser, 1996).

By the year 2000, 56% of K-12 public school teachers reported they had participated in some form of formal support for beginning teachers (Hirsch, Koppich, & Knapp 2001), but these programs still varied widely. For example, they differed in the number of days required, frequency of meetings, topics covered, and involvement of mentors. As local schools and districts controlled the design of induction programs for new teachers, the length, variety and quality of programs was impacted by funding and

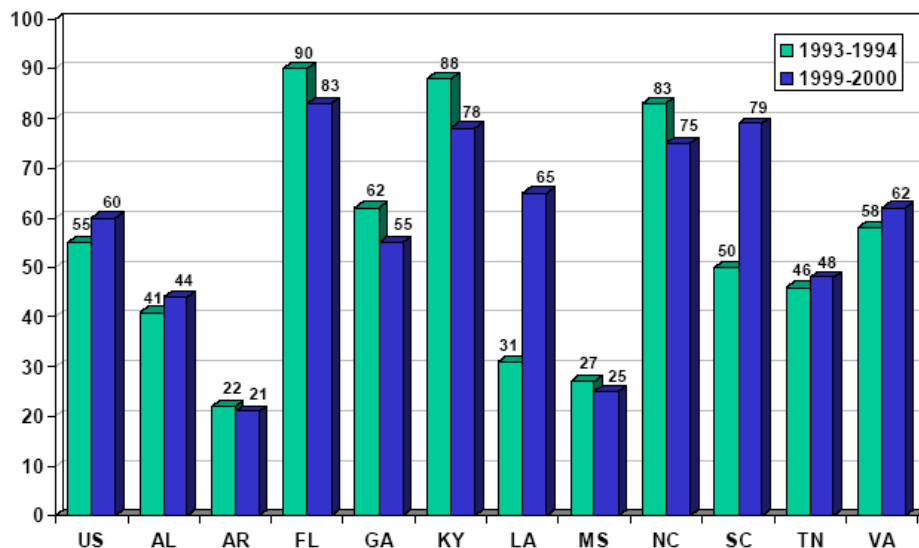
state mandates. In 2002, 23 out of 50 states required new teachers to participate in some type of mentorship or induction program (Council on Chief State School Officers, 2002).

As shown in the chart below (Figure 2), the Southeast Center for Teacher Quality (now Center for Teacher Quality) looked at two time periods, 1993-94 and 1999-2000, to compare teachers involved in a formal, organized forms of induction in 11 Southeastern states. Only teachers with less than five years of teaching experience were surveyed so no teacher should have been surveyed in both data collection periods. Out of the 12 states, half (six) had an increase in the number of teachers participating in formal induction programs and the other six states, including North Carolina, had a decrease in the number of teachers participating in induction programs.

Figure 2 *Percent of new teachers with some formal induction experience*

Percent of new teachers* with some formal induction experience

Source: Schools and Staffing Survey, 1999-2000



* Reports from teachers with less than five years experience

<http://www.teachingquality.org/BestTQ/issues/v02/v02n03.pdf>

As local schools and districts control the design and implementation of induction programs for new teachers, the length, variety and quality of the programs continues to be impacted by funding and state mandates. Each year, districts hire new teachers and some offer support in formal and informal induction programs for beginning teachers. In a 2006 Education Week survey, 30 states, seen in the maps below (Figure 3), reported mandating an induction program for new teachers. Sixteen of these states, as seen in Figure 4, provided some funding at the state level; however only five of these states required more than one year of induction support according to an Education Week survey (2006). This is a reduction from the rise in support for beginning teacher seen the 1990's.

Figure 3 *States which offer induction programs for new teachers Education Week, Quality Counts 2006*

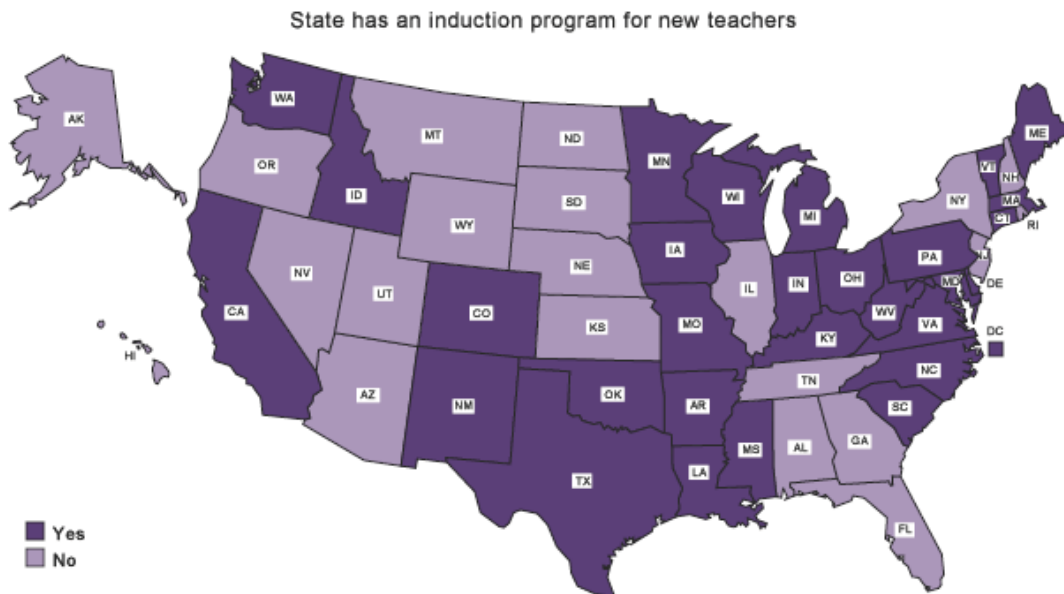
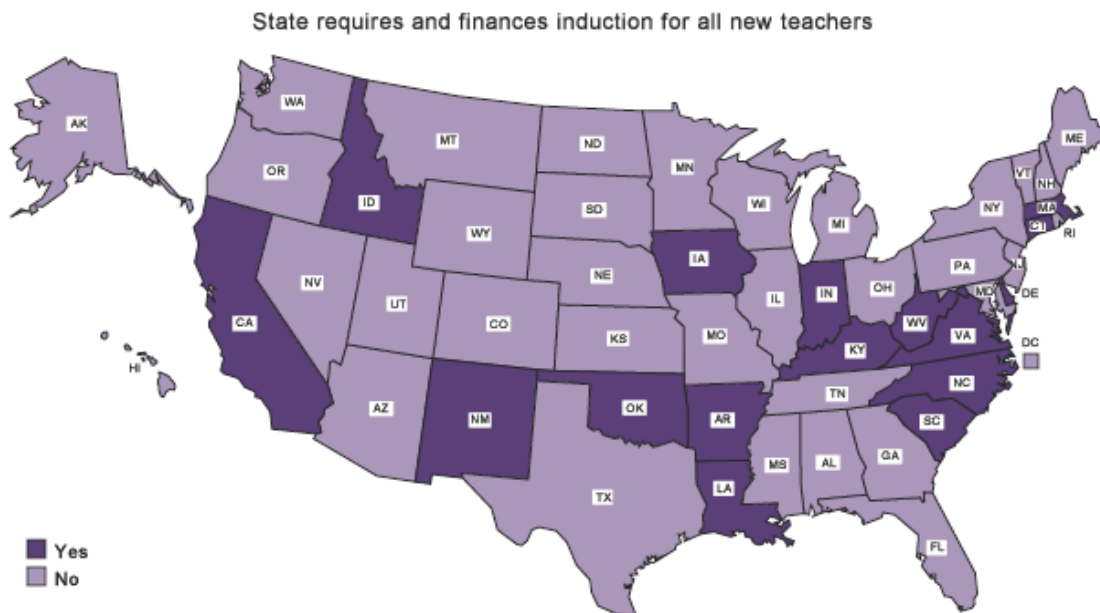


Figure 4 States which require and finance induction programs for new teachers
Education Week, Quality Counts 2006



Comparing the research and programs implemented over the last 40 years, each induction program has impacted a group of beginning teachers, but programs may be going more toward voluntary teacher participation focusing on teacher needs, such as UNCW’s Watson School of Education First Years of Teaching program that partners with local school districts to provide support. Eddy (1969) concluded through her research that “experienced teachers indoctrinate new teachers with attitudes, behaviors, and values that they have defined as appropriate for teachers” (as cited in Feiman-Nemser, 2003, p.23).

Induction Research

Research involving beginning teachers occurs in both quantitative and qualitative formats. Ranging from local, to state and national forms, surveys and questionnaires have been used to collect data from beginning teachers in North Carolina's Teacher Working Conditions bi-annual survey as well as by the U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey. Researchers also use surveys and questionnaires for large multiple-state studies, such as Kardos and Johnson's study examining BTs' professional cultures and experiences with their colleagues in California, Florida, Massachusetts, and Michigan (2007). Many local school districts also survey beginning teachers at the end of the year about their induction program as a form of self-assessment. Case studies involving beginning teachers are more prominent including the published studies of Dollase (1992) *Voices of Beginning Teachers*, Roehring, Pressley, and Talotta (2002) *Stories of Beginning Teachers* and McCain, Johannessen, and Ricca (2005) *Supporting Beginning English Teachers*. One variation of the case studies are longitudinal studies following beginning teachers into their career, including Bullough, Jr. and Baughman (1997) *First Year Teacher Eight Years Later*; Johnson's (2004) Harvard research *Project on the Next Generation of Teachers*; Kardos, Johnson, Peske, Kauffman and Liu's (2001) qualitative longitudinal study of 50 Massachusetts teachers; and Levin's (2003) *Case Studies of Teacher Development: An in-depth look at how thinking about pedagogy develops over time*. These studies include descriptions of beginning teachers' experiences and the varied support they receive including both formal and informal induction program components.

The majority of available data on beginning teachers focuses on teacher retention and attrition. The attrition rate of beginning teachers has been documented at local, state and national levels. The Alliance for Excellent Education reported in 2004 that \$2.6 million is spent annually in the United States hiring new teachers, including replacing those who have left the profession. Comprehensive induction, including mentoring during the first two years of teaching, was cited as the most beneficial way to curtail the increasing attrition rate. The report also states that one out of every two beginning teachers will leave the profession within the first five years. Schools and districts with comprehensive support cut this rate in half. Unfortunately, the analysis determined that only one percent of beginning teachers receive support through a comprehensive induction program (Alliance for Excellent Education, 2004).

Ingersoll (1997) studied the induction of teachers as one of four parts in a statistical analysis of data from public and private school teachers for the 1990-91 school year. He determined that “simply offering formal mentoring programs did not guarantee that new teachers were effectively assisted in matters of discipline, instruction and adjustment to the school environment” (Ingersoll, 1997, p.16). This study compared public and private school programs, school size, as well as high and low poverty schools. “Small public schools were less likely than large schools to offer mentoring programs but more likely to provide effective assistance” (Ingersoll, 1997, p.16). In Ingersoll’s study, 67% of the schools implemented a mentor program, however only 16% of these schools were viewed as having effective assistance by teachers. “Background analysis of the data also indicated that whether or not a school had a mentor program little affected the

distribution of teachers' reports of the effectiveness of assistance" (Ingersoll, 1997, p.17). Schools compared by poverty enrollment had a similar percentage of mentoring programs and program effectiveness, however the size of the school did impact the analysis. Fifty-three percent of small schools, with fewer than 300 students, and 21% of schools with more than 300 students were viewed as having effective assistance. The percentages grew farther apart in schools that were larger. Seventy-eight percent of large schools that had over 599 students had mentor programs, but only 9% were viewed as offering effective assistance (Ingersoll, 1997).

In an earlier study, Dianda, Ward, Quartz, Tushnet, Radio, and Bailey (1991) used data from the California New Teacher Project to suggest that there is a higher retention rate for beginning teachers when they receive support from veteran teachers. The results from this study, which used a control group of first-year teachers not participating in the project and an experimental group being mentored, showed that both groups answered a question at the end of their first year teaching, "Will you continue teaching?" with possible responses of no, unsure, yes, probably and yes, definitely. The experimental group's answers were more positive that they would continue teaching. Their mean score was 3.0 and the control group 2.3, a slight difference, but not statistically significant ($p=.069$). This study also provided information on the effects of the state mentor program in California. However, this study looked at the beginning teachers' intentions to continue teaching and did not follow up to determine the attrition rate (Ingersoll & Kralik, 2004).

Mentoring

Many models for induction support include mentors, but how mentors are paid and used varies widely. Mentoring is often part of an induction program, but not the only part involving teachers. Little (1990) suggested that mentoring was becoming part of teachers' professional careers. States and programs suggested that induction was about helping teachers matriculate into the current system in their school – mentors were one way teachers had a shoulder to lean on and *learn the ropes* (Feiman-Nemser, 2003). The collegial mentorship is the most common form of support for beginning teachers, although Feiman-Nemser, et al (1999) suggests there needs to be thoughtful selection, training and support of the mentor while experienced teachers are supporting beginning teachers. The support is more successful during this collegial relationship if both parties are involved and supported.

Mentoring goes beyond pairing a beginning and experienced teacher. The collegial relationships built among colleagues has been established through the research of Boreen and Niday (2003) whose research states that mentoring offers a “vast array of life and professional learning experiences that enhance their ability to interact with their colleagues in a collegial manner” (p.15). The relationships built between a mentor and mentee can move beyond collegial support. Glickman, Gordon and Ross-Gordon (1995) indicated through their research that experienced teachers offer continued professional support during the mentorship. Wang and Odell (2002) identified three major areas through their research that are crucial in the success of beginning teacher mentoring component:

- Humanistic: assisting teachers on a personal level immerse themselves into the teaching profession
- Apprentice: assisting beginning teachers transition into the culture of the school and help with the progress of teachers in specific contexts
- Critical constructivist: reconstructing teaching, asking questions and questioning current teaching practices

It is during these first three years that “the development of a teacher is shaped or determined by what happens to the teacher during the transition period” (McDonald, 1980, p.25). Long-term support using mentors was supported by Coppola et al. (2004) who found through their research that a multi-year induction program involving mentoring was important. However only adopting mentors for beginning teachers does not provide the knowledge, skill and support for BTs to thrive in the classroom. Coppola et al. (2004) suggest an induction program with collegial mentoring and effective professional development components will more specifically target beginning teachers’ needs.

Mentoring has been around longer than the other aspects of induction. Although mentoring is described to improve instruction and is considered to be a collaborative process, often mentors are assigned to beginning teachers with little connection. Marzano (2003) describes matching mentors in schools with a beginning teacher through a structured program in order to establish trust, accountability, and instructional support. The only relationship teachers have may be through the school they teach in, which does put them in similar contexts with their mentor if assigned as Marzano suggests. Huffman

and Leak (1986) found mentors could be helpful in meeting the needs of beginning teachers, however “to maximize their effectiveness the mentors should teach the same content and work at the same grade level as the beginning teacher” (p.22) which aligned with the research of Johnson, Berg and Donaldson (2005) who found mentoring could have a positive impact on teacher efficacy and retention when matched by subject, grade and school.

Thoughtful assigning and training of mentors can provide quality support. Mentors are required by No Child Left Behind (2001) to have quality training, and may have follow-up professional development and support while mentoring the beginning teachers. The full-time mentor program developed by the New Teacher Center at the University of California, Santa Cruz is a good example of how support and training can be offered to the mentors themselves. Some believe the mentorship should be a collegial relationship where both parties gain from the experiences (Castanga, 2003). But the mentor can only do so much, and as Bartell (2005) states, the mentor is not a substitute for a developed program to meet beginning teachers’ needs.

The use of mentors as an induction component in North Carolina varies from full-time mentors supporting one or more beginning teachers in their first few years of teaching to mentor teachers who continue teaching and mentor on a part-time or outside of the instructional day. However, state funding for teacher mentors, mandated for teachers in their first or second year, can be used by school districts in different ways through a request to the State Board of Education. For example, Guilford County Schools (GCS) has used discretion with state funding to develop the mentor program including

both full-time and school-based mentors for beginning teachers. During 2005-2006, this school district used funds to finance the Right Start program providing personnel and resources for induction programs for teachers. GCS also discounted the amount paid to mentor teachers. If mentors had one beginning teacher, they received a \$50 stipend monthly and if they had two beginning teachers, they received the \$100 stipend monthly. GCS also used the funding to finance school-based induction coordinators who received a \$500 stipend for the school year (Renn, personal communication, 2005). In 2006, however, GCS changed the organization of its induction program by forming an Induction and Success department in Human Resources with a director, office support staff and 9 full-time beginning teacher and lateral entry teacher support coaches who serve as full-time mentors to beginning GCS teachers.

Teacher Development

The experiences of first-year teachers should not be dissected and labeled, but researchers and educators have suggested that teachers develop through phases or stages of teaching during their careers. Three models of teacher development that relate to teacher induction and retention are presented here.

Fuller Model of Teacher Concerns

Fuller's (1969) seminal work on beginning teacher concerns focuses on the perceptions of teachers during their student teaching and first year of teaching. Preservice teachers begin in the Fantasy stage with unrealistic beliefs about education and concerns about other's perceptions of them. As they become responsible for instruction and their

students, beginning teachers enter a stage of survival and their concerns are about fulfilling the role of a teacher. The third stage called Mastery of Craft, refers to teachers' perceptions of how well they are teaching and the difficulties that arise from the restrictions in education. The model was revised in 1975 (Fuller & Brown, 1975) with the addition of the fourth stage, Impact. As teachers shift from concerns about themselves to concern for their students' learning, they must relate to whether they are impacting the academic, social, emotional and physical needs of their students. This model describes growth as a teacher as persistent self-confrontation (Fuller & Brown, 1975, Kagan 1992). Fuller (1969) summarized teacher's perceptions of their needs as a beginning teacher through survey data collected from many different teaching populations. The summary states

Beginning teachers are concerned about class control, about their own content adequacy about situations in which they teach and about evaluations by their supervisors, by their pupils, and of their pupils by themselves (p. 210).

Fuller (1969) suggests that the discrepancy between beginning teachers' perceptions of what they need and the induction and support offered to them warranted further research.

Ryan Model of Beginning Teacher Development

Ryan's (1986) stage theory about the development of beginning teachers was founded on the work of Fuller (1969) and Fuller & Brown (1975). The four developmental stages posited by Ryan (1986) are very similar to Fuller's Model of Teachers' Concerns: Fantasy, Reality (Survival), Master of Craft, and Impact. Preservice

teachers come to the profession with their own perceptions of how learning should look. These perceptions, along with teachers' interactions with exemplary teachers and their own identity as learners, continues to impact their development and growth (Kagan, 1992). This model emphasizes teachers' relationships with their mentor teachers and for induction purposes promotes the need for teacher interaction for teacher development.

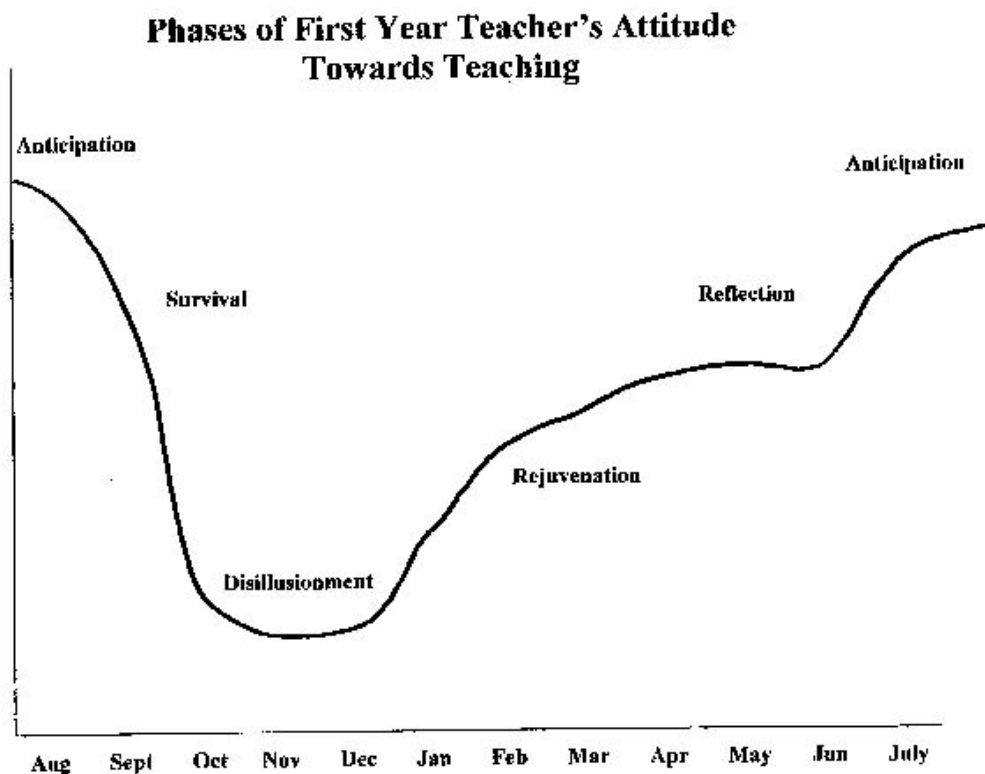
Moir's Phases of First Year Teacher's Attitudes Toward Teaching

According to Ellen Moir, Executive Director at the New Teacher Center at the University of California-Santa Cruz, which was founded in 1988, beginning teachers move through five phases during their first year of teaching and then return to the first phase, which is Anticipation at the end of the year in expectation of the next year. Moir's (1990) model is the only one investigated that predicted which month teachers would move through the stages. Moir's first stage of Anticipation is more positive than the Fantasy stage of Fuller (1969) and Ryan (1982). Beginning teachers are idealistic and generally excited about their first year of teaching. This energy wanes as their responsibilities begin to accumulate and they move into the Survival stage, followed by Disillusionment. See Figure 5 for phases of first year teachers' attitudes according to Moir.

The exhaustion of the first year is apparent in all of the three beginning teacher models described so far. Many teachers complete their first year in the survival stage and they never feel they're caught up. This is apparent when you talk with beginning teachers after school or near the end of the week in the fall months. After the winter break,

teachers have a chance to catch their breath and hit the Rejuvenation stage ready to start fresh. The time away from school has given them time to think and reenergize for the following months. Teachers' attitudes go up, as can be seen in Figure 5, and the Rejuvenation stage continues through the spring semester with ups and downs, such as worries over testing. At the end of the school year, beginning teachers move into the Reflection stage and have time to think during the summer months about the school year.

Figure 5 *Phases of First Year Teacher's Attitude Toward Teaching* (Moir, 1999)



In their study of Alabama teachers, McIntosh, Steele and Wolfe (2006) examined the timeline proposed by Moir. Participants all agreed they did move through the stages, but not all at the same time or month indicated. Moir's model, although chronological, can be adjusted for beginning teachers based on their experiences and context. No two teachers will have the exact same experiences or perceptions throughout their first year of teaching. Beginning teachers' attitudes and perceptions can influence their career in teaching. Moir's model has been attributed to greater teacher retention through her work at the New Teacher Center because studies at the New Teacher Center "suggest that mentoring may be correlated with the retention of new teachers in the profession, and may also be related to decreased turnover from district to district and school to school" (Strong, 2005).

Theories of teacher development support the need for beginning teacher induction by calling attention to the concerns and needs of beginning teachers, which change and develop over time during their career. Each theory cites somewhat different impacts on beginning teachers and describes the perspectives of beginning teachers in slightly different ways; however, all the theories acknowledge that teachers change and develop, and provide a baseline for beginning teachers to start with their professional development including induction. The retention of teachers is a focus of these models, as the goal is for teachers to remain in teaching and develop over time. Teachers who continue teaching develop throughout their career, whereas teachers who are dissatisfied with their job and do not develop, may leave the profession.

There are other models of teacher development that have not been compared due to the focus of these models, and there is not a single model of teacher development that is going to fit all beginning and career teachers. In fact, according to Huberman (1989), the phases of teacher development should be seen as groundwork and not deterministic, and the levels of development may also be flexible with regard to the teacher's context and growth. Models could also be focused on more than just the professional lives of teachers since the outside factors that impact teachers will influence them (Levin, 2003), just as student impact was discussed earlier. As Rock-Kane (1991) points out, "in many situations, teachers must adjust not only to a new job, but also to an unfamiliar culture" (p.3). By incorporating personal and professional growth (Huberman, 1989; Kagan, 1992; Levin, 2003), the model for teacher development may become more dynamic and honor the complexities of teaching. A developmental model should address teachers' learning, but also be a problem solving process to be put into context (Berliner, 1988; Huberman, 1989). The model may be a framework (Huberman, 1989), or as Fessler (1995) suggests a model-building process that is dynamic and "subjected to refinement and modification as new data are fed back into the process" (p.190). Although this may cause hardship when creating a model that is this dynamic, a research-based model would be useful for mentors and induction coaches to use with beginning teachers.

Models of teacher development all predict growth, and none shows a stagnant model where the teacher remains in the same stage or phase throughout their teaching career. These models provide an opportunity to situate an understanding of how induction can support beginning teachers the development of BTs throughout the year and not only

in orientation sessions as the school year begins. Blackwell states that the induction of teachers through professional development is a factor in their decision to continue teaching. “Sustained and consistent induction increases the retention rate when it is custom-designed and incorporates personal attention” (Blackwell, 2004, p.44). If the professional development is offered and sustained throughout the year as a support component, it may become one factor increasing teacher retention as beginning teachers remain in the profession.

Just as beginning teachers should not become isolated, induction can not happen alone. There are multiple components and personnel that impact beginning teachers. The terminology for induction has been developed through research to encompass all of the aspects induction programs. Feiman-Nemser, et al (1999) describe induction as multiple terms encompassing beginning teachers’ period of induction, the transition that occurs during the beginning years of teaching and the program components offered supporting beginning teachers:

As we analyzed the discourse on beginning teacher induction, we uncovered three meanings or uses of the term.

- First, induction is used to label a unique phase (or stage) in teacher development. Stories by beginning teachers and studies of beginning teaching concur that the induction phase, which coincides with the first year(s) of teaching, is a time of intense learning and anxiety, different from what has gone before and what comes after. Current descriptions and conceptualizations of the induction phase tend to emphasize the self-defined problems and concerns of beginning teachers rather than the central tasks of learning teaching.
- Second, induction is construed as a time of transition when teachers are moving from preparation to practice. Researchers often use the term “socialization” to describe the informal processes by which newcomers enter the field and join the ranks of teachers. Conceptualizing induction as a process

of socialization focuses attention on the occupational setting and professional community which new teachers are entering, the messages they receive about what it means to be a teacher, and how these messages influence their emerging identity and practice.

- Thinking about induction as a phase in teacher development and a process of teacher socialization reminds us that, for better or for worse, induction happens with or without a formal program. Still, in contemporary discussions of educational policy and practice, induction generally means a formal program for beginning teachers. While the term “program” implies something intentional and organized, what counts as an induction program is not clear-cut. Sometimes it refers to state-wide system of support and assessment. Sometimes it refers to a district sponsored orientation for new teachers. Often it is equated with the assignment of mentors to work with new teachers (Feiman-Nemser et al., 1999, p.4-5)

Teacher development is connected to induction through the different stages represented. However, induction is also the period of time when teachers are enculturated into the profession with or without a formal induction program. Teachers will go through the induction phase as part of the process of teacher socialization (Feiman-Nemser, et al, 1999). This study will focus on the components of induction offered in North Carolina LEAs and explore teacher perspective on induction. The development of teachers during this phase of teaching will likely impact teacher perception and participation in induction programs.

Variety of Induction Program Components

Understanding teacher induction, used to describe both the program components (formal or informal) offered to teachers their first few years of teaching and to describe what teachers do as they enter the profession, involves understanding the larger systems of support as well as individual or smaller school-based supports.

Stansbury and Zimmerman (2002) separate induction program components into two categories: Low Intensity Support Strategies and High Intensity Support Strategies. However, as districts have autonomy in selecting, planning and providing these induction components as support for beginning teachers, the support components explained are individual to each program.

Low Intensity Support Strategies, or informal strategies, are those components that require fewer resources and less time compared to other support components and they are often procedural. A description of low intensity support is offered by Stansbury and Zimmerman (2002).

1. Orientation – This can vary from part of a day to multiple days of meetings at the district and/or school level typically connected to a handbook or other procedural documents to indoctrinate the teacher into the LEA and/or school and may orient the teacher to the LEA or school with a tour.
2. Matching beginning and veteran teachers – At this level, this may be less than a formal mentoring role and more like a buddy teacher there to lend an ear, possibly on the same grade level or subject area and willing to talk with the beginning teacher.
3. Adjusting working conditions – This often falls to the administrator responsible for the beginning teacher and more often than not, beginning teachers are not protected in their working conditions or job assignments.
4. Promoting collegial collaboration – Building a community of support for beginning teachers will in some cases involve the entire school community

and in a broader sense could expand out to others in the LEA and/or state levels.

High Intensity support strategies, or formal support categories, often require funding and have been found by the California New Teacher Project (Dianda et al, 1991) to be more effective in supporting beginning teachers.

1. Mentors - Providing support providers in the more formal role, these mentors will be assigned to a beginning teacher and will also be supported and trained to assist the beginning teacher.
2. Professional Development – In the more formal induction program, release time may be used with the mentor, to observe or visit other classrooms or for professional development to allow the beginning teacher to take workshops on various subjects pertaining to the LEA and/or school and to attend seminars mandated by the LEA and/or school.
3. Resources and Materials – When LEAs and/or schools mandate programs of instruction, resources and materials may be provided along with the training to teach the beginning teacher the system adopted.
4. Formal Networking Opportunities – Beginning teachers are provided opportunities to meet other beginning teachers as well as colleagues in their grade level and/or subject areas.

Criteria for Successful Induction Programs

The induction programs offered to beginning teachers take many different forms as will be discussed later. Many researchers have created a list of criteria to help define what makes a substantial induction program.

Annette L. Breaux and Harry K. Wong (2003) point out that no two programs are identical and list characteristics an induction program should have:

- an initial four or five days of training before school begins.
- ongoing, systematic training over the course of two or three years.
- strong administrative participation in, and support of, the overall induction process.
- a mentoring component.
- study groups in which new teachers network and support one another.
- a structure for modeling effective teaching during in-services and mentoring.
- numerous opportunities for inductees to visit demonstration classrooms taught by successful veteran teachers. (Breaux & Wong, 2003)

Comparing Breaux's (2003) list of induction components to Bartell's (2005) list of recommendations, there is an added sense of accountability and measures taken to ensure teachers don't slip through the cracks.

- Clarity about the purpose and intended outcomes of the program
- Sufficient attention to leadership and administration of the program

- Collaboration among organizations, groups, and individuals involved in providing instructional services
- Support of site administrators who are well informed about the purpose and goals of the program
- An understanding of and linkages with the university preparation program that prepare the teacher for practice
- Attention to the context in which new teachers are assigned to work and their specific teaching assignments
- Involvement of experienced teacher mentors who are carefully selected and trained to effectively guide and assist new teachers
- Provision of scheduled, structured time for experienced and beginning teachers to work together
- Professional development for new teachers – training that is related to their immediate needs and their current stage of professional development
- Individual follow-up by experienced educators so that new teachers learn to use new skills effectively in their classrooms
- Feedback to beginning teachers about their success in meeting professional goals and expectations
- Evaluations of the program and its impact on new teachers and their students

Because the suggestions for induction programs are so vast, it is understandable that there is more than one agency that creates and implements the supports for beginning

teachers. Induction programs can not be defined as something that just happens at one level, such as school induction activities or local school district or state induction models. Teachers may be fortunate and have several agencies providing induction programs.

Induction programs may be mandated by state departments of education as part of the standard certification process, implemented by school districts or regional offices of education as a staff-development requirement, or offered by university personnel as part of a master's program (Clement, Enz & Pawlas, 2000, p.53)

Each of these agencies has something different to offer the beginning teacher that supports the processes involved during induction. Beginning teachers need choices and a voice when determining what kinds of support and induction are needed for them to thrive, as Bartell (2005) mentions. Kardos, Johnson, Peske, Kauffman, & Liu (2001) developed a framework for understanding teachers' professional culture in a study with the *Project on the Next Generation of Teachers* in which they found beginning teachers felt more supported when they experienced "integrated professional cultures" in their school. This professional culture allows for collaboration and communication among teachers in their schools and LEAs.

This study will examine program components across LEAs in North Carolina and the relationship with beginning teacher support through induction program components and teacher retention.

Perceptions of Beginning Teachers

During their first year, teachers have reported feeling overwhelmed and isolated

(Lieberman and Miller, 1994) as well as inadequate as teachers, not realizing that their peers were going through the same experiences (Veenman, 1984). The need for induction and support goes hand in hand with these feelings, but first-year teachers can be receiving induction through a program and still feel as if they are alone and struggling. As Griffin (1985) stated,

What we see from research, then, is that, on the one hand, teachers can be unsystematically influenced by teachers and administrators in schools where they begin practicing their teaching skills, and on the other hand, they can believe that they are abandoned and helpless in the face of the complexities of teaching (p.43).

First-year teachers share similar problems in their classrooms across the globe.

Veenman (1984) conducted a review of 83 studies for his article *Perceived Problems of Beginning Teachers*. Through this review, eight problems became apparent as the most difficult for beginning teachers, and certainly ones that should be attended during their induction:

1. Classroom Discipline
2. Motivating Students
3. Dealing with Differences
4. Assessing students' work
5. Relationships with Parents
6. Organization of Class Work
7. Insufficient and/or inadequate teaching materials and supplies
8. Dealing with problems of individual students.

These are certainly not the only problems first-year teachers face, but they were perceived as the most difficult. Among the 83 studies, no two researchers established exactly the same two lists; however the prioritized items Veenman suggests are consistent with others (Gordon & Maxey, 2000).

Veenman's study still rings true today in North Carolina. Studies from the Education Policy Studies Division (2002) showed there is still a perceived lack of administrative support by North Carolina teachers who leave after their first year of teaching. In fact, according to the North Carolina Teaching Fellows Commission (1995) 63% of Teaching Fellows teachers who don't return to teaching list one reason as lack of administrative support.

Most of the research in the field focuses on beginning teachers with regard to the issue of teacher recruitment and retention. The attrition rate of beginning teachers has been reported as one-third of beginning teachers leaving within the first three years and almost half leave the profession after five years (Ingersoll, 2001). The reasons for leaving the profession include job dissatisfaction, poor support, classroom management issues, and personal or family reasons such as pregnancy or raising children (Ingersoll, 2000; MacDonald, 1999; Tye & O'Brien, 2002). This study will examine the influence of induction programs on teachers' decisions to remain in teaching, and through this the connection of induction and teacher retention. Understanding teacher development, what the components of good induction programs should be, the distinctions between induction and mentoring, and the history of providing support for beginning teachers are all important for interpreting the data collected from North Carolina's LEAs and BTs.

CHAPTER III

METHODOLOGY

Research Design

Teacher retention is connected to teacher induction, working conditions, supportive environments, teacher beliefs, and attributes of the personnel and organizations surrounding teachers in schools (Ingersoll, 2001). This study employed a mixed methods approach to investigate the relationships between teacher induction, and teacher socialization activities including induction components such as mentoring, to explore the connections with teacher retention. Both quantitative and qualitative data were used to inform the analysis of the research questions. This study used questionnaires which included quantitative descriptive and demographic questions, rankings of components, and qualitative interview-style and open-ended questions. Questionnaires were sent to representatives of 11 LEAs and to over 400 beginning teachers in order to gather data for the purpose of garnering insight regarding LEA induction from participants' perspectives (Creswell, 2005). Collecting both types of data allowed the research questions to be answered using the type of data that best fits the kind of information that was sought, and also to provide different perspectives to answer the research questions (Johnson & Onwuegbuzie, 2004).

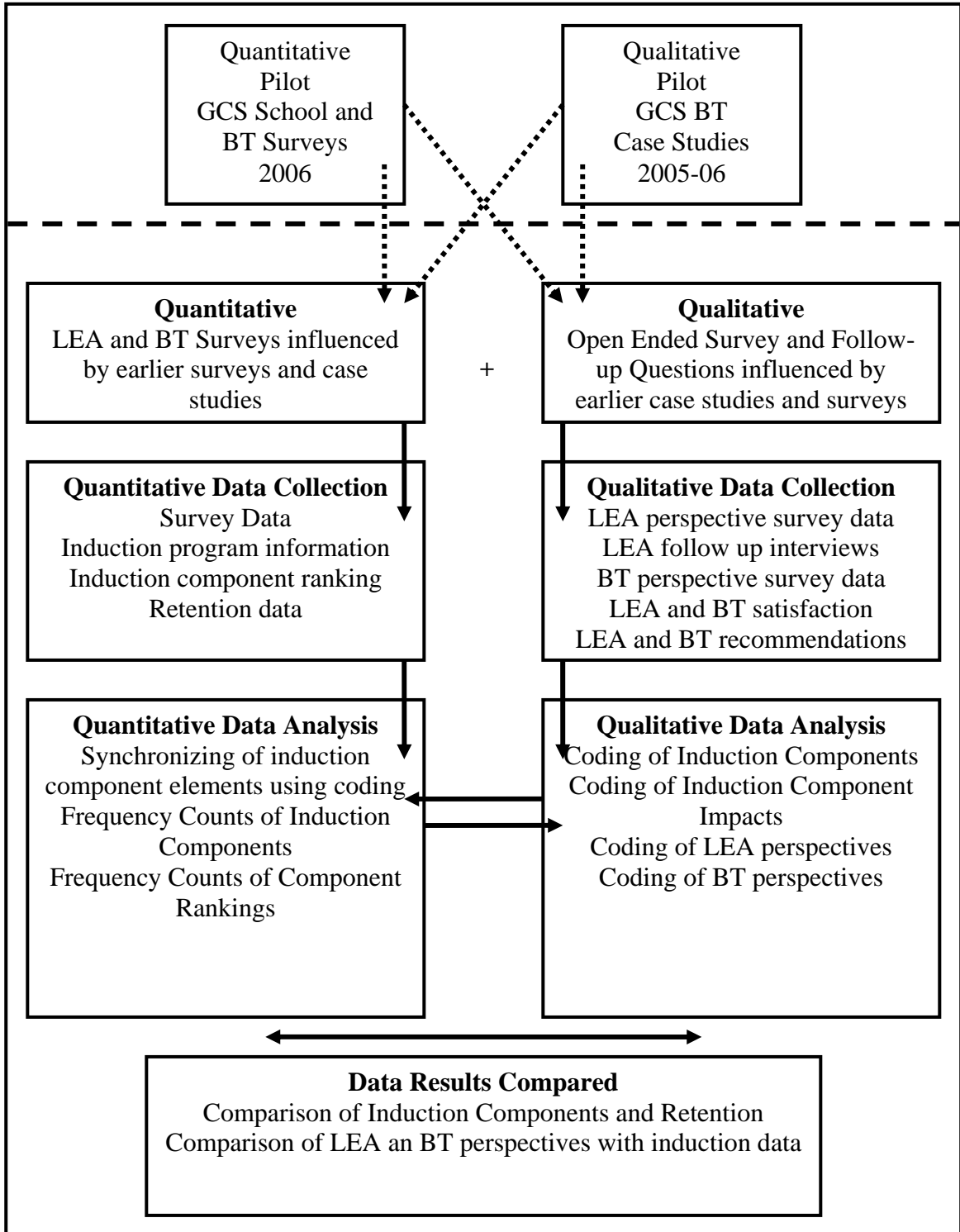
The mixed methods design selected for this study used a concurrent nested strategy so that both quantitative and qualitative data was collected simultaneously. This

design also allows the qualitative data to inform the quantitative results and vice versa (Creswell, 2003), so that interpretation of these data will provide opportunities to uncover relationships in the findings to inform both the LEA representatives and BT perspectives.

An interpretive analysis of both the qualitative and quantitative data was used to develop an understanding of the different perspectives on teacher induction programs gathered from each LEA representative. The addition of informational documents and beginning teacher surveys allowed for an even broader perspective, connecting the teachers' perspectives about induction to those of the LEAs, thus providing a comprehensive picture of induction (Creswell, 2005) practices in the LEAs from the perspectives of beginning teachers. Collecting multiple forms of data integrated the different perspectives and triangulated the data in a single study (Jick, 1979; Creswell, 2005) as demonstrated in the research design shown in Figure 6 on the following page.

Figure 6 depicts the relationships between the quantitative and qualitative data gathered simultaneously and analyzed separately and then compared for a triangulation of data analysis. The decisions on gathering and analyzing quantitative and qualitative data were influenced by pilot research studies conducted during the 2005-06 school year. The data collection and analysis of beginning teacher case studies and a paper administered survey influenced the question format and content, the presentation and collection of survey data electronically and data analysis and coding techniques in this study. Figure 6 includes both of these pilot studies at the top, followed by the components of this study in the formation of the data collected, the analysis of data and the triangulation used in comparison of the quantitative and qualitative results.

Figure 6 *Teacher Induction Research Design*



Research Questions

The comprehensive question framing this study was: How do the components of induction programs implemented in North Carolina's Local Education Agencies (LEA) influence the retention of beginning teachers (BT)?

The following questions guided the study:

- 1 What components of induction are LEAs in North Carolina providing to support beginning teachers during induction?
 - a. How do the differences among LEAs (e.g. location, size, turnover) influence the components of induction implemented?
 - b. How do the differences among BTs (e.g. years in teaching, grade-level, location, turnover) influence the components of induction implemented?
- 2 What components of induction do LEAs and BTs identify as beneficial?
 - a. How do the differences among LEAs (e.g. location, size, turnover) influence which components of induction seem beneficial?
 - b. How do the differences among BTs (e.g. years in teaching, grade-level, location, turnover) influence which components of induction seem beneficial?
- 3 What is the relationship between teacher induction components offered in North Carolina LEAs and Beginning Teacher retention?
 - a. How do the differences in LEAs (e.g. location, size, turnover) influence the relationship that their induction components have with teacher retention?

b. How do the differences in BTs (e.g. years in teaching, grade-level, location, turnover) influence the relationship that the induction components have with BTs' decision to remain in teaching?

These questions were posed to examine how beginning teachers in North Carolina are supported during induction and what LEAs and BTs find beneficial. The intent of this study in identifying these factors was to enable schools to implement induction programs based on this information, hopefully increasing the possibility that teachers will remain in the profession.

Setting and Participants

This study examined what 11 LEAs across North Carolina are doing to support and retain their teachers. Each LEA in North Carolina was invited to participate in the study. According to the 2007-08 North Carolina public school directory, there were 2484 schools and 115 LEAs (North Carolina Department of Public Instruction 2007b). All 115 LEAs were sent information on the study and an explanation of the purpose, procedures and potential benefits of the study through email contacts and a recruitment flyer (Appendix E). Names of the LEAs that chose to participate were not known until after the recruitment process was completed. Based on responses to the invitation to participate in this study 11 LEAs in three geographic regions of the state were purposefully chosen to be included in the study. The BTs in each participating LEA were also invited to participate through an online survey distributed through a central office contact (Appendix G). There were 378 participating BTs in the 11 participating LEAs. Of these

beginning teachers contributing to this study, 210 were first-year teachers (56%) and 168 were second-year teachers (44%). The 11 LEAs represents 9.6% of North Carolina school systems and the 378 BTs represent 18.5% of the 2048 BTs employed in the 11 LEAs surveyed. The low response rate of BTs was impacted by the anonymity of the participants and the time frame in which data was collected.

Data Sources

Data were collected and analyzed using both quantitative and qualitative formats including: online surveys with LEA representatives – typically central office induction personnel, follow-up interviews with LEA induction personnel, LEA informational documents, a beginning teacher online survey, and a state report of LEA teacher retention. The data sources chosen were influenced by previous research about the induction practices in North Carolina’s third largest LEA. In this pilot study LEA induction personnel and beginning teachers were surveyed and case studies of three beginning teachers were completed. The results of that study in which a significant correlation was identified between the number of professional development activities attended at the school and the plans to continue teaching after five years informed the design of this study.

The Data Crosswalk (Appendix H) shows how the data sources are aligned with the research questions in each survey. The data sources are arranged across the top of the crosswalk and the survey parts have been separated to show the connection between LEA and BT data. The research questions are shown vertically and separated with the sub-

questions that addressed the main question. Each of the sub-questions used the demographic data to isolate induction components and retention data in order to make comparisons.

The first source of information included documents collected from a variety of sources. The collected documents included information gathered from LEA websites, information requested from LEA personnel about Induction Programs, and the North Carolina Report on Teacher Retention. The North Carolina Annual Report on the Reasons Teachers Leave reports teacher retention statistics and included district reports submitted in 2007 (North Carolina Department of Public Instruction, 2007a).

The second form of data was procured through the use of online surveys of both LEAs and BTs. These surveys were designed based on prior studies conducted during my graduate work. The LEA survey was created with the appropriate central office personnel in mind, e.g. Induction coordinator, Human Resources director or Superintendent's designee. BT surveys were created for all beginning teachers in each district as the intended audience. Demographic data was collected from the LEA surveys to determine LEA size and location. The BT survey gathered demographic data to determine the BT's years in teaching, grade level, and location in addition to the quantitative and qualitative questions on teacher induction components. Follow-up interviews added a third type of data but were conducted only with representatives from the 11 participating LEAs. These interviews served to clarify questions from the first two types of data and provided the opportunity to investigate induction practices for the LEA

in more depth. The alignment of the data sources to the research questions can be seen in the Data Crosswalk (Appendix H).

Instrumentation

Two survey instruments were self-created taking into account reliability and validity. Mentor and Beginning teachers were used as experts to provide feedback once the surveys were created and for validity. Tests of the reliability of the BT surveys (N=378) were conducted using a reliability test reporting Cronbach's Alpha. The BT survey yielded Cronbach's Alpha at .559. However, when the survey responses were calculated separated into separate categories, the reliability improved yielding Chronbach's Alpha of the Induction Component rankings at .616. Reliability of the LEA responses was not calculated due to the low number of LEA responses (N=11).

The survey design was influenced by prior studies on induction practices conducted in the third largest LEA in North Carolina in the 2005-06 school year (See Appendix A for the LEA survey and Appendix B for the BT survey) The surveys included both quantitative and qualitative questions for the LEA and BT participants. The LEA survey was divided into four sections:

1. Induction program information
2. Ranking of induction program components as beneficial to BTs
3. The satisfaction and recommendations of induction programs
4. LEA induction program success in the form of retention rates.

The first section gathered information about the induction program in general. Survey items two through four addressed these questions: e.g. What components of induction are offered to beginning teachers?. The second section asked respondents to rank the induction program components. This area was assessed in items five through ten which addressed each multiple components of induction and asked the participants to rank the different support components for each induction program component:

1. Orientation and Meetings
2. Professional Development
3. Mentors
4. Resources

The third section investigated the respondent's satisfaction with their induction programs and their recommendations regarding their programs. This question was assessed in items 11 - 13 (e.g. How satisfied are you with the current LEA induction program?) which used a five-point Likert scale to identify satisfaction, which was evaluated using a 5-point Likert scale (e.g. *5. Very satisfied, 4. Satisfied, 3. Neither satisfied nor dissatisfied, 2. Dissatisfied, 1. Very dissatisfied*). This satisfaction scale and questions of the survey did not address any of the research questions for this study and were not analyzed as part of this research. The fourth section sought to identify success using quantitative ratings (e.g. *High Impact on Teacher Retention, Some Impact on Teacher Retention, Does not Impact Teacher Retention*) followed by qualitative questions (e.g. *How do you measure success for the induction program?*) in items 14 - 17.

The BT survey was similarly divided into four sections, addressing the same four sections on the LEA survey to gather the BT perspective. The first two sections were used to gather information on the induction program components and the ranking of these components, identical to the LEA survey. The third section also asked for the BT satisfaction and suggestions for improvement in questions 11 and 13, however the qualitative question was more specific to BTs gathering data from the BT perspective answering *What kind of support was the most beneficial during your first year(s) of teaching?*. The quantitative satisfaction questions of the survey did not address any of the research questions for this study and were not analyzed as part of this research. The fourth section was also seeking the BT perspective on the program impact in items 14 through 16 including *Do you feel the induction program impacts your decision to remain in teaching?* with a choice of four varying responses from *Not at all* to *To a great extent the induction program impacted my decision*. Qualitative data was collected through two questions seeking the BT perspective including a description of the induction program's impact and *Which components of the induction program have influenced your decision to remain in teaching?*

Both surveys included questions to gather demographic information. LEA demographic data included the LEA name, location, size, and number of BTs. Beginning Teacher demographic data included the LEA name, the grade levels they teach and BT status as a first or second year teacher. BTs were also asked their future plans to remain in teaching in the demographic section to determine their possible retention.

Once a draft of the two surveys was complete, I sought feedback from 12 experts in the field at both the LEA and BT level (Appendix D). Feedback from these experts was used to assess content validity, and the surveys were revised based on their feedback. Revised surveys were then entered into SurveyMonkey (<http://www.surveymonkey.com/>), an online platform for delivery and electronic data collection. Data was subsequently collected through SurveyMonkey and was stored digitally on a secured computer. Other data sources not stored digitally were kept in a secured, locked file.

Data Collection Procedures

Step 1 – Recruitment through the invitation to participate

The first step in this research was to recruit LEA participation. This involved creating recruiting materials and gaining approval of the materials through the IRB process. Each LEA in North Carolina was invited to participate in the study using these recruitment materials in the form of a flyer sent via email (see Appendix E). An Induction Coordinator and/or LEA personnel representative received the invitation to participate electronically with a request to contact me for more information. The solicitation also included a request to pass along the invitation to the correct personnel, if needed. I compiled a spreadsheet of those LEAs responding to the invitation noting those that had not responded. Achieving 100% participation in the recruitment process was desired, but not expected due to the difficulty of locating appropriate contact persons in 115 LEAs. Within two weeks, I used the list of those responding to the invitation to participate to

follow up and answer any questions LEAs had about participation. Follow-up phone calls were made to LEAs with whom the I had a contact and had not responded to the initial solicitation in order to determine who the survey should have been sent to, and if the correct person received the link. This strategy was designed to serve as a method for verifying receipt of invitation and to provide an opportunity to clarify any questions that the LEA might have. This strategy was also designed to increase the response rate after verifying that the correct person received the solicitation with the hope was that this would result in a larger pool from which to select participating LEAs.

Step 2 – Purposeful sampling through selecting LEAs and IRB

From the responding 14 LEAs, purposeful sampling was used to choose 11 participating LEAs willing to participate fully and representing various regions across the state: Mountains, Piedmont, and Coastal region. Following this process, I contacted each LEA's representative to confirm participation, request approval procedures and documents for conducting research in their district. I then completed the application process requesting approval to collect data from the 11 LEAs selected and subsequently modified the IRB to reflect the participating LEAs. The participating LEAs and their region, size, and teacher turnover characteristics are shown in Table 1.

Table 1 *Participating LEAs*

LEA	Location (State geographic region)	Size (# of teachers)	Turnover Percentage (2006-07)
LEA1	Mountain	270	3.53%
LEA2	Piedmont	2116	8.82%
LEA3	Coastal	223	12.83%
LEA4	Piedmont	2200	16.70%
LEA5	Piedmont	2284	9.55%
LEA6	Coastal	683	17.97%
LEA7	Mountain	379	7.65%
LEA8	Piedmont	535	16.81%
LEA9	Coastal	206	13.27%
LEA10	Mountain	749	11.37%
LEA11	Mountain	497	7.83%

Step 3 – Surveys and Interviews

After the approval process, each participating LEA was sent an email that included the LEA online survey website (Appendix F), usually to the Induction Coordinator or another designated LEA representative. Following completed survey responses from the LEA, the designated contact person was invited to participate in a follow-up interview to clarify survey responses and to ask qualitative questions based on the follow-up protocol (Appendix C). Also after the LEA survey response, LEA representatives were contacted through email again and asked to send each BT in their LEA the link to the online beginning teacher survey (Appendix G). Continuing contact was established with the 11 participating LEAs. Following the first contact, I contacted the LEA representative to confirm their participation and remind them of the online

survey, and when needed, I resent the survey link to LEA representatives as needed. This strategy was used to increase to response rate and participation of all 11 LEAs.

As the LEA follow-up process and interviews continued, I also followed-up with LEAs to confirm the BT survey link had been received and passed on to all first and second year beginning teachers in the manner best fitting the LEA. I offered to send the email of the survey link to beginning teachers directly, if needed. There were 2048 BTs available in the 11 participating LEAs in a variety of subject areas and grade levels. Due to anonymity, there was no feasible way to follow-up with BTs, or contact those that chose not to respond. As a result, the expected response rate could not be predicted. Responses from BTs were collected during a three-month period and follow-up with LEAs was made as needed to finalize data collection (calendar of data collection and analysis in Appendix I). I was able to use 378 BT responses that were complete for a response rate of 18.46%. The following table (Table 2) describes the participating BTs.

Table 2 *BT Participant Data*

LEA	# of BTs (2008)	# of participating BTs	BT1	BT2	Elementary	Secondary
LEA1	41	9	3	6	5	4
LEA2	428	153	79	74	68	85
LEA3	54	14	10	4	8	6
LEA4	600	34	20	14	12	22
LEA5	450	42	25	17	23	19
LEA6	130	26	30	16	19	27
LEA7	50	22	12	10	10	12
LEA8	70	17	9	8	10	7
LEA9	21	3	2	1	2	1
LEA10	130	27	14	13	15	12
LEA11	74	11	6	5	6	5

Data Analysis Procedures

A mixed methods approach was used to collect and analyze data using both quantitative and qualitative methods. Responses were gathered from both LEA and BT participants to examine the components of induction being provided in LEAs. These surveys investigated the components that are beneficial to BTs and the relationship between induction components and teacher retention. The surveys for both the LEAs and BTs asked questions about the induction programs offered. Additional information was collected from documents including a state report on teacher retention and LEA websites. Follow-up interviews were conducted with LEA representatives to round out data collection from multiple perspectives.

LEAs identities were retained during the data collection process so that each component of induction could be attributed to the appropriate LEA. However, beginning teachers who completed the survey were not asked to identify themselves outside of their association with a specific LEA. This was done because the BT respondents only needed to be aligned with their assigned LEA for analysis and comparison purposes.

Both quantitative and qualitative data were collected from both sets of participants to give equal emphasis to the LEA and BT perspectives. Both LEA and BT data were analyzed separately using frequency counts for responses to each question. Comparison of responses to similar data questions asked on LEAs and BTs allowed for the building of a comprehensive picture from both the LEA and beginning teacher perspective. From a qualitative perspective, open-ended responses and follow-up interview responses were coded according to emerging categories (using the survey responses to inform the names of the categories) for connecting the LEA and BT induction data with LEA retention data.

Each section of the two surveys was compared to determine any matches between the LEA and BT survey data. Frequency counts provided preliminary data on questions about the induction components. Coding for qualitative data emerged from information collected from LEA induction documents and research in the field to provide themes and common terms for similar induction practices across LEAs. Coding was used throughout the data reduction process to simplify the qualitative data into similar categories so conclusions could be made identifying commonalities and differences with comparisons

of universal components (Miles and Huberman, 1984). The themes emerging from the qualitative data supported statistical findings from the quantitative data (Creswell, 2005).

Data from the open-ended survey questions was analyzed using descriptive analyses and summarized in a series of comparative tables which described the differences by LEA and commonalities seen across sections. The QSR program NVivo 8 was used in the coding and analysis of BT and LEA responses to open ended questions. The induction component categories – Orientation, Professional Development, Mentoring and Resources, were used as coding categories and allowed for comparison using the same techniques as quantitative analysis disaggregating the data by the descriptives of LEA location, turnover and size and BT years in teaching and school level looking for commonalities and differences among the coded responses. I used hand-coding techniques reading through all of the responses and assigning the appropriate coded categories to each based on the participants open-ended response. Occasionally responses were double coded due to the data provided in the open-ended response about induction components. This provided more than 378 coded responses compared to the 378 responding BTs. The strength of the qualitative data provided context and inductive analysis to shape categories of induction components used as codes (Miles and Huberman, 1984).

The perspectives of BTs and LEAs ranking the most successful induction program components were gathered through LEA surveys and follow up LEA interviews and BT surveys. These data were analyzed using ranking scales and a cross tab and open-ended questions. The goal of these questions was to determine how induction was

defined, including program components, and seemed beneficial to each group. The information gathered in the surveys and follow up interviews was compared with teacher retention data from the North Carolina Teacher Retention Report.

After analyzing the quantitative data and qualitative data separately, the responses and analyses were compared for commonalities and differences. One use of this is a comparison of BTs future plans in teaching and the impact of induction components on that decision to answer the third research question. A code of “no impact” was used in the coding of the question regarding the impact of induction components on plans to continue teaching. This allowed for a layer of analysis as some beginning teachers did not regard induction as impacting their decision to remain in teaching, however they listed beneficial induction components in their open-ended responses. The following table demonstrates the alignment with the research questions, data collected and analysis.

Table 3 *Data Connections*

Research Questions	Data Collected		Data Analysis	
	LEA	BT	Quantitative	Qualitative
1. What components of induction are LEAs in North Carolina providing to support beginning teachers during induction?	Survey: Induction Program information	Survey: Induction Program information	Frequency Counts for Induction Program components	Data Transformation - code and follow-up with LEA for similar attributes & differentiate for LEA/School Orientation, LEA/School meetings, Buddy/Mentor – which components are universal across the state, what makes orientation, etc
	Induction Program Documents			
	Follow-up interview: Induction Program information and clarification			
1a. How do the differences among LEAs (e.g. location, size, type) influence the components of induction implemented?	Survey: Induction Program information		Descriptive & Crosstab analysis - Comparison of frequency counts using differences among LEAs	
1b. How do the differences among BTs (e.g. years in teaching, grade-level, location) influence the components of induction implemented?	Survey: Induction Program information		Descriptive & Crosstab analysis - Comparison of frequency counts using differences among BTs	

Research Questions	Data Collected		Data Analysis	
	LEA	BT	Quantitative	Qualitative
2. What components of induction do LEAs and BTs identify as beneficial?	Component Rankings: Survey and Follow-up interviews	Component Rankings: Survey		
2a. How do the differences among LEAs (e.g. location, size, type) influence which components of induction seem beneficial?	Component Rankings: Survey and Follow-up interviews		Descriptive analysis & Crosstab - Frequency counts of induction component rankings	Code for similarities, universal components
2b. How do the differences among BTs (e.g. years in teaching, grade-level, location) influence which components of induction seem beneficial?		Component Rankings: Survey	Descriptive analysis & Crosstab - Frequency counts of induction component rankings	Code for similarities, universal components

Research Questions	Data Collected		Data Analysis	
	LEA	BT	Quantitative	Qualitative
3. What is the relationship between teacher induction components offered in North Carolina LEAs and Beginning Teacher retention?	Induction Program Information, Survey Component Ranking: Retention Rate: State Report	Induction Program Information, Component Ranking: Survey	Comparison & Crosstab of LEA programs and BT retention Rank	Thematic analysis - Code for similarities in open-ended responses Multiple Levels: LEA and BT
3a. How do the differences in LEAs (e.g. location, size, type) influence the relationship that their induction components have with teacher retention?	Induction Program Information, Component Ranking: Survey Retention Rate: State Report	Induction Program Information, Component Ranking: Survey	Descriptive analysis & Crosstab - Comparison of LEA programs and BT retention taking into account LEA differences Rank	Thematic analysis - Code for similarities in open-ended responses
3b. How do the differences in BTs (e.g. years in teaching, grade-level, location) influence the relationship that the induction components have with BTs' decision to remain in teaching?	Induction Program Information, Component Ranking: Survey Retention Rate: State Report	Induction Program Information, Component Ranking: Survey	Descriptive analysis & Crosstab - Comparison of LEA programs and BT retention taking into account BT differences Rank	Thematic analysis - Code for similarities in open-ended responses

Validity and Reliability

Issues of validity and reliability were addressed during the design, analysis, and interpretation phases of this study. In the design of the study, content validity was informed through the use of expert review of the two different surveys created for this study. Surveys were revised based on experts' feedback. In the first round, experts were asked to evaluate the accessibility and flow of the instrument. In a second round of feedback, each expert was provided the purpose of the research study and the research questions. They were asked to provide information on the survey content and usability by responding to the following questions:

- What conflicts do you see with the survey instruments and the research questions?
- What additional information is needed to answer the research questions?
- What technical difficulties did you encounter with the survey instrument?
- Approximately how long did it take you to complete the survey?
- What suggestions do you have to improve the survey?

Reliability in the survey design and administration was addressed by using the same platform for all online surveys, SurveyMonkey, and similar survey administration processes throughout the three-month period of data collection. The reliability of the data analysis and interpretation was addressed by using a split-half reliability test on the survey data and reporting Chronbach's alpha of the instruments as stated above.

Role of the Researcher and Biases

As the researcher for this study, I actively recruited LEAs to participate through electronic communication. The participants surveyed included representatives in 11 of the 115 LEAs. Once the selected LEAs were identified, I collaborated with each LEA to

procure documentation to approve participation in the research study and modified the IRB with each LEAs approval. The contact with LEAs informed my understanding of each LEA and its induction program components. This understanding was further informed by viewing the LEA websites and through review of the North Carolina teacher retention and working conditions reports about each LEA. Following the IRB modification, I contacted each LEA to send the online survey instrument (Appendix F). Survey data were collected along with quantitative data on the induction programs of North Carolina. As the surveys began to be reported, I undertook the interpretation and analysis of these data.

What follows provides background about my developing interest in studying teacher education from the perspective of both the LEAs and BTs in North Carolina. This information offers insight into any biases that I might have regarding this study. As a beginning teacher, I did not have an induction program in my first teaching position, or a supportive mentor. I found that the lack of these support mechanisms contributed to my leaving that position when the year was complete. The next year I began teaching in a supportive environment with mentors and an induction program and continued in this position for 10 years, eventually mentoring beginning teachers and leading professional development in that district. My own experiences with induction program components and beginning teachers has influenced me to examine induction components in other LEAs. My own success and frustrations have influenced my bias and perception of beginning teacher needs to have supportive induction components.

As an art teacher in two North Carolina school systems I participated in induction as well as observed induction through the eyes of an experienced teacher after moving to a new district. My first year of teaching was in low-country South Carolina school system in 1993. I believe I had a typical beginning where I was given my room key and walked to my classroom alone. Later on I was assigned a mentor – another teacher who was not in my curricular area and rarely talked with me about school. I was left to my own devices for survival, and unfortunately I became part of the attrition statistics, a teacher who left the school system after one year of teaching.

That summer I was hired by a suburban district in North Carolina and as before I was given a room key and assigned a mentor who also was not in my curricular area. However, I reported the first week in August to four days of orientation called *TIPS* – the LEA’s Teacher Induction Program for Success. There were daily activities, a presentation by Harry and Rosemary Wong along with a copy of their book, *The First Days of School*, meetings on district policies and procedures, and a tour of the district. I worked there 10 years, eventually participating in mentor training, serving as a mentor myself and assisting in the *TIPS* program.

While I was in graduate school at the University of North Carolina at Greensboro, I moved to the third largest LEA in North Carolina. The first year, I was again shown to my classroom and given a key. My first socialization to the school was a day-long faculty meeting on the first teacher workday. As a veteran teacher, but new to this LEA, I did not know about or participate in any LEA induction, but did have opportunities to meet with teachers in my curricular area during the year. Near the end of that school year, I found

out more about the LEA's induction program and that there was an induction coordinator at my school. The next year, I changed schools and got to know the induction coordinator at my new school as well as induction coordinators at other schools through a research project that I initiated. During the summer of 2006, I assisted in the first days of this LEA's orientation, called *Right Start*.

I participated in the mentor training in this LEA and continued to work as an employee of North Carolina teaching in this LEA during the 2006-07 school year, at yet another school. This school had a retired teacher who served as the Induction Coordinator, offering monthly meetings to beginning teachers and Visiting International Faculty (VIF). She did invite me to the first meeting of the year, which was spent introducing us to the policies and procedures of this school and provided opportunities for us to collaborate and support each other. There were four beginning teachers in my part of the school and this informal mentoring opportunity was a chance to glean the beginning teacher perspective on induction in the school and district.

My own interests of induction and retention have grown from my experiences in different schools as well as communication with beginning teachers both informally and more formally when I interviewed them for a previous study. My own successes and frustrations have influenced my biases and perceptions about beginning teachers' needs to have supportive induction components. I believe successful induction is part of teacher development during the beginning years of teaching that will support teachers and therefore connect to teachers remaining in the profession. Induction programs attempt to develop the beginning teachers socially and professionally, giving the beginning teacher

opportunities to be part of a community. The socialization into the school and LEA involves teachers in activities that allow for collaboration and communication, thus providing teachers opportunities to connect with others in their schools and LEA. This happens as induction socializes the teachers into the LEA through orientation and meetings that provide beneficial professional development. I believe the best induction programs in schools occur when the entire staff takes time to nurture and support beginning teachers, welcoming them into the culture of that school. Professionally, induction should support beginning teachers developing them into the profession as a teacher, linking theory and practice, and ideally providing a mentor teacher as a guide. I believe good induction can make the difference in teachers' careers as novices develop into experienced teachers who will continue the cycle of teacher development.

Limitations and Delimitations of the Methodology

While this study attempts to identify key elements in teacher induction and to identify relationships between the use of these elements and teacher retention, it proved challenging to conduct the study due to a number of limitations. First, the large number of 115 school systems in North Carolina as well as their distributed nature of made it difficult to identify and survey every school district and every beginning teachers across the state, which was my initial goal. Using 11 LEAs only represents 9.6% of North Carolina's school systems. Second, the time of year made it difficult for participants to give full attention to the study due to their teaching responsibilities. Given the timing of the research and the need for IRB approval from each district, this study was conducted

during the spring semester of 2008 rather than during the fall semester as originally planned. The survey was ended in March 2008 after approximately 6 weeks due to a state-wide survey being administered that is requested of all North Carolina teachers.

In order to address these limitations, I began by identifying and contacting induction personnel in each of the 115 LEAs of North Carolina. Second, I used a multi-tier contact system which encouraged the development of a large sample pool. Third, I used purposeful sampling, based on wanting to see if region, LEA size or retention rates made any difference in perceptions of induction, in order to identify a purposeful sample from the set of willing participants.

Return rates and the accuracy of reporting from each LEA were another area of concern in this research, and also contributed to the limitations of the study. That is, the LEA and BT surveys were dependent on self-reported data from the LEAs and BTs. Further, I was wary of multiple responses from LEAs. By requiring the LEAs to identify themselves, I hoped to eliminate duplicate responses, but this was still a limitation.

Yet another limitation was that although experts in the field examined the survey prior to its delivery to the LEAs, the survey instrument was not piloted with possible participants prior to use. Further, the use of an online survey instrument may impact the survey responses (Walther, 1996; Wright, 2002, 2005). Using online surveys has presented new challenges to traditional research methods (Yun & Trumbo, 2000). Creating and delivering the survey through an online platform may save time and allow for larger geographic access (Yun & Trumbo, 2000), which made it feasible to try to access each LEA, but also runs the risk of introducing technological bias. While the

online survey saved time once created, the correct contact person for each LEA still had to be sought out to the best of my ability, which took some investigation and follow-up. The state does not produce a list of induction coordinators or human resource personnel for each LEA. This resulted in the need to identify appropriate personnel in the LEAs and make best guesses about the appropriate contact points if unknown. For this portion of the project, I used an education directory for all LEAs, which may not be always accurate, or up to date. I also used members of the North Carolina Personnel Administrators Association as primary contacts in each LEA that did not have a known induction coordinator. This limitation was minimized through a second email addressed to the superintendent to follow up on surveys not returned to determine if the online survey link was emailed to the correct personnel.

Similar limitations were a concern in contacting BTs because I relied on the consent and follow through of LEA personnel to send the survey link to first and second year teachers. The response rate for BTs could not be improved through follow up with LEAs due to the anonymity required of the BT survey. BT responses were only connected by identifying their LEA. To provide a complete picture of the induction programs offered throughout the state, an effort was made to contact each LEA after an acceptable passage of time to get a better response rate. However data collection was limited to a four-month period of time from the time LEAs were contacted.

The retention data on BTs was also a limitation during data collection and analysis. The retention data was sought for the current year, but BT1 data is not accessible because the teachers that completed the survey were in their first year of

teaching and retention data has not been collected on this group. The retention data used was not the data from the exact group of BT participants but reflected BTs from previous years.

Lastly, the mixed methods approach for collecting data can be considered as both a limitation and a benefit. The limitation of analyzing both quantitative and qualitative data was increased through the need to transform and code data to allow for analysis using the same codes for both types of data (Huberman, 2003). There are also benefits to collecting both qualitative and quantitative data in that perspectives from both the LEAs and BTs on induction practices were gained and both types of quantitative and qualitative data informed the relationship between teacher retention and induction programs.

Summary

The methodology and design of this study were impacted by prior work investigating beginning teacher induction policies and practices using both quantitative and qualitative methods. I also came to this study with my own experiences, biases and assumptions gained as a teacher in different school districts. My interest in beginning teacher support across the state and the perceptions of beginning teachers led to a balanced study combining qualitative and quantitative methods. This study employed a mixed methods approach to investigate the relationships between teacher induction and BTs future career intentions to explore the connections with induction components and teacher retention.

A mixed methods study offered the opportunity to combine appropriate design, collection and analysis techniques to gather data from multiple LEAs and BTs from across North Carolina. Quantitative data collection and analysis techniques were designed to provide descriptive information on the LEA induction components, a ranking of the components' perceived benefit, and demographic data, including retention rates for each LEA. Qualitative data collection and analysis techniques were designed to gather and understand the perceptions of LEAs and BTs. The mixed methods approach captured a moment of time in the BTs' perception of the support offered in the beginning of their career during the second semester of their school year. The comparison of data from differing perspectives and the triangulation of data provided a more complete picture of the LEA induction practices and BT perceptions of induction support possibly impacting their career intentions.

My prior research, teaching and mentoring experiences through 14 years of teaching in North Carolina impacted the design of this study, the types of data desired, even the timing of the survey distribution, and coding used in the analyses. How beginning teachers in North Carolina are supported during induction and what LEAs and BTs find beneficial created the intent of this study in identifying the components examined. The investigation of induction components on the beginning teachers' intention to remain in teaching stemmed from the endless possibilities that may lead to a BT's failure to deal with the challenges of the profession and their decision to leave teaching. This study's design utilized the perceptions of those BTs' that have continued

teaching, hopefully supported and thriving in their career with the future interest that they may continue the cycle to support their prospective colleagues in the profession.

CHAPTER IV

DATA ANALYSIS AND FINDINGS

Data and Participants

Data were collected from two different groups, the LEAs and the BTs, to provide both perspectives. The LEA data describes what each district offers to support beginning teachers from the viewpoint of LEAs. The BT data were collected from first and second year teachers in the participating LEAs to seek their perspectives about what BTs see as beneficial support and how their decisions to remain in teaching were or were not impacted by an induction program. The LEA data were collected from 11 LEA representatives. Data were gathered in several formats: (a) online survey about the induction program in each LEA, (b) demographic data about the district and its programs, (c) state turnover reports on teacher retention, (d) through telephone interviews, and (e) LEA member checks that provided confirmation of the data collected and further detailed information about the induction components in each program. The BT data were collected from over 500 BTs, although 378 sets of data were complete enough to provide information on the induction programs BTs participated in, their perspectives on induction components, demographic data on the BTs, and their decisions about remaining in teaching.

The demographic data from each LEA were categorized by location in the state, size according to the number of teachers in each district, and teacher turnover rates from

2006-07. Three codes (location, size, and turnover) were used for describing both the LEA data and the BT data. As seen in Table 4, the LEAs in this study included four Mountain districts located in the North Carolina, four Piedmont districts located in central North Carolina, and three Coastal districts in eastern North Carolina. The districts ranged in size from 223 teachers to over 2200 teachers, so the LEAs were grouped by size to include four Small LEAs with 400 or fewer teachers, four Medium LEAs with 401-1999 teachers and three Large LEAs employing over 2000 teachers. Using the teacher turnover rate from the 2006-2007 school year, LEAs were separated into two categories including six Lower Turnover LEAs with teacher turnover under the state average of 12.31% and five Higher Turnover LEAs with teacher turnover over the state average of 12.31%. These codes were used to assist in describing the data during analysis because there were no other consistent patterns within the demographic data collected to describe the 11 districts that participated in this study.

Table 4 *Participating LEAs with Descriptive Terms*

LEA	BT N=	Size	Turnover	Location
LEA1	9	Small	Lower	Mountain
LEA2	153	Large	Lower	Piedmont
LEA3	14	Small	Higher	Coastal
LEA4	34	Large	Higher	Piedmont
LEA5	42	Large	Lower	Piedmont
LEA6	46	Medium	Higher	Coastal
LEA7	22	Small	Lower	Mountain
LEA8	17	Medium	Higher	Piedmont
LEA9	3	Small	Higher	Coastal
LEA10	27	Medium	Lower	Mountain
LEA11	11	Medium	Lower	Mountain

The BT demographic data were also used to describe selected demographic characteristics of the beginning teachers and connect them with the demographic qualities of the LEA in which they worked. As seen in Table 5, there were a total of 378 beginning teachers, including 210 first-year teachers (BT1) and 168 second-year teachers (BT2). Of these 178 were employed as elementary teachers and 200 as secondary teachers. The majority of the BTs were from the Piedmont region (246), while 69 were from the Mountain region and 63 from the Coastal region,

Table 5 *Beginning Teacher Descriptive Terms*

Category	Codes	BT N=	Description
Number of Years in Teaching	BT1	210	First-year teacher
	BT2	168	Second-year teacher
Teaching Level	Elementary	178	Teacher in grades PreK-5
	Secondary	200	Teacher in grades 6-12
Location of LEA	Mountain	69	Teacher in a mountain region LEA
	Piedmont	246	Teacher in a piedmont region LEA
	Coastal	63	Teacher in a coastal region LEA
LEA Teacher Turnover Percentage	Higher Turnover	114	Teacher in a LEA with over 12.31% teacher turnover in 2006-07
	Lower Turnover	264	Teacher in a LEA with under 12.31% teacher turnover in 2006-07

First, the LEA and BT data were examined separately to answer the main research questions. Looking at the LEA data as a whole offered a picture of induction across North Carolina, and indicated that all LEAs offered orientation at the LEA and School levels but varied on how many days of orientation each district offered.

Data from the 378 beginning teachers were also examined as a whole to provide a view of beginning teachers across North Carolina. The data were examined for each research question using the descriptive codes described above to address each sub-question in order to look for any significant differences in the participating LEAs and BTs.

Findings Regarding Research Question 1

What follows are the quantitative and qualitative findings for Research Question 1: *What components of induction are LEAs in North Carolina providing to support beginning teachers during induction?* Each LEA responded in the survey and in a follow-up telephone interview to questions about the induction program offered by the LEA to support beginning teachers. Following is a description of each LEA's offerings for induction.

Participating LEAs

During the first three years of a teacher's career, all participating LEAs offered an induction program consisting of orientation, mentoring and professional development during 2007-08. As shown in Table 6, each LEA offered these components at varying levels within the schools and district. However, the 11 participating LEAs offered surprisingly similar induction components to support beginning teachers within their schools and district.

Four of the LEAs had partnerships with outside agencies. LEA3, LEA7 and LEA11 have partnerships with various state university programs aligned with beginning

teacher support. LEA3 was a partnership district with a state university; however they did not participate in the beginning teacher support options offered by the university's School of Education. LEA7 used the partnership as part of their orientation as BTs participated in a two-day regional program with a state university BT support program. In addition, the partnership was also utilized through various online support provided by the regional state university engaging the BTs. LEA11's partnership was geared more toward the mentor teacher support. Mentors within the district participated in summer week-long institutes and seminars during the year to assist in their development and support of the BTs. LEA4 has partnered with a national induction program to develop the LEA4 induction model and guide professional development for the mentor team of 35 full-time mentors. LEA4 has seen gains in their teacher retention as the turnover rate dropped from 28% to 18% at the end of the first year of the partnership, and further dropped to 15% for a 46% improvement in teacher turnover after the initial two years. Also attributed to the full-time mentor support was a contrast in student performance on either EOC (End-of-Course High School) or EOG (End-of Grade 3-8) tests. Prior to the start of this mentor program, LEA4's students of veteran teachers achieved higher and by statistically significant margins on these state tests. After the first year of mentor program, the opposite was true, the students of the beginning teachers in the majority of cases were outperforming those of the veteran teachers, "which was a very surprising finding" according to the human resources director of LEA4 (personal communication, 2008).

Table 6 *Participating LEAs and Induction Components*

LEA	Location	Induction Components			
	Size	Orientation		Mentoring	Professional Development (PD)
	Turnover	LEA	School		
LEA1	Mountain	3 days of Central office based, including PD	1 day at the school included on the 3 rd day	School based teacher mentors	6 sessions offered throughout the year
	Small				
	Lower				
LEA2	Piedmont	3 days of Central office based, including PD	Additional 2 days at the school	Central office based mentor supervisor and teacher support coordinator, Both school based teacher mentors and full-time mentors	Varying sessions planned and coordinated by the team of lead mentors and the central office mentor supervisor based on beginning teacher needs
	Large				
	Lower				
LEA3	Coastal	3 days of Central office based, including PD	Additional 1 day at the school	District level full-time mentor School based buddy teacher	Varying sessions planned at school level
	Small				
	Higher				
LEA4	Piedmont	3 days of Central office based, including PD	Additional 3 days at the school	35 district level full-time mentors	Varying sessions planned by the mentors based on beginning teacher needs
	Large				
	Higher				
LEA5	Piedmont	3 days of Central office based, including PD	Additional 1 day at the school	School based teacher mentors	Monthly for BT1s 3 sessions for BT2s & BT3s School based PD varies by school
	Large				
	Lower				
LEA6	Coastal	3 days of Central office based, including PD	½ day on the 3 rd day at the school	School based teacher mentors	Monthly sessions
	Medium				
	Higher				
LEA7	Mountain	1 day of Central office based Professional Development	Additional 1 day at the school	District level full-time mentor Online support through partnership	Quarterly district level meetings
	Small				
	Lower				
LEA8	Piedmont	3 days of Central office based, including PD	Additional 3 days at the school	School based teacher mentors	Quarterly district level meetings
	Medium				
	Higher				
LEA9	Coastal	3 days of Central office based, including PD	Varying additional school based orientation	School based teacher mentors	Varying sessions planned at school level
	Small				
	Higher				
LEA10	Mountain	5 days of Central office based, including PD	Additional 5 days at the school	School based teacher mentors	Monthly district level meetings
	Medium				
	Lower				
LEA11	Mountain	3 days of Central office based, including PD	Additional 1 day at the school	School based teacher mentor	Monthly district level meetings
	Medium				
	Lower				

LEA Induction Components

According to North Carolina policy, “each LEA must develop a plan and provide a comprehensive program for beginning teachers” as part of the induction of beginning teachers. Although the policy informs and requires districts to have a comprehensive plan for induction, the components offered as part of the comprehensive program are left up to each LEA. The actual state policy includes the following:

North Carolina Policies on the Beginning Teacher Support Program

- 4.20 IGP: Each beginning teacher is required to develop an Individual Growth Plan in collaboration with his/her principal (or the principal's designee) and mentor teacher. The plan is to be based on the INTASC (Interstate New Teacher Assessment and Support Consortium) Standards, and must include goals, strategies, and assessment of the beginning teacher's progress in improving professional skills.
- 4.40 Orientation: Each beginning teacher must be provided an orientation.
- 4.50 Mentors: Each beginning teacher is to be assigned a qualified, well-trained mentor as soon as possible after employment.
- 4.120 Induction Program: Each LEA must develop a plan and provide a comprehensive program for beginning teachers.
Retrieved from <http://www.ncpublicschools.org/docs/recruitment/beginning/policysupportprogram.pdf>

In responding to the survey question, *What components of induction are offered to beginning teachers in your LEA?* four components were measured: (1) Number of days for LEA and school-based Orientation, (2) Number of days for Professional Development offered by the LEAs and at the school level, (3) Types of Mentoring offered, and (4) types of Online Support offered. Each LEA responded using the choices provided (see Appendix A for LEA survey and Appendix B for BT survey) to indicate which induction

components they offered. Analysis of these four induction components began with analysis across the LEA responses using frequency counts to tally each component. Beginning teachers were also asked about these induction offerings in their LEA and analysis of their responses included frequency counts. In examining the LEA and BT responses about the induction component offerings, a difference in the BT's perception of what is offered and what the LEAs reported as the components of their induction programs was evident. Further details about the responses of the LEAs and the BTs concerning each induction component are provided.

All of the participating LEAs offer orientation at the district and school levels. The majority of surveyed LEAs, nine out of 11, have a three-day LEA orientation for BTs. All the LEAs surveyed also offer at least one day of school orientation. However, 13 out of 378 BTs reported they did not attend orientation in their LEA. Although the BT responses varied widely, 130 BTs reported attending three days of LEA orientation, aligning with the most chosen LEA response. And, while 128 BTs reported attending one day of school orientation, 12 reported there was no school orientation. Such contradictions between what the LEAs reported and what the BTs reported regarding orientation, make these data difficult to analyze in any meaningful way beyond reporting just what the respondents indicated on the surveys.

Professional Development

Seven out of 11 LEAs reported offering monthly professional development for beginning teachers at the district or school level. Ten out of 11 LEAs offer professional development at the district level to beginning teachers. Ten out of 11 LEAs also offer

school-level professional development to beginning teachers. Among the varied responses of the BTs, monthly LEA professional development was the majority response by 216 BTs and monthly school professional development was the response by 191 BTs.

Mentoring

All surveyed LEAs offer mentors for their beginning teachers – either a full-time mentor or a teacher who serves as mentor. Out of the 11 LEAs surveyed, three utilize full-time mentors, six employ teachers as mentors, and two use a combination of teachers as mentors and full-time mentors. The BTs responses regarding mentors varied; however all but three BTs responded that they were assigned a mentor.

Online Support

Nine out of 11 LEAs offer some form of online support. Online support was used as a category to describe any support districts offer their beginning teachers through technology. The nine responses for online support provided by the LEAs were varied and not consistent across the state. BT responses were also varied, and 211 responded their LEA provided no online support.

BT Perceptions of LEA Induction Components

Summary of BTs' Perceptions about LEA Orientation

In comparing the responses of the BTs with the responses provided by their LEAs, the induction components offered by LEAs did not correspond with the perceptions of BTs as to what or how much support is offered. Table 7 provides a comparison of each LEA's induction components with the BT response counts for that

district showing the disconnection between what is offered with each induction component and the differing responses of BTs within each LEA.

In summary, what counts as orientation differs across the 11 LEAs surveyed; however the BT perceptions also differ about orientation within their LEAs. The state of North Carolina mandates that each LEA must provide orientation for beginning teachers, but allows the LEAs to determine how orientation will be implemented and delivered, which accounts for the variation across LEAs with regard to components of induction. Eight out of the 11 surveyed districts offered three days of orientation. However, in asking the beginning teachers the same question, the beginning teacher responses varied about what is offered for orientation at the district level. The BT data are, therefore, difficult to interpret and a comparison of LEA and BT responses disaggregated by LEA is documented in Table 7.

Table 7
LEA Orientation components LEA response compared with BT responses

LEA	LEA response	BT responses							Other
		None	1 day LEA orientation	2 days LEA orientation	3 days LEA orientation	4 days LEA orientation	5 days LEA orientation	More than 5 days LEA orientation	
LEA1	3 days LEA orientation	1	1		6			1	
LEA2	3 days LEA orientation	3	16	21	49	6	45	10	3
LEA3	3 days LEA orientation	2	4	1	5		1	1	
LEA4	3 days LEA orientation	3	3	7	12		2	3	4
LEA5	3 days LEA orientation	2	1	3	18	1	3	10	4
LEA6	3 days LEA orientation		7	7	25		3	3	1
LEA7	1 day LEA orientation		11	8	2			1	
LEA8	3 days LEA orientation	2	4		2	2	6	1	
LEA9	3 days LEA orientation			1	1		1		
LEA10	5 days LEA orientation		2	2	7	2	5	9	
LEA11	3 days LEA orientation		1		3	2	4	1	

Summary of BTs' Perceptions about School-based Orientation

Orientation offered at the school level differs within each LEA; however the BT perceptions also differ about orientation within the LEAs. One LEA leaves the planning of how much school orientation is needed up to the individual schools while the other ten

offer some form of consistent school-based orientation beginning with a half-day. When asking the beginning teachers the same question, the beginning teacher responses varied about what is offered for orientation at the school level. LEA6 offered a half-day orientation following a luncheon with the principal and mentors, however ½ day was not a choice in the survey responses which may clarify the a variety of responses by the BTs in LEA6. However, each LEA had a variety of BT responses regarding the school-based orientation. This could also be evidence of multiple schools with different school orientations leading to the represented variety in BT responses. The variety of BT responses compared with the LEA response is documented in Table 8.

Table 8
School Orientation components LEA response compared with BT responses

LEA	LEA response	BT responses							Other
		None	1 day School orientation	2 days School orientation	3 days School orientation	4 days School orientation	5 days School orientation	More than 5 days School orientation	
LEA1	1 day School orientation	2	2	2	3				
LEA2	2 days School orientation	8	43	47	18	5	16	13	3
LEA3	1 day School orientation	3	6	1	3		1		
LEA4	3 days School orientation	4	10	6	5	2	1	3	3
LEA5	1 day School orientation	15	15	3	2	1	1	4	1
LEA6	½ day School orientation	11	18	8	5	1	1		2
LEA7	1 day School orientation	6	11	2			1		2
LEA8	2 days School orientation	6	5	3	2			1	0
LEA9	Varies by school	1	1	1					
LEA10	5 days School orientation	9	11	2	1	2	1		1
LEA11	1 day School orientation		6	2	1		1	1	

Summary of BTs' Perceptions about LEA Professional Development

Professional development also differs across the LEAs and ranges from no LEA

professional development to monthly LEA professional development being offered. The topics covered varied as well. The BT perceptions also differ about professional development offerings within their LEAs. Six out of 11 LEAs offer monthly professional development at the district level. When the beginning teachers reported how often they participate in professional development, 216 chose monthly; however, nine beginning teachers reported that they attend professional development as often as weekly. The variety of BT responses compared with the LEA response is documented in Table 9.

Table 9
LEA Professional Development component LEA response compared with BT responses

LEA	LEA response	BT responses						
		None	Once a year	Each semester	Quarterly	Monthly	Weekly	Other
LEA1	Optional	1			1	5		2
LEA2	Monthly	15	9	8	26	86	1	8
LEA3	Monthly	1	1			10	1	1
LEA4	Quarterly	7	3	1	9	8	4	2
LEA5	Monthly	1			4	35	1	1
LEA6	Monthly		1		1	44		
LEA7	Quarterly	2	3	2	1	12		2
LEA8	Quarterly	2			14	1		
LEA9	None	2			1			
LEA10	Monthly	2	4	4	7	5	2	3
LEA11	Monthly				1	10		

Summary of BTs' Perceptions about School-based Professional Development

School-based professional development also differs across the LEAs and ranges from no School-based professional development to monthly School-based professional development being offered. The BT responses also differ about professional development offerings within the LEAs schools. Five out of 11 LEAs offer monthly professional development at the school level; however four of the LEAs chose “other” when describing the frequency of their school induction programs, as some LEAs allow their schools to plan and implement their school-based components. When the beginning teachers reported how often they participate in school professional development, the responses were more varied than those of district level professional development.

Table 10
School Professional Development component LEA response compared with BT responses

LEA	LEA response	BT responses						
		None	Once a year	Each semester	Quarterly	Monthly	Weekly	Other
LEA1	Optional	4				3	1	1
LEA2	Monthly	4	1	3	12	108	19	6
LEA3	Other	3			1	7	1	2
LEA4	Monthly	5			4	16	7	2
LEA5	Other	10	1	4	3	13	7	4
LEA6	Other	8		1	6	18	8	5
LEA7	Monthly	5	2	2	2	8	2	1
LEA8	None	6			4	6		1
LEA9	Other	2		1				
LEA10	Monthly	10		2	3	8	4	
LEA11	Monthly			1	2	4	3	1

Summary of BTs' Perceptions about Mentoring

Mentoring is mandated by North Carolina state policy, however with waivers and site-based decision making, the type of mentoring differs within each LEA. Mentors can be assigned at either the district or school levels within LEAs. Nevertheless, the BTs' perceptions also differ about mentoring within the LEAs. The beginning teacher responses varied about what kind of mentoring is offered within their district (Table 11). Fortunately, only three beginning teachers out of 378 reported not being assigned a mentor.

A description of mentor types was provided for LEAs and BTs in the online survey. Following are both descriptions which were provided with the survey: *A full-time mentor is a person employed by the school district as a mentor or induction coach to support and mentor teachers at one school or more on a full time basis - with NO teaching responsibilities. A teacher as mentor is a person employed by the school district as a teacher who in addition to teaching responsibilities also mentors beginning teachers.* However, one second-year elementary BT in a Piedmont LEA that does utilize both Teacher Mentors and Full-time Mentors said in response to an open-ended question, *“It has been very beneficial to have a full time mentor teaching next door. I would not be a second year teacher without her.”* This perception of a full-time mentor that has teaching responsibilities leads me to see there are misconceptions remaining on the types of mentors even with descriptions available. Therefore, despite providing these definitions it is hard to interpret the mentor data due to discrepancies between how the BTs responded and what the LEAs say they offer regarding mentoring.

Table 11
Mentor component LEA response compared with BT responses

LEA	LEA response	BT responses			
		None	Full time Mentor	Teacher as Mentor	Full time and Teacher Mentors
LEA1	Teacher as Mentor		2	7	
LEA2	Full time and Teacher Mentors		35	107	11
LEA3	Full time and Teacher Mentors		9	2	3
LEA4	Full time Mentor		33		1
LEA5	Teacher as Mentor	1	5	35	1
LEA6	Teacher as Mentor		9	36	1
LEA7	Full time Mentor		6	15	1
LEA8	Teacher as Mentor		4	12	1
LEA9	Teacher as Mentor		2	1	
LEA10	Full time Mentor	2	20		5
LEA11	Teacher as Mentor		3	7	1

Summary of BTs' Perceptions about Online Support

Online support differs within each LEA; however the BT perceptions also differ about online support within the LEAs. The beginning teacher responses varied about what kind of online support is offered within their district with 211 responses of No Online Support being the greatest in the group surveyed. The variety of BT responses compared with LEA responses is documented in Table 12. The mismatch between LEA and BT responses can be attributed to the broad terminology of online support given that BTs in LEA8 and LEA11 indicated there were online resources available when the LEA reported there was No Online Support. Also, BTs may not be aware of the existence of

online support provided by their LEA due to the districts that offer Online Resources, however some BTs in those districts reported there was No Online Support.

Table 12
Online Support components LEA response compared with BT responses

LEA	LEA response	BT responses				
		No Online Support	Online Mentor	Online Discussion Groups	Online Resources	Other Online Support
LEA1	Online Resources	4			5	
LEA2	Online Resources	94		2	52	5
LEA3	Online Resources	7			6	1
LEA4	Online Resources	22			9	3
LEA5	Online Resources	27		1	10	4
LEA6	Other Online Support	19		1	22	4
LEA7	Online Discussion Groups	3	4	11	3	1
LEA8	No Online Support	11			4	2
LEA9	Online Resources	2			1	
LEA10	Online Mentor	17	1	1	6	2
LEA11	No Online Support	5	1		4	1

Findings Regarding Sub-Questions 1a and 1b

To examine the differences and perspectives of LEAs and BTs, two sub-questions were used in the analysis of the LEA and BT data. The LEA differences were determined through the descriptors of the LEA including location, size, and turnover and BT years of experience and teaching level as seen in Tables 4 and 5. The participating districts were

spread out across North Carolina geographically, but LEAs in the same region were grouped for analysis because of their location, similar populations and characteristics. The size of the LEA was determined by the number of teachers employed. Larger, urban and suburban districts employ more teachers and have more schools and students and differ from smaller, more rural districts. The turnover rate is reported by the LEA to the state and these yearly percentages were examined for the past five years. The participating LEAs all have varying turnover averages. The turnover percentages from the 2006-07 school year were used in grouping the LEA for comparison. The LEA data were divided using these three variables (location, size, and turnover) to examine if any of these categories interacted with the choices made by LEAs in the induction components offered to beginning teachers. Data were examined using the same survey question results and the four induction component categories.

What follows are the quantitative findings for Research Sub-Question 1a: *How do the differences among LEAs influence the components of induction implemented?* The four induction components: Orientation, Professional Development, Mentoring and Resources were examined by comparing them to the LEA differences of location, size and turnover.

Orientation

Orientation is one of the state mandates and is offered by all participating LEAs in some format. The amount of LEA orientation varied by location. All participating Piedmont and Coastal LEAs have similar three-day orientation components. The Mountain LEAs had a range of orientations offered. In North Carolina not all LEAs have

outside support and resources available, however three LEAs had partnerships with a state university offering support to both beginning teachers and their mentors. One example is the Mountain region which used the local regional program through a state university for two days of orientation, offering the other orientation days in the LEA and School. The addition of outside orientation would bring this LEA up to the three-day norm of the other LEAs in the region and state.

In the participating LEAs, nine out of 11 offered three days of LEA orientation. LEAs with over 400 teachers had similar LEA orientation, offering at least three days of LEA orientation. Smaller districts with less than 400 teachers also offered three-day LEA orientations with the exception of 1 LEA, which only offered one day of LEA orientation, in addition to the outside two-day orientation it involves its beginning teachers in at a state university.

Similarly, the turnover rate did not impact the number of LEA orientation days each district held. Both LEAs above and below the state average of 12.31% turnover offered three days of LEA orientation. All five participating LEAs with Higher Turnover held a three-day LEA orientation, and four out of the six Lower Turnover LEAs also offered three days of orientation. The LEA that offered the most orientation (five days of LEA orientation) is one of the LEAs with Lower Turnover, but there are no patterns or trends in the data about number of days of LEA orientation as documented in Table 13.

Table 13

Number of LEAs with Varying Orientation Components compared by LEA Location, Size and Turnover

LEA Orientation	Location			Size			Turnover	
	Mountain	Piedmont	Coastal	Small	Medium	Large	Lower	Higher
1 day of orientation	1			1			1	
3 days of orientation	2	4	3	3	3	3	4	5
5 days of orientation	1				1		1	

The school-level orientation results varied slightly from the LEA orientation comparisons because they had a mixture of responses. Location, size and turnover did not influence the amount of school orientation offered due to the variety of school orientation offerings and limited sample size as can be seen in Table 14.

Table 14

Number of LEAs with Varying School Orientation Components compared by Location, Size and Turnover

School Orientation	Location			Size			Turnover	
	Mountain	Piedmont	Coastal	Small	Medium	Large	Lower	Higher
1 day of orientation	2	1	1	2	1	1	3	1
2 days of orientation		2			1	1	1	1
3 days of orientation		1				1		1
5 days of orientation	1				1		1	
Other	1		2	2	1		1	2

Professional Development

As seen in Table 15 the differences in LEAs by location, size and turnover did not show a difference in the professional development components offered at the district or school levels. There were a variety of professional development components offered across the LEAs and the small sample size did not yield any patterns across LEAs.

Table 15
Number of LEAs with Varying Professional Development Components compared by Location, Size and Turnover

LEA Professional Development	Location			Size			Turnover	
	Mountain	Piedmont	Coastal	Small	Medium	Large	Lower	Higher
None			1	1				1
Quarterly	1	2		1	1	1	1	2
Monthly	2	2	2	1	3	2	4	2
Other	1			1			1	

School Professional Development	Location			Size			Turnover	
	Mountain	Piedmont	Coastal	Small	Medium	Large	Lower	Higher
None		1			1			1
Monthly	3	2		1	2	2	4	1
Other	1	1	3	3	1	1	2	3

Mentoring

Mentoring components varied across the state, and beginning teachers are no more likely to have a full-time mentor compared to a teacher mentor in any one location, or district of varying size or turnover rate. As seen in Table 16, no patterns regarding mentoring can be established within the differences of North Carolina’s LEAs.

Table 16
Number of LEAs with Varying Mentoring Components compared by Location, Size and Turnover

Mentoring	Location			Size			Turnover	
	Mountain	Piedmont	Coastal	Small	Medium	Large	Lower	Higher
Full-time Mentor	2	1		1	1	1	2	1
Teacher as Mentor	2	2	2	2	3	1	3	3
Full-time and Teacher Mentors		1	1	1		1	1	1

Online Support

Patterns of online support were seen when comparing the differences in LEAs. LEAs in the coastal region all offer some form of online support. All the larger LEAs with over 2000 teachers stated they have online resources; however this was also found in districts with less than 400 teachers. Apparently, size does not make a difference in the online support offered given that districts of all sizes have online components. LEAs with Lower Turnover in 2006-07 all offered online support in the form of either an online

mentor or online resources available to beginning teachers. This was not the case in LEAs with Higher Turnover, as two LEAs with higher than the state average turnover offered no online support to beginning teachers. In sum, differences in the location, size, and turnover rate of LEAs did not show many patterns when examining the quantitative data from the survey as seen in table 17.

Table 17
Number of LEAs with Varying Online Support Components compared by Location, Size and Turnover

Online Support	Location			Size			Turnover	
	Mountain	Piedmont	Coastal	Small	Medium	Large	Lower	Higher
No Online Support	1	1			2			2
Online Mentor	1				1		1	
Online Discussion Group	1			1				1
Online Resources	1	3	2	3		3	4	2
Other Online Support			1		1			1

To answer the second sub-question: *How do the differences among BTs influence the components of induction implemented?* I used the data from 378 BTs separated into several descriptive categories to examine the data for patterns. The BT differences examined were (a) years in teaching, (b) teaching level, (c) location, and (d) turnover. The first and second year teachers provided their own demographic data, including how

they were classified in North Carolina, as either a BT1 (first-year teacher), or as a BT2 (second-year teacher). Similarly, beginning teachers indicated the grades they were teaching and this helped in designating their teaching position as either elementary (grades PreK-5), or secondary (grades 6-12). The beginning teachers also indicated their LEA on the survey, which was used in categorizing their geographic location (Mountain, Piedmont or Coastal) and turnover (below 2006-07 state average or above 2006-07 state average).

When analyzing the BT data, it was evident there was not a clear understanding on the part of the beginning teachers regarding the induction offered in their LEA. As seen in Tables 7, 8, 9, 10, 11, and 12, the beginning teacher data on the induction components did not match what the LEA had reported they offered. Although the induction components were defined in the online survey prior to any questions about induction, the beginning teacher responses apparently reflect their individual perceptions about induction in their LEA. Each LEA had discrepancies in the induction components reported by the beginning teachers. That is, what the BTs reported as their experiences with induction did not match with what the LEAs said they offered as induction. A variety of induction components were offered across the state and none of the four categories of beginning teachers showed patterns the offerings reported in any of the categories of induction: Orientation, Mentoring, Professional Development or Online Support in alliance with the BT differences.

Following the induction component question on the survey, an open ended question requested BTs to describe the induction program offered. Typical comments

about induction included how many days they participated in orientation activities, topics covered in orientation and professional development, resources available and most often mentioned, interaction with their mentor. The top three coded responses on the open-ended question about induction were orientation (134), mentors (127), and professional development (106). One second-year elementary teacher stated,

As a new teacher, I attended a three day orientation session, where I learned what was expected for the school system. I also learned about the textbooks that I would be using, as well as the curriculum. There was a 2-day block where I was able to meet with my mentor and set up my classroom.

An additional code was used to code BT responses that indicated they did not participate in induction. Thirteen BTs responded that they did not participate in any induction program in response to the open-ended question, but they did respond to other questions on the survey. Several stated they were hired after the beginning of the school year and were able to answer other questions on the survey about what was offered in their LEA. Only three BTs reported they did not have a mentor, so apparently there is a discrepancy in how BTs perceive the mentor component of induction. Not all BTs see their mentor as part of their induction in the LEA. Frustration was evident in several BT responses about the induction program, or lack thereof. As one first year elementary teacher stated, *“There is some support provided but not enough!”*

Findings Regarding Research Question 2

What follows are the quantitative and qualitative findings for Research Question 2: *What components of induction do LEAs and BTs identify as beneficial?* Data collected through the LEA and BT surveys provided the data about what the LEAs and BTs identified as beneficial components and rankings of the specific induction offerings: Orientation, Professional Development, Mentoring and Resources. Following is a description of each component's ranking and the most beneficial induction components from the perspective of the LEAs and BTs.

Induction Components

Orientation

Only two types of Orientation were represented in the LEA responses, the orientation at the district and school levels. Seven out of 11 (63.63%) felt their LEA orientation was the most important and touring the school facilities was the least important. As seen in the comparison of LEAs and BT rankings in Table 18, all four orientation components were ranked by beginning teachers. Orientation at the school level received the highest percentage of most important rankings with 40.5% of the responses, followed by orientation at the district (LEA) level (25.7%), beginning teacher meetings (24.3%) and touring the school facilities (9.5%). The LEA and BT perspectives did not match in ranking the orientation offerings. Beginning teachers value the school orientation, while LEAs believe the district offered orientation is most important.

Table 18
Ranking by LEAs and BTs of Most Important Orientation Components

LEA Responses	BT Responses
LEA Orientation Session(s) (most important 63.63%)	School Orientation Session(s) (most important 40.5%)
School Orientation Session(s) (most important 36.36%)	LEA Orientation Session(s) (most important 25.7%)
	Beginning Teacher Meetings (most important 24.3%)
	Tour of the school facilities (most important 9.5%)

Professional Development

Professional Development was ranked using three professional development training categories and reimbursement for professional development activities. Professional Development responses included training in three categories: classroom management, curriculum and instructional planning, and teaching methods and practices. Training in classroom management was chosen most important by seven out of 11 responses (63.63%) from the LEAs. All 11 LEAs chose reimbursement for professional development as the least important professional development component to beginning teachers, while 53 (14%) BTs chose reimbursement as most important and 251 (66.4%) BTs chose reimbursement as least important in the professional development components. A comparison of LEA and BT most important rankings can be seen in Table 19. All types of Professional Development were represented in the ranking of professional development components by beginning teachers. The most important to beginning teachers was training in classroom management (46.3%), followed by training in curriculum and instructional planning (26.5%), training in teaching methods and

practices (13.2%), and reimbursement for professional development (14%). The top two responses for both the LEA and BT perceptions about professional development offerings are the same, indicating agreement among BTs and their LEAs that professional development about classroom management and curriculum and instruction are key for beginning teachers.

Table 19
Ranking by LEAs and BTs of Most Important Professional Development Components

LEA responses	BT responses
Training in classroom management techniques (most important 63.63%)	Training in classroom management techniques (most important 46.3%)
Training in curriculum and instructional planning (most important 27.27%)	Training in curriculum and instructional planning (most important 26.5%)
Training in teaching methods and practices (most important 9.09%)	Reimbursement for professional development (most important 14%)
	Training in teaching methods and practices (most important 13.2%)

Mentoring

Three out of the four types of mentoring were represented in the LEA responses and varying types of mentoring are offered in the participating districts. With varied responses, all 11 LEAs chose some type of mentoring as most important over a central office based induction coordinator. Four out of the 11 LEAs (36.36%) chose the central office based induction coordinator as the least important component, however only 13 (3.4%) BTs chose the central office induction personnel as most important. Beginning teachers ranked having a mentor or buddy teacher at the same school most important at

82.2%. This combines the top two responses by BTs – Mentor teacher at the same school (41.5%) and Mentor and/or Buddy teacher next door (40.7%). The next highest ranking was having a full-time mentor or induction coach (14.3%) and LEA central office based induction coordinator (3.4%) was last. A comparison of the most important rankings of LEAs and BTs can be seen in Table 20. Beginning teachers and LEAs agree in similar percentages that having a mentor at the same school is the most important.

Table 20
Ranking by LEAs and BTs of Most Important Mentor Components

LEA responses	BT responses
Mentor teacher at the same school (most important 45.45%)	Mentor teacher at the same school (most important 41.5%)
Full-time mentor or Induction coach (most important 27.27%)	Mentor and/or buddy teacher next door (most important 40.7%)
Mentor and/or buddy teacher next door (most important 27.27%)	Full-time mentor or Induction coach (most important 14.3%)
	LEA central office based Induction Coordinator (most important 3.4%)

Resources

Resources provided in terms of books and opportunities were ranked using the same four-point scale. Three out of the four resource components were represented in the ranking by LEAs. A comparison of LEA and BT most important rankings can be seen in Table 21. All forms of resources were represented as most important by beginning teachers. The highest percentage of both LEAs (54.54%) and BTs (63.2%) ranked adequate resources, materials, textbooks and workbooks as most important, followed by

opportunities to visit schools and/or observe teachers teaching (17.2%), formal networking opportunities (12.7%), and a beginning teacher’s handbook (6.9%)

Table 21
Ranking by LEAs and BTs of Most Important Resources

LEA responses	BT responses
Adequate resources, materials, textbooks and workbooks (most important 54.54%)	Adequate resources, materials, textbooks and workbooks (most important 63.2%)
Formal networking opportunities for personnel with similar responsibilities (most important 36.36%)	Opportunities to visit schools and/or observe teachers teaching (most important 17.2%)
Opportunities to visit schools and/or observe teachers teaching (most important 9.09%)	Formal networking opportunities for personnel with similar responsibilities (most important 12.7%)
	A beginning teacher’s handbook (most important 6.9%)

After considering the four induction categories, LEAs and BTs were asked to rank these components (Orientation, Professional development, Mentoring or Resources) from most to least beneficial to the beginning teacher. LEAs and BTs ranked the most beneficial components similarly with the exception of professional development. Mentors were the top ranked component by both LEAs and beginning teachers. Mentoring was identified as most beneficial for beginning teachers by eight out of the 11 participating LEAs (72.72%) and 222 BTs (58.7%). Professional development was identified as least beneficial for beginning teachers by five out of 11 LEAs, however 41 BTs chose professional development as the most beneficial induction component. A comparison of LEA and BT most beneficial rankings can be seen in Table 22. Resources was the second

most chosen response by both LEAs (18.18%) and BTs (24.3%), however the remaining two components were not aligned in LEA and BT responses.

Table 22
Ranking by LEAs and BTs of Most Beneficial Induction Components

LEA responses	BT responses
Mentors (most beneficial 72.72%) ←	→ Mentors (most beneficial 58.7%)
Resources (most beneficial 18.18%) ←	→ Resources (most beneficial 24.3%)
Orientation and Meetings (most beneficial 9.09%)	Professional Development (most beneficial 10.8%)
	Orientation and Meetings (most beneficial 6.1%)

In an open-ended question, LEAs and BTs were asked *In your opinion, why are the components you ranked as most beneficial perceived as most beneficial to a beginning teacher?* and in three out of four components, the responses of LEAs were similar to the rankings. Interestingly, four of the LEAs also included professional development in their open-ended response, which was left out by LEAs in the most beneficial quantitative ranking. Beginning teachers' responses to the open-ended questions were very true to their responses to the previous component rankings with mentoring and resources as the top two responses in both the quantitative and qualitative responses on the survey. In analyzing the qualitative responses, LEA and BT responses were double coded as some indicated more than one component as seen in the greater

number of responses in Table 23. A comparison of LEA and BT qualitative responses can be seen in Table 23.

Table 23
Comparison of Induction Component Ranking by LEAs and BTs in Coded Qualitative Analysis

LEA Qualitative responses (N=21)	BT Qualitative responses (N=486)
Mentors 10 coded responses (47.62%)	Mentors 264 coded responses (54.32%)
Resources 4 coded responses (19.05%)	Resources 115 coded responses (23.66%)
Professional Development 4 coded responses (19.05%)	Professional Development 71 coded responses (14.61%)
Orientation and Meetings 3 coded responses (14.28%)	Orientation and Meetings 36 coded responses (7.41%)

Findings Regarding Sub-Questions 2a and 2b

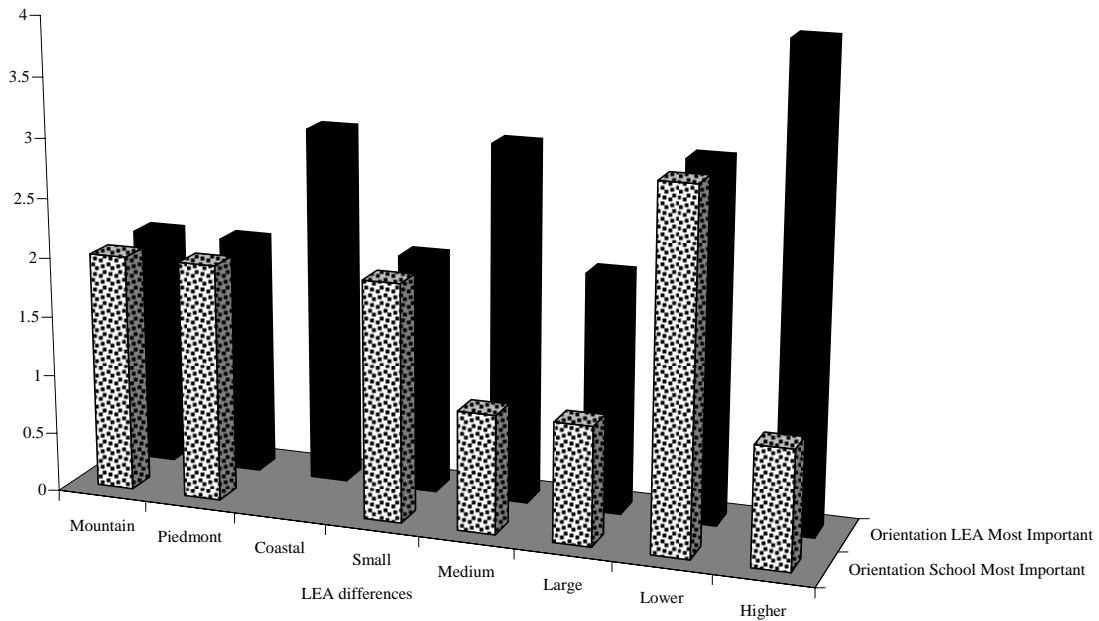
To examine the differences and perspectives of LEAs and BTs according to various demographic categories, two sub-questions were used in the analysis of the LEA and BT data. The same descriptive coding was used to examine the data in separate groups by location, size and turnover for LEAs and BT's years in teaching, and teaching level

Examining the LEA data using the descriptive groups, the sub-question, *How do the differences among LEAs influence which components of induction seem beneficial?* did not reveal significant differences in the data due to the small sample size of 11 LEAs.

Orientation

There were varying responses to LEA or School orientations being more important. As seen in Figure 7 the differences in LEAs by location, size and turnover did not show a difference in the orientation ranking by LEAs except that all Coastal LEAs chose LEA orientation as the most important component in orientation. The remaining differences all included both LEA orientation and school-based orientation as most important.

Figure 7
Comparison of Most Important Orientation Component Rankings by LEAs

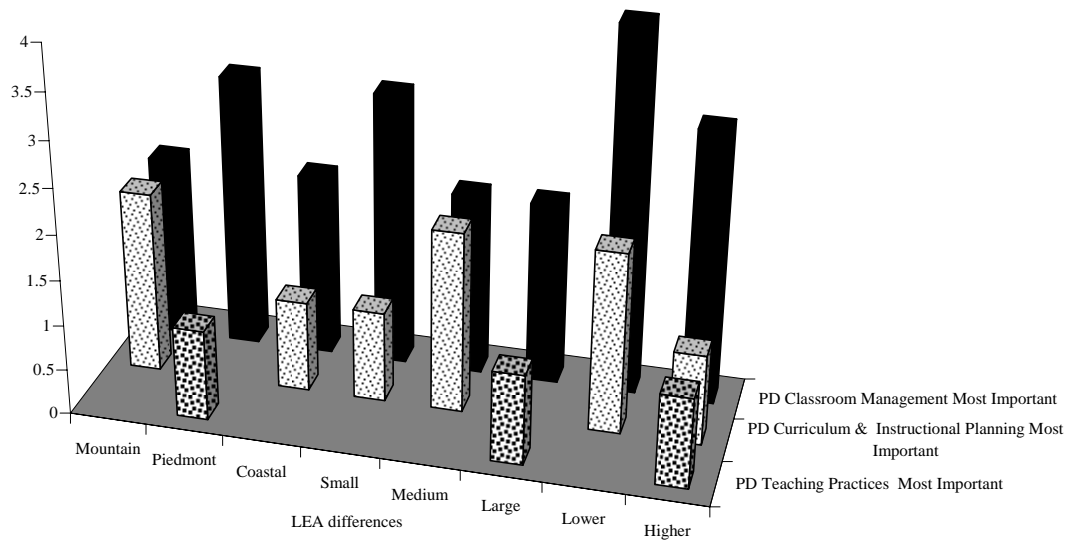


	Mountain	Piedmont	Coastal	Small	Medium	Large	Lower	Higher
Orientation School Most Important	2	2		2	1	1	3	1
Orientation LEA Most Important	2	2	3	2	3	2	3	4

Professional Development

The differences in LEAs by their location, size and turnover did not identify any discernable patterns among the most important professional development component rankings by LEAs in analysis. As seen in Figure 8, there were a variety of responses across the LEA differences.

Figure 8
Comparison of Most Important Professional Development Component Rankings by LEAs



	Mountain	Piedmont	Coastal	Small	Medium	Large	Lower	Higher
■ PD Teaching Practices Most Important		1				1		1
▨ PD Curriculum & Instructional Planning Most Important	2		1	1	2		2	1
■ PD Classroom Management Most Important	2	3	2	3	2	2	4	3

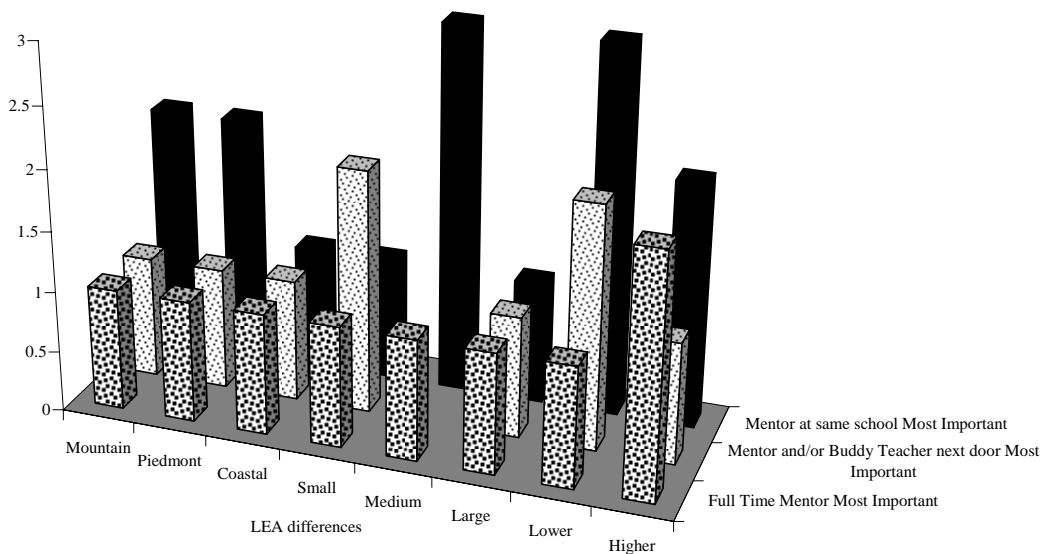
Mentoring

Types of mentoring and the placement of mentors differed across the LEAs. The choice of full-time versus teacher mentors varied as seen in Figure 9. Also compared

were the district mentor programs with their ranking of the mentoring components. Three out of four LEAs that have a full-time mentor program in place, chose full-time mentors as most important. Similarly, LEAs with teacher mentor programs chose proximity as most important factor. Three LEAs ranked having mentors at the school as most important and three ranked having a mentor or buddy teacher next door as most important as shown in Table 24's comparison. One first-year secondary teacher said,

Every new teacher should have a mentor/buddy next door to them. I have a buddy next door who I go to for everything. I have a mentor as well, but she is on the other side of the school and I can't just go next door when I have an emergency.

Figure 9
Comparison of Most Important Mentoring Component Rankings by LEAs



	Mountain	Piedmont	Coastal	Small	Medium	Large	Lower	Higher
Full Time Mentor Most Important	1	1	1	1	1	1	1	2
Mentor and/or Buddy Teacher next door Most Important	1	1	1	2		1	2	1
Mentor at same school Most Important	2	2	1	1	3	1	3	2

Table 24

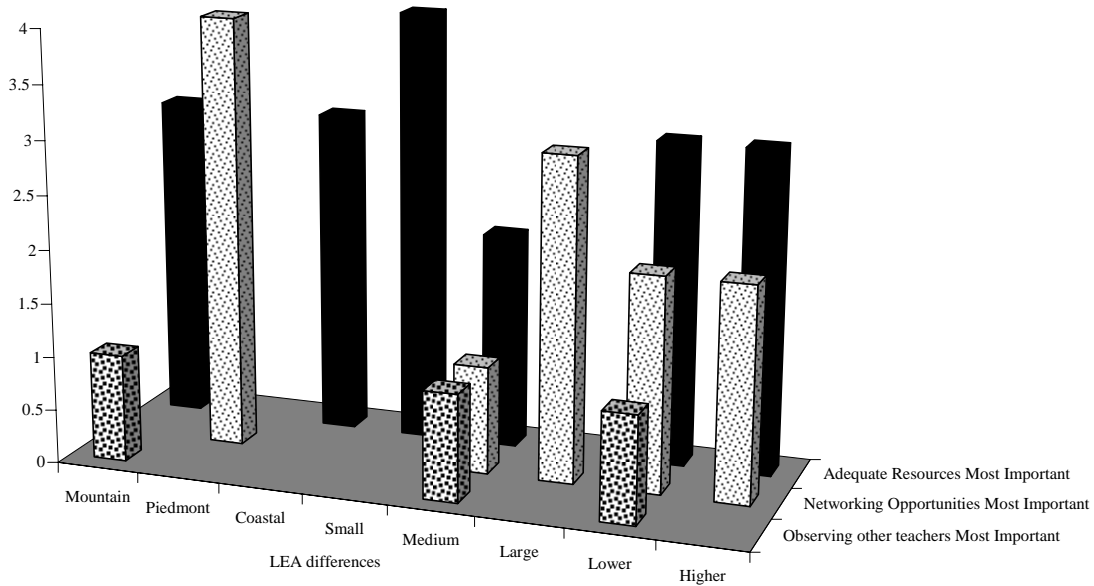
Comparison of Most Important Mentor Component Rankings by LEAs and LEA Mentor Program

	Full time Mentor	Teacher as Mentor	Full time and Teacher Mentors
Full-Time Mentor or Induction Coach	2		1
Mentor teacher at the same school	1	3	1
Mentor and/or buddy teacher next door		3	

Resources

Choices of most important resources did align in two of the three locations and two of the three district sizes. All Piedmont LEAs ranked networking opportunities as the most important provided to BTs and all Coastal LEAs ranked adequate resources as the most important component provided their BTs. Small districts with 400 or fewer teachers ranked adequate resources as most important and Large districts with over 2000 teachers identified networking opportunities as most important. However, Medium districts identified these two components as important, as well as observing other teachers. Turnover did not show any differences in the component rankings as the variety of responses shows in Figure 10.

Figure 10
Comparison of Most Important Resource Component Rankings by LEAs

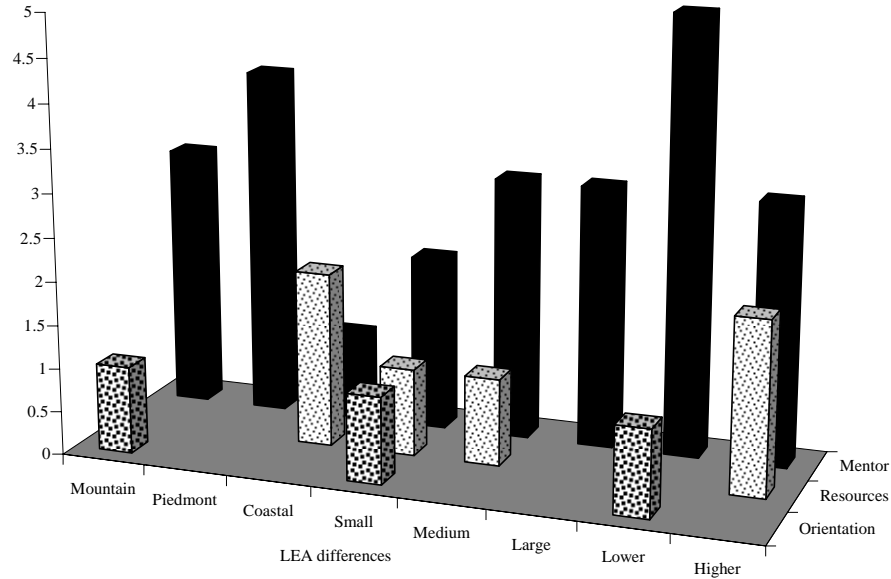


	Mountain	Piedmont	Coastal	Small	Medium	Large	Lower	Higher
■ Observing other teachers Most Important	1				1		1	
▨ Networking Opportunities Most Important		4			1	3	2	2
■ Adequate Resources Most Important	3		3	4	2		3	3

Most Beneficial Induction Components

LEA Location and Size indicated a difference in the analysis of Most Beneficial components. All four participating Piedmont LEAs (36.36% of participating LEAs) chose Mentors as the Most Beneficial component of their induction program. Also all three participating LEAs with more than 2000 teachers (27.27% of participating LEAs) chose Mentors as the Most Beneficial component as seen in Figure 11.

Figure 11
Quantitative Comparison of Most Beneficial Induction Component Rankings by LEAs

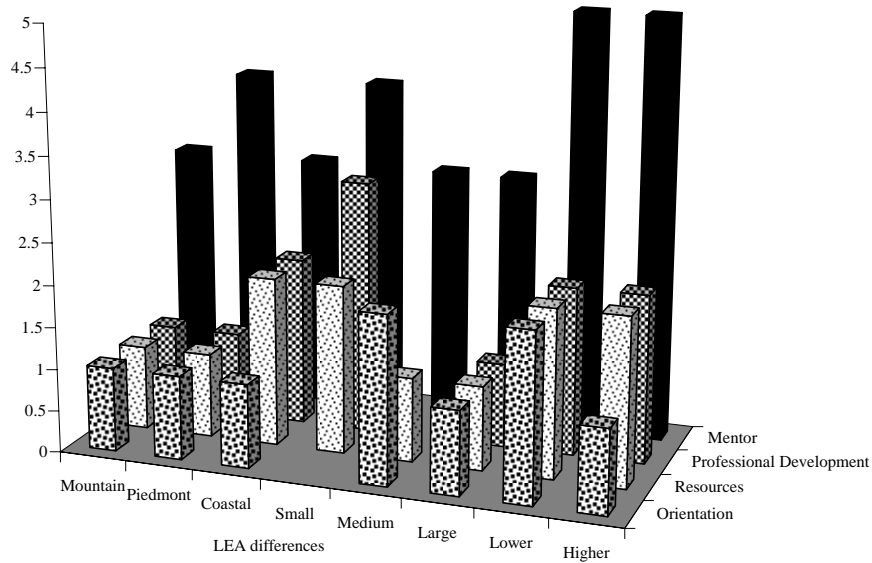


	Mountain	Piedmont	Coastal	Small	Medium	Large	Lower	Higher
Orientation	1			1			1	2
Resources			2	1	1			
Mentor	3	4	1	2	3	3	5	3

After ranking the induction components, LEAs were asked, *In your opinion, why are the components you ranked as most beneficial perceived as most beneficial to beginning teachers?* In analyzing the qualitative responses, LEA choices were double coded as some indicated more than one component in their response, which can be seen in the greater number of responses in Figure 12. Due to a variety of responses across the LEAs, there were only two noted differences due to size and no patterns could be established in the examination of the differences in LEAs and the components coded in responses to the open-ended question. Small LEAs did not state that Orientation as

beneficial in their comments and Medium LEAs did not state that Professional Development was one of the beneficial components.

Figure 12
Qualitative Comparison of Most Beneficial Induction Components from LEA responses



	Mountain	Piedmont	Coastal	Small	Medium	Large	Lower	Higher
Orientation	1	1	1		2	1	2	1
Resources	1	1	2	2	1	1	2	2
Professional Development	1	1	2	3		1	2	2
Mentor	3	4	3	4	3	3	5	5

LEAs provided explanations of the components ranked most beneficial in their responses. Mentoring was the most often coded response discussed by ten out of 11 LEAs. One Piedmont LEA with a full-time mentoring program shared why the program is beneficial.

The full-time mentor is most significant because of the consistent and deep relationship that develops between a beginning teacher and mentor. The consistent support, especially over a 3-year period, allows for instruction to become the focus of the mentor-beginning teacher conversations.

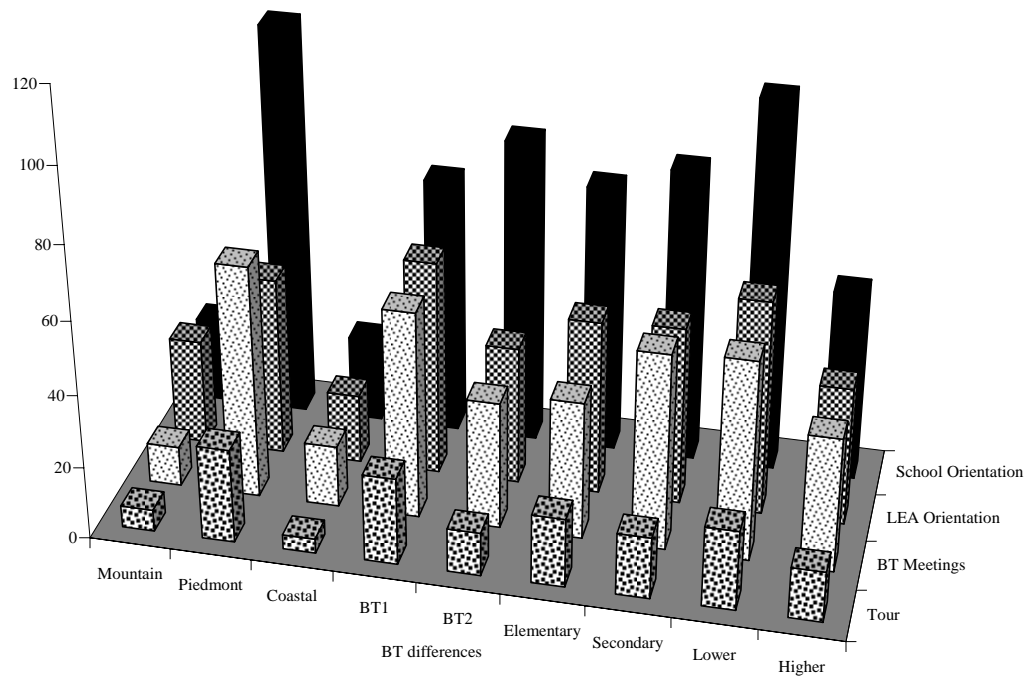
Typical responses included more than one component as important, such as this example from another Piedmont LEA: *“Mentors and personal contact should make the most difference in supporting new teachers. BTs should never feel alone or isolated. Personal relationships is what will keep them engaged, encouraged, and coming back!”*

Comparison of BTs’ Perceptions

The BT differences examined in analysis were years in teaching, teaching level, location, and turnover. These four descriptive groups did not yield any noticeable patterns when analyzing the induction component data by the BT descriptive codes.

A variety of induction components were provided by LEAs and BTs indicated great variety across the state due to their differing perceptions. In disaggregating the BT data by the four categories (teaching, teaching level, location, and turnover.) there were no patterns among the BTs’ rankings of the induction components they perceived to be most important. As seen in Figure 13, no discernable patterns could be identified across any category (orientation, professional development, mentoring or resource components) when comparing the rankings and differences in BTs. All components of induction were identified in the quantitative and qualitative analysis of BT responses.

Figure 13
Quantitative Comparison of Most Beneficial Induction Components from BT responses



In both the quantitative and qualitative analysis, mentors were the most identified beneficial component, and this did not differ by any of the coded components for BT differences. Typical responses to the open-ended responses included an explanation of how their mentor and other components were beneficial.

A first-year elementary teacher in a Piedmont LEA said,

I feel that having a mentor is the most important component because it is a way to learn about the school, expectations of you, methods, and opinions about everything from someone who has been there and can guide you into your own routines. Resources are a close second, if you do not have the right resources you are unable to complete your job thoroughly. Professional development and orientations are helpful but will continue going on as you teach. Orientations are helpful at a county level but at the same time each school is different so there again, it is helpful to have a mentor at your specific school.

A first-year secondary teacher in the same Piedmont LEA had a similar experience,

Having a mentor has been the most beneficial experience I have had as a new teacher. A mentor is a new teacher's most valuable resource. Mentors enable new teachers to become more familiar with school policies and resources that may be available to them.

Findings Regarding Research Question 3

What follows are the quantitative and qualitative findings for Research Question 3: *What is the relationship between teacher induction components offered in North Carolina LEAs and Beginning Teacher retention?* To answer this question the LEA data on induction components and BT retention data were examined for each induction component. Each LEA and BT was asked about how they perceived the impact of induction. Beginning teachers were also asked about their future plans in teaching. These data were compared to examine the relationship between induction and teacher retention.

Determining Teacher Retention

The Beginning Teachers were surveyed in the spring semester of their first or second year of teaching. To determine their intentions to continue teaching, they were asked about their future plans to remain in teaching. Seventy-two percent of the participating beginning teachers plan to remain in teaching at their current school (Table 25). Only six of the beginning teachers indicated that they did not plan on continuing in teaching at all. Participants in the survey had a predicted teacher turnover rate of 1.94% which is much lower in this study than the 2006-07 state average of 12.31%

Of the six who indicated they were leaving the profession, five reported induction did not impact their decision. One of these five, a first-year secondary teacher said, “*I don't plan to remain in teaching, but this is not due to lack of support.*” As seen in Table 26, the largest number of responses in each induction impact category was consistently aligned with those BTs who plan to continue teaching at their school. The responses for those who plan on continuing at their school varied regarding the impact of induction, with the largest number of BTs (104) responding that induction had at least some impact on their decision to remain in teaching. However, the reasons and perceptions provided by the BTs varied widely. A first-year secondary teacher who was one of the six who plan to leave the profession said,

It [induction] has had less impact on my decision to stay in teaching than the overall experience here at the school, with the students, my co-workers, and the administration. Mentors have been the most influential of the components set up by the LEA.

Another first-year elementary teacher who plans on continuing to teach at her current school said,

I think that it is very important for beginning teachers to go through the induction program. It was very nice to see other teachers and to network. It did not have that great of an impact on my decision to keep teaching because I feel that teaching is a calling. I know that I should be teaching and have the motivation, determination and compassion to continue working with molding the lives and minds of children.

Table 25
BT Responses on future plans in teaching to answer “Which best describes your future intentions for your professional career?”

	Beginning Teacher Responses	%
Leave the profession	6	1.6
Continue teaching but leave this district as soon as I can	10	2.6
Continue teaching but leave this school as soon as I can	13	3.4
Continue teaching at my current school until a better opportunity comes along	77	20.4
Continue teaching at my current school	272	72.0

Table 26
Comparison of BT responses Impact of Induction and Future Plans in Teaching

	Leave the profession	Continue teaching but leave this district as soon as I can	Continue teaching but leave this school as soon as I can	Continue teaching at my current school until a better opportunity comes along	Continue teaching at my current school
Not at all	5	8	7	36	95
To some extent the induction program impacted my decision	1	1	4	28	104
To a moderate extent the induction program impacted my decision			2	7	40
To a great extent the induction program impacted my decision		1		6	33

Induction Components and the Relationship to Retention

Orientation

In an effort to connect the LEA data and BT data, BT retention was compared with LEA turnover and orientation data. LEA differences were determined not to have a relationship with the induction components, except that nine out of 11 participating LEAs enacted three days of LEA orientation. Because these differences did not indicate a relationship, the two LEAs that did not have three days of LEA orientation were

examined. The BTs employed in the LEA that had the most days of orientation, with five days of LEA orientation and five days of school orientation, had varied responses about their plans to remain in the teaching profession; however, 13 out of the 27 participating BTs (48.15%) responded they plan to continue teaching at their current school and one BT (3.7%) responded that she was planning on leaving the profession and not continuing teaching. On the opposite end, one LEA reported that it had one day of LEA orientation and one day of school orientation. Out of the 22 participating BTs from that LEA, 20 (90.9%) reported they were going to continue teaching at their current school and none reported plans to leave the profession. The LEA with the most days of orientation was a Medium sized district and the LEA with the fewest days of orientation was a Small district, so size may have a relationship in the comparison of teacher retention and LEA orientation. Size was a difference examined with the LEA data in other analyses, but not with the other BT analyses. However, both of these LEAs had lower teacher turnover and were located in the Mountain region, so the location and turnover differences did not impact the teacher retention. The teacher retention responses are compared with the LEA data in Table 27.

Table 27

Comparison of Orientation Components and BT Retention Sorted by Number of Days Offered

LEA Turnover	LEA and School Orientation Number of Days		Number of BTs Future Plans to Remain in Teaching				
	LEA Orientation Number of Days	School Orientation Number of Days	Leave the profession	Continue teaching but leave this district as soon as I can	Continue teaching but leave this school as soon as I can	Continue teaching at my current school until a better opportunity comes along	Continue teaching at my current school
LEA7	1	1		1		1	20
LEA1	3	other				1	8
LEA2	3	2	2	1	6	27	117
LEA3	3	1				4	10
LEA4	3	3	1	2	2	8	21
LEA5	3	1	1		1	14	26
LEA6	3	other	1	4	1	7	33
LEA8	3	2			1	2	14
LEA9	3	other					3
LEA11	3	1				4	7
LEA10	5	5	1	2	2	9	13

Professional Development

In a similar examination of the Professional Development components and BT retention data, the LEAs with the most and least professional development offered were examined. One Small, Coastal LEA with Higher Turnover offered no LEA professional development for BTs and left professional development up to each school's discretion. All three of the participating BTs in this setting disclosed they planned on continuing teaching at their current school next year. Three LEAs offered monthly professional

development at the LEA and school levels. The three LEAs offering the most professional development for BTs were of varying sizes and in different Locations. All three have Lower teacher turnover; however, the BT responses varied in each LEA, as seen in Table 28, with the highest number of BTs indicating they planned on continuing teaching at their current school next year.

Table 28
Comparison of Professional Development Components and BT Retention Sorted by Amount Offered

LEA Turnover	LEA and School Professional Development		Number of BTs Future Plans to Remain in Teaching				
	LEA Professional Development	School Professional Development	Leave the profession	Continue teaching but leave this district as soon as I can	Continue teaching but leave this school as soon as I can	Continue teaching at my current school until a better opportunity comes along	Continue teaching at my current school
LEA9	None	Other					3
LEA1	Optional	Optional				1	8
LEA8	Quarterly	None			1	2	14
LEA4	Quarterly	Monthly	1	2	2	8	21
LEA7	Quarterly	Monthly		1		1	20
LEA3	Monthly	Other				4	10
LEA5	Monthly	Other	1		1	14	26
LEA6	Monthly	Other	1	4	1	7	33
LEA2	Monthly	Monthly	2	1	6	27	117
LEA10	Monthly	Monthly	1	2	2	9	13
LEA11	Monthly	Monthly				4	7

Mentoring

Mentoring components fell into three different categories: (1) full-time mentors, (2) teachers as mentors, and (3) combined use of full-time and part-time teacher mentors. The LEAs offering similar mentor components did not align in turnover, location or size.

Consistent with other comparisons, the largest number of BTs in the different mentoring programs plan on continuing teaching as seen in Table 29. However, the responses were varied across the LEAs, and comparing Mentor programs and teacher retention did not provide any relationships between the types of mentor programs and BTs who are planning on leaving the profession or continuing teaching.

Table 29
Comparison of Mentoring Components and BT Retention Sorted by Program Type

LEA and School Professional Development		Number of BTs Future Plans to Remain in Teaching				
LEA Turnover	Mentoring Program Component	Leave the profession	Continue teaching but leave this district as soon as I can	Continue teaching but leave this school as soon as I can	Continue teaching at my current school until a better opportunity comes along	Continue teaching at my current school
LEA1	Teacher as Mentor				1	8
LEA5	Teacher as Mentor	1		1	14	26
LEA6	Teacher as Mentor	1	4	1	7	33
LEA8	Teacher as Mentor			1	2	14
LEA9	Teacher as Mentor					3
LEA11	Teacher as Mentor				4	7
LEA4	Full time Mentor	1	2	2	8	21
LEA7	Full time Mentor		1		1	20
LEA10	Full time Mentor	1	2	2	9	13
LEA2	Full time and Teacher Mentors	2	1	6	27	117
LEA3	Full time and Teacher Mentors				4	10

Online Resources

The LEAs offering similar online resource components did not align in turnover, location or size. Consistent with other comparisons, the largest number of BTs in LEAs offering different online resources plan on continuing teaching as seen in Table 30.

However, the responses were varied across the LEAs and any comparison of Online resources and teacher retention did not provide any relationships for the types of online resources and teachers who are planning on leaving the profession or continuing teaching.

Table 30
Comparison of Online Resource Components and BT Retention Sorted by Resource Type

LEA Orientation Components Number of Days		Number of BTs Future Plans to Remain in Teaching				
LEA Turnover	Online Resources Components	Leave the profession	Continue teaching but leave this district as soon as I can	Continue teaching but leave this school as soon as I can	Continue teaching at my current school until a better opportunity comes along	Continue teaching at my current school
LEA8	No Online Support			1	2	14
LEA11	No Online Support				4	7
LEA1	Online Resources				1	8
LEA2	Online Resources	2	1	6	27	117
LEA3	Online Resources				4	10
LEA4	Online Resources	1	2	2	8	21
LEA5	Online Resources	1		1	14	26
LEA9	Online Resources					3
LEA7	Online Discussion Groups		1		1	20
LEA10	Online Mentor	1	2	2	9	13
LEA6	Other Online Support	1	4	1	7	33

Relationships in Perceptions of Induction Programs and Retention

LEAs were asked, *What level of impact do you feel the induction program has on teacher retention in the LEA?* All LEAs stated that induction impacts the retention of beginning teachers. Six out of the 11 participating LEAs (55%) indicated induction had a High Impact and the remaining five LEAs (45%) indicated induction had Some Impact. No LEAs believed induction did not impact teachers' decisions; however, one Piedmont LEA and one Coastal LEA indicated doubt about the impact of induction components in the open-ended question on induction impact. One Piedmont LEA representative said, *"Teachers teach and remain because they love it, not because they were convinced to stay in it."*

However, another Piedmont LEA representative believed that induction through mentoring impacts a beginning teacher's decision and corresponds with a teacher's efficacy and success.

The data we have received in surveys shares that the mentor does play a role in a teacher's decision to remain in teaching. The dominant issue, though, is the teacher's relationship with the administrative team of the school and the teacher's assessment of whether the culture of the school allows him or her to be successful with students.

When comparing the LEA responses and BT responses, their perceptions do not align as seen in Table 31; however, the questions and survey choices were not worded exactly the same regarding the impact of induction programs on retention.

Table 31
Impact of Induction on Decision to Remain in Teaching.

LEA perception of impact on retention	BT perception of the impact on retention
Induction had a high impact (55%)	Induction had a great impact (10.6%)
Induction had some impact (45%)	Induction had a moderate impact (13%)
	Induction had some impact (36.5%)
	Induction does not impact (39.9%)

Beginning teachers were asked *Do you feel the induction program impacts your decision to remain in teaching?* and 39.9% of Beginning Teachers indicated they do not believe the Induction program components impacted their decision to remain in teaching, while 36.5% of Beginning Teachers believe induction had some impact on their decision to remain in teaching as seen in Table 32.

Table 32
Do you feel the induction program impacts your decision to remain in teaching?

	Beginning Teacher Responses	%
Not at all	151	39.9
To some extent the induction program impacted my decision	138	36.5
To a moderate extent the induction program impacted my decision	49	13.0
To a great extent the induction program impacted my decision	40	10.6

However, after interviewing LEA Central Office personnel, it does not appear that Beginning Teachers perceive the Mentoring program as a part of the Induction Components. This perception was supported by this example from a first-year elementary teacher in a Piedmont LEA who wrote, *“I think that my mentor has made a great impact on my future, especially at this school. The induction program had little impact on my decision to remain in teaching.”* Another first-year secondary teacher in a district with outside support said, *“It [the induction program] didn't impact me. If I do eventually stay in teaching, it will be because of the support Teach For America and mentor teachers in my school offered.”* There were positive messages about mentor teachers; however, they also indicate the perception on the part of some BTs that mentoring is not necessarily a part of induction. A second-year elementary teacher attributed her continuing in the profession to her mentor stating, *“I would not be a second year teacher without the help and support from my mentor during my first year of teaching.”* One interesting aspect was the connection to district and school the BTs made in the impact responses. One first-year teacher who plans to remain teaching at their current school stated, *“I wanted to teach regardless of the program. This program made it so that I wanted to stay with my current school system.”* Another first-year teacher said the program influenced the decision *“Somewhat. I teach because I love making a difference and having an impact on children's lives. Knowing that I am employed by a great school district and school is an additional bonus.”*

In a separate question, beginning teachers listed the components that impacted their decision to remain in teaching. A second-year teacher said, *“I was introduced to a*

lot of things that helped make this a smooth transition to this field.” References were coded for the induction components of Orientation, Professional Development, Mentoring, or Resources; however, some beginning teachers listed more than one component and these were double coded for a total of 310 total responses. Out of all coded responses, mentors (264 coded responses) and resources (115 coded responses) were the most frequent as seen in Table 33. However, a comparison of the survey response of “no impact” was used to compare the qualitative responses about induction components. Out of the 378 BT responses, 151 indicated that induction did not impact their decision to remain in teaching. The qualitative responses of those 151 were examined and 100 credited their mentor, 55 credited resources, and 31 credited their mentor and resources as impacting their decision, which once again may have impacted the BT perception that “induction” did not influence their decision to remain in teaching (Table 34). One first-year teacher explained this through the access to available resources stated, *“It (the induction program) didn't impact my decision to stay in teaching, but I do think that it has definitely made my 1st year a lot easier being able to have access to those resources.”*

Table 33
Qualitative Coded Responses of Induction Components from BT perspectives

	Orientation	Professional Development	Mentor	Resources
Coded BT responses	36	71	264	115

Table 34

Qualitative Coded Responses of Induction Components from BTs that responded Induction did not impact their decision to remain in teaching

	Mentor	Resources	Mentor and Resources
Coded BT responses	100	55	31

A second-year secondary teacher reiterated her perception of the assistance mentors and the induction program has on beginning teachers in response to an open-ended question,

It [induction] does help because it keeps the teaching environment less stressful as you have a "friend" and it gives you the insight that you can keep doing this because your mentor has. Overall, I think if you truly are a teacher that a mentor doesn't ultimately affect your decision to remain in teaching but it does just help to have someone to talk to and discuss issues with.

Findings Regarding Sub-Questions 3a and 3b

To examine the differences and perspectives of LEAs and BTs, two sub-questions were used in the analysis of the LEA and BT data. The same descriptive coding was used to examine the data in separate groups of location, size and turnover for LEAs and BT's years in teaching and teaching level. Examining the LEA data using the descriptive groups, the sub-question, *How do the differences in LEAs influence the relationship that their induction components have with teacher retention?* did not reveal any significant differences due to the variety of responses and the small sample size of 11 LEAs. As seen in Table 35, there were a range of responses across all LEA groups.

Table 35

Induction Impact on Teacher Retention LEA responses

	Location			Size			Turnover	
	Mountain	Piedmont	Coastal	Small	Medium	Large	Lower	Higher
No Impact on Teacher Retention								
Some Impact on Teacher Retention	1	2	2	2	2	1	2	3
High Impact on Teacher Retention	3	2	1	2	2	2	4	2

In answering the open-ended question about the impact of induction on teacher retention, two LEAs indicated induction did not impact retention. However, this differed from their quantitative responses. As seen in Table 36, the two LEAs that indicated induction did not impact retention both have Higher teacher turnover above the state average of 12.31% and were both Medium sized LEAs employing 401-1999 teachers. The remaining open-ended responses were consistent with their quantitative response to the survey question in stating that induction impacted teacher retention, which can be seen compared by their differences in Table 36.

Table 36

Induction Impact on Teacher Retention Qualitative LEA responses

	Location			Size			Turnover	
	Mountain	Piedmont	Coastal	Small	Medium	Large	Lower	Higher
No Impact on Teacher Retention		1	1		2			2
Impact on Teacher Retention	4	3	2	4	2	3	5	4

Beginning Teachers were asked about their future plans to remain in teaching to determine teacher retention for the group of participants. There were varied responses across the BT groups with the highest number of responses planning on remaining at their school. No category describing BT differences provided a connection to the BT's decision to remain in teaching as seen in Table 37. In analysis for the research sub-question, *How do the differences in BTs influence the relationship that the induction components have with BTs' decision to remain in teaching?* the retention of BTs was compared with the BTs' perceptions of induction's impact. The responses were varied across the BT differences as seen in Table 37. Overall, 40% of beginning teachers do not indicate that induction impacted their decision to remain in teaching. A second-year teacher stated, *"I can see how better support should lead to better job satisfaction. However, my desire to stay in teaching has little to nothing to do with the induction programs."* The location percentages, which were similar for the Mountain (49.2%), Piedmont (35.4%), and Coastal (47.6%) LEAs showed no association between the location and BT perceptions. Similarly, no relationship was determined among BT1s and BT2s, or elementary and secondary teachers, and teacher turnover regarding their decision to remain in teaching. One second-year teacher who plans to remain in teaching stated, *"If anything, I felt it (what impacted the decision to remain in teaching) was the companionship you formed with other teachers who were in the same boat. It was a time for beginning teachers to express concerns as a group and ask questions."*

Table 37

Beginning Teacher Future Plans to Remain in Teaching

Beginning Teacher Retention	Location			BT Year		Level		Turnover	
	Mountain	Piedmont	Coastal	BT1	BT2	Elementary	Secondary	Lower	Higher
Leave the profession	1	4	1	5	1	2	4	4	2
Continue teaching but leave this district as soon as I can	3	3	4	5	5	4	6	4	6
Continue teaching but leave this school as soon as I can	2	10	1	4	9	8	5	9	4
Continue teaching at my current school until a better opportunity comes along	15	51	11	39	38	35	42	56	21
Continue teaching at my current school	48	178	46	157	115	129	143	191	81

Table 38

Beginning Teacher Induction Component Impact on Decision to Remain in Teaching

Impact of Induction on	Location			BT Year		Level		Turnover	
	Mountain	Piedmont	Coastal	BT1	BT2	Elementary	Secondary	Lower	Higher
Not at all	34	87	30	79	72	67	84	101	50
To some extent the induction program impacted my decision	20	98	20	79	59	72	66	99	39
To a moderate extent the induction program impacted my decision	9	33	7	27	22	23	26	35	14
To a great extent the induction program impacted my decision	6	28	6	25	15	16	24	29	11

Summary

The main question for this study was: *How do the components of induction programs implemented in North Carolina's Local Education Agencies (LEA) influence the retention of Beginning Teachers (BT)?* This question was answered by the analyzing responses to three research questions and other sub-questions identifying the differences that influenced induction across North Carolina.

In the first research question, *What components of induction are LEAs in North Carolina providing to support Beginning Teachers during induction?* all the LEA and BT data were examined based on induction components offered. The main finding was that all participating LEAs offer orientation, professional development and mentoring in their

district in varying forms and amounts. Orientation varies depending on each LEA's plan for implementation, which differs at both the school and LEA levels. Similarities were found in the orientation offered with nine out of 11 LEAs offering three days of LEA orientation. However due to the small sample of LEAs, any differences in the induction components that LEAs offered were not significant.

Another finding was that many of the BTs' responses did not match with the LEAs' responses. Furthermore, when comparing the responses of the BTs to their LEAs' responses, the induction components offered by LEAs did not correspond with the perceptions of BTs as to what or how much support is offered. There was enough discrepancy in what the LEAs reported compared to the BTs' perceptions to make any meaningful interpretation of the BT data difficult. Further, only three BTs reported they did not have a mentor, and there was a clear discrepancy in how BTs perceive the mentor component of induction. In fact, not all BTs see their mentor as part of their induction in the LEA. Thirteen BTs responded that they did not participate in an induction program, which is possibly due to being hired after the beginning of the school year. These findings seem to indicate that the terminology in use around induction may not be consistent among LEAs and BTs. For example, while induction continues after orientation and throughout the school year as part of a comprehensive induction program as required in state policy, many BTs in this study did not perceive that their mentors were a part of that induction process.

In the second research question, *What components of induction do LEAs and BTs identify as beneficial?* LEAs and BTs ranked four components of induction (orientation,

professional development, mentoring, and resources) and indicated what was perceived as most beneficial to beginning teachers. In ranking these four orientation components, none of the most important rankings of the LEAs or BTs aligned. However, LEAs and BTs agreed that training in classroom management and training in curriculum and instructional planning were most important in professional development. In Mentoring, LEAs and BTs both ranked having a mentor at the same school as most important and they also agreed that adequate resources such as textbooks and materials were the most important resource components. Mentoring by a large margin was seen as the most beneficial component of induction by both LEAs and BTs; however, the differences in LEA mentor programs did not yield any information about why mentoring was so well received. Further, even teachers who did not find the induction program beneficial categorized mentors and resources as most helpful. The differences in LEAs and BTs, however, did not structurally influence which components were perceived as beneficial, so there were no patterns with regard to the location, size, or turnover rate of the 11 LEAs.

In the third research question, *What is the relationship between teacher induction components offered in North Carolina LEAs and Beginning Teacher retention?* LEA and BT data were compared to discover relationships between the components offered and the beginning teachers' future intentions. Again, due to the varied responses, relationships were not evident among the data. However the good news was that 272 BTs planned on returning to their current school for the next school year and only six out of the 378 BTs who responded to the survey planned on leaving the profession. Therefore,

the turnover rate of the participants in this study was much lower than the state average of 12.31%. But, in examining the differences in LEAs and BTs, the varying responses and small sample size of LEAs did not yield any consequential relationships about the induction components and teacher retention in the participating LEAs.

Overall, the induction programs and components offered in North Carolina were quite varied and the varying perceptions of BTs made it difficult to see any relationships when comparing the LEA and BT data. LEAs stated they believe their induction programs impact retention; however 39.9% of BTs reported their plans to remain in teaching were not due to the induction program in their district. Beginning teachers' perceptions of induction vary, and the most beneficial aspects of induction singled out was mentoring. However, a large number of BTs did not perceive mentoring to be a part of their district's induction program.

CHAPTER V

DISCUSSION AND IMPLICATIONS

The purpose of this study was to describe the components of induction programs implemented in 11 Local Education Agencies (LEAs) in North Carolina and to examine how various components of induction programs influence the retention of Beginning Teachers (BTs). Based on data collected and a review of the literature, there is evidence that teacher induction programs have a positive impact on beginning teachers and their decisions to remain in teaching. This was the impetus for studying the impact induction components have on retaining beginning teachers, examining ways that beginning teachers in North Carolina are supported during induction, and learning what both the LEAs and BTs find beneficial with regard to induction. The intent of identifying these factors was to enable districts and schools to use this information when implementing their induction programs, and potentially increasing the possibility that beginning teachers will remain in the profession.

In this chapter, a summary of the findings based on the three research questions and connected sub-questions is provided. Implications and recommendations based on these findings are discussed and the limitations of this study and implications for future research are addressed.

Summary of the Findings

The main question directing and framing this study was: *How do the components of induction programs implemented in North Carolina's Local Education Agencies (LEA) influence the retention of beginning teachers (BT)?* Three research questions and connected sub-questions guided the analysis of quantitative and qualitative data collected from an online survey of 11 North Carolina LEAs and 378 BTs in those districts. Follow-up interviews with the LEAs and teacher retention data were also used to answer the research questions. Through examining the LEA induction components and BT perceptions of the components offered in their districts, each research question was addressed and the relationship to teacher retention investigated.

A relationship between induction programs offered by the 11 LEAs and teacher retention in those districts, informed by quantitative and qualitative data, could not be determined decisively in this study. One reason is because all the participating LEAs offer similar induction components and comparing these components and teacher turnover did not yield any patterns or connections between the number or frequency of induction components offered by the LEAs and the retention of the LEA's teachers. Following is a description of specific findings in this study related to induction components and teacher retention.

Induction Components

The first research question was *What components of induction are LEAs in North Carolina providing to support beginning teachers during induction?* The connected sub-

questions examined whether any differences in LEAs (based on location, size and turnover), and BTs differences (based on years in teaching, grade-level, LEA location, and turnover) influenced the induction components implemented by each district. The results of the online survey indicated that a wide variety of induction components are used to varying degrees across the 11 LEAs, including various types of orientations, mentoring, and professional development. This variety of implementations within the state mandates allows LEAs to formulate and change their induction components to meet the needs of their beginning teachers.

The second research question asked *What components of induction do LEAs and BTs identify as beneficial?* and the sub-questions similarly sought to disaggregate the data by LEA and BT differences. A four-point ranking scale was used in both the LEA and BT survey to determine which components were perceived as beneficial, but the LEA and BT rankings did not always align. All the participating LEAs reported that their induction programs were beneficial in supporting their beginning teachers. However, the Beginning Teachers provided varying reports about their perceptions of the induction components offered in their districts, with very few of the participating BTs reporting that they did not participate in the different induction components: LEA orientation (3.4%), school orientation (17.2%), LEA professional development (8.7%), school professional development (15.1%), or have a mentor (0.8%). These are much lower percentages than the 56% of K-12 public school teachers in North Carolina who reported not participating in some form of formal support for beginning teachers in an earlier working conditions survey (Hirsch et al., 2001). Beginning teachers' perceptions of induction components

may be one cause of teacher reporting they did not participate; however a comprehensive induction program is mandated by the state of North Carolina in each LEA, so a focus on the components offered and not the absence of a program was considered in answering the research questions. The results are reported below for each induction component.

Orientation

All 11 participating LEAs provided orientation at the district and school levels for beginning teachers. State policy requires that each beginning teacher must be provided an orientation, but leaves the design of this component up to each LEA. Nine out of the 11 participating LEAs offer three days of district orientation with the remaining two offering one day and five days. All LEAs also offer at least one day of school-based orientation; however, this varied in each LEA and also by schools. BT responses varied about induction in their LEAs and when compared to the reported LEA orientation, numerous dissimilar responses made it difficult to interpret the actual participation of BTs in district and school-level orientations.

LEAs and BTs ranked the importance of four possible components of orientation: LEA orientation session(s), School-based orientation session(s), Beginning Teacher meetings and Touring the school facilities. None of the LEA and BT orientation rankings aligned. LEAs ranked LEA orientation as most important, and BTs ranked School-based orientation as most important. LEA perceptions of the importance of orientation components are dissimilar from BT perceptions. Both LEA and BT qualitative responses supported these disjunctions in the perceived importance of various orientation

components. BTs perceptions of what impacts their teaching is directly related to their school policies and procedures most provided in school-based orientation.

The differences in LEAs influenced the orientation components offered in the participating LEAs by location, size and turnover; however, the majority of LEAs offered three days of LEA orientation and this trend continued across location, size and turnover comparisons. School orientations were even more varied in each LEA. Patterns of implementation could not be determined. BT perceptions of orientations provided larger variety in the analysis, and no patterns could be determined. These findings are very similar to the findings of the National Council for Teacher Quality (2004), which reported a variety of new teacher orientation programs that ranged from introductory lectures used to introduce teachers to the district to more developed programs that used methods developed as a result of research and experience. Without a mandate on orientation, orientations will continue to vary in LEAs and schools.

Professional Development

Professional Development was offered monthly at the district or school levels by seven out of 11 LEAs, and this was also what most BTs reported. Professional development also varied by districts and schools due to differences in the planning and implementation by various districts. The demographic differences in LEAs and BTs did not influence the professional development components offered in the participating LEAs and patterns could not be determined due to the variety of responses.

In the California New Teacher Project (Dianda et al, 1991), professional development allowed the beginning teacher to take workshops on various subjects

pertaining to the LEA and/or school and to attend seminars mandated by the LEA and/or school. This was consistent with the findings of components offered in this study. Four possible professional development topics were ranked: training in classroom management techniques, training in curriculum and instructional planning, training in teaching methods and practices, and reimbursement for professional development attended. LEAs and BTs both ranked the training in classroom management techniques and training in curriculum and instructional planning as the most important, thus providing similar perceptions of professional development needs. LEA and BT responses about professional development were not the highest ranked in the qualitative, open-ended responses on the survey when compared with the other components; however, both LEAs and BTs described the topics covered in professional development.

Professional development varied by LEA and in the BT data due to the variety of possible professional development opportunities offered in the different LEAs. Although LEAs and BTs did not rank professional development as one of the most beneficial components, Blackwell (2004) states that the induction of a teacher through professional development is a factor in their decision to continue teaching. This was inconsistent with the data collected from 11 LEAs and 378 BTs in this study.

Mentoring

Mentoring is required by state policy for beginning teachers and North Carolina provides for flexibility in how mentoring is implemented. All participating LEAs reported that they provide mentors for their beginning teachers; however, different mentoring programs were found in the 11 North Carolina LEAs. Six of the participating

districts provide teacher mentors, three out of 11 have programs are staffed by full-time mentors, and two employ both full-time and teacher mentors. The differences in LEAs (size, location, or turnover) did not impact the kind of mentor programs implemented because more than one type of mentoring program was implemented in each different type of LEA examined.

In the most important rankings, LEAs and BTs ranked four possible components of mentoring: mentor teachers at the same school, mentor and/or buddy teachers next door, full-time mentors or induction coaches, and LEA central office-based induction coordinator. Both LEAs and BTs ranked having a mentor teacher at the same school as most important, and this was confirmed in the qualitative responses.

Any differences in the demographics of LEAs and BTs did not influence the mentoring components offered by the participating LEAs, and no patterns could be determined due to the variety of responses. However, the terms mentoring and induction are often used interchangeably (Ingersoll & Smith, 2004) and this was one concern regarding the reliability of the participants' responses due to the inconsistent terminology used by LEAs and BTs.

The data collected in this study from 378 beginning teachers and 11 LEAs supported the existing research on mentoring. All participating LEAs included mentoring as one part of the induction program, concurring with Bartell (2005) who stated that mentoring only was not a substitute for a developed induction program. Mentoring has been identified as one component in retaining beginning teachers (Claycomb, 2000; Darling-Hammond, 1999). The variations of mentoring found in this study are also

congruent with the research on mentoring programs examined in the review of the literature and supports contemporary research on mentors and mentoring.

Online Support and Resources

In the initial survey question regarding induction components, various components of online support were reported by nine of the 11 participating LEAs. Online support was used as a component category to describe the support and resources districts offer their beginning teachers through technology. The nine LEA responses regarding online support were varied and not consistent across the state. BT responses were also varied, and 211 BTs indicated their LEA provided no online support. Differences in the location, size, or retention rates of LEAs did not influence whether online support was made available, except that all large districts provided online resources for their beginning teachers. Large districts and also Piedmont districts all ranked networking opportunities as most important for BTs, while Small districts and Coastal districts all ranked adequate resources as most important to supporting beginning teachers.

In the component ranking four types of resources were ranked: (a) adequate resources, including materials, textbooks and workbooks; (b) opportunities to visit schools and/or observing teachers teaching; (c) formal networking opportunities for personnel with similar responsibilities; and (d) having a beginning teacher's handbook. Both LEAs and BTs ranked having adequate resources as the most important in this category, and this was also supported by both the LEA and BT qualitative responses. Due to an omission during survey construction, online resources were not included in the rankings of possible resources available to beginning teachers.

Online support and resources are both established induction components according to the research of Harry Wong (1998) and Stansbury and Zimmerman (2002) who view online resources as part of needed support components during induction. However, other resources can be more effective in supporting beginning teachers, which are described by Dianda, Ward, Quartz, Tushnet, Radio, and Bailey (1991) as High Intensity support strategies, or formal support categories, because they often require funding that due to the cost and availability may not be available to all BTs.

Most Beneficial Induction Components

Both LEAs and BTs ranked mentoring and resources as the top two most beneficial components, which was supported by the qualitative responses of both the BTs and LEAs. When the differences in LEAs were examined, both Large and Piedmont LEAs also ranked mentoring as the most beneficial component. Due to the variety of BT responses, patterns could not be established when examining the most beneficial rankings and any differences among the BTs with regard to years in teaching, grade-level, LEA location, or turnover rate.

Mentoring has been connected to teacher retention by the New Teacher Center (Strong, 2005), and The Alliance for Excellent Education reported in 2004 that \$2.6 million is spent annually in the United States hiring new teachers, including replacing those who have left the profession. Comprehensive induction, including mentoring during the first two years of teaching, was cited as the most beneficial way to curtail the increasing attrition rate. The findings in this study concur with that research.

Teacher Retention

The third research question examined the perceptions of the LEAs and BTs about the impact of induction on teacher retention using LEA turnover data and BTs responses about their future plans to answer: *What is the relationship between teacher induction components offered in North Carolina LEAs and Beginning Teacher retention?* In the participating LEAs, all offered some form of orientation, professional development and mentoring for their BTs. When comparing the amount of each type of component offered with the BTs' future plans, no relationships could be established between any increased number of induction components and increased teacher retention. This is likely due to the variety of BT responses. All LEAs agreed that induction had at least some impact on teacher retention; however in this study 60.1% of BTs believed induction had at least some impact on their decision to remain in teaching. This finding is consistent with current research (Blackwell 2004; Ingersoll & Kralik 2004) that induction increases teacher retention by positively affecting beginning teachers. Kardos, et al. (2001) support that beginning teachers will continue teaching if their schools are *integrated professional cultures* which support collegial interaction, such as mentoring; recognize BTs' needs; and invest in beginning teachers' commitment in the school and its students. Only six out of the 378 BTs surveyed plan on leaving the profession. Four out of these six were in Large Piedmont districts, and although this is a very small number, it aligns with Ingersoll's conclusion that smaller schools provide more effective assistance (1997). However 272 of the 378 BTs replied they planned on continuing teaching at their current

school and this was similar to the positive findings reported by Dianda, Ward, Quartz, Tushnet, Radio, and Bailey (1991).

Many of the 39.9% of BTs in the group reporting that induction did not impact their decision to remain in teaching did report in the qualitative data that mentors and resources influenced their decision, contradicting their quantitative survey responses. In the qualitative responses, BTs overwhelmingly acknowledged that their mentor and/or resources were most beneficial in their decision to remain in teaching. However, frustration was evident in those who did not agree that induction, or a lack of a program, impacted their retention, which is similar to Lieberman and Miller's (1994) research on beginning teachers thoughts and feelings of being overwhelmed and isolated during their first year of teaching.

Variability of the Findings

LEA responses throughout the survey were very consistent with regard to the program components offered in their district. Further, LEAs were provided their data for a member check in order to reconfirm the description of the data they had provided about their district's offerings. Beginning Teachers were recruited through their district to participate and were surveyed anonymously. Therefore, the number of BT responses varied in each LEA. One LEA asked their full-time mentors to provide the survey link to BTs in a computer lab setting and provided time for the BTs' to respond to the survey. However, many of the LEAs emailed the link to the online survey to their BTs several times after follow-up reminders. BT responses on the survey also varied in their content.

LEAs were asked about their induction program components first on the online survey, and then through a follow-up interview, and finally through member checking. However, BTs could only respond about their induction program using the online survey, and there was no opportunity for follow up in order to check their responses for accuracy. Also, BT perceptions about the induction components offered them differed in their frequency and content from LEA responses. This may have been a failure in using consistent vocabulary about induction, or lack of communication between LEAs and BTs about all the components of their induction programs. The state policy regards induction as a comprehensive program, and so does the research in the field (Bartell 2005, Wong 2004); however LEAs and BTs in this study perceived the various components and regularity of induction differently. Adelman (1991) and McDonald (1980) have reported that the experiences of beginning teachers not only affects their perceptions of teaching and learning, but also influences the kind of teacher they will become and affects their decisions whether or not to continue teaching. Given that the BTs in this study did not consider their mentors to be a part of the induction program offered by their LEA, this lack of understanding could influence whether the beginning teachers in this study remain in teaching. Fortunately, the vast majority of BTs in this study indicated that they plan to remain in teaching and ranked their mentors as their most important form of support.

Implications

LEAs currently have the flexibility to plan and implement the induction program in their district. Some LEAs have utilized community resources such as a local university

to supplement the offerings by schools and the district. Although LEAs in this study were from across the state, of differing sizes, and with turnover rates, these differences did not impact the choices made by LEAs regarding the planning and implementation of their induction program in any discernible pattern. Even with dissimilar requirements, each induction program is there to help the teacher, school and students and the flexibility of implementation assists LEAs in providing substantial induction components. Bartell (2005) makes the case that induction goes beyond the survival of the first year, and states “the goal of a systematically planned program of induction is to help new teachers not just survive, but to succeed and thrive” (p.6).

Smith and Ingersoll (2004) find that the more induction components experienced by beginning teachers, the lower the teacher turnover. The additive effect in their study proved statistically significant for the probability of beginning teachers returning with seven components versus those with none. However, the findings from the three research questions asked in this study did not match my similar assumptions prior to conducting this study. That is, the original hypothesis for this study was that having more than one induction component would impact the teacher retention in the LEA. However, due to the fact that all LEAs participating in the study offered several induction components, just differing in amount or frequency, this hypothesis was not confirmed and the findings in this study do not replicate the work of Smith and Ingersoll (2004). Wang, Odell and Schwille (2008) found through their research that the components of induction “do not independently influence beginning teachers’ learning and teaching practice” (p.148), which is more in line with the findings that the varying components offered in North

Carolina did not impact beginning teachers' perceptions or impact the retention of beginning teachers.

Nevertheless, through conversations with the LEAs and responses on the survey, each LEA was able to provide a strong rationale for their program implementation to meet the needs of BTs. Due to the fact I could not connect the number of LEA induction component offerings to teacher turnover, this leads me to believe that two factors influence whether beginning teachers stay or leave: (1) The quality of the induction program and its offerings, instead of the quantity of induction program components influences teacher retention, and (2) The time spent by BTs involved in these induction activities influences whether they stay or leave. However, further study is needed to test these ideas about the quality of induction and the time spent by the BTs.

Another implication of this research was the value of mentors to beginning teachers. Hanson and Moir (2008) from the New Teacher Center state "the findings of our research provide clear evidence that mentoring has powerful implications for practice far beyond the benefits of the mentoring relationship itself" (p.458). The mentoring relationship should be part of a comprehensive induction program and involving mentors in the research would provide the perspectives from both the mentor and beginning teachers on the collegial aspects of mentoring. Further study is needed to examine the relationships created and sustained throughout beginning teachers' careers in both formal and informal mentoring roles.

Recommendations

Based on the findings and my own experiences, the following recommendations are suggested for the different stakeholders involved in teacher induction programs. Due to the variety of programs in North Carolina's LEAs, each of these recommendations could have implications for multiple levels of support.

Teacher Induction in North Carolina

Teacher induction is currently supported in North Carolina through the state policy mandating orientation, mentoring, and a comprehensive induction program. Due to the flexibility allowed by the state, LEAs can plan and implement induction programs of their choice to meet the needs of their teachers. To support induction in North Carolina, the following recommendations are offered:

- Develop and promote consistent induction terminology within the state and districts to define the qualities needed for a “comprehensive” program. This would make LEAs accountable and all programs would define their programs based on similar terminology. This should include defining mentoring as part of the induction program, aiding in promoting understanding about this important component of a comprehensive induction program.
- Promote “best practices” through showcasing local programs. There is a division of the Department of Public Instruction aligned with teacher retention and this division could support LEA programs by connecting those involved with induction throughout North Carolina. Each year this division also coordinates the Teacher Turnover report and more information about and promotion of the

programs with high retention would assist other LEAs in learning of best practices across North Carolina.

- Support and connect university programs to help build more partnerships with LEAs around induction. This would assist schools, districts and universities in creating long-term relationships, and in promoting the connection teacher education programs have with their alumni. Some beginning teacher support programs have already been started by several state universities in different regions of the state, but this is not the norm and is not currently mandated as part of the state's induction policy.

Teacher Induction in LEAs and Schools

With the promotion of site-based management in North Carolina, school districts have the flexibility to implement their own induction programs as long as they fit with the state policies. Because state policies are not specific as to the content or frequency of induction components, the components provided are up to the LEA. This yields a lot of variance. To support induction in LEAs and schools, the following recommendations are offered:

- Create an assessment of teacher needs within the school district to assist LEAs and schools in their program planning and implementation. This would allow LEAs to use the flexibility provided through state mandates to offer induction components that are beneficial to beginning teachers.
- Use evaluations of the program and/or components to analyze the impact on beginning teachers and their students. This would provide the data to allow LEAs

feedback on the how and what is offered and provide a voice for beginning teachers to share their perspective with the district.

- Designate mentors as an induction component and involve them as part of any induction team. Beginning Teachers and LEAs report that mentors are the most beneficial induction component, but rarely were mentors included or described as part of induction in this study.
- Continue to provide mentors as part of every induction program. Given that both BTs and LEAs in this study chose mentors located at the school as the most important form of mentoring, it is suggested that even full-time mentors be based in schools rather than at the central office. Also, whenever possible, it is recommended to align mentors with BTs in the same content area and/or grade-levels to provide commonalities between the mentor and BT.
- Provide training and support for the mentors. Many of the participating LEAs stated their mentors were trained, however training should be updated and current with trends, policies and procedures. Mentors also need refreshers on their original training to stay current. One method of connecting with mentors was used in one participating LEA to meet with both the mentors and beginning teachers monthly, providing training and support, as well as time for the mentor and beginning teacher to spend together.
- Build relationships with beginning teachers. LEAs believe induction impacts retention; however, the BTs in this study did not report remaining in teaching due to any induction program. Rather they are impacted by the relationships with their

mentor, school and district. LEAs and schools should examine how they can build relationships with their BTs as a form of support during their beginning years of teaching. Many BTs shared their perspective about the relationships with their mentors and other induction personnel that made them feel supported in their survey responses.

- Provide long-term induction. Induction should also continue past orientation, involving the mentors and school personnel to provide a support system for BTs. Such continued support with multiple facets would add value to the components already in practice and create a more comprehensive support system that both BTs and LEAs are looking for.

Limitations of the Study

There were several limitations that developed during this study. I recruited LEAs for participation in the project, and fortunately the participating LEAs were distributed across the state and varied in their location, size, and turnover rate. However, a larger number of LEAs, or required participation of all LEAs across the state, would have provided a better picture of induction in North Carolina and a better sample size for comparison.

In the development of the survey, one limitation was the terminology used in the description of the various induction components. A description of the components was offered at the beginning of the survey for participants, however BT responses lead me to believe the induction terms were not widely understood, or that there may be different

meanings in the various LEAs. There were a wide variety of BT responses, and due to this mixture, comparison with the LEA induction component responses was not always possible during data analysis. Also during the development of the surveys, a mistake was made in identifying one of the induction components. In the first part of the survey LEAs and BTs were asked to identify the induction component currently in use and known components currently enacted in North Carolina LEAs. I used known induction components identified in previous research in the later part of the survey, but the online support resources were not included in the Resources rankings as an option. This made it difficult to compare analysis of actual Resources available to BTs. Surveys constructed after examination of LEA induction programs would have provided better knowledge about induction components offered and could be specifically tailored to each participating LEA.

During data collection and reporting, a limitation regarding anonymity was observed as the LEAs' anonymity has been protected as well as that of all the BTs. I believe this allowed for honest responses because the beginning teachers knew their responses and their identity would not be known. However, due to this anonymity, I could not follow-up with BTs about any of their responses to the survey, or gather more information about their perceptions about induction and teacher retention. One piece of data collected, the teacher turnover rate, counts all teachers who left the LEA that year, not just BTs. For a more appropriate comparison, BT teacher retention data would be better data, but this was not available from all participating LEAs. Lastly, there were limitations encountered during the analysis due to the inconsistent data collected from the

survey due to the design of survey questions. Both surveys were tested by LEA personnel and BTs prior to the implementation of this study; however larger and more rigorous pre-testing should have been used. Now that the survey has been used by over 500 BTs, with minor modifications it could be used to collect data from larger populations, or aligned with specific LEA induction programs and used in smaller LEA studies. The categories in analysis of the sub-questions were created and may have masked outcomes if the categories had been created differently. LEAs were asked to categorize themselves in the survey as urban, suburban or rural; however these categories were not defined and did not have common meanings across the LEAs. I created categories for the purpose of comparative analysis and grouping LEAs into similar categories. Also during analysis, I familiarized myself with three computer programs for the analysis of quantitative and qualitative data. I had to hand-code in multiple cases while learning to use these programs and some mistakes in coding may have been made. Every effort was made to learn and use these programs effectively, but due to the steep learning curve with three new computer programs, analysis could have been done more efficiently.

Future Research

This study confirmed my personal experience teaching in multiple LEAs. There are a variety of induction program components being implemented across North Carolina. Fortunately, much has changed since my first experience as a beginning teacher over 15 years ago, which was not a supportive one. Now it seems school districts are learning to

meet the needs of their teaching populations and recognizing new innovations that may prove helpful in supporting and retaining their teachers.

I am very appreciative of the 11 LEAs that agreed to participate and believe a state-wide study would provide further information on induction and possibly find the relationship between induction and retention that was the impetus for this study. It would be of interest to gather a larger sample and employ better ways of analyzing the data to provide a fuller picture of how each induction component impacts retention, rather than the generalized focus of this study that found similar induction components engaging BTs across North Carolina. For example, not all of the data were analyzed and compared across the LEA and BT satisfaction scales and all possible differences among BTs or LEAs were not examined. More in depth statistical analysis and other possible variability in the data could provide alternate conclusions about induction from the LEA and/or BT perspectives.

Due to the fact that the surveys used have now been tested by over 500 participants, it would be in the interest of to examine better ways to formulate questions, gain access to beginning teachers, and to conduct a more complete collection and analysis of data. However, other instruments could be used such as the *Perceptions of Success Inventory for Beginning Teachers* (Corbell, Reiman & Nietfeld 2008) developed to measure psychometrically the perceptions of BTs, which has been tested with 116 North Carolina BTs and could be tested with a larger sample in varying LEAs. A larger collection of data from a variety of LEAs would allow for the possibility of generalizing the data using the LEA and BT differences as intended in this study. For example, three

of the 11 LEAs utilize full-time mentors, which is a relatively new component within the past decade. More in-depth studies within LEAs, including research at the school level would provide more encompassing data about induction components and their relationship to teacher retention. A further study including follow-up data with the LEAs would be of interest in order to connect the BT responses of the study with the actual retention data. This would entail waiting for a new school year to start and follow-up surveys with LEAs and BTs to gather retention data on participants. This study did provide comprehensive information on the induction program components in 11 LEAs; however this study looked at the beginning teachers' intentions to continue teaching and did not follow up to determine the actual attrition rate, which was similar to Ingersoll & Kralik's study of the effects of support programs (2004).

One barrier to a comprehensive study on retention is gathering data on teachers who leave the profession. It would be of interest to follow-up with BTs who leave the profession and examine possible links among their decision to leave teaching and the available support in their school and LEA.

As for this researcher's future research, due to the finding that induction components implemented were not impacted by the size, location or turnover of the district or beginning teacher's years in teaching or teaching assignment, I am interested in studying if and how the quality of induction programs, rather than the quantity of components, impacts beginning teachers. The mixed methods design of this study provided multiple data from a variety of LEAs; however an interest in the quality of the program must be examined through qualitative data collection and analysis from the

perspective of the participants in the induction program. This would best be accomplished through an in depth examination of individual LEAs or school-based induction programs and components. Since generalization across the LEAs was not as applicable as I believed, collaboration with a school or LEA would provide fewer barriers in getting access to the beginning teachers, mentors and induction personnel and a better opportunity for in depth exploration of the induction components and their potential impact. My continued interest in the beginning teacher perspective would continue to provide a balanced perception of the induction program and the impact of the components with the addition of induction personnel perspectives.

Summary

In conclusion, the analysis of LEA and BT data on teacher induction components provided information from a variety of participating LEAs and perspectives from 378 BTs teaching in North Carolina LEAs. A review of the literature indicated that information about general induction components has already been provided to the field. However, the perspectives of BTs was something that interested me and informed the design of this study because their perceptions have not been studied very often, and not on a large scale. The misalignment of LEA and BT perspectives about orientation, professional development, mentors, and resources established a concern I had not anticipated. Nevertheless, this should lead to further research.

Through the analysis of the data, the induction components in North Carolina are primarily Orientation, Mentoring and Professional Development in varying contexts.

Resources are also available, but data was not collected on the kinds of resources available except for online support resources. The most beneficial components on induction from the perspectives of beginning teachers were Mentors, followed by Resources. LEAs agreed with their BTs that Mentors and Resources were most important, and the perspectives gathered from LEA and BT qualitative responses supported the survey responses. Mentoring is a common component that occurs formally and informally in schools and districts. Making sure that mentors are perceived by BTs to be part of the induction process will create new opportunities for teacher support and opportunities to create connections. In this study the relationship to retention was not evident in the statistical analysis comparing induction components, teacher turnover, and BTs' future plans in teaching. However, the building of supportive relationships involving human elements was evident in the orientation, professional development and mentoring components offered across North Carolina's LEAs. As beginning teachers are hired each school year, a goal should be to insure that the supportive relationships we establish and sustain with beginning teachers will continue to decrease teacher turnover, creating a relationship to retention.

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APPENDIX A

LEA CONSENT AND SURVEY

1. Consent to Act as a Human Participant

Project Title: Teacher Induction in North Carolina: Relationships to Retention

Project Director: Lisa N. Mitchell, M.A., NBCT

The purpose of this research study is to describe the components of induction programs implemented in North Carolina's Local Educational Agencies and examine how various types of induction components influence the retention of beginning teachers.

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of proposed procedures. This explanation describes the procedures, benefits, and risks of the study. It also describes your right to withdraw from the study at any time and that data you provide will be kept confidential.

Description and Explanation of Procedures:

As a Local Education Agency employee, you have been invited to participate in the "Supporting Beginning Teachers in North Carolina" study. This study involves completion of an online survey designed to examine the induction practices in each LEA, follow-up questions to gain participant perspectives and teacher retention data from 2006-2007.

Responding to the online questions takes no more than 30 minutes.

Risks and Discomforts:

There are no foreseeable physical or psychological risks as you participate in this study.

Potential Benefits:

The information provided by LEAs and BTs on induction practices in North Carolina will benefit LEAs with knowledge of induction practices that support BTs. This will benefit future beginning teachers and the planning of induction programs. This research study will benefit society through the impact on school districts and schools in the support and retention of future beginning teachers.

Confidentiality:

Your answers to the survey will be kept securely. Only the researcher certified by the UNCG Institutional Review Board will have access to the data. Data will be stored digitally in a password protected format on SurveyMonkey and on the principal investigator's personal computer.

The data will only be aligned with the LEA, and will be stripped of identifiers at the end of the project. Your individual data will not be linked to your name.

Consent:

By clicking the I AGREE button, you agree that you understand the procedures and any risks and benefits involved in this research. You are free to refuse to participate or to withdraw your consent to participate in this research at any time without penalty or prejudice. Your participation is entirely voluntary. Your privacy will be protected because you will not be identified by name as a participant in this project.

The University of North Carolina at Greensboro Institutional Review Board, which ensures that research involving people follows federal regulations, has approved the research and this consent form. Questions regarding your rights as a participant in this project can be answered by calling Mr. Eric Allen at (336)256-1482. Questions regarding the research itself will be answered by Lisa N. Mitchell by contacting her at (336)509-5811 or Inmitche@uncg.edu or Dr. Barbara B. Levin, Project Director at (336)334-3443 or bblevin@uncg.edu. Any new information that develops during the project will be provided to you if the information might affect your willingness to continue participation in this project.

Please print a copy of this consent form for your records.

By clicking I AGREE, you are agreeing to participate in the project described to you on this form.

By clicking I DO NOT AGREE, you are declining to participate in the project described to you on this form.

#	Survey Question	Item Responses
Consent to Act as a Human Participant		
1	Consent	I agree I do not agree
Descriptive Terms		
<p>In this survey, the following terms and abbreviations will be used in the questions and text. Please read through the following terms to provide a basic understanding. Once you have completed reading this page, select the NEXT button at the bottom to move forward.</p> <p>All items in the survey marked with * are required.</p> <p>Beginning Teachers Teachers new to the profession are defined in North Carolina as Beginning Teachers (BTs), those entering the profession and continuing through their first 3 years of teaching until they are recommended for a continuing license</p> <p>Induction Teacher induction refers to the period of time during of the first three years of teaching as well as the components of support offered to the beginning teachers during this period. Teacher induction programs are implemented to assist beginning teachers into becoming a professional educator socialized into the educational community. The United States Department of Education defines teacher induction as “those practices used to help beginning teachers become competent and effective professionals in the</p>		

#	Survey Question	Item Responses	
	<p>classroom” and teacher induction program as “the actual process or procedures that are implemented in your education system to assist beginning teachers” (1996). The United States Department of Education differentiates a “successful” teacher induction program as “a program that leads to increased teacher retention and/or to development of effective skills and positive attitudes toward teaching” (1996).</p> <p>Local Educational Agency</p> <p>The Local Educational Agency (LEA) is the term used in North Carolina to define the school district or school system. The LEA is typically defined by the parameters of the county boundaries, however there are some counties that are broken up into several LEAs such as city and county districts.</p> <p>Mentor</p> <p>The United States Department of Education defines mentors as “individuals who play a significant role in offering guidance and assistance to beginning teachers” (1996). More explicitly, a mentor teacher is a more experienced colleague of the beginning teacher, typically at their same school and possibly in the same grade-level or subject area, who assists the beginning teacher with becoming part of the school and the profession.</p> <p>* For the purposes of this survey, a FULL-TIME mentor is a person employed by the school district as mentor or induction coach to support and mentor teachers at one school or more on a full time basis - with NO teaching responsibilities.</p> <p>A TEACHER mentor is a person employed by the school district as a teacher who in addition to teaching responsibilities also mentors beginning teachers.</p> <p>Please answer each question fully. Questions marked with a * require answers to all parts.</p>		
Induction Program Components			
2	What components of induction are offered to beginning teachers in your LEA? Choose all that apply	LEA orientation	1 day LEA orientation 2 day LEA orientation 3 day LEA orientation 4 day LEA orientation 5 day LEA orientation More than 5 days of LEA orientation None Other
		School-based orientation	1 day school orientation 2 day school orientation 3 day school orientation 4 day school orientation 5 day school orientation More than 5 days of school

#	Survey Question	Item Responses	
			orientation None Other
		LEA Professional Development for Beginning Teachers	Weekly Monthly Quarterly Each Semester Once a year None Other
		School-based Professional Development for Beginning Teachers	Weekly Monthly Quarterly Each Semester Once a year None Other
		Mentor	Full-time mentor Teacher as mentor Full-time and teacher mentors No mentor Other
		Online Support	Online mentor Online discussion group Online resources Other online support No online support
3	Please choose the best answer. Whom are induction components required for?	Only 1 st year teachers 1 st and 2 nd year teachers 1 st , 2 nd and 3 rd year teachers Any teacher new to the LEA regardless of teaching experience Optional for beginning teachers Optional for all teachers Other (please specify)	
4	Describe the induction program offered to support beginning teachers.	Open-ended	Text box provided

#	Survey Question	Item Responses
Induction Component Rating		
5	Please rank the following items in order of importance (1 as most important) as they are perceived as beneficial to supporting beginning teachers. You will need to assign each component a number and can only use numbers 1 time each. Orientation and Meetings	<ul style="list-style-type: none"> • LEA orientation session(s) • School-based orientation session(s) • Tour of school facilities • Scheduled meetings for beginning teachers • Other (please specify)
		1 most important 2 3 4 least important
6	Please rank the following items in order of importance (1 as most important) as they are perceived as beneficial to supporting beginning teachers. You will need to assign each component a number and can only use numbers 1 time each. Professional Development	<ul style="list-style-type: none"> • Training in classroom management techniques • Training in curriculum and instructional planning • Training in teaching methods and practices • Reimbursement for professional development such as attending local, state or national conferences or taking college courses • Other (please specify)
		1 most important 2 3 4 least important
7	Please rank the following items in order of importance (1 as most important) as they are	<ul style="list-style-type: none"> • LEA central office based Induction Coordinator
		1 most important 2 3 4 least important

#	Survey Question	Item Responses	
	perceived as beneficial to supporting beginning teachers. You will need to assign each component a number and can only use numbers 1 time each. Mentors	<ul style="list-style-type: none"> • Full-time mentor or induction coach • Mentor teacher at the same school • Mentor and/or buddy teacher next door • Other (please specify) 	
8	Please rank the following items in order of importance (1 as most important) as they are perceived as beneficial to supporting beginning teachers. You will need to assign each component a number and can only use numbers 1 time each. Resources	<ul style="list-style-type: none"> • A beginning teachers handbook • Adequate resources, materials, textbooks and workbooks • Formal networking opportunities for personnel with similar responsibilities • Opportunities to visit schools and/or observe teachers teaching 	1 most important 2 3 4 least important
9	Looking at your responses above, please rank the 4 areas as Most Beneficial (1) to Least Beneficial (4)	<ul style="list-style-type: none"> • Orientation and meetings • Professional development • Mentors • Resources 	1 Most Beneficial 2 3 4 Least Beneficial
10	In your opinion, why are the components you ranked as most beneficial perceived as most beneficial to a beginning teacher.	Open-ended	Text box provided

#	Survey Question	Item Responses	
Induction Program Satisfaction			
11	How satisfied are you with the current LEA induction program?	Induction program overall satisfaction Orientation component satisfaction Mentoring program component satisfaction Beginning teacher professional development component satisfaction Induction resources satisfaction Funding appropriation satisfaction Personnel appropriation satisfaction	Choices for each: Very Satisfied Satisfied Neither Satisfied nor dissatisfied Dissatisfied Very dissatisfied N/A
12	How has the induction program changed since it was implemented?	Open-ended	Text box provided
13	If you had endless time, personnel and resources, what would you need to improve induction in the LEA to improve your satisfaction with the program?	Open-ended	Text box provided
Induction Program and Teacher Retention			
14	What level of impact do you feel the induction program has on teacher retention in the LEA?	High impact on Teacher Retention Some impact on Teacher Retention Does not impact Teacher Retention	
15	How would you describe the induction program's influence on personnel's decisions to remain in teaching?	Open-ended	Text box provided
Induction Program Goal and Success			
16	What is the purpose (goal) of the induction program?	Open-ended	Text box provided

#	Survey Question	Item Responses	
17	How do you measure success for the induction program?	Open-ended	Text box provided
LEA Information			
18	What LEA do you work in?	115 LEAs listed to choose from Other (please specify)	
19	Which category best describes the LEA?	Rural Urban Suburban	
20	LEA personnel data – Please enter a numerical answer for each question.	How many teachers total work in this LEA? How many beginning teachers work in this LEA (BT1, BT2, BT3) How many induction personnel work at the county office level?	Text boxes provided
21	2006-2007 personnel data – Please enter a numerical answer for each question.	How many teachers did the LEA hire during the 2009-07 school year? Out of these how many are beginning teachers (in their first 3 years of teaching)? Out of the beginning teachers, how many continued teaching in 2007-08 Out of those returning to teaching, how many beginning teachers participated in the LEA induction program?	Text boxes provided

#	Survey Question	Item Responses	
Follow-up Contact Information			
22	If you or LEA personnel would be willing to email a survey link to beginning teachers gathering their perspective on induction, please list the email of the personnel willing to forward a survey link to beginning teachers.	Text box provided	
23	If you would be willing to participate in a follow up interview on the phone about the LEA induction program, please include contact information.	Name Phone Number Best time to call	Text Boxes Provided
24	Please provide contact information for the Induction Coordinator or Human Resources Personnel responsible for Beginning Teacher Induction	Name LEA/Title Email Address City/Town Zip Code Phone	Text boxes provided

APPENDIX B

BT CONSENT AND SURVEY

1. Consent to Act as a Human Participant

Project Title: Teacher Induction in North Carolina: Relationships to Retention

Project Director: Lisa N. Mitchell, M.A., NBCT

The purpose of this research study is to describe the components of induction programs implemented in North Carolina's Local Educational Agencies and examine how various types of induction components influence the retention of beginning teachers.

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of proposed procedures. This explanation describes the procedures, benefits, and risks of the study. It also describes your right to withdraw from the study at any time and that data you provide will be kept confidential.

Description and Explanation of Procedures:

As a Local Education Agency employee, you have been invited to participate in the "Supporting Beginning Teachers in North Carolina" study. This study involves completion of an online survey designed to examine the induction practices in each LEA, follow-up questions to gain participant perspectives and teacher retention data from 2006-2007.

Responding to the online questions takes no more than 30 minutes.

Risks and Discomforts:

There are no foreseeable physical or psychological risks as you participate in this study.

Potential Benefits:

The information provided by LEAs and BTs on induction practices in North Carolina will benefit LEAs with knowledge of induction practices that support BTs. This will benefit future beginning teachers and the planning of induction programs. This research study will benefit society through the impact on school districts and schools in the support and retention of future beginning teachers.

Confidentiality:

Your answers to the survey will be kept securely. Only the researcher certified by the UNCG Institutional Review Board will have access to the data. Data will be stored digitally in a password protected format on SurveyMonkey and on the principal investigator's personal computer.

The data will only be aligned with the LEA, and will be stripped of identifiers at the end of the project. Your individual data will not be linked to your name.

Consent:

By clicking the I AGREE button, you agree that you understand the procedures and any risks and benefits involved in this research. You are free to refuse to participate or to withdraw your consent to participate in this research at any time without penalty or prejudice. Your participation is entirely voluntary. Your privacy will be protected because you will not be identified by name as a participant in this project.

The University of North Carolina at Greensboro Institutional Review Board, which ensures that research involving people follows federal regulations, has approved the research and this consent form. Questions regarding your rights as a participant in this project can be answered by calling Mr. Eric Allen at (336)256-1482. Questions regarding the research itself will be answered by Lisa N. Mitchell by contacting her at (336)509-5811 or Inmitche@uncg.edu or Dr. Barbara B. Levin, Project Director at (336)334-3443 or bblevin@uncg.edu. Any new information that develops during the project will be provided to you if the information might affect your willingness to continue participation in this project.

Please print a copy of this consent form for your records.

By clicking I AGREE, you are agreeing to participate in the project described to you on this form.

By clicking I DO NOT AGREE, you are declining to participate in the project described to you on this form.

#	Question	Item Responses
Consent to Act as a Human Participant		
1	Consent	I agree I do not agree
Descriptive Terms		
<p>In this survey, the following terms and abbreviations will be used in the questions and text. Please read through the following terms to provide a basic understanding. Once you have completed reading this page, select the NEXT button at the bottom to move forward.</p> <p>All items in the survey marked with * are required.</p> <p>Beginning Teachers Teachers new to the profession are defined in North Carolina as Beginning Teachers (BTs), those entering the profession and continuing through their first 3 years of teaching until they are recommended for a continuing license</p> <p>Induction Teacher induction refers to the period of time during of the first three years of teaching as well as the components of support offered to the beginning teachers during this period. Teacher induction programs are implemented to assist beginning teachers into becoming a professional educator socialized into the educational community. The United States Department of Education defines teacher induction as “those practices used to help beginning teachers become competent and effective professionals in the</p>		

#	Question	Item Responses	
<p>classroom” and teacher induction program as “the actual process or procedures that are implemented in your education system to assist beginning teachers” (1996). The United States Department of Education differentiates a “successful” teacher induction program as “a program that leads to increased teacher retention and/or to development of effective skills and positive attitudes toward teaching” (1996).</p> <p>Local Educational Agency The Local Educational Agency (LEA) is the term used in North Carolina to define the school district or school system. The LEA is typically defined by the parameters of the county boundaries, however there are some counties that are broken up into several LEAs such as city and county districts.</p> <p>Mentor The United States Department of Education defines mentors as “individuals who play a significant role in offering guidance and assistance to beginning teachers” (1996). More explicitly, a mentor teacher is a more experienced colleague of the beginning teacher, typically at their same school and possibly in the same grade-level or subject area, who assists the beginning teacher with becoming part of the school and the profession.</p> <p>* For the purposes of this survey, a FULL-TIME mentor is a person employed by the school district as mentor or induction coach to support and mentor teachers at one school or more on a full time basis - with NO teaching responsibilities. A TEACHER mentor is a person employed by the school district as a teacher who in addition to teaching responsibilities also mentors beginning teachers.</p> <p>Please answer each question fully. Questions marked with a * require answers to all parts.</p>			
Induction Program Components			
2	What components of induction are offered to beginning teachers in your LEA? Choose all that apply	LEA orientation	1 day LEA orientation 2 day LEA orientation 3 day LEA orientation 4 day LEA orientation 5 day LEA orientation More than 5 days of LEA orientation None Other
		School-based orientation	1 day school orientation 2 day school orientation 3 day school orientation 4 day school orientation 5 day school orientation More than 5 days of school

#	Question	Item Responses	
			orientation None Other
		LEA Professional Development for Beginning Teachers	Weekly Monthly Quarterly Each Semester Once a year None Other
		School-based Professional Development for Beginning Teachers	Weekly Monthly Quarterly Each Semester Once a year None Other
		Mentor	Full-time mentor Teacher as mentor Full-time and teacher mentors No mentor Other
		Online Support	Online mentor Online discussion group Online resources Other online support No online support
3	Which induction program components are you required to attend?	LEA orientation School orientation Meetings at school for beginning teachers LEA meetings for beginning teachers Meeting with a mentor teacher Other (please specify)	
4	Describe the induction program offered to support beginning teachers.	Open-ended	Text box provided

#	Question	Item Responses
Induction Component Rating		
5	Please rank the following items in order of importance (1 as most important) as they are perceived as beneficial to supporting beginning teachers. You will need to assign each component a number and can only use numbers 1 time each. Orientation and Meetings	<ul style="list-style-type: none"> • LEA orientation session(s) • School-based orientation session(s) • Tour of school facilities • Scheduled meetings for beginning teachers • Other (please specify)
		1 most important 2 3 4 least important
6	Please rank the following items in order of importance (1 as most important) as they are perceived as beneficial to supporting beginning teachers. You will need to assign each component a number and can only use numbers 1 time each. Professional Development	<ul style="list-style-type: none"> • Training in classroom management techniques • Training in curriculum and instructional planning • Training in teaching methods and practices • Reimbursement for professional development such as attending local, state or national conferences or taking college courses • Other (please specify)
		1 most important 2 3 4 least important
7	Please rank the following items in order of importance (1 as most important) as they are perceived as beneficial to supporting beginning teachers. You will need	<ul style="list-style-type: none"> • LEA central office based Induction Coordinator • Full-time mentor or induction coach
		1 most important 2 3 4 least important

#	Question	Item Responses	
	to assign each component a number and can only use numbers 1 time each. Mentors	<ul style="list-style-type: none"> • Mentor teacher at the same school • Mentor and/or buddy teacher next door • Other (please specify) 	
8	Please rank the following items in order of importance (1 as most important) as they are perceived as beneficial to supporting beginning teachers. You will need to assign each component a number and can only use numbers 1 time each. Resources	<ul style="list-style-type: none"> • A beginning teachers handbook • Adequate resources, materials, textbooks and workbooks • Formal networking opportunities for personnel with similar responsibilities • Opportunities to visit schools and/or observe teachers teaching 	1 most important 2 3 4 least important
9	Looking at your responses above, please rank the 4 areas as Most Beneficial (1) to Least Beneficial (4)	<ul style="list-style-type: none"> • Orientation and meetings • Professional development • Mentors • Resources 	1 Most Beneficial 2 3 4 Least Beneficial
10	In your opinion, why are the components you ranked as most beneficial perceived as most beneficial to a beginning teacher.	Open-ended	Text box provided
Induction Program Satisfaction			
11	How satisfied are you with the current LEA induction program?	Induction program overall satisfaction Orientation component satisfaction	Choices for each: Very Satisfied Satisfied Neither Satisfied nor

#	Question	Item Responses	
		Mentoring program component satisfaction Beginning teacher professional development component satisfaction Induction resources satisfaction Funding appropriation satisfaction Personnel appropriation satisfaction	dissatisfied Dissatisfied Very dissatisfied N/A
12	What kind of support was the most beneficial during your first year(s) of teaching?	Open-ended	Text box provided
13	If you had endless time, personnel and resources, what would you like to see improved with the induction program to improve your satisfaction with the program?	Open-ended	Text box provided
Induction Program and Teacher Retention			
14	Do you feel the induction program impacts your decision to remain in teaching?	Not at all To some extent the induction program impacted my decision To a moderate extent the induction program impacted my decision To a great extent the induction program impacted my decision	
15	How would you describe the induction program's influence on your decision to remain in teaching?	Open-ended	Text box provided
16	Which components of the induction program have influenced your decision to remain in teaching?	Open-ended	Text box provided

#	Question	Item Responses	
BT Information			
17	What LEA do you work in?	115 LEAs listed to choose from Other (please specify)	
18	How are you classified as a Beginning Teacher?	BT 1 BT 2 BT 3	
19	What grade(s) do you teach? Please check all that apply	PreK K 1 2 3 4 5 6 7 8 9 10 11 12 Other (please specify)	
20	What is your current teaching position or content area?	Open-ended	Text box provided
21	Which best describes your future intentions for your professional career?	Continue teaching at my current school Continue teaching at my current school until a better opportunity comes along Continue teaching but leave this school as soon as I can Continue teaching but leave this district as soon as I can Leave the profession all together	

APPENDIX C

LEA FOLLOW-UP INTERVIEW PROTOCOL

Project: Teacher Induction in North Carolina: Relationship to Retention

Time of Interview:

Date:

Location: Phone

Interviewer: Lisa N. Mitchell

Position of Interviewee:

LEA of Interviewee:

Phone number of Interviewee:

Description of project

- Purpose of study: The purpose of this study is to describe the components of induction programs implemented in North Carolina's Local Education Agencies (LEA) and examine how various types of induction components influence the retention of Beginning Teachers (BT).
- Data being collected: These follow-up interviews will be used to clarify data collected electronically through an online survey.
- Protection of confidentiality: Participants confidentiality will be protected by only identifying the information collected by the LEA which it is connected with.
- Approximate length of interview: 15 minutes
- Consent form: Participants consent verbally through consent over the phone.

Phone Consent

This consent will be read over the phone to the participant.
Verbal consent will be gained before proceeding with the interview questions.

Purpose:

The purpose of this research study is to describe the components of induction programs implemented in North Carolina's Local Educational Agencies and examine how various types of induction components influence the retention of beginning teachers.

Before agreeing to participate in this research study, it is important that you understand the following explanation of proposed procedures. This explanation describes the procedures, benefits, and risks of the study. It also describes your right to withdraw from the study at any time and that data you provide will be kept confidential.

Description and Explanation of Procedures:

As a Local Education Agency employee, you have been invited to participate in the "Teacher Induction in North Carolina: Relationship to Retention" study. This part of the study involves completion of follow-up questions to gain participant perspectives and clarification of induction components.

Responding to the questions over the phone takes no more than 15 minutes.

Risks and Discomforts:

There are no foreseeable physical or psychological risks as you participate in this study.

Potential Benefits:

The information provided by LEAs and BTs on induction practices in North Carolina will benefit LEAs with knowledge of induction practices that support BTs. This will benefit future beginning teachers and the planning of induction programs. This research study will benefit society through the impact on school districts and schools in the support and retention of future beginning teachers.

Confidentiality:

Your answers to the survey will be kept securely. Only the researcher certified by the UNCG Institutional Review Board will have access to the data. Data will be stored digitally in the form of transcribed interviews on the principal investigator's personal computer and any paper based data or audio tapes will be stored in a locked file cabinet in the principal investigator's home office.

The data will only be aligned with the LEA, and data will be stripped of identifiers at the end of the data collection. Your individual data will not be linked to your name.

Consent:

By consenting with this phone interview, you agree that you understand the procedures and any risks and benefits involved in this research. You are free to refuse to participate or to withdraw your consent to participate in this research at any time without penalty or prejudice. Your participation is entirely voluntary. Your privacy will be protected because you will not be identified by name as a participant in this project.

Questions:

Do you have any questions about your participation or the research?

The University of North Carolina at Greensboro Institutional Review Board, which ensures that research involving people follows federal regulations, has approved the research and this consent form. Questions regarding your rights as a participant in this project can be answered by calling Mr. Eric Allen at (336)256-1482. Questions regarding the research itself will be answered by Lisa N. Mitchell by contacting her at (336)509-5811 or lnmitche@uncg.edu or Dr. Barbara B. Levin, Project Director at (336)334-3443 or bblevin@uncg.edu. Any new information that develops during the project will be provided to you if the information might affect your willingness to continue participation in this project.

Do you agree to participate in this phone interview? (verbal consent)

Interview Questions:

1. Describe the induction program of the LEA.
2. What aspects of the induction program seem most beneficial to beginning teachers?
3. How do you believe the induction program has affected teacher retention?
4. How do you change the induction program to improve support for beginning teachers?
5. Clarification questions of any survey data will also be asked.

APPENDIX D

EXPERT SURVEY FEEDBACK REQUEST

I am preparing to submit my research proposal to my committee in early October and need your assistance. I have constructed 2 surveys for my dissertation research. One for LEA personnel – an induction coordinator, lead mentor, or human resources personnel administrator. Each district will have a different contact person that I have gathered through resources and websites. The other survey is for Beginning Teachers and will be sent to beginning teachers through the LEA contact after participation and consent from the LEA.

I need your assistance to validate my surveys. Please take the survey using the following link. Please use accurate data, this will not be used in the final data collection but used to validate responses for the future state-wide data collection.

The purpose of this research study is to examine how the processes and effects of induction programs implemented in North Carolina's Local Education Agencies (LEA) influence the retention of beginning teachers.

My research questions are:

1. What components of induction are LEAs in North Carolina providing to support beginning teachers during induction?
2. What components of induction do LEAs and BTs identify as beneficial?
3. What is the relationship between teacher induction components offered in North Carolina LEAs and Beginning Teacher retention?

After you have taken the survey, please answer the following questions and return via email (LNMITCHE@UNCG.EDU)

Survey link:

http://www.surveymonkey.com/s.aspx?sm=c_2fsoqJjfqrFZ03DKDtR30A_3d_3d

Please respond to the following according to your own perception and experiences with the survey and research:

What conflicts do you see with the survey instruments and the research questions?

What additional information is needed to answer the research questions?

What technical difficulties did you encounter with the survey instrument?

Approximately how long did it take you to complete the survey?

What suggestions do you have to improve the survey?

Thank you for your assistance. If you have any questions, you can contact me at lnmitche@uncg.edu or 336-509-5811.

Lisa N. Mitchell

APPENDIX E

LEA RECRUITMENT FLYER

Teacher Induction in North Carolina *Relationships to Retention*

If your LEA is curious about the relationship between induction and beginning teacher retention, then please consider participating in research to help answer these questions.

- 1. What components of induction are LEAs in North Carolina providing to support Beginning Teachers?*
- 2. What components of induction do LEAs and beginning teachers identify as beneficial?*
- 3. What is the relationship between teacher induction components offered in North Carolina LEAs and Beginning Teacher retention?*

For my dissertation study I am conducting at UNCG, I am researching the current induction practices in LEAs that support beginning teachers and searching for a connection between induction program components and the retention of beginning teachers. I hope you will consider participating as a representative for your LEA. As an LEA representative, you would complete an online survey and follow up phone interview, each taking no longer than 30 minutes. Also, I would ask you to forward an online survey link to 1st and 2nd year beginning teachers in your LEA. There is no risk for participants as their participation is anonymous and no more than 30 minutes involvement through an online survey. Following are the details of the study. For more information or if your LEA is interested in participating, you can contact me at 336.509.5811 or lnmitche@uncg.edu and Dr. Barbara B. Levin, Project Director, 336.334.3443 or bblevin@uncg.edu.

Thank you for your time and consideration,

Lisa N. Mitchell, MA, NBCT

- **Purpose:** The purpose of this study is to describe the components of induction programs implemented in North Carolina's Local Education Agencies (LEA) and examine how various types of induction components influence the retention of Beginning Teachers (BT).

- **Procedures:** In this study, a representative from your LEA such as the Induction Coordinator or personnel in charge of teacher induction, will complete an online survey about the components of induction offered in the LEA. Following the completion of this survey, we will ask a LEA representative to distribute a link to an online survey to 1st and 2nd year beginning teachers. There is no risk to any participant as all data collected will be anonymous. Each survey will take no longer than 30 minutes to complete. Follow up phone interviews will be conducted with a LEA representative at the district office level to clarify information provided about induction programs and their impact on teacher retention.
- **Benefits:** The information learned from these surveys will be shared with LEAs to help inform induction practices. This information will increase your knowledge of induction practices that support and are related to Beginning Teacher retention. Such knowledge may benefit future teachers and your planning for induction support.

*All North Carolina Local Educational Agencies are invited to participate in this study.
A purposeful sample of 10 LEAs that commit to participating will be contacted to take part in this study.*

For More Information, please contact:

Lisa N. Mitchell, MA, NBCT at 336.509.5811 or email lnmitche@uncg.edu

Dr. Barbara B. Levin, Project Director, 336.334.3443, bblevin@uncg.edu



THE UNIVERSITY of NORTH CAROLINA
GREENSBORO

UNCG School of Education
Department of Curriculum and Instruction

APPENDIX F

LEA REQUEST FOR SURVEY PARTICIPATION

Dear LEA representative,

Following is the link for the LEA survey to gather information on the induction program offered to support beginning teachers in your school district. This survey should be completed by one designee of the LEA with information pertaining to the Teacher Induction in your school district and teacher retention. Please forward this email or survey link to the appropriate LEA personnel as needed.

The LEA survey will be completed online by following this link and should take no more than 30 minutes. It has 16 questions relating to the teacher induction components and 4 questions about the LEA and retention data, followed by a request for contact information. Please contact me if you have any technical problems completing the survey. I will follow up with you within 2 weeks to complete the survey process. Following the survey completion, I will arrange a time to talk with you over the phone to follow-up on survey responses to clarify about the LEA induction program.

LEA Survey Link:

http://www.surveymonkey.com/s.aspx?sm=TiQW7CGOIf1uyv2Tzu5gwQ_3d_3d

If you have any questions or concerns about the survey, please do not hesitate to contact me at 336-509-5811 or lnmitche@uncg.edu

Thank you again for your interest and support. I look forward to working with you.

Sincerely,

Lisa N. Mitchell

APPENDIX G

BT REQUEST FOR SURVEY PARTICIPATION

Dear LEA Representative,

Following is the link for the Beginning Teacher survey to gather information on the induction program offered to support beginning teachers in your school district. This survey should be completed by 1st and 2nd year teachers in your school district. Please forward the following message and survey link to the appropriate personnel as needed.

If you have any questions or concerns about the survey, please do not hesitate to contact me at 336-509-5811 or lnmitche@uncg.edu

Thank you again for your interest and support. I look forward to working with you.

Sincerely,
Lisa N. Mitchell

Please forward the following to your 1st and 2nd year teachers. Thank you -

Dear Beginning Teacher,

Please consider completing the following survey at your own convenience on your beginning teacher experiences. This data is being collected as part of my dissertation research at The University of North Carolina at Greensboro and with the cooperation of your school district.

The survey will be completed online by following this link http://www.surveymonkey.com/s.aspx?sm=mifa4Q08DFUvDdYosb8QaA_3d_3d and should take no more than 30 minutes. It has 15 questions relating to the teacher induction components offered in your school district and 5 questions about yourself – however all data is collected anonymously and your survey answers in no way can be connected to you. Please contact me if you have any technical problems completing the survey.

I hope you are having a great school year. If you have any questions or concerns about the survey, please do not hesitate to contact me at 336-509-5811 or lnmitche@uncg.edu

Thank you,
Lisa N. Mitchell, NBCT

Beginning Teacher Survey Link:
http://www.surveymonkey.com/s.aspx?sm=mifa4Q08DFUvDdYosb8QaA_3d_3d

APPENDIX H

DATA CROSSWALK

Data Sources	State Report Retention Data	LEA Documents	LEA Survey Question #s					LEA Follow-up Interview	BT survey Question #s											
			Induction Program Information	Influence / Component Rating	Success / Recommendations	Satisfaction	Demographic		Induction Program Information	Influence / Component Rating	Success / Recommendations	Satisfaction	Retention	Demographic						
			1. What components of induction are LEAs in North Carolina providing to support beginning teachers during induction?		X	2 3 4														
1a. How do the differences among LEAs (e.g. location, size, turnover) influence the components of induction implemented?		X	2 3 4																	
1b. How do the differences among BTs (e.g. years in teaching, grade-level, location, turnover) influence the components of induction implemented?								X												17 18 19 20

Data Sources	State Report Retention Data	LEA Documents	LEA Survey Question #s					LEA Follow-up Interview	LEA Survey Question #s					
			Induction Program Information	Influence / Component Rating	Success / Recommendations	Satisfaction	Demographic		Induction Program Information	Influence / Component Rating	Success / Recommendations	Satisfaction	Retention	Demographic
			3. What is the relationship between teacher induction components offered in North Carolina LEAs and Beginning Teacher retention?	X		14 15			16 17			X	14 15	16
3a. How do the differences in LEAs (e.g. location, size, turnover) influence the relationship that their induction components have with teacher retention?	X	X	14 15		16 17		18 19 20 21	X						
3b. How do the differences in BTs (e.g. years in teaching, grade-level, location, turnover) influence the relationship that the induction components have with BTs' decision to remain in teaching?	X								14 15	16			21	17 18 19 20

APPENDIX I

DATA COLLECTION AND ANALYSIS TIMELINE

Recruitment	<p>115 LEAs receive invitation to participate letter and flyer December 2007 Researcher followed up with LEAs to increase response rate, 2nd invitation sent after winter school vacation Purposeful sampling used to choose participating LEAs Application process for research approval from each participating LEA determined and permission requested through application process or letter from the superintendent 11 LEAs agreed to participate and followed through with application or letter for approval Researcher contacted LEAs by phone and email to remind them of needed letter for approval Approval gained from 11 participating LEAs in January 2008 IRB modified to reflect participating LEA documentation, submitted January 31, 2008 and approved February 15, 2008</p>
Weeks 1-3 LEA survey	<p>LEA Online Survey link sent out through email to all LEA personnel administrators and/or induction contacts February 15, 2008 Review LEA surveys as respondents complete surveys to keep track of which LEAs have responded Reminder email sent each week to LEAs that have not responded to the survey with survey link All LEAs complete survey by March 7, 2008</p>
Weeks 1-4 BT survey	<p>Sent out BT survey link to be distributed by LEA to LEAs that have responded to the survey: Tracked BT responses weekly to see which LEAs have sent out links to teachers. Answered emails from occasional teachers who needed assistance getting into the survey online Reminders sent via email to resend BT link in following weeks to LEAs including teacher participation numbers to help increase participation All LEAs emailed March 2, 2008 requesting teachers complete the survey by March 14, 2008 due to state Teacher Working Conditions survey beginning the following week</p>
Weeks 3-4 LEA interview	<p>Phone interviews with LEA representatives Transcribed phone interviews Weekly read through of survey data and recorded number of surveys with each LEA</p>
Week 5-6 Data finalized	<p>Data collection finalized via online surveys</p>
Weeks 7-12+ Data analysis	<p>Quantitative: Frequency Counts, Cross Tab Qualitative: Coding for perspectives, ratings, induction components Connections – identified patterns with LEA retention data and induction components through comparing quantitative and qualitative data Member check with LEAs on LEA descriptive data</p>