

The Pennsylvania State University

The Graduate School

College of Education

**SOURCES OF WORK-RELATED SUPPORT FOR RURAL SPECIAL
EDUCATION TEACHERS AND THEIR RELATIONSHIP TO TEACHER
SATISFACTION AND COMMITMENT**

A Dissertation in

Special Education

by

Ann Bassett Berry

© 2010 Ann Bassett Berry

Submitted in Partial Fulfillment
of the Requirements
for the Degree of

Doctor of Philosophy

August 2010

The dissertation of Ann Bassett Berry was reviewed and approved* by the following:

Thomas Farmer
Associate Professor of Special Education
Dissertation Advisor
Co-chair of Committee

David McNaughton
Professor of Special Education
Co-chair of Committee

Linda H. Mason
Associate Professor of Special Education

Mary Catherine Scheeler
Assistant Professor of Special Education

Elizabeth M. Z. Farmer
Associate Professor of Health Policy and Administration

James Nolan
Henry J. Hermanowicz Professor of Education

Kathy L. Ruhl
Department Head of Educational Psychology, School Psychology, and Special
Education

*Signatures are on file in the Graduate School

ABSTRACT

The shortage of special education teachers is a critical issue facing rural school districts. Administrators face moderate to extreme difficulties recruiting special educators and some are unable to fill positions at all. The retention of teachers to special education positions in rural schools is part of any comprehensive plan to deal with teacher shortages. Research in the broader field of special education has demonstrated that work-related support, defined as the ability to ask questions and problem-solve student related issues, increases teachers' levels of satisfaction and commitment to their position. However, retention research conducted in rural areas is often limited by a focus on one state or region, and/or a small sample size. This study investigated, through survey research, several aspects of teacher support and their relationship to teacher commitment and satisfaction with a randomly selected, national sample (n = 203) of rural special education teachers. The results reveal a significant relationship between the extent and helpfulness of teachers' support networks and levels of teacher satisfaction, perceived efficacy, and willingness to choose the profession again. Furthermore, individual sources of support, particularly support from building and special education administrators and general education teachers, significantly contributed to the outcomes related to teacher commitment.

TABLE OF CONTENTS

LIST OF TABLES	viii
LIST OF FIGURES	xi
ACKNOLWEDGEMENTS	xii
CHAPTER 1: Introduction	1
Attrition in Special Education	2
Special Education Teacher Retention	4
Collaborative and Collegial Support.....	4
Administrative Support.....	5
Relationship of Support to Teacher Satisfaction and Commitment	5
CHAPTER 2: Review of Related Literature.....	8
Special Education Teacher Shortages	9
Efforts to Cope with Teacher Shortages.....	9
Special Education Teacher Shortages in Rural Schools	10
Characteristics and Challenges of Rural Special Education.....	10
Efforts to Cope With Teacher Shortages in Rural Areas.....	13
Special Education Attrition and Retention Research	14
Research Design	14
Teacher Characteristics.....	15
Position Characteristics.....	17
Working Conditions and Teacher Support	19
Conclusions From Attrition and Retention Research in Special Education	22
Rural Special Education Attrition and Retention.....	23

Attrition in Rural Schools	23
Special Education Teacher Attrition to General Education	24
Positive Qualities of Rural Schools	25
Support For Rural Special Education Teacher Retention	25
Qualities of Rural School and Teacher Retention	28
Research Questions and Hypotheses	31
CHAPTER 3: Methodology.....	33
Sample Selection.....	33
District Characteristics.....	35
Teacher Identification	36
Teacher and Position Characteristics	37
Survey Development.....	40
Planning Phase.....	40
Instrument Reliability and Validity.....	42
Survey Format.....	44
Question Format	46
Survey Categories	48
Procedure	52
Training of Interviewers, Fidelity of Administration, and Recorded Responses.....	52
Data Analysis.....	54
CHAPTER 4: Results	58
Sources of Work-Related Support	60

Levels of Teacher Commitment and Satisfaction in Rural Schools	61
The Relationship of Work-related Support to Commitment Variables	64
The Relationship of Teacher and Position Characteristics and Overall Support to Commitment Variables	64
The Relationship of Individual Sources of Support to Commitment Variables	67
Analysis Summary for Teacher and Position Characteristics and Support and Their Relationship to Teacher Intent to Stay	70
Analysis Summary for Teacher and Position Characteristics and Support and Their Relationship to Teacher Willingness to Choose the Profession Again	74
The Relationship of Work-Related Support to Teacher Satisfaction.....	78
The Relationship of Teacher and Position Characteristics and Overall Support to Satisfaction Variables	78
The Relationship of Individual Sources of Support to Satisfaction Variables	80
Analysis Summary for Teacher and Position Characteristics and Support and Their Relationship to Teacher Satisfaction	82
Analysis Summary for Teacher and Position Characteristics and Support and Their Relationship to Teacher Efficacy	86
Relationships Between Commitment and Satisfaction Variables	91
Summary of Key Findings	92
Challenges of the Position	94
What Teachers Like Best	96
CHAPTER 5: Discussion.....	99

Sources And Extent of Work-Related Support for Rural Special Education	
Teachers	100
Perceived Levels of Job Commitment and Job Satisfaction.....	100
Relationships Between Work-Related Support and Outcome Variables in	
Support Models	102
Relationships Between Variables	103
Relationships Between Satisfaction and Commitment.....	104
Important Relationships to Teacher Satisfaction	105
The Importance of Administrative Support	105
The Increased Role of Support from the General Educators in Rural Schools	106
A Shared Responsibility	108
New Directions	109
Implications.....	109
Limitations.....	112
Conclusions.....	114
REFERENCES	116
APPENDIX A: Teacher Recruitment Letter	126
APPENDIX B: Teacher Survey.....	127

LIST OF TABLES

TABLE 1. Composition of District Sample.....	36
TABLE 2. Teacher and Position Characteristics.....	39
TABLE 3. Means, Standard Deviations, and Correlations for Teacher and Position Characteristics, Overall Support, and Commitment Variables.....	66
TABLE 4. Means, Standard Deviations, and Correlations for Individual Sources of Support and Commitment Variables.....	69
TABLE 5. Multiple Regression Analysis Summary for Teacher and Position Characteristics, Overall Support, Individual Sources of Support, and Their Relationship to Teacher Intent to Stay One Year and Five Years.....	71
TABLE 6. Analysis of Variance for Teacher and Position Characteristics and Overall Support in Relationship to Teacher Intent to Stay One Year and Five Years.....	73
TABLE 7. Analysis of Variance for Teacher and Position Characteristics and Individual Sources of Support in Relationship to Teacher Intent to Stay One Year and Five Years.....	74
TABLE 8. Multiple Regression Analysis Summary for Teacher and Position Characteristics, Overall Support, Individual Sources of Support, and their Relationship to Teacher Willingness to Choose the Profession and Rural School Again.....	75
TABLE 9. Analysis of Variance for Teacher and Position Characteristics and Overall Support and Their Relationship to Teacher Willingness to Choose Profession Again.....	77

TABLE 10. Analysis of Variance for Teacher and Position Characteristics and Individual Sources of Support and Their Relationship to Teacher Willingness to Choose Profession Again	78
TABLE 11. Means, Standard Deviations, and Correlations for Teacher and Position Characteristics, Overall Support, and Satisfaction Variables.....	80
TABLE 12. Means, Standard Deviations, and Correlations for Individual Sources of Support and Satisfaction Variables	81
TABLE 13. Multiple Regression Analysis Summary for Teacher and Position Characteristics, Overall Support, Individual Sources of Support, and Their Relationship to Teacher Satisfaction	83
TABLE 14. Analysis of Variance for Teacher and Position Characteristics and Overall Support and Their Relationship to Teacher Satisfaction	85
TABLE 15. Analysis of Variance for Teacher and Position Characteristics and Individual Sources of Support and Their Relationship to Teacher Satisfaction...	86
TABLE 16. Multiple Regression Analysis Summary for Teacher and Position Characteristics, Overall Support, Individual Sources of Support, and Their Relationship to Teacher Efficacy.....	88
TABLE 17. Analysis of Variance for Teacher and Position Characteristics and Overall Support and Their Relationship to Teacher Efficacy	90
TABLE 18. Analysis of Variance for Teacher and Position Characteristics and Individual Sources of Support and Their Relationship to Teacher Efficacy	91
TABLE 19. Teacher Satisfaction, Efficacy, Intent to Stay, and Willingness to Choose Profession Over Again.....	92

TABLE 20. Summary of Significant Correlations Between Support and
Commitment and Satisfaction93

LIST OF FIGURES

FIGURE 1. Conceptual Model of the Study Investigating Teacher Commitment to
Special Education Positions..... 45

ACKNOWLEDGEMENTS

A debt of gratitude is owed for the countless hours of support offered to me by the members of my committee, the staff at NCRES, and my friends and family. Without the encouragement, humor, tenacity, and candor of my doctoral advisor, Dr. Tom Farmer, I would not have embarked on, nonetheless completed, the research and scholarship necessary for this dissertation. His use of many metaphors has inspired and humbled me throughout this process. His unfaltering confidence in my abilities has allowed me to accomplish many aspects of this program, and of my future role in higher education, that prior to his tutelage I would not have thought possible. I cannot thank him enough.

I also wish to acknowledge the members of my committee who have been encouraging and supportive along the way. Several papers, with their guidance, have been transformed through countless drafts and iterations into scholarly works I am proud of. The skills and knowledge I carry with me into my career in higher education are the real prize. I am especially indebted to Dr. Linda Mason, Dr. Jim Nolan, and Dr. David McNaughton for their unwavering encouragement along the way.

The help and support of NCRES staff, Maggie Gravelle in particular, was invaluable. I am also grateful to Dr. Rob Petrin and Dr. Elizabeth Farmer, for patiently explaining the subtleties of statistical procedures, which often baffled me. Needless to say, my friends and family have given hours of support and made many sacrifices as I became consumed with this project. I wish to especially thank my husband Scott, my daughter Emily, and my friend Smita for believing I could move forward and succeed. *Merci bien.*

CHAPTER 1

Introduction

The consistent shortage of special education teachers and frequent teacher turnover in high poverty and rural areas represent two challenges faced by our nation's schools, according to national organizations such as the National Comprehensive Center for Teaching Quality (NCCTQ; Rowland, Allen, & Education, 2007). Administrators in rural school districts, which make up 40% of the nation's districts (Johnson & Strange, 2007), are struggling to secure and retain special education teachers who have not only the necessary special education credentials, but multiple content certifications as well (Purcell, East, & Rude, 2005). Shortages of qualified teachers can threaten the quality of education that students with disabilities receive. The shortage of highly qualified special educators in rural settings is reported to be as high as 35% (Brownell, Bishop, & Sindelar, 2005), clearly higher than the 11.4% nation-wide quality shortage in special education (Boe, 2006). In fact, the shortage of qualified special education teachers is cited as a significant challenge for rural special education leaders today (Purcell et al.).

Rural districts have initiated different recruitment and retention strategies in an effort to deal with qualified special education teacher shortages (e.g., financial incentives and grow-your-own programs, etc.). While programs aimed at recruiting special educators to rural districts are necessary, developing effective strategies to retain teachers in their positions is also an important part of a comprehensive plan to reduce special education teacher shortages in rural areas. Rural districts that are successful in dealing with special education teacher shortages are also addressing the issue of teacher attrition and improving their abilities to retain their special educators (Theobald, 1991).

Attrition in Special Education

Special educators experience the highest attrition rate nationally of any teacher group (Ingersoll, 2001). There are several kinds of attrition: transfer into related positions (e.g., reading specialist), transfer into general education, and exiting the field of teaching altogether (Miller, Brownell, & Smith, 1999). Attrition to general education positions in some rural districts can be as high as 17% (Prater, Harris, & Fisher, 2007). Special educator attrition to other positions within the school or to other districts also contributes to the chronic shortage in rural areas (Brownell et al., 2005; Prater et al.).

The cost of attrition is greater than the additional expense of continual recruitment. New teachers require time to gain experience, and the time needed for their acclimation disrupts the flow of curriculum implementation. Both conditions affect student achievement and curriculum continuity (Lemke, 1995; National Commission on Teaching and America's Future [NCTAF], 2002). Reducing special education teacher attrition is essential, not only as a means of addressing teacher shortages, but also to improve the integrity of education provided to students with disabilities.

Research studying teacher attrition investigates factors that contribute to special education teachers leaving their positions. Teacher characteristics and working conditions are examples of factors that can contribute to special education teacher attrition.

Teacher characteristics such as age, experience, certification, and background appear to influence attrition. The younger, newly hired, inexperienced, or inappropriately certified teachers leave their positions at the highest rate (Miller et al., 1999; Stempien & Loeb, 2002). Special education teachers with less experience or inadequate training may feel overwhelmed and less effective, which places them at greater risk for attrition (Boe

& Bobbit, 1997; Miller et al.). In rural areas, teachers without a rural background appear to be at higher risk for attrition because of the lack of social or personal ties to the area (Bornfield, Hall, Hall, & Hoover, 1997; Huysman, 2008). Teacher characteristics such as age, experience, and background, however, are relatively unalterable factors, which is to say that they are difficult and/or time-consuming to change.

Teacher working conditions also appear to influence attrition. The demands of the position can influence reported levels of stress, which results in increased attrition among special educators. As students with disabilities are increasingly served in general education classrooms, special education teachers face the dual challenge of working with students with a variety of ability levels as well as the need to negotiate their roles in the general education classroom (Billingsley, 2004a). Despite the need for shared responsibility in educating students with disabilities, special education teachers frequently state that general education teachers and administrators have little understanding of their role in the classroom, which makes working together difficult (Billingsley & Cross, 1992). They also report professional isolation, including limited opportunities for collaborative exchanges with other special educators or collegial conversations with general education classroom teachers and administrators. Furthermore, the slow academic progress of their students can be discouraging for some special educators. Professional isolation, along with the perceived lack of support and recognition, can place special education teachers at risk for increased levels of stress, dissatisfaction, and attrition (Cooley & Yovanoff, 1996; Gersten, Keating, Yovanoff, & Harniss, 2001; Miller et al., 1999).

Special Education Teacher Retention

Attention to positive working conditions has been a focus for education leaders and researchers interested in reducing special education teacher shortages. Alterable factors represent conditions or characteristics that are influenced by changes to the environment and are within school administrators' and policymakers' control. Positive working conditions are alterable factors, which influence special education teacher retention (Miller et al., 1999; NCTAF, 2002).

Several large-scale national research projects have identified factors related to working conditions as important to special education teacher retention. Central to the retention of special educators is the existence of collaborative and collegial relationships with others in the school. Collaborative relationships, between teachers of special education and between teachers of special and general education, facilitate the exchange of ideas and help to generate solutions to problems that arise with students in the classroom. Equally important are supportive relationships between special educators and administrators. The literature examining special education attrition and retention finds that these kinds of supportive collaborative and collegial relationships result in special educators who report higher levels of effectiveness with their students, increased satisfaction with their jobs, and positive intentions to remain teaching (Billingsley, Carlson, & Klein, 2002; Gersten et al., 2001; McLeskey, Tyler, & Flippin, 2004; Stempien & Loeb, 2002).

Collaborative and Collegial Support

Special education teachers who are involved in collaborative relationships with other special educators also report lower levels of professional isolation and work-related

stress. Informal guidance and the exchange of ideas with other special educators increase teachers' reported levels of confidence and job satisfaction (Billingsley, 2004a; Cooley & Yovanoff, 1996; Westling, Herzog, Cooper-Duffy, Prohn, & Ray, 2006). Opportunities for collegial conversations with general educators, provide special educators with support and decreases the amount of role dissonance or conflicting role expectations they report (Billingsley & Cross, 1992). Collegial exchanges permit teachers to define their roles and responsibilities, and allow them to feel valued by their colleagues, which results in increased levels of job satisfaction and commitment to the field (Billingsley, 2004b; Gehrke & Murri, 2006; Gersten et al., 2001).

Administrative Support

Administrators (e.g., building principals or district special education directors) can also play a pivotal role in recognizing teachers' contributions to the school, helping teachers define their classroom roles, and making resources available for teachers. Special education teachers who report a higher degree of principal support (e.g., help solving problems, clarification of their role in the classroom) express lower levels of role ambiguity and greater satisfaction with their jobs (Billingsley, 2004b; Billingsley & Cross, 1992).

Relationship of Support to Teacher Satisfaction and Commitment

Work-related support—defined as the exchange of information, ideas, and resources, or the opportunity to ask questions and problem-solve student issues—enhances a teacher's ability to more confidently and effectively provide services to students with disabilities (Cooley & Yovanoff, 1996; Westling et al., 2006). Work-related support appears to decrease levels of professional isolation while increasing levels of satisfaction

and intent to stay (Billingsley, 2004a; Cooley & Yovanoff; Westling et al.). Teachers who report higher levels of support also expressed more job satisfaction, which has been correlated with higher levels of retention (Billingsley et al., 2002; Gersten et al., 2001; Whitaker, 2000).

In summary, evidence from special education retention research suggests that positive working conditions in the form of work-related support can result in special educators who express increased levels of efficacy, satisfaction, and commitment. What is less clearly understood are the critical features of work-related support for rural special educators and the relationship between that support and teacher retention.

There is a small but growing body of research examining the sources of work-related support for rural special educators and the relationship of that support to levels of teacher satisfaction and commitment. In one study, research with veteran special educators in Utah confirmed that support from other special educators and general educators was helpful in handling the work-related stress of being a special education teacher (Menlove, Garnes, & Salzberg, 2003). Similarly, a study investigating rural teachers in schools with few retention difficulties found close-knit relationships between special educators and general education teachers. Teachers in these schools reported functioning as a team when providing services to students with disabilities (Nagel, Hernandez, Embler, McLaughlin, & Doh, 2006). These findings suggest that further information on the sources of work-related support for rural special educators and their related satisfaction and commitment is paramount to understanding teacher retention in rural areas.

The purpose of the current study, which builds upon prior research, is to further examine the types of support available to rural special educators on a nation-wide scale and to investigate the relationship between these supports and teachers' plans to remain in their position. The aim is to investigate how work-related support may be correlated with special education teacher satisfaction and commitment, in order to guide future rural teacher retention research efforts. Additionally, the findings may benefit rural leaders interested in developing effective retention strategies. Specifically, this study seeks to address the following five questions:

1. What types of work-related support are available to rural special educators?
2. What is the extent of the work-related support that special educators receive from available sources?
3. What are the perceived levels of job commitment and job satisfaction for rural special education teachers?
4. What is the relationship between work-related supports and teachers' perceived levels of commitment and satisfaction?
5. Is there a relationship between job commitment and job satisfaction for rural special educators?

CHAPTER 2

Review of Related Literature

For over 15 years, the shortage of special educators has been a primary problem facing the field of special education (Brownell & Smith, 1992). In the United States there are chronic shortages of special educators in almost every disability category: emotional or behavior disorders, severe/profound disabilities, multiple disabilities, learning disabilities, and mild/moderate disabilities (McLeskey et al., 2004). Such teacher shortages are attributed to an increase in special education enrollment and the attrition of fully qualified special educators (Boe, 2006; McLesky et al.). Chronic shortages of experienced special educators in rural areas threaten the provision of appropriate services to students with disabilities. Part of the solution to teacher shortages may be supporting qualified special educators to remain in their positions.

This chapter will initially discuss the special education teacher shortage in the United States and then identify the challenges for teachers in rural areas that may contribute to the difficulties rural administrators report in the recruitment and retention of special education teachers in rural schools. The following section will review research on the attrition and retention of special education teachers, examine important considerations related to research design, and report on major research findings. More specifically, the review will investigate the available research on special education teacher attrition and retention in rural schools and explore directions for research with special educators in rural areas.

Special Education Teacher Shortages

Special education teacher shortages are due in part to a steady increase in the number of students identified with disabilities. The growth rate of identified students is almost three times the growth rate of the student population (Boe, 2006). This disproportionate growth rate has increased the demand for qualified special educators across the United States.

Another factor contributing to teacher shortages is teacher attrition. The predominant source of special educators (92%) is returning teachers (Cook & Boe, 2007). However, special educators are distinguished by the highest rate of attrition of any teacher group (Ingersoll, 2001). Some teacher attrition is the result of special educators transferring to general education. The loss of special educators to general education is 13% annually, which is 10 times greater than general education teachers becoming special educators (McLeskey et al., 2004). Teacher shortages have created teaching positions in special education that are difficult for administrators to fill.

Efforts to Cope With Teacher Shortages

School districts have employed a variety of problematic methods to cope with the severe shortage of qualified special education teachers. Administrators may feel the necessity to reduce services, increase teacher caseloads, or overuse untrained paraprofessionals to provide individualized education to a diverse group of special education students (Billingsley & Cross, 1992). When fully certified teachers are simply not available, teaching positions are filled with part-time personnel certified in other areas, as part-time status circumvents the requirements for full-time teachers (Ingersoll, 2001). In the past, states have issued conditional or emergency licenses to ease personnel

shortages (Brownell & Smith, 1992). The consequences of these practices can be severe: substandard quality of education, reduction in student achievement, and teacher attrition or burnout (i.e., teachers who remain on the job but are no longer effective; Billingsley, 2004a; Darling-Hammond, 1997). Effective special education is dependent on securing and retaining experienced, qualified teachers who can design individualized programs to meet students' needs and help them reach their potential.

Special Education Teacher Shortages in Rural Schools

Many schools in rural locations experience difficulty in securing qualified special education teachers to fill positions teaching students with disabilities (Kossar, Mitchem, & Ludlow, 2005; Rowland et al., 2007). In the United States, 27% of rural schools report either facing difficulties finding special educators to fill vacancies or being unable to fill positions at all (Provasnik, KewalRamani, Coleman, Gilbertson, Herring, & Xie, 2007). This percentage is alarming given that 43% of America's public schools are located in rural and small communities, and more than 21% of all public school students attend these schools (Johnson & Strange, 2007). Rural schools are located predominantly in 20 states that make up the South, Appalachia, northern New England, and the Great Plains. The worst special education teacher shortages are found in western and southeastern states, particularly for teachers certified in early intervention, severe disabilities, and low incidence disabilities (Ludlow, Conner, & Schlecter, 2005).

Characteristics and Challenges of Rural Special Education

The remote locations and geographically large districts of some rural areas contribute to the characteristics of the teaching position and can pose unique challenges for special educators. The characteristics and challenges of the position may contribute to

the shortage of qualified special educators. The average rural teacher is white, married, and female, with 6 years of teaching experience in their current rural school. Generally, rural teachers are from a rural background, and their families or spouses are also employed or live in the rural area (Bornfield et al., 1997; Davis, 2002).

In rural special education, the low incidence of special needs populations can mean smaller caseloads, but can also require teachers to be one of few special educators in their school or district, or even the only special educator providing services in several schools. Special educators in rural areas may work as itinerant teachers, providing consultation to general education teachers in several schools throughout the district. Such characteristics contribute to professional isolation. Some special educators may provide services to students with disabilities through an outside agency that is contracted by local districts. Teachers may need to commute in order to service students on their caseload, further decreasing their opportunities for encouragement and support (Theobald, 1991). Special educators in remote locations frequently report professional and social isolation as a challenge of their position (Forbush & Morgan, 2004). Additionally, the transition to a rural area, where the social and cultural activities typically associated with larger urban and suburban districts are not available, can be difficult for a new teacher (Bornfield et al.).

The characteristics of the special needs population create additional challenges for rural special educators. In some small rural school districts, special education teachers provide instruction to students in kindergarten through 12th grade across a variety of subjects (Schwartzbeck, Prince, Redfield, Morris, & Hammer, 2003). Furthermore, special educators are often asked to address a wide variety of student needs and disability

categories in rural schools, resulting in a need for teachers to work outside of their typical training and expertise (Brownell et al., 2005).

Many rural schools have to operate within a limited budget because of the lower tax base found in some rural areas (Monk, 2008). Smaller operating budgets can present challenges for rural special education teachers, as teachers in rural settings may need to make do with fewer materials and resources due to budget constraints. Rural schools may struggle to provide the specialized services required by individualized programs. As a result, small schools may be forced to consolidate services or hire outside agencies to provide services for their students with special needs (Hodge, & Krumm, 2009).

Historically, teachers in rural areas have faced lower pay scales, fewer support networks, and limited professional development opportunities because of their schools' limited financial resources. These working conditions make recruiting and retaining teachers difficult for rural administrators (Ludlow et al., 2005; Collins, 1999).

The federal mandates of No Child Left Behind (NCLB) create further pressure for rural schools by imposing requirements to employ highly qualified teachers with special education certification and competence in core content areas. Multiple assignments across subject areas, along with the diverse nature of the populations served, are major factors affecting difficulties in securing and retaining rural special education teachers (Reeves, 2003). Rural administrators face considerable challenges securing personnel with multiple certifications in remote areas where professional development programs to obtain further credentials may be limited (Hardman, Rosenberg, & Sindelar, 2005; Kossar et al., 2005).

Furthermore, NCLB requirements for student progress can be discouraging for special educators in rural areas. Despite the effectiveness of a teacher, a small number of special needs students can create artificial volatility in achievement scores, hindering the school's ability to meet adequate yearly progress (AYP). Being marked as an "*in need of improvement*" school can create a demoralizing environment for special educators. NCLB sanctions (e.g., fewer federal funds, reassignment of money, or the option of school choice) can strain an already stretched school budget as administrators struggle to recruit and compete with the better salaries, student services, and teacher programs found in other parts of the state (Brownell et al., 2005; Jimerson, 2005; Reeves, 2003).

Efforts to Cope With Teacher Shortages in Rural Areas

In an effort to deal with teacher shortages, some administrators have offered incentives such as increased salaries and benefits, loan forgiveness plans, and assistance with housing to attract teachers to positions in rural districts (Lowe, 2006; Monk, 2007). Such incentives to attract teachers, however, have had limited success and appear less likely to succeed than programs to recruit and train residents who already have ties to the local community and are likely to remain there (Rosenkoetter, Irwin, & Saceda, 2004). Rural school districts have often utilized alternative routes to special education certification for general education teachers, high school graduates, paraprofessionals, or other individuals already living in rural areas who are interested in becoming special education teachers. State universities, often in collaboration with local districts, offer programs to certify teachers as special educators through coursework delivered through distance education technology or in a nearby city (Dugi, 2008; Rosenkoetter et al.).

While recruitment and training strategies are necessary, developing effective retention strategies is also an essential component of any solution to reduce the problem of teacher shortages experienced by many rural school districts (Brownell et al., 2005; Schwartzbeck et al., 2003). Research on teacher attrition and retention has investigated several factors related to the retention of special education teachers.

Special Education Attrition and Retention Research

Research investigating teacher attrition looks at the factors contributing to a teacher's decision to leave their position. Research investigating retention, on the other hand, examines what teachers consider to be important influences on their decision to stay in their position. The design of the research investigating attrition and retention can impact the generalization of the findings to teachers in rural areas.

Research Design

Research investigating teacher attrition and retention is typically approached in one of three ways: surveying teachers' opinions, examining exit and retention data, and investigating teachers' behavior following an intervention designed to influence retention. Most frequently, attrition and retention research involves a survey of teachers' perceptions; in other words, researchers solicit the teacher's verbal report of their satisfaction or commitment to their field or position. Teachers are generally surveyed using phone interviews or a questionnaire regarding their satisfaction with their job and their perceived reasons for remaining (e.g., Billingsley et al., 2002; Gersten et al., 2001; Westling & Whitten, 1996). Teachers who have left their teaching position are asked their reasons for doing so (e.g., Gehrke & McCoy, 2007). Some researchers also gather data on teacher retention and exit behavior following the administration of the survey

(e.g., Miller et al., 1999; Singer, 1992; Westling et al., 2006). Another approach is the study of teacher behavior over a period of time following the alteration of a particular teacher characteristic (e.g., experience, certification status) or working condition (e.g., teacher support). The use of a control group in the research design (e.g., Cooley & Yovanoff, 1996; Mariage & Garmon, 2003; Squires, 1995) further strengthens the validity of the reported outcomes. A review of the research in special education incorporating these designs shows that researchers have identified the teacher characteristics, position characteristics, and working conditions that positively influence teacher attrition and retention.

Teacher Characteristics

Research has established that teacher characteristics such as age, inexperience, inadequate certification status, and teacher background are factors associated with attrition. Miller et al. (1999) surveyed over 1,100 randomly selected special educators (response rate = 80%) and then tracked their careers for two years to determine if demographic and work-related variables (e.g., school climate, job-related stress, workload, support from administration and colleagues) contributed to the special educator staying in their position, leaving their position, or transferring to a different position. The teacher's age was inversely related to their retention in the position: teachers who transferred to a new school were younger than those who remained. Inadequate certification status was also correlated with attrition. The authors concluded that a positive school climate was important to teacher retention, and they encouraged principals to take strong leadership roles in promoting collaboration and collegiality among teachers.

Research with both general educators and special educators by Stempien and Loeb (2002) supported previous results: younger, less experienced, or inadequately certified teachers expressed higher levels of dissatisfaction. Researchers hypothesized that these teachers may feel inadequately equipped to handle the demands of the position and subsequently have less commitment to their position. Thus, administrators who hire teachers with inadequate experience or inappropriate certification in order to fill vacancies may simply perpetuate a cycle of attrition.

As a whole, beginning teachers are particularly susceptible to attrition. Thirty-three percent of beginning teachers leave in their first three years, while 50% leave within the first five years of teaching (Smith & Ingersoll, 2004). Beginning teachers who are able to manage the challenges of the first five years have enhanced odds of remaining in their position, for attrition rates drop dramatically after the first and critical five-year period. These findings are supported by Singer's (1992) seminal longitudinal research, which tracked the career paths of over 6,000 special educators over a 15-year period. Several trends underscore the need for support during the induction period. Beginning special educators frequently left in the first few years of teaching. The risk of attrition steadily declined for those teachers able to negotiate the challenges of the first few years.

Recommendations by NCTAF (2002) resulted in legislation that mandated induction support for beginning teachers in several states (e.g., a relationship with a mentor teacher who offers the beginning teacher knowledge, techniques, support, and professional development activities). Collaborative environments that foster supportive relationships between teachers, as well as between teachers and administration, have been

strongly related to beginning teachers' commitment to teaching and staying in the field (Hernandez, 2008; Weiss, 1999).

Research conducted with beginning special education teachers also suggests that teachers who receive early career support through informal guidance and collaboration with other special educators, along with in-service staff development, are teachers who feel confident in their roles as special educators, a trait associated with higher levels of retention (Billingsley et al., 2002).

Other attrition factors related to teacher characteristics include teachers who are of age to retire, teachers who relocate due to the transfer of a spouse, or those who leave due to social isolation. Frequently, the rural teachers who leave their positions are not from a rural background and report having fewer local emotional and social ties to family or friends in the area (Bornfield et al., 1997). Rural districts frequently experience the loss of special educators to suburban and urban districts where there are more cultural and social amenities, and often higher salaries: several thousand dollars more per year (Monk, 2007). Factors that are related to teacher characteristics, however, are relatively unalterable, or in other words, they are beyond the local administrator's control.

Position Characteristics

Along with the characteristics of the teacher, the characteristics of the position influence a teacher's satisfaction and sense of commitment to their position. Teachers who work with students with disabilities have a challenging job. When compared to teachers in general education, special educators express higher levels of role conflict (e.g., general educators and/or administrators have conflicting expectations for their role in the classroom), higher levels of job frustration, higher levels of stress, and lower levels

of job satisfaction (Billingsley & Cross, 1992; Stempien & Loeb, 2002). For example, Billingsley et al. (2002), in research with beginning teachers of emotionally and behaviorally challenged students, found that 24% expressed feeling role conflict, 21% felt disconnected from their school, and 25% saw their workload as unmanageable. The authors noted that job frustration was more related to teacher attrition than factors of salary, caseload size, or diversity of caseload. Additional research with special educators has substantiated the relationship between high levels of frustration and lower levels of job satisfaction ($r = .69^1$; Stempien & Loeb). It is not surprising that research investigating special education teacher retention, on the other hand, has identified high levels of job satisfaction to be associated with increased teacher retention (Billingsley, 2004a; Gersten et al., 2001; Miller et al., 1999; Whitaker, 2000).

Lower teacher salaries in rural areas are a recurring issue worth additional mention. Generally, teachers in rural areas report being dissatisfied with their salaries when compared to teachers in other locales (Provasnik et al., 2007). The issue of salary, then, is important to teacher recruitment and retention in rural areas (Jimerson, 2005; NCTAF, 2002). However, research is inconclusive on the relationship between higher salaries and teacher retention (Billingsley et al., 2002; NCTAF; Singer, 1992).

In sum, teacher characteristics and position characteristics impact the retention of special educators. McLesky et al. (2004), however, conclude from the analysis of data from three national sources (i.e., U.S. Department of Education Office of Special Education Programs, National Center for Educational Statistics' Schools and Staffing

¹ Pearson's r for group studies are considered to be .20 - .40 low, .40 - .60 moderate, .60 - .80 high moderate, .80 - 1.00 very high (Glass & Hopkins, 1996).

Survey and Teacher Follow-Up Survey, and the American Association of Employment in Education) that while teacher and position characteristics such as age, salary, and type of position can be associated with attrition, teacher working conditions are the factors that place teachers at greater risk.

Working Conditions and Teacher Support

As has been noted, job frustration and dissatisfaction is related to special education teacher attrition. Positive working conditions, on the other hand, can have a profound impact on the retention of special education teachers, and these conditions are more alterable aspects of the work environment. Research has explored the contribution of several sources of work-related support to special education teacher retention: early career support as well as support from other special educators, general educators, and administrators.

Early career support. Mentors can be an important source of emotional, procedural, curricular, and instructional support for beginning special educators. Research has provided evidence of a significant relationship between the overall effectiveness of mentoring support and first year teachers' plans to remain in special education (Whitaker, 2000). Teachers with greater mentor support were more likely to see their roles as manageable, believe they could manage the most difficult students, and believe they were successful in providing special education services (Billingsley, 2004b). The most helpful form of mentor support was an informal meeting with a veteran teacher (Whitaker, 2000) to exchange information and problem-solve situations that arose in the classroom. This type of work-related support has been shown to help beginning teachers acquire the skills they need and develop a greater commitment to teaching.

Support from other special educators. Informal guidance and collaboration with other special educators is identified by beginning special educators as the most important form of support (Geherke & Murri, 2006). Additionally, collaboration with other special educators is shown to be beneficial for the veteran special educator as well. For example, Cooley and Yovanoff (1996), using a quasi-experimental design, empirically validated the effect of teacher support on teacher satisfaction and commitment. The study involved two interventions with 92 special educators and related service providers that were designed to reduce stress and increase peer collaboration. The *Peer Collaboration Program* provided special educators with a support network so they could collaborate and problem-solve issues from their classrooms. Baseline, 6-month, and 1-year follow-up means were analyzed for trends. The dependent variables of personal effectiveness, job satisfaction, and job commitment increased for the treatment group, while members of the wait-list control group became less satisfied and less committed during the same time period. This and similar studies support the conclusion that collaboration with other special educators decreases professional isolation, emotional exhaustion, and work-related stress while increasing reported levels of satisfaction for special education teachers working in stressful positions (Billingsley, 2004a; Billingsley & Cross, 1992; Cooley & Yovanoff, 1996). Researchers advocate the use of peer collaboration to enhance a school's abilities to support and retain their special education personnel.

Support from general education colleagues. Westling and his colleagues (2006) investigated the relationship between work-related support for general and special education teachers and special education teacher retention. Multi-level support for 178 teachers included collaborative groups, online networks, peer-mentoring, and in-class

consultation. Teachers of both general and special education appreciated the opportunities to talk with colleagues about work-related issues and to exchange useful techniques and strategies. Participation in the project had a positive association with the teacher remaining in the same position over a three-year period.

The importance of support from colleagues is also underscored in a study conducted by Gehrke and Murri (2006) with eight beginning teachers. Special educators answered a questionnaire and were then interviewed to obtain their perceptions of their first year of teaching. They were concerned about the multiple roles required of special educators when students with disabilities were included in general education classrooms. The beginning special educators desired further knowledge of the general education curriculum, as well as skills in collaborating and consulting with general education teachers. Teachers identified support from both the administration and general educators as critical influences on their intent to return to their position.

Administrative support. Special educators perceive administrators as an important source of support for solving student-related problems and for clarifying roles and expectations in the classroom. In addition, principals make available opportunities to learn new techniques and information. Gersten et al. (2001) investigated the factors influencing the retention of 887 special educators and found that teachers enjoyed learning throughout their careers. Teachers reported increased levels of competency and effectiveness with their students and increased commitment to the field as a result of participation in professional development opportunities. Administrative support, either through direct support of the teacher or by making resources and training available has a

strong and direct affect on teacher satisfaction (Billingsley & Cross, 1992; Geherke & Murri, 2006; Gersten et al.).

Furthermore, principals mediate the overall school culture and influence the level of support felt by special education teachers. Administrators play an important role in creating a climate conducive to collaboration. Despite requirements to work together to develop individualized education programs, collegial relationships are not always familiar territory for general educators and special educators (Hammond, Olson, Edson, Greenfield, & Ingalls, 1995; Miller, Wienke, & Savage, 2000). The requirements to accommodate students' disabilities and behaviors can create tension and obstacles to collaborative relationships. Special educators frequently report that general educators do not fully understand their roles and responsibilities in the classroom, nor value their contributions to the education of the students they share (Billingsley & Cross, 1992).

To improve collegiality, research has found that general educators need to increase their willingness to involve special educators in classroom decisions and increase their own comfort with providing appropriate accommodations for students with disabilities. Then again, special educators need to increase their knowledge and comfortability with curriculum content. Collaboration and consultation between special and general educators may require strong leadership from administrators in order to create collaborative communities so meaningful conversations about the students they share can take place between teachers (Stempien & Loeb, 2002).

Conclusions From Attrition and Retention Research in Special Education

Research provides insight into the factors associated with attrition and retention for special educators. We now have a considerable amount of information regarding why

teachers leave the field and, more importantly, why they stay. As has been discussed, the factors of age, certification status, teaching experience, and background are generally cited as teacher characteristics associated with higher levels of teacher attrition.

Research investigating teacher retention has provided evidence that work-related support such as: (a) special educators working together, (b) collaboration between teachers of special education and general education, and (c) support from administrators, including recognition and clear definitions of roles and responsibilities, are all consistently associated with increased levels of job satisfaction for special educators. Of particular interest, these factors are also associated with special educator job commitment. What has received less attention in the literature is the relationship between work-related support and the levels of job commitment and satisfaction specifically for rural special educators. The available research on rural special education teacher attrition and retention will now be reviewed.

Rural Special Education Attrition and Retention

Attrition in Rural Schools

Rural special educators are susceptible to the same attrition factors as their counterparts teaching in suburban and urban areas. Research by Westling and Whitten (1996) with 156 rural special educators (response rate = 100%) supports the conclusion that the demands of the position, as discussed in the special education literature, contribute to rural teacher attrition. Teachers, who indicated on the questionnaire that they intended to leave, expressed professional isolation, burnout, and lower levels of support. Teachers cited the following working conditions as reasons for dissatisfaction and attrition: a lack of understanding and recognition from their general education

colleagues, little assistance grappling with the challenges of their position, and a lack of administrator support.

Teachers who leave their teaching positions may continue to work in special education in different special education positions in their schools or in another district. Some teachers leave teaching altogether to pursue other opportunities, administrative or leadership roles, or are at a point in their career where they wish to retire. Some may remain teaching in their rural schools but opt to teach either a related teaching position (e.g., reading specialist), or a position in general education.

Special Education Teacher Attrition to General Education

An important issue in the retention of rural special educators is the high attrition rate of special education teachers into general education positions in rural schools. In the United States, 13% of special educators transfer into general education each year (Ingersoll, 2001; McLesky et al., 2004), whereas 17% of special educators make such a transfer in rural areas (Prater et al., 2007). The transfer of special educators into general education positions is seen by some researchers as the largest preventable source of rural special educator attrition, and a significant hurdle to retention in rural areas (Menlove et al., 2003; Prater et al., 2007). Therefore, to reduce teacher shortages, administrators need to retain those special educators who transfer into general education or related positions within the school, or who transfer to positions in other districts in either special education or general education.

The challenge for rural leaders is to find strategies that encourage a rural educator to remain in special education in their school. Rural educators may transfer out of special

education but elect to remain teaching in their school because of the many positive qualities found in rural schools.

Positive Qualities of Rural Schools

Rural communities have many positive qualities that may influence the retention of rural educators to a school. Rural teachers, as a whole, often report a positive relationship with their students and parents, as well as an appreciation of the rural lifestyle (Davis, 2002). This conclusion is supported by Provasnik and her colleagues (2007), using data provided by the National Center for Educational Statistics (NCES). Their analysis found that when compared to those teachers working in suburban and urban locales, a larger percentage of public school teachers in rural areas are satisfied with their class size, their students' behavior, and the support they receive from parents. On average, rural schools have fewer pupils per teacher (15.3). Rural teachers report fewer student behavior problems: lower levels of student disrespect, verbal abuse, bullying, and acts of physical aggression. At the same time, rural teachers report that higher numbers of students come to school prepared to learn. Rural teachers cite higher levels of parent involvement: a greater percentage of parents in rural areas attend school events and volunteer. Given the positive aspects of teaching in a rural school, the high percentage of rural teachers who are dissatisfied with teaching in special education but who choose to remain teaching in their rural school in other positions is not surprising.

Support for Rural Special Education Teacher Retention

Research investigating rural special education teacher retention has identified several sources of teacher support central to teachers' job commitment: relationships with

other special educators, general educators, and administrators provided through support networks, professional development, and service delivery teams.

Support networks. Gehrke and McCoy (2007) collected survey data from ten beginning special educators, some teaching in rural locales, through the administration of a questionnaire (response rate = 28%). Researchers found that teachers who were leaving their position identified fewer and less diverse sources of support. Those who intended to remain in their special education position had positive experiences with mentors and had established a broader support network with other special education teachers, general education teachers, and related service providers. Structured time for collaboration with other special educators was important to these beginning teachers.

Online support. Having a supportive relationship with another special educator can be difficult in the vast remote regions where some rural schools are located. Researchers have found that distance education technology, which is useful for involving rural special educators in the acquisition of knowledge and skills, can also provide a platform for developing supportive collaborative relationships with other special educators and general educators in the area (Grisham-Brown & Collins, 2002; Kendall, 1992; Knapczynyk, Chapman, Rodes, & Chung, 2001).

For instance, the *Collaborative Teacher Education Program* (CTEP; Knapczynyk et al., 2005) utilized distance education technology to provide 57 special education teachers with supportive networks while they obtained certification to teach students with high incidence disabilities in Florida. CTEP was founded on the philosophy that teachers are in a unique position to offer each other realistic suggestions, examples, and genuine support from the perspective of experience. The program's collaborative structure

utilized online teams of three to four teachers to complete assignments. Area teachers established virtual teams who could hear and see each other, and they developed collaborative relationships despite the geographic distance separating them. Teachers posted situations from their classrooms, offered practical feedback, suggested methods or materials, and provided social and emotional support to each other. Over 50% reported knowing their classmates better than in traditional face-to-face classes. These support networks were one of the positive outcomes of the program (Knapczynyk, Frey, & Wall-Marenick, 2005). Professional development programs, through the assistance of technology, can provide otherwise isolated special educators with needed skills and a learning community. Researchers did not, however, provide data on the relationship of these support networks to teacher retention.

Working in teams. Hammond and her colleagues (1995) found that teams of teachers may need additional training to encourage them to work together to serve student with disabilities. The *Rural Education Assistance Plan* provided 57 teachers with training in team strategies and collaborative planning. Related service providers and administrators were included in the trans-disciplinary teams. Some evidence was found of better teaming in each student's individualized education programs. Teachers reported decreased levels of role dissonance and conflicting role expectations as a result of participation in the training. Teachers found they had amongst their ranks the solutions to solve many of the problems associated with educating students with disabilities. Retention data as a result of participation was not provided.

In subsequent research, Mariage and Garmon (2003) investigated multi-disciplinary teams in a school-wide initiative for two rural schools. *Project Prepare*

created voluntary collaborative structures (e.g., teacher study groups, team-based planning periods) for teams of teachers, including special educators and related support personnel, to support teacher learning, curriculum development, and active inquiry. Supportive mentor relationships were established for probationary licensed teachers during their first four years of service. When the results were compared with two control schools that received no intervention, researchers found that the school-based intervention benefited both teachers and students. By the end of the project, 75 to 85% of at-risk and special education students were within satisfactory levels in reading and math. No information was provided on the retention of teachers following the implementation of the program.

Qualities of Rural Schools and Teacher Retention

Some rural schools who are successfully meeting the challenges of teacher recruitment and retention appear to have capitalized on the positive qualities found in small, close, rural communities. In two recent studies conducted in rural areas, work-related support and the presence of teams of teachers working together appeared to enhance special education teachers' satisfaction levels and commitment to their position.

In a statewide survey conducted in Utah, Menlove et al. (2003) found that the support of other special educators and general education teachers was important to 812 veteran rural special educators (response rate = 74%). The majority (95%) of these teachers had worked in special education for 10 years or more and enjoyed their jobs, and 85% indicated they would remain teaching in special education until the end of their career. A majority (91%) were satisfied with the instructional aspects of teaching, despite dissatisfaction with the non-instructional aspects (e.g., paperwork, student discipline).

More than two-thirds indicated a high degree of support from other special educators and a positive working relationship with both general education teachers and administrators. Most of these veteran special education teachers (97%) reported their jobs as stressful; however, 87% of these veteran teachers had been able to negotiate the work-related stress associated with their positions.

Along a similar line of research, Nagel and her colleagues (2006) investigated 13 effective rural schools with few recruitment or retention problems. Qualitative measures, including interviews and site visits with administrators, general educators, and special educators, revealed a supportive collegial environment within the schools. Teams of general educators and special educators worked together to provide appropriate services for students with disabilities, and they shared planning time and grade-level team meetings once a week. Building administrators were very involved with the special education process in their schools. Administrators reported very few vacancies year-to-year and little difficulty in recruiting teachers because of the school's positive reputation. The researchers concluded that the cooperation and communication between educators was the essential element that contributed to the stability and continuity among the staff.

Researchers (Downing & Peckham-Hardin, 2007) have found that in rural schools, students with disabilities are more likely to be provided support and services within a general education classroom, regardless of the severity of their disability. The authors noted that the characteristics of small communities could transfer to inclusive environments in schools. Because of the close-knit nature of rural communities, members of the school community also had an in-depth understanding of each student's background, and this led to a collective sense of responsibility in supporting students

and each other. Researchers found that core teams of general educators, special educators, related service providers, students, and parents, all worked together to provide authentic student assessments, appropriate student goals, and related services.

The promising findings of these studies suggest that rural schools may be in a unique position to capitalize on the qualities of cooperation and collaboration fostered in rural areas. This type of work-related support and its positive relationship to special education teacher satisfaction and commitment is supported by research in the field of special education. However, the opportunity for work-related support in rural districts may vary from special educator to special educator depending on the roles teachers are asked to take in the school and the configuration of service delivery in a particular district.

Research investigating the types of work-related support available to special education personnel would clarify the sources of available support in rural areas and the nature of the relationship between support and teacher commitment. The existing research investigating the relationship between teacher support and the retention of rural special educators offers an incomplete picture in several ways. The incomplete reporting, limited sample size, and focus on one region of the country, as used in some current research, all contribute to a limited understanding of the issues. Additional information on the relationship between work-related support and teacher retention is crucial, given the teacher shortages in rural areas and the impact of these shortages on special education services. There is a need for further research on a national scale to guide retention efforts. Thus, the purpose of the current study is to investigate, on a national level, work-related

support and its relationship to special education teachers' satisfaction and commitment to their positions in rural schools.

Research Questions and Hypotheses

Research into the sources of support available to rural special education teachers seems not only warranted but also critical, given the possible relationships between work-related supports, teachers' commitment to their position, and the retention of special education teachers in rural districts. The first step is to identify the sources of available support for rural special education teachers. Therefore, the first two research questions address the sources and extent of available support: What types of professional work-related support are available to rural special educators? What is the extent of the support special educators receive from available sources?

The third research question examines the extent of teacher satisfaction in rural schools and teacher job commitment: What are rural special education teachers' perceived levels of job commitment and job satisfaction?

Information regarding the strength of the relationships between support and job commitment and job satisfaction will inform further research on effective retention strategies for rural areas. The fourth research question investigates the nature of those relationships: What is the relationship between professional support and teachers' perceived levels of commitment and satisfaction? Since teacher satisfaction has been established in the literature as related to teacher commitment, the final research question investigates the relationship between those two variables: Is there a relationship between job commitment and job satisfaction for rural special educators?

The preceding review of past research leads to the following hypotheses:

1. As perceived levels of work-related support increase, teacher ratings of their commitment will increase.
 - a. Rural teachers who report an increased level of work-related support will also more frequently report increased levels of commitment.
 - b. Rural teachers who more frequently report working with general education teachers, related service providers, and administrators to educate students with disabilities will also more frequently report increased levels of commitment.
2. As perceived levels of work-related support increase, teacher ratings of satisfaction will increase.
3. As perceived levels of satisfaction increase, teachers' levels of commitment will increase.

CHAPTER 3

Methodology

This chapter will review the methods used in the current study: (a) sample selection, (b) sample description, (c) instrument development, (d) instrument implementation, and (e) data analysis. The first section describes the sampling process used for the selection of rural districts as well as the process for identifying participants, and it provides descriptions of the participants and their districts. The second section includes an overview of how the instrument was developed from planning through pilot testing, a discussion of the survey's reliability and validity, and a presentation of the survey's format, including the construct categories, items that comprise the construct, and the scale of individual items. In the third section, the procedures for the survey implementation are discussed, including interviewer training, the fidelity of administration, and the fidelity of recorded responses. The final section discusses the methods for data analysis.

Sample Selection

Special education teachers who were employed in rural districts over the span of two school years (i.e., 2008 – 2009 and 2009 – 2010) provided information on their personal characteristics and working conditions as well as their perceptions of the support they received, their satisfaction, and their job commitment to special education positions. The current study involved teachers from a subset of randomly selected rural school districts identified in a larger research project conducted by the National Research Center on Rural Education Support (NRCRES). The following section explains the procedures

used to identify rural school districts and to select the districts and teachers for the current study. Characteristics of the districts and the teachers in the sample follow.

To identify rural school districts, first a subset of the population of public school districts listed in the 2005–06 NCES Common Core of Data (CCD) Public Elementary/Secondary Local Education Agency Universe Survey (Version 1a: NCES, 2006b) was identified by limiting districts to those that were operational in the 50 states and the District of Columbia (N= 14,720). Second, rural districts were identified from this population in three ways: (a) districts eligible for the Rural Education Achievement Program (REAP) in 2006 by the Department of Education, (b) districts identified as rural by NCES in the 2005-06 CCD with a metro-centric locale code of 7 (designated rural by the US Census Bureau and located outside a county that shares a core area with a large population) or 8 (designated rural by the US Census Bureau and located inside a county that shares a core area with a large population) or (c) districts identified by NCES in the 2005-06 CCD as rural by one of the following urban-centric code codes: 41, 42, or 43, indicating rural fringe, rural distant, or rural remote. This identification process yielded 8,646 districts designated as rural. A computer randomly selected 10% of the districts, for a sample of 864 rural districts. Districts that were not traditional school districts, such as prison or hospital schools, were eliminated from the pool, resulting in a sample of 585 districts.

In order to conduct detailed personal interviews with individual teachers, a subset of 55 districts from the 585 identified rural districts was randomly selected. These rural districts were assigned to one of three mutually exclusive sub-categories based on their REAP eligibility and NCES locale codes. Districts eligible for REAP's Small Rural

School Achievement Program were classified as *SRSA*. Districts eligible for REAP's Rural and Low-Income Schools Program were classified as *RLIS*. Districts not eligible for either REAP program but classified as rural by the NCES were classified as *Other*. *Other* districts did not meet the requirements for either *SRSA* or *RLIS*, but were located in 41, 42, or 43 locale codes. The percentages of these 8,646 rural districts that were *SRSA*, *RLIS*, and *Other* were 52%, 14%, and 33% respectively.

District Characteristics

The 55 identified rural districts were located in 33 states. Table 1 summarizes the composition of the district sample by REAP eligibility, including average pupil populations, average number of schools, and whether districts were located in an area designated as rural fringe (five miles from an urban area and 2.5 miles from an urban cluster); rural distant (5 to 25 miles from an urban area and 10 miles from an urban cluster); or rural remote (more than 25 miles from an urban area and 10 miles from an urban cluster; NCES, 2006a). *SRSA* districts were located in sparsely populated areas (i.e., population density less than 10 persons per square mile) and/or had fewer than 600 students (U.S. Department of Education, 2008b). *RLIS* districts were located in small towns (population between 2,500 and 25,000) or in a county inside or adjacent to a metropolitan area. Twenty percent of the students in *RLIS* schools were from families below the poverty level (U.S. Department of Education, 2008a). As can be seen in Table 1, one third of the districts were *SRSA*, and were therefore located in more remote and distant locales with fewer schools and students, on average. The *RLIS* districts comprised the smallest percentage in the sample but, on average, had a larger number of schools and

students. A large percentage (46%) of the districts fell in the *Other* category. Many of these districts were classified rural fringe and were located near an urban cluster.

Table 1

Composition of District Sample (N = 55)

Category	Number of districts in category (%)	Average student population (range)	Average number of schools (range)	Number of districts in NCES local code		
				Remote	Distant	Fringe
Small Rural School Achievement Program (SRSA)	20 (36%)	373 (72 – 1,020)	2.3 (1 – 6)	7	10	3
Rural and Low-Income Schools Program (RLIS)	11 (20%)	2,719 (632 – 7,137)	7 (3 - 14)	2	7	2
NCES rural (Other)	24 (44%)	2,229 (131- 11,047)	4.8 (2 - 17)	7	5	11

Teacher Identification

All teachers responsible for special education services in the 55 districts were identified, creating a district-wide sample. Teachers were identified for participation through sources independent of the district administration (e.g., district website page). This step was necessary in order to assure participants of the confidentiality of the sensitive information being collected (e.g., teacher satisfaction and future career plans). This process identified a total of 522 teachers for possible inclusion in the study. The

study sought a large sample size ($n > 60$) in order to obtain a sample representative of rural special educators and to support the normalcy of the distribution of teacher responses (Glass & Hopkins, 1996).

Following teacher identification, a letter of introduction was mailed that explained the aims of the study (Appendix A). Following the letter, NRCRES staff and the principal investigator contacted teachers by email and telephone regarding their voluntary participation and set up a convenient time for researchers to administer the survey. Teachers were told they would be compensated with \$20 for their participation. Teachers in districts with a large number of special educators were contacted until 10 teachers had been interviewed. The cap of 10 teachers per district was imposed to prevent larger districts from being over-represented in the overall sample. One hundred and fifty-nine teachers were found to be ineligible for participation for one of two reasons: (a) they did not currently hold a special education teaching position (e.g., paraprofessional, administrator, no longer employed at the school), or (b) the cap for their district had been reached (i.e., 130 teachers). One hundred and twenty teachers were unable to be directly contacted by telephone (e.g., incorrect contact information, office staff would not transfer call). Forty teachers verbally declined to participate in the study. A total of 203 special educators volunteered to participate in the study, for a participation rate of 84% (i.e., number of teachers who participated divided by the number of eligible teachers who interviewers were able to contact; 203/243).

Teacher and Position Characteristics

A summary of teacher and position characteristics for the participants in the study is presented in Table 2. The average teacher's age was 43 years: 13% were in their 20's,

half were in their 30's and 40's, and 33% were over the age of 50. As was characteristic of the teachers in other rural samples (Bornfield et al., 1997; Davis, 1992), the majority of teachers were white (92%) and female (87%) and had been residents of their rural area for a relatively long time: 48% were teaching in a school located in the same general area as the place they grew up, and 62% had been living in the area for 16 years or longer.

The teachers had a variety of preparation backgrounds, experience, and credentials. The majority of teachers (83%) had obtained their certification from a traditional teacher-training program. Thirty-seven percent had graduated from programs that required at least 25 credits in special education (i.e., eight three-credit courses) and 12% had graduated from programs that required 46 credits or more. Sixty-four percent held an advanced degree. Similarly, 62% held their states' highest level of certification. A slightly higher percentage held special education certification for elementary (60%) and middle school (62%) settings versus high school (50%). Many teachers were dually certified in elementary (50%), middle (39%), and high school (8%).

Teachers in this sample had been in special education for an average of 13 years. Forty percent of the teachers had been in special education for 5 to 20 years; nearly a fourth (22%) had dedicated more than 20 years to working in special education. Teachers had been teaching in their positions for an average eight years. Roughly half (52%) were in the first five years of teaching in their position; 30% were in their first or second year.

Table 2

Teacher and Position Characteristics (N = 203)

Characteristic	New 1-2 yrs	Beginning 3-5 yrs	Early 6 -10 yrs	Mature 11-15 yrs	Veteran 16-20+ yrs
Years in position	30%	27%	18%	10%	16%
Years in special education	10%	16%	24%	14%	33%
Years living in rural area	7%	8%	16%	7%	62%
Age in years	20 – 29 13%	30 – 39 23%	40 – 49 24%	50 - 59 29%	> 60 5%
Special education certification	K – 5 60%	6-8 62%	9-12 50%		
Primary instructional setting	Self- contained 25%	Resource Room 53%	Inclusion classroom 18%	Classroom consultant 4%	
Students on caseload	2-10 30%	11-15 27%	16-20 23%	20-25 10%	26-40 10%
Grade level	K – 5 54%	6-8 41%	9 – 12 25%		
Highest level certification	Yes 62%	No 30%	Don't know 8%		
Highest level education	BA/BS 35%	MS/MEd 64%	Other 1%		
Teacher training	Traditional 83%	Alternative 14%	Other 3%		
Grew up in rural area	Yes 48%	No 52%			

Note: BA/BS Bachelor's degree; MS/MEd Master's degree

The majority of teachers worked primarily in elementary or middle school settings (75%). Most (97%) taught full-time, primarily in either a resource room (53%) or in an inclusionary setting (22%). The remaining 25% provided services to students in a self-contained classroom. The size of teachers' caseloads varied. Most (78%) had fewer than 20 students on their caseloads. Ten percent of the teachers had caseload sizes larger than 25 students. The development of the instrument used for the collection of data with this sample of teachers is discussed next.

Survey Development

Planning Phase

Several methods were employed to capture a representational picture of teacher support and commitment from these special education teachers working in rural areas and to insure a valid instrument. These methods, common in survey development (i.e., focus group, literature review, expert review, pilot survey; Tamur, 1992) have been used in previous special education retention research (Whitaker, 2000) to develop an instrument to measure the relationship between teachers' support and commitment.

Focus group. A focus group discussion was held during a breakout session at a national conference on rural special education (American Council of Rural Special Education; April, 2008). Prior to the discussion was a presentation on the literature addressing the recruitment and retention of rural special educators. The discussion was facilitated by NRCRES staff and provided a forum for the issues and concerns of educators involved with rural special education and teacher preparation. A transcript was made from the taped discussion and analyzed, and a list of common topics was identified.

Literature review. Current literature on special education retention was reviewed for content pertinent to rural special education, and a list of relevant research questions was developed. Instruments used in previous rural special education research were solicited from researchers who had previously investigated teacher retention. These instruments were analyzed for content related to the research questions under investigation. A bank of 34 questions was generated, and these were embedded in a larger survey containing nine additional items developed by NRCRES, whose researchers wished to address additional areas of investigation (e.g., professional development).

Expert review. To assure the relevance of survey items to the concerns of teachers in rural schools, six national experts on rural special education teacher retention reviewed a draft of the survey. All reviewers held faculty positions at large universities and had conducted research in rural special education. Four reviewers were selected on the basis of their knowledge and research in the field. The final two reviewers were identified through the department websites of major universities in areas of the country that were lacking reviewer representation. All reviewers were contacted and interviewed regarding rural special education in their areas of the country, and all agreed to review the survey content. The reviewers' suggestions primarily consisted of small wording changes that enhanced the clarity of the questions. These comments were taken into consideration in the development of the final instrument.

Pilot study. The survey item content was tested in a pilot administration of the entire questionnaire with a pool of ten special education teachers. The principal investigator interviewed the teachers, and their comments were recorded. A sufficient range of answers was evident for all questions during the pilot administration of the

survey. Half of the teachers were offered 5 response choices for Likert items and half were offered 4 choices without a neutral response (i.e., neither agree or disagree). There was no additional variability found with the addition of a neutral choice: teachers either agreed or disagreed on Likert items, so the neutral choice was eliminated in the final version of the instrument. Interviews with teachers during the piloting of the instrument identified some confusion due to question wording and length. Subsequently, questions were revised and the teachers' comments were taken into account when developing the final instrument to ensure that it reflected a consistent and valid understanding of the constructs under investigation.

The survey development procedure followed a rational approach (Kornhauser & Sheatsley, 1951) by incorporating results from the focus group, the literature review, expert reviews, and the pilot study. This process ensured that the final version of the instrument contained appropriate content to measure the constructs under investigation and generated appropriate information that reflected the views of special education teachers in rural areas. Appendix B contains the 34 survey items germane to the research questions under investigation, as well as the 9 items added by NRCRES, which are denoted with an asterisk (i.e., items 6, 11b, 12, 32, 33, 34, 35, 36, 39).

Instrument Reliability and Validity

The reliability of an instrument measuring teacher support, satisfaction, and commitment relies on the teacher's personal interpretation of abstract concepts and the teacher's perception at the time the interview was conducted. Thus, measuring such phenomena is difficult with any degree of accuracy. However, the current measure did adopt items that have been used to measure constructs in previous research and validation

of the constructs under investigation could be demonstrated if the measure performed in a way that was consistent with theoretical expectations (Carmines & Zeller, 1979). In reviewing the literature on special education teacher retention, there was sufficient evidence to support associations between teacher and position characteristics and commitment and satisfaction. The literature also supported the association between teachers' ratings of their support and their satisfaction and commitment to the job (e.g., Billingsley et al., 2002; Cooley & Yovanoff, 1996; Gersten et al., 2001; Westling et al., 2003; Whitaker, 2000). The current study sought to investigate whether these relationships extended to teachers working in rural schools. A measure of construct validity, therefore, was established by the extent to which the current measure was consistent with the previously established relationships between support, satisfaction, and commitment.

Construct validity was also established through the relationships of multiple indicators within the constructs of support, satisfaction, and commitment. Initially, factor analyses were conducted with the construct items to identify related items. Next, a Cronbach's alpha was computed for the items in the construct, to test whether the items created a reliable scale. Standardized alpha levels are reported, as the scales for items within a construct varied.

An overall level of support was measured by summing the degree of helpfulness for sources of available support ($\alpha = .77$). Commitment was measured by teachers' intent to stay in their position for one year and five years ($\alpha = .50$) and their willingness to choose working in special education and in a rural school again if given the chance ($\alpha = .59$). Satisfaction was measured by teachers' responses to questions

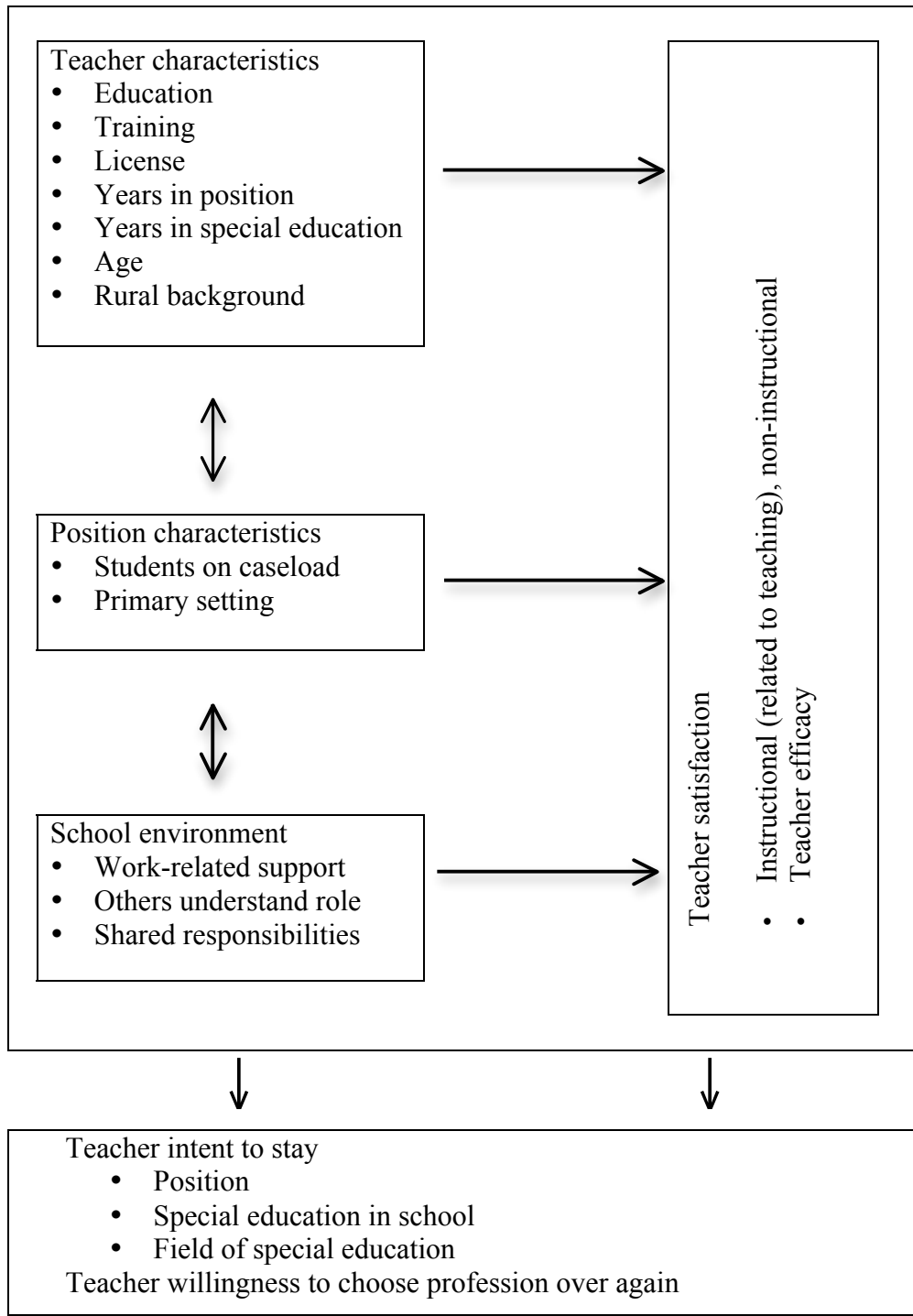
about their satisfaction with the instructional and non-instructional aspects of their job, whether they found enjoyment in their work, and whether they would recommend the position to someone else ($\alpha = .65$). Teacher perceptions about their level of efficacy were also considered a measure of teacher satisfaction. Efficacy related items asked if teachers could meet the academic and behavioral needs of their students and if their caseload was manageable ($\alpha = .75$). An alpha of .6 or higher indicated that items were measuring the same underlying construct (Gersten, Fuchs, Compton, Coyne, Greenwood, & Innocenti, 2005). Most constructs, therefore, demonstrated acceptable levels of reliability.

In addition, a measure of instrument reliability was also established during the pilot administration of the questionnaire through the analysis of responses on items that were consistent for all teachers in the same district (i.e., available professional development). The ten special education teachers in the pilot study were from 3 different districts. They each answered 27 items related to professional development. The consistency of the responses on these items for the teachers in each district was 76%, 78%, and 87%, calculated by dividing the total number of agreements within each district by the number of agreements plus disagreements. The overall measurement for this indicator of instrument reliability was 80%.

Survey Format

The survey questions were divided into four broad categories identified in the literature as central to special education teacher retention: teacher and position characteristics, work-related support, satisfaction, and commitment. A conceptual model for the current study, which investigated these constructs, is presented in Figure 1.

Figure 1. Conceptual model of the study investigating teacher commitment to special education positions in rural schools



Teacher and position characteristics, such as a teacher's age and experience, as well as the school environment, all play a role in the teacher's perceptions of satisfaction with their job. In turn, personal, position, and work-related factors as well as teacher-reported levels of satisfaction influence the teacher's commitment to the position.

Questions were ordered according to common conventions in survey research (Glesne, 2006). Items regarding the teacher's background and position were asked first. Teachers' perceptions of a shared role in educating students with disabilities in their school, their sources of professional support, and items related to commitment and satisfaction came next. Finally, teachers were asked about their rural background and what they liked best and found the most challenging about being a special educator in a rural school. Items used either a Likert scale, multiple option, or open-ended format. The format for the item was determined by the type of question and standard practice when asking survey items (Bradburn, Sudman, & Wansink, 2004).

Question Format

Likert scale. A 4-point Likert rating scale was utilized throughout the survey to measure the constructs of support and satisfaction. Research on the effect of the number of Likert scale response categories on the reliability and validity of results suggests that the optimal number of possible responses should fall between four and seven (Lozano, Garcia-Cueto, & Muniz, 2008). The current instrument used a Likert scale with four response categories for three reasons: brevity, clarity and intensity. Teacher responses were obtained using a phone interview. The brevity of a 4-point scale allowed the participant to listen to four choices and select a response that most accurately reflected their position without having to listen to a lengthy list. Similarly, the clarity of a 4-point

scale allowed for meaningful interpretation by the participant and avoided the need to discriminate between confusing gradations (Lozano et al.).

In addition, the use of four choices forced the respondent to select from one side of the continuum or the other, rather than being able to take a neutral position (e.g., *Neither dissatisfied nor satisfied*). The Likert scale survey items asked teachers to rate their opinions on working conditions, support, satisfaction, and commitment. Teachers were read the Likert categories (e.g., Strongly agree, Agree, Disagree, Strongly disagree) without the scale (1 – 4) associated with the categories. The absence of a non-commitment choice for a personal opinion forced participants to state their opinion and rate the intensity (Converse & Presser, 1986), which is aligned with the aims of the proposed research. Eight items, however, included *Not applicable*, intended for those teachers in positions in rural schools where a staff member (e.g., building administrator or special education director) was not available.

A similar 4-point Likert scale, or a version thereof, has been used almost exclusively in the research literature to measure teacher support, satisfaction, and commitment (e.g., Geheke & McCoy, 2007; Menlove et al., 2003; Miller et al., 1999; Westling & Whitten, 1996; Whitikar, 2000). This survey's uniformity with other surveys from comparable literature allows for consistency and the comparison of results with previous research.

Multiple option and open-ended questions. Additionally, the survey contained two multiple option formats. The respondent either selected the most appropriate choice from a list of possible options (i.e., forced choice) or selected as many options as were appropriate. For open-ended questions about teacher satisfaction and commitment,

interviewers recorded the teacher's actual responses by typing them into a database and then validated the accuracy of that response (i.e., participant validation). Interviewers asked each teacher to verify that the recorded answer accurately represented their views by reading the teacher's response aloud. The teacher was given the opportunity to clarify or expand their response.

Survey Categories

Teacher and position characteristics. Items 1, 3, 3b, 4, 5, 8, 9, 38, 40, and 41 collected data on the teacher's level of education, training, level of certification, experience in the current position, numbers of years teaching special education, caseload, primary teaching setting, age, and number of years living in a rural area. Interviewers asked respondents to complete open-ended questions or identify appropriate multiple-choice responses. These teacher and position characteristics have been identified in the literature as related to teacher attrition and retention (Billingsley et al., 2002; Bornfield et al., 1997; Miller et al., 1999; Stempien & Loeb, 2002). Ten items collected data on teacher and position characteristics.

Support. Teacher's perceived over-all level of support was measured by responses to 16 items, 13a - p. Teachers were asked to identify their sources of work-related support from a list of professional sources. This list, or a variation thereof, has been used in previous research (e.g., Menlove et al., 2003; Westling et al., 2003) as an accepted list of possible teacher supports. Teachers then ranked the helpfulness of available sources of support using a 4-point Likert scale (e.g., 1: not a helpful source of support, 2: minimally helpful source of support, 3: moderately helpful source of support, 4: very helpful source of support). This measurement of teacher support has been used by researchers in prior

retention research (Gehrke & McCoy, 2007; Menlove et al., 2003; Westling et al., 2003). However, no information on the instrument development or construct reliability and validity has been supplied by previous researchers. The ratings of the helpfulness of these sources of support were aggregated to create a measurement of overall support.

The measurement of support also consisted of others' perceptions of the special educator's role (i.e., items 16, 17, 18). Teachers rated whether general educators and/or administrators understood the special educator's role and responsibilities in the classroom (Westling & Whitten, 1996; Miller et al., 1999) on a 4-point Likert scale (e.g., 1: Strongly disagree, to 4: Strongly agree). The reliability and validity of these questions measuring teacher support has been established in a large-scale ($n = 1,100$) longitudinal study with special education teachers (Miller et al., 1999). Additionally, teachers ranked the most supportive source of work-related support and identified sources of support that were not currently available but would be helpful if they were available. A total of 19 items provided both descriptive and quantitative information on current and potential sources of rural special education teacher support.

Shared responsibility. As an additional measure of support (item 19) measured the degree to which special educators shared their role of educating students with disabilities with others in their school. Teachers rated their agreement with the statement "The responsibility for providing services to students on my caseload falls entirely on my shoulders." on a 4-point Likert scale (e.g., 4: Strongly disagree, to 1: Strongly agree). Teachers were also asked to explain their response (i.e., What makes you feel this way?). The relationship between the shared roles of special educators and teacher commitment has been discussed in the literature (Squires, 1995) and investigated qualitatively by

Nagel and her colleagues (2006); however, items related to teachers working together have not been developed in previous research.

Commitment. Teachers' commitment to their position was measured in two ways. Teachers were asked if they expected to stay in their special education position in a rural school for the following year and also for five years (i.e., items 20, 21). Teachers chose from several possible career choices, and their choices were ranked according to their retention value to their school and special education (i.e., 6 = stay in current position; 5 = stay in special education in current school, 4 = stay in special education in different school, 3 = stay in education in school, 2 = stay in education in different school and 1 = leave teaching altogether). The multiple choice response format has been utilized by Whitaker (2000) to measure teacher commitment, and the reliability (2 week test/retest correlation .74 - .93, $p < .001$) and validity (standard error of measurement = .2 - .5) of the measure were reported. Moreover, Westling and his colleagues (2006) used this procedure in a longitudinal study where teacher retention data were collected for three years following program participation, validating information gathered from the survey. In addition, teachers were asked to identify the reasons why they were leaving, and interviewers recorded their comments.

The other measurement of commitment were items 22 and 23, which asked teachers whether they would choose the profession over again if given the opportunity and whether they would teach again in a rural school. Both items used a 4-point Likert scale (e.g., 1: Strongly disagree, to 4: Strongly agree). This type of question measuring commitment has been used extensively in the research literature, including a longitudinal retention study by Miller et al. (1999) with retention data establishing the construct

validity. Two other studies have used this type of item to measure commitment; however, researchers did not provide information on the reliability and validity of the items (Westling & Whitten, 1996; Menlove et al., 2003). A total of four items measured commitment.

Satisfaction. Teachers were asked to demonstrate their level of satisfaction through responses on 4 items: 24, 25, 30, 31. Satisfaction has been positively correlated with teacher commitment in previous research (Billingsley et al., 2002; Gersten et al., 2001; Whitaker, 2000). Teachers provided a rating of their satisfaction with the instructional aspects of teaching and delivering services to students with special needs, and also with the non-instructional aspects of their jobs (e.g., paperwork, other assigned duties; Menlove et al., 2003) on a 4-point Likert scale (e.g., 1: Very dissatisfied, to 4: Very satisfied). This measure of satisfaction was included in two studies that found a positive association between teacher satisfaction and teacher retention (Miller et al., 1999; Westling et al., 2006). Teachers also ranked their enjoyment of teaching and whether they would recommend the profession to someone else on a 4-point Likert scale. In addition, teachers were asked to state any reasons for dissatisfaction with the instructional and non-instructional aspects of teaching special education in rural schools, and interviewers recorded their comments.

On items related to teacher satisfaction, teachers' perceived levels of efficacy (i.e., they could meet the academic and behavioral needs of the students on their caseload, and found the size of their caseload manageable) were measured by items 26, 27a, and 27b using a 4-point Likert scale (e.g., 1: Strongly disagree, to 4: Strongly agree). Thus, seven items quantitatively measured satisfaction. Teachers also described what they liked

best and what they found most challenging about being a special educator in a small town or rural school. The measurement of satisfaction using similar surveys items and interviews has been previously conducted in qualitative and quantitative research (Geheke & McCoy, 2007; Ware & Kitsantas, 2007; Menlove et al., 2003). However, the researchers did not provide information on the reliability and validity of the items included in their measurement of this construct.

Procedure

Over a period of nine months, seven interviewers, trained as part of this project in survey implementation, administered the instrument during phone interviews with the teachers identified for participation. Four interviewers conducted phone interviews from the NCRES office in North Carolina, and three interviewers and the principal investigator conducted phone interviews from the Pennsylvania State University. A phone interview was used as the vehicle for data collection, as mailed surveys can result in a low rate of return (e.g., Gehrke & McCoy, 2007 and Griffin, Kilgore, Winn, Wilborn-Otis, Hou, & Garvan, 2009 both had a 28% response rate for mail surveys). Interviews were guided by the survey questions and instructions (See Appendix B for survey questions and instructions). The survey was designed to take 30 to 40 minutes to administer.

Training of Interviewers, Fidelity of Administration, and Recorded Responses

Training of interviewers. All interviewers participated in two days of training to ensure that the survey was implemented consistently and as designed. The training consisted of an orientation to the survey content and the procedures used to code teacher responses. Interviewers were provided with a script and survey questions, then they practiced administering the survey. Each interviewer conducted three mock interviews

with senior members of the research team. All interviewers were trained to verify teacher responses for all open-ended questions (i.e., participant validation). An observation of the interviewers was conducted during the training period, and a 98% accuracy level for the administration of the survey and the interviewer recording of responses was achieved with all interviewers.

Fidelity of administration and recorded responses. The NRCRES project director and the principal investigator held weekly meetings, either in person, via email, or by conference call, with all interviewers to address any issues and concerns that arose during the administration of the survey or the recording of teacher responses. Interviewers were instructed to flag any concerns that arose during the interviews, and decisions were made at a team level, during weekly meetings, to insure the consistency of survey administration and response recording. In order to check for interviewer drift over the course of the study, the NRCRES project director and the principal investigator observed interviewers conduct a teacher interview over a speakerphone and observed interviewers' recorded responses at one, two, and five months following the start of the study. The NRCRES project director observed the four interviewers in North Carolina, and the principal investigator observed the three interviewers in Pennsylvania. The accuracy levels of survey administration and response recording ranged between 95 and 100 percent, for an average of 98%. Following the observations, any individual interpretation of survey questions or coding of responses that resulted in a variation in administration or recording was discussed with all interviewers until a consensus was reached. By way of these procedures, all interviewers administered the survey and recorded teacher responses in a consistent manner.

Data Analysis

The hypotheses posed in this research were tested by analyzing the survey data collected on the constructs of teacher support, commitment, and satisfaction. The independent or explanatory variables of teacher and position characteristics and teacher support were paired with the dependent or outcome variables of teacher commitment (i.e., intent to stay, willingness to choose the profession over again) and satisfaction (i.e., satisfaction with instructional and non-instructional aspects of the job, and teacher efficacy). The relationships between teacher satisfaction and teacher commitment were also explored.

Prior to statistical analysis, the data were prepared through a systematic and iterative process to check for completeness, range, and distribution. Most variables of interest contained infrequent (< 5) and random missing values. Mean substitutions were used for missing data rather than excluding the teacher entirely from the analysis. The support variable of helpfulness from other special education teachers, identified as an important variable to teacher commitment in the special education literature, was included in the analysis with 12% missing values. The mean was substituted for this variable in the analysis of independent sources of support. The influence of the missing data was assessed for this variable in the regression models by the inclusion of a dummy variable indicating missing cases. This variable was insignificant in all analyses. Several variables (i.e., special education team meetings, grade level meetings, other special education teachers in the district, online contacts) had higher percentages of missing data (17 – 45%), therefore they were used in the measurement of the overall helpfulness of support, but excluded from the analysis of the independent contributions of support

sources. No variables had any out-of-range responses. Likert scale responses were recoded (e.g., 1 = Strongly agree was changed to 4 = Strongly agree) to reflect the scales described in the previous section. Standard assumptions for data analysis such as linearity, normalcy (i.e., skewness < 1), and multicollinearity (i.e. tolerance >.6) were met for most variables of interest; however, three variables used in analysis were negatively skewed: willingness to do over, helpfulness of other special educators, and the special education director's understanding of the special educator's role.

Bivariate correlation coefficients (Pearson's r) established the relationships between the variables. The statistical significance for each relationship was established at $p < .05$. Additionally, multiple regressions were run to test the relationships between the sets of explanatory variables and the outcome variables. These analyses were run to determine each variable's unique contribution to the overall model and to explain the relationship to commitment and satisfaction while holding constant the contribution of the other factors. Three models were analyzed in relationship to teacher commitment and satisfaction: teacher and position characteristics, overall support, and individual sources of support. Examining the model's r^2 , or proportional reduction in error (PRE), served to make comparisons between models possible. The change in the models' r^2 measured the effectiveness of one model over the other.

The responses from the teachers on open-ended questions were also analyzed to determine the perceptions of teachers working in rural settings. Written transcripts of teacher responses to six questions were gathered: (1) reasons for shared responsibility in the education of students, (2) reasons the teacher was leaving the position, (3) instructional sources of dissatisfaction, (4) non-instructional sources of dissatisfaction,

(5) what teachers liked best about being a rural special educator, and (6) the biggest challenge teachers faced.

Coding for open-ended questions was developed in a structured and logical way. Responses were first analyzed by generating categories from the research literature in rural education. Data were then compiled, by question, in a table containing each teacher's response. Responses were coded into corresponding categories and topic areas. New categories emerged from the responses of the teachers as researchers accounted for new or previously not understood relationships, a process consistent with the grounded theory of category development (Miles & Huberman, 1994). Data were then re-categorized as connections both within and across items and individuals developed and new categories emerged. An across-case analysis method was used to identify pervasive patterns and themes among participants' responses (Miles & Huberman).

To assure that open-ended responses were coded with reliability, the principal investigator and an independent rater, knowledgeable in qualitative analysis, coded all open-ended responses. Initially, the two raters coded responses from three districts independently and then reviewed the coded sections together. Inter-coder reliability was 93% percent, determined by calculating the number of agreements divided by the total number of agreements plus disagreements. Any disagreements were discussed, and a consensus was reached. Raters then independently coded the remaining open-ended responses. Agreement ranged from 90 to 97% with an average of 94.5% agreement for all open-ended responses.

Analysis of the categories and themes found in the open-ended responses and descriptive statistics were prepared with the aim of complimenting the quantitative

analysis. By linking the descriptive and quantitative data in this study, a better understanding of the subject under investigation was obtained. The relationship between work-related support and teacher commitment and satisfaction, was explored from two perspectives thus illuminating the relationships between the constructs under investigation and developing a more comprehensive picture of the strengths and concerns of special educators teaching in rural areas (Miles & Huberman, 1994).

CHAPTER 4

Results

This chapter will present the descriptive and quantitative data collected during the teacher interviews. In response to the initial questions under investigation (i.e., what types of work-related support are available and what is the extent of support special educators receive?), the sources of teacher support and the extent of the support are discussed. Descriptive statistics regarding the perceived levels of job commitment and job satisfaction for the special education teachers in this sample are presented next. This information addresses the third research question under investigation (i.e., what are the perceived levels of job commitment and job satisfaction for rural special education teachers?) and allows for comparisons between the teachers in this sample and the existing research on rural special education teachers as a whole. Using inferential statistics, this chapter then explores the relationship of work-related support to teacher commitment and satisfaction. The descriptive data are presented along with the quantitative findings so the relationships under investigation can be more clearly understood (Miles & Huberman, 1994).

The inferential statistics were run using the SPSS statistical package for multiple linear regressions. All relationships that are reported as significant had p values of less than .05. The relationships of work-related supports to teacher commitment and satisfaction were investigated in a systematic fashion. This process allowed the relationships between the variables to be understood and the significant contributors to each relationship to be taken into account. Initially, the correlations for the teacher and position characteristics and outcome variables were examined. These variables have been

discussed extensively in the special education literature. By analyzing a model with only teacher and position characteristics initially, the relationships of these variables to the focal outcomes could be examined and the influence of these variables could then be taken into account when investigating other models.

A second model, which included the teachers' overall level of support, was then introduced into the analysis to evaluate the contribution of that variable to teacher commitment and satisfaction. The third model investigated the contribution of several individual sources of support. Correlations between these variables of support are presented so the contribution of these variables to commitment and satisfaction are clear. Analyses of the variance between the three models are also presented in order to investigate the significance and strength of the relationships between the explanatory variables and teachers' commitment and satisfaction. In this manner, the analyses tested the two hypotheses posed: (H₁) work-related support, particularly support offered when teachers work together as a team, is positively correlated with teacher commitment; and (H₂) work-related support is positively correlated with teacher satisfaction.

In the final stage of analysis, the relationships between the two outcome variables of teacher commitment and satisfaction were investigated. This analysis answered the last research question (i.e., is there a relationship between job commitment and job satisfaction?) and tested the third research hypothesis: (H₃) as satisfaction increases, job commitment will increase. Such analysis allowed for a fuller understanding of the factors related to teacher commitment.

Sources of Work-related Support

To understand the sources and types of the support teachers received in their roles as special educators, this study initially investigated the sources of work-related support identified by the teachers as the most helpful to them professionally as well as the sources of support that were not available, but that teachers would appreciate having. The most available sources of support were: building administrators (99%), general education teachers (98%), related service providers (98%), parents (97%), special education director (97%), professional development (96%), and other special education teachers (88%). Teachers most frequently (34%) named other special educators in their building as the most helpful source of work-related support. Other helpful sources were administrators (special education director, 14%; building administrator, 10%), related service providers (10%), and general education teachers (9%).

Half of the teachers (105) also identified sources of support that were currently not available but would be helpful to them if they were available. It became evident that some teachers had a limited opportunity to work with other educators: 83% had special education team meetings available, 83% consulted with special educators in their district, 66% had grade level team meetings available, and 55% were able to establish online contacts with other special educators. Consequently, the most frequently chosen sources of support that were unavailable but desired were grade level team meetings (8%), online contacts with other special educators (6%), and special education team meetings (5%).

As an additional indicator of support, the current study also examined the extent to which the teachers believed that they shared the responsibility for educating students with disabilities with others in their school. When asked if they shared the responsibility

for providing services to students on their caseload, 51% of the teachers said that they had sole responsibility. One teacher of a self-contained classroom for students with low incidence disabilities voiced concerns that reflected the feelings of several teachers, “It is all me,” she said, “If I don't speak for them it isn't going to happen. I need to advocate for my students constantly.” Teachers provided a variety of reasons for believing they shouldered the full responsibility for the education of their students: 34% stated they didn't feel supported by others in the school, 9% acknowledged that others helped but it was their responsibility to see that services were provided, and 5% cited legal issues. Twelve percent of the teachers specifically portrayed general education teachers as not fully understanding the special educator's role.

On the other hand, 49% of the teachers indicated that they shared the responsibility for educating students with disabilities with others. The majority of these teachers (24%) described a team approach of general educators and special educators working together to provide services, while 7% mentioned sharing the role with related service providers and 4% mentioned administrators. As explained by one teacher, “It is more of a collaborative effort. I have a great support system with para [professionals], related service providers, the general education teachers, and the parents. It's not all on me.”

Levels of Teacher Commitment and Satisfaction in Rural Schools

The two outcome variables of interest in this study, job commitment and satisfaction, were measured to address the third research question: levels of job commitment and satisfaction for rural special education teachers. Job commitment was measured in two ways: teacher intent to stay in special education for 1 year and 5 years,

and teacher willingness to choose the profession again. Teacher satisfaction was measured in two ways: teacher satisfaction with the aspects of their position, and their perceived levels of efficacy.

1 year and 5 years. Most teachers (88%) planned to stay in their current position or in a special education position in their rural school (4%) the following year. Two percent were planning to retire. When teachers were asked about their future plans in five years, 47% of teachers stated they planned to stay in their current position. While 11% were moving to a different special education position in their school, 42% reported they would be leaving special education in their rural school. Some of these teachers (16%) were planning to leave teaching altogether either to retire (13%) or work in leadership positions. However, 20% were leaving for positions in other districts, and 5% were leaving their special education position to teach in their school in a general education or other related position (e.g., reading specialist).

Willingness to choose over again. Ninety percent of teachers surveyed either agreed (65%) or strongly agreed (25%) that if given the chance to choose over again, they would be a special education teacher. Ninety-three percent either agreed (31%) or strongly agreed (61%) they would teach in a rural school again if given another chance to choose a profession.

Satisfaction with instructional aspects. A few (9%) teachers indicated that they were either dissatisfied or strongly dissatisfied with the instructional aspects of teaching and delivering services to students on their caseload, whereas 89% of teachers said they were satisfied or very satisfied. Teachers gave several reasons for their dissatisfaction with the instructional aspects of teaching, including workload demands (4%) and not

enough time to meet the demands of the role (2%). As one elementary resource room teacher noted, "I feel the kids need more time to work on their skills. I just don't get enough time with them."

Satisfaction with non-instructional aspects. Sixty-seven percent of teachers indicated they were dissatisfied or strongly dissatisfied with the non-instructional aspects of teaching. The majority of these teachers (43%) mentioned the paperwork. "Paperwork!" said one teacher whose comments represented the overall sentiment, "There is more and more and it accomplishes less and less. It is senseless and it takes away from the time with the kids." Seventeen percent of the dissatisfied teachers commented on the amount of time that record keeping, writing IEPs, and paperwork entailed. "IEP's are long - 20 pages per student...[and there is] not enough time during the school day, [so I] end up doing them on the weekend," was a typical comment. Paperwork is a common dissatisfaction reported by most special education teachers (Menlove et al., 2003; Miller et al., 1999). The rural special education teachers in this sample were no exception.

A few (5%) of the teachers said they were dissatisfied with other assigned duties that were part of their job but were unrelated to special education. One teacher's comment was typical, "Having the non-special education homeroom...[being] in charge of 18 other students that I have to monitor and be responsible for. Having to prep for these students as well." A small number (2%) of the teachers mentioned the lack of support from administrators and other members of the staff, such as general education teachers, as reasons for their dissatisfaction.

The Relationship of Work-Related Support to Commitment Variables

The following analyses examined the relationship between support and teacher commitment. These analyses sought to address the fourth research question under investigation, which considers the relationship of professional support to the commitment of rural special education teachers. First, a model with only teacher and position characteristics was analyzed, so the influence of these variables on teacher commitment could be explored. A second model that included the teachers' overall level of support was independently tested to understand the contribution of that variable to commitment. Finally, a third model was investigated which examined the contributions of several individual sources of support to the relationship. In this manner, the analyses tested the first hypothesis: (H₁) work-related support, particularly support offered when teachers work together as a team, is positively correlated with teacher commitment.

The Relationship of Teacher and Position Characteristics and Overall Support to Commitment Variables

Teacher and position characteristics typically associated with teacher attrition and retention in the special education literature are summarized in Table 3. The bivariate correlation coefficients explain the degree of association, or correlation, for the explanatory variables of teacher and position characteristics and support with the outcome variables of commitment. Variables with weaker associations have values close to 0, whereas strong associations have values closer to 1 (Schroeder, Sjoquist, & Stephan, 1986).

Relatively weak but significant relationships with the first commitment variable, teachers' intent to stay, were found for the number of years of experience in the position

($r = -.15$), the number of students on the caseload ($r = -.19$), the teacher's age ($r = -.18$) and the number of years lived in their rural area ($r = -.13$). These negative associations suggest that as caseload, age, and number of years living in the area increased, teachers' intent to stay decreased.

Other significant correlations were found between the number of years the teacher had stayed in their position and remained in special education and (a) whether they had undergone a traditional teacher training program ($r = .17, .30$), (b) whether they held their state's highest licensure ($r = .19, .32$), and (c) the type of degree they currently held ($r = .16$). The number of years living in the rural area was also significantly associated with the number of years in the position ($r = .40$) and also with the number of years in special education ($r = .33$). These relationships are consistent with what has been previously noted in the special education literature, and they serve as evidence for the internal validity of the reported results. No significant relationships, however, were found between the overall measurement of support (i.e., sum of all helpfulness ratings) and teacher intent to stay.

Table 3 also presents the correlations between teacher and position characteristics, overall support, and the second commitment variable: teachers' willingness to choose special education over again and teach again in a rural school. A significant relationship was found between teachers' willingness to choose the profession over again and the overall level of support the teachers reported ($r = .24$).

Table 3

Means, Standard Deviations, and Correlations for Teacher and Position Characteristics, Overall Support, and Commitment Variables (N=203)

Commitment Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11
Intent to stay 1 yr & 5 yr	9.89	2.54	-.04	.03	.02	-.15	-.09	-.19	-.02	-.18	-.08	-.13	.11
Willing to choose profession again	7.02	1.17	.10	.01	.03	.03	.02	-.08	.02	-.02	.02	.12	.24
Explanatory Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Education	2.72	.68											
2. Training	.83	.37	-.03										
3. License	.70	.45	.34	.06									
4. Years in position	7.80	7.81	.07	.17	.19								
5. Years in Sp. Ed.	12.94	9.38	.16	.30	.32	.69							
6. Caseload	15.25	7.61	.09	-.10	.02	-.02	-.05						
7. Setting	2.00	.75	-.03	.02	-.01	.07	.05	.18					
8. Age	43.38	11.07	.15	.13	.21	.48	.64	-.01	.07				
9. Rural	.48	.50	-.13	.12	-.09	-.05	-.17	.05	.04	-.12			
10. Years in area	22.27	14.85	.04	.20	.15	.40	.33	-.03	.01	.39	.47		
11. Overall support	37.25	14.85	-.01	-.05	-.03	-.05	.04	.01	-.08	-.01	-.03	.01	

Note: All correlation coefficients greater than .11 are statistically significant ($p < .05$); Sp. Ed. = Special Education

The Relationship of Individual Sources of Support to Commitment Variables.

Table 4 presents the correlations between the individual sources of support (e.g., helpfulness of related service providers or general education teachers) and the commitment variables. A small but significant relationship was found between the helpfulness of other special education teachers in the building ($r = .13$), the helpfulness of related service providers ($r = .14$), a shared responsibility in the education of students ($r = .14$), and teachers' intent to stay. In addition, significant relationships were found between the degree of helpful support from other special education teachers in the building ($r = .11$), the special education director ($r = .11$), general education teachers ($r = .12$), and the building administrator ($r = .19$), and the teacher's willingness to teach in rural special education again. Similarly, both the special education and building administrators' ($r = .14, .16$) and general education teachers' ($r = .23$) understanding of special educators' roles were positively associated with the special education teacher choosing the profession again. The variable of administrative support has been previously discussed as a significant predictor of teacher commitment in the literature. The similar findings here validate the representativeness of this study's results. An increase in the special education teachers' perception of a shared responsibility in educating students with disabilities was also associated with an increase in teachers' willingness to work in rural special education again ($r = .16$).

Moderately strong and significant associations were found between support variables as well: increased ratings of helpful support from special and building administrators ($r = .56, .44$) and general education teachers ($r = .45$) were associated with the perception that these colleagues understood the special educator's role and

responsibilities. An increase in special educators' perceptions of a shared role was associated with increased levels of helpful support from related service providers, ($r = .20$), general education teachers ($r = .20$), and the building administrator ($r = .19$), as well as the degree to which administrators ($r = .12, .14$) and general educators understood the special educator's role and responsibilities ($r = .25$).

Table 4

Means, Standard Deviations, and Correlations for Individual Sources of Support and Commitment Variables (N=203)

Commitment Variables	M	SD	1	2	3	4	5	6	7	8	9
Intent to stay 1 yr & 5 yr	9.89	2.54	.13	.10	.14	.07	.09	.04	-.03	.04	.14
Willingness to choose over again	7.02	1.17	.11	.11	-.02	.12	.19	.14	.16	.23	.16
<hr/>											
Sources of Support											
<hr/>											
1. Other special educators	3.51	.66									
2. Sp. Ed. director	3.27	.87	.07								
3. Related service	3.45	.69	.16	.18							
4. Gen. Ed. teachers	3.30	.78	.10	.05	.11						
5. Building administrator	3.30	.88	.15	.17	.21	.21					
6. Administrator understands role	3.17	.90	.01	.05	.05	.17	.44				
7. Sp. Ed. director understands role	3.50	.67	-.01	.56	.08	.08	.19	.13			
8. Gen. Ed. teachers understand role	2.96	.77	.09	.15	.15	.45	.18	.20	.21		
9. Shared responsibility	2.39	.86	.09	.10	.20	.20	.19	.12	.14	.25	

Note: All correlation coefficients greater than .10 are statistically significant ($p < .05$).
Sp. Ed. = Special Education; Gen. Ed. = General Education

Analysis Summary for Teacher and Position Characteristics and Support and Their Relationship to Teacher Intent to Stay

Table 5 summarizes the unique contribution of each explanatory variable to teacher intent to stay. Each column includes the individual beta weights for the variable, the standard error, and the standardized beta weights, which allow for the comparison of variables measured on different scales. The first column examines the contributions of teacher and position characteristics in relationship to teachers' intent to stay. Significant regression coefficients were found for both the number of students on the teacher's caseload and the teacher's age (-.18 in both cases). The negative contributions suggest that as caseload size and teacher age increases, teachers' intent to stay decreases. The second column presents the contribution of overall teacher support while controlling for teacher and position characteristics. This contribution was not significant. The third column presents the contributions of individual support variables when examining teacher intent to stay. There were no significant individual support factors when controlling for teacher and position characteristics.

Table 5

Multiple Regression Analysis Summary for Teacher and Position Characteristics, Overall Support, Individual Sources of Support, and Their Relationship to Teacher Intent to Stay One Year and Five Years (N = 203)

Explanatory Variables	I			II			III		
	B	SEB	β	B	SEB	β	B	SEB	β
Education	-.09	.27	-.03	.08	.27	.02	-.05	.28	-.02
Training	.32	.50	.05	.37	.50	.05	.35	.50	.05
License	.32	.44	.06	.35	.44	.06	.28	.45	.05
Years in position	-.05	.03	-.14	-.04	.03	-.12	-.04	.03	-.12
Years in special education	.02	.03	.07	.01	.03	.05	.01	.03	.03
Caseload	-.06	.02	-.18**	-.06	.02	-.18**	-.06	.02	-.17**
Setting	.12	.23	-.03	.14	.23	.23	-.06	.25	-.02
Age	-.04	.02	-.18*	-.04	.02	-.17	-.05	.02	-.18*
Rural	-.47	.44	-.09	-.44	.44	-.09	-.68	.45	-.13
Years in area	-.01	.02	-.01	-.01	.02	-.01	.01	.17	.02
Overall support				.03	.02	.11			
Other special educators							.27	.27	.07
Sp. Ed. director							.32	.24	.11
Related service providers							.42	.30	.12

General education teachers			.03	.26	.01
Building administrator			.03	.24	.01
Administrator understands role			.21	.22	.08
Sp. Ed director understands role			-.46	.31	-.13
Gen. Ed. teachers understand role			.01	.27	.01
Shared responsibility			.38	.23	.13
<i>r</i>	.30	.32		.39	
<i>r</i> ²	.09	.10		.15	
Δr^2		.01		.06	

Note: * $p < .05$; ** $p < .01$; Sp. Ed. = Special Education; Gen. Ed. = General Education

Examining teachers' intent to stay in the position, Table 6 presents a summary for the reduction in variance in intent to stay for the second model, which included overall support to explain teachers' intent to stay, over a model that included teacher and position characteristics. The r^2 or proportional reduction in error (PRE) was 10%. Based on these findings, when accounting for the influence of teacher and position characteristics, there appeared to be no significant relationship between overall support and teacher intent to stay.

Table 6

Analysis of Variance for Teacher and Position Characteristics and Overall Support in Relationship to Teacher Intent to Stay One Year and Five Years

Source	SSE	df	MSE	F*	<i>p</i>	<i>r</i>	r^2 PRE
Regression	14.30	1	14.30	2.34	.13	.32	.10
Residual	1169.67	191	6.12				
Total	1183.98	192	6.16				

The analysis of variance for the third model using individual support variables when investigating teacher intent to stay is provided in Table 7. The model does account for 15% of the variance (PRE) in teachers' intent to stay one year and five years. Based on these findings, however, there appeared to be no significant difference between a model that included independent support variables when compared to a model that included teacher and position characteristics.

Table 7

Analysis of Variance for Teacher and Position Characteristics and Individual Sources of Support and Their Relationship to Teacher Intent to Stay for One Year and Five Years

Source	SSE	df	MSE	F*	<i>p</i>	<i>r</i>	<i>r</i> ² PRE
Regression	84.37	9	9.34	1.56	.13	.39	.15
Residual	1099.61	183	6.01				
Total	1183.98	192	6.16				

Analysis Summary for Teacher and Position Characteristics and Support and Their Relationship to Teacher Willingness to Choose the Profession Again

Table 8 summarizes the unique contributions of teacher and position characteristics and support to the second commitment variable: teacher willingness to choose the profession and a rural school again. The first column summarizes the contributions of teacher and position characteristics. The second column provides information on the contribution of overall support, while controlling for teacher and position characteristics. The overall level of support teachers reported was a significant contributor (.24) even when the influences of teacher and position characteristics were accounted for. As teacher support increased, teachers' willingness to work in special education and a rural school over again also increased.

Table 8

Multiple Regression Analysis Summary for Teacher and Position Characteristics, Overall Support, Individual Sources of Support, and Their Relationship to Teacher Willingness to Choose the Profession and Rural School Again (N = 203)

Explanatory Variables	I			II			III		
	B	SEB	β	B	SEB	β	B	SEB	β
Education	.19	.13	.11	.20	.13	.11	.22	.13	.13
Training	-.08	.24	-.03	-.08	.23	-.01	.04	.23	.03
License	-.04	.21	-.02	-.01	.20	-.01	.05	.21	.02
Years in position	-.01	.02	-.01	.01	.02	.02	.01	.02	.02
Years in special education	.01	.02	.02	-.01	.02	-.03	.01	.02	-.05
Caseload	-.01	.01	-.09	-.02	.01	-.10	-.01	.01	-.08
Setting	.07	.11	.05	.10	.11	.06	.01	.12	.01
Age	-.01	.01	-.13	-.01	.01	-.11	-.01	.01	-.10
Rural	-.16	.21	-.07	-.13	.21	-.06	-.13	.21	-.05
Years in area	.02	.01	.19*	.04	.01	.18	.01	.01	.18*
Overall support				.04	.01	.24**			
Other special educators							.16	.13	.09
Sp. Ed. director							.01	.11	.01
Related service							-.18	.12	-.10

willingness to choose the profession over again, overall support was significantly associated with this choice ($F^*_{(1,191)}=11.91, p < .001$) above and beyond the model that included teacher and position characteristics. A model that included overall support proportionally reduced the amount of variance (PRE) explaining teacher willingness to choose the profession over again by 15%. Based on these findings, there is a significant relationship ($r = .31$) between overall support and teacher willingness to choose the profession over again.

Table 9

Analysis of Variance for Teacher and Position Characteristics and Overall Support and Their Relationship to Teacher Willingness to Choose Profession Over Again

Source	SSE	df	MSE	F*	<i>p</i>	<i>r</i>	r^2 PRE
Regression	15.68	1	11.91	11.91	.001	.31	.09
Residual	251.34	191	1.32				
Total	267.01	192	1.39				

Concerning teachers' willingness to choose the profession again, Table 10 presents a summary for the reduction in variance for the third model, which included individual sources of support, over a model that included teacher and position characteristics. The model using the individual support variables accounted for 15% of the variance in teachers' willingness to choose the profession over again, above and beyond the influence of teacher and position characteristics. Based on these findings,

there is a moderate ($r = .39$) and significant relationship ($F^*_{(9,183)} = 2.65, p < .001$) between the support variables in the model and teacher willingness to choose special education and a rural school over again.

Table 10

Analysis of Variance for Teacher and Position Characteristics and Individual Sources of Support and Their Relationship to Teacher Willingness to Choose Profession Again

Source	SSE	df	MSE	F*	p	r	r ² PRE
Regression	30.80	9	3.42	2.65	.001	.39	.15
Residual	236.21	183	1.29				
Total	267.01	192	1.39				

The Relationship of Work-Related Support to Teacher Satisfaction

The following analyses examine the relationship between support and teacher satisfaction, a variable previously noted as correlated with teacher commitment in the special education literature. These analyses also sought to address the fourth research question, which examines the relationship of support to the satisfaction of rural special education teachers, and test the second hypothesis posed: (H₂) teacher support is positively correlated to teacher satisfaction.

The Relationship of Teacher and Position Characteristics and Overall Support to Satisfaction Variables

The bivariate correlation coefficients for teacher and position characteristics, overall support, and the satisfaction outcome variables were analyzed to understand the

relationships between variables. The two satisfaction outcome variables were teacher satisfaction with aspects of their position (i.e., satisfaction with the instructional and non-instructional aspects of their position, enjoyment of their work, and willingness to recommend the job to someone else) and teacher efficacy (i.e., perceived ability to meet academic and behavioral needs of students and manage their caseload). The correlations between teacher and position characteristics and overall support have already been reported in Table 3.

The correlations between the variables are summarized in Table 11. A small but significant correlation was found between satisfaction and the overall amount of helpful support the teacher received ($r = .27$) There was also a relationship between the teachers' perceived level of efficacy and the amount of overall helpful support teachers received ($r = .17$).

Table 11

Means, Standard Deviations, and Correlations for Teacher and Position Characteristics, Overall Support, and Satisfaction Variables (N=203)

Explanatory Variable	Satisfaction	Efficacy
Mean	12.34	9.23
(SD)	(1.80)	(1.84)
1. Education	-.01	-.07
2. Training	.03	.06
3. License	-.06	-.10
4. Years in position	.03	.08
5. Years in Sp. Ed.	-.07	.09
6. Caseload	-.20**	-.42**
7. Setting	-.03	.01
8. Age	-.01	.15*
9. Rural	.13*	.09
10. Years in area	.15*	.12*
11. Overall support	.27**	.17**

Note: * $p < .05$; ** $p < .01$; Sp. Ed. = Special Education

The Relationship of Individual Sources of Support to Satisfaction Variables

Table 12 summarizes the bivariate correlation coefficients for individual sources of support and the satisfaction outcome variables. The correlations between these sources of support have already been reported in Table 4. Relatively small but significant relationships were found between teachers' satisfaction and the helpfulness of the support

from general education teachers ($r = .19$), the degree that the building administrator understood their role ($r = .14$), and whether the teacher perceived that their role was shared with others in their school ($r = .18$). Significant and stronger relationships were found between satisfaction and the helpfulness of support from administrators ($r = .25$, $.25$) and whether the special education director ($r = .32$) and general education teachers ($r = .29$) understood the special educator's role.

Table 12

Means, Standard Deviations, and Correlations for Individual Sources of Support and Satisfaction Variables (N=203)

Explanatory Variable	Satisfaction	Efficacy
Mean	12.34	9.23
(SD)	(1.80)	(1.84)
1. Other special educators	.09	.10
2. Sp. Ed. director	.25**	.22**
3. Related service providers	.05	.07
4. General education teachers	.19**	.16**
5. Building administrator	.25**	.11
6. Administrator understands role	.14*	.15*
7. Sp. Ed. director understands role	.32**	.28**
8. Gen. Ed. teachers understand role	.29**	.25**
9. Shared responsibility	.18**	.19**

Note: * $p < .05$; ** $p < .01$; Sp. Ed. = Special Education

Relatively weak but significant relationships were found between teachers' perceived levels of efficacy and the helpfulness of the support from general education teachers ($r = .16$), whether the building administrator understood their role ($r = .15$), and whether teachers perceived that their role was shared with others in their school ($r = .19$). Significant and stronger relationships were found between teachers' perceptions of efficacy and the helpfulness of support from the special education director ($r = .22$), and whether the special education director ($r = .28$) and general education teachers understood the special educator's role ($r = .25$).

Analysis Summary for Teacher and Position Characteristics and Support and Their Relationship to Teacher Satisfaction

Table 13 summarizes the individual contributions of teacher and position characteristics, overall support, and individual sources of support to teachers' satisfaction with the instructional and non-instructional aspects of their position. The first column summarizes the contribution of teacher and position characteristics to satisfaction. The second column provides information on the contribution of overall support. A significant relationship was found between the teachers' overall level of support and their satisfaction with the position (.29) while controlling for teacher and position characteristics. As teacher support increased, teacher satisfaction increased.

The third column summarizes the contributions of individual sources of support when controlling for teacher and position characteristics. The helpfulness of support from the building administrator (.17) and the degree to which general education teachers (.16) and the special education director (.24) understood the special education teacher's role made significant contributions to teachers' satisfaction.

Table 13

Multiple Regression Analysis Summary for Teacher and Position Characteristics, Overall Support, Individual Sources of Support, and Their Relationship to Teacher Satisfaction
(*N* = 203)

Explanatory Variables	I			II			III		
	B	SEB	β	B	SEB	β	B	SEB	β
Education	.12	.20	.05	.13	.19	.05	.18	.18	.07
Training	.09	.34	.02	.21	.34	.04	.27	.33	.06
License	-.22	.31	-.05	-.15	.30	-.04	-.10	.29	-.03
Years in position	.02	.02	.10	.03	.02	.15	.02	.02	.11
Years in special education	-.04	.02	-.20	-.05	.02	-.26*	-.05	.02	-.28**
Caseload	-.05	.02	-.21**	-.05	.02	-.22**	-.05	.02	-.21**
Setting	.01	.16	.01	.06	.16	.03	-.14	.16	-.06
Age	.01	.02	.01	.01	.02	.04	.01	.01	.04
Rural	.16	.32	.04	.20	.30	.06	.22	.29	.06
Years in area	.02	.01	.15	.02	.01	.13	.01	.01	.12
Overall support				.07	.02	.29**			
Other special educators							.08	.17	.03
Sp. Ed. director							.09	.16	.05
Related service providers							-.13	.17	-.05

General education teachers			.11	.17	.05
Building administrator			.34	.15	.17*
Administrator understands role			.04	.14	.02
Sp. Ed. Director understands role			.42	.20	.16*
Gen. Ed. teachers understand role			.56	.18	.24**
Shared responsibility			.15	.15	.07
r	.30	.45		.54	
r^2	.09	.17		.30	
Δr^2		.08		.20	

Note: $p < .05$; ** $p < .01$; Sp. Ed. = Special Education; Gen. Ed. = General Education

Concerning the question of teacher satisfaction, Table 14 presents a summary for the reduction in variance for the second model, which included overall support, over a model that included teacher and position characteristics. Overall support was significantly associated with teacher satisfaction ($F^*_{(1,191)} = 18.79, p < .001$). A model, which included overall support, had a PRE of 10% over a model that included teacher and position characteristics. Based on these findings, there is a significant relationship ($r = .31$) between overall support and teacher satisfaction when accounting for the influences of other teacher and position characteristics.

Table 14

Analysis of Variance for Teacher and Position Characteristics and Overall Support and Their Relationship to Teacher Satisfaction

Source	SSE	df	MSE	F*	<i>p</i>	<i>r</i>	<i>r</i> ² PRE
Regression	53.00	1	53.00	18.79	.001	.31	10
Residual	538.73	191	2.82				
Total	591.73	192	3.08				

Table 15 presents a summary for the reduction in variance for the third model, which included the individual sources of support to explain teachers' satisfaction, over a model that included teacher and position characteristics. The model using individual sources of support had a PRE of 29% over a model that included teacher and position characteristics. Based on these findings, there is a moderate ($r = .54$) and significant relationship ($F^*_{(9,183)} = 5.89$, $p < .01$) between the support variables in the model and teacher satisfaction, above and beyond the influence of other teacher and position characteristics.

Table 15

Analysis of Variance for Teacher and Position Characteristics and Individual Sources of Support and Their Relationship to Teacher Satisfaction

Source	SSE	df	MSE	F*	<i>p</i>	<i>r</i>	<i>r</i> ² PRE
Regression	133.16	9	14.79	5.89	.01	.54	.29
Residual	458.57	183	2.51				
Total	591.73	192	3.08				

Analysis Summary for Teacher and Position Characteristics and Support and Their Relationship to Teacher Efficacy

Table 16 summarizes the individual contributions of teacher and position characteristics and support variables to the second outcome variable related to teacher satisfaction: teachers' perceived levels of efficacy. The first column summarizes the contributions of teacher and position characteristics. The number of students on their caseload ($r = -.44$) contributed significantly to teachers' perceived levels of efficacy. The teachers' age was also a contributor to teacher efficacy ($r = .18$).

The second column provides information on the contribution of overall support when controlling for teacher and position characteristics. Overall support made a small but significant contribution to perceived levels of efficacy ($r = .18$) when controlling for the influences of teacher and position characteristics. As teacher support increased, teachers more frequently reported they were able to meet the academic and behavioral needs of the students on their caseload.

The third column takes into consideration individual sources of teacher support and their contribution to teacher efficacy while controlling for teacher and position characteristics. The degree to which the special education director (.16) and the general education teachers (.20) understood the special education teachers' role and responsibilities made significant contributions to teachers' perceived levels of efficacy.

Table 16

Multiple Regression Analysis Summary for Teacher and Position Characteristics, Overall Support, Individual Sources of Support, and Their Relationships to Teacher Efficacy
(*N* = 203)

Explanatory Variables	I			II			III		
	B	SEB	β	B	SEB	β	B	SEB	β
Education	-.02	.19	-.01	-.01	.18	-.01	.01	.17	.01
Training	-.09	.37	-.02	-.01	.30	-.01	-.01	.32	-.01
License	-.49	.29	-.12	-.45	.29	-.11	-.41	.28	-.10
Years in position	.01	.02	.01	.01	.02	.03	-.01	.02	-.02
Years in special education	.01	.02	.02	-.01	.02	-.02	.01	.02	.01
Caseload	-.11	.02	-.44**	-.11	.02	-.44**	-.11	.01	-.43**
Setting	.16	.16	.06	.19	.16	.08	.03	.16	.13
Age	.03	.15	.18*	.03	.01	.19*	.03	.01	.17*
Rural	.48	.29	.13	.51	.29	.14	.55	.29	.15*
Years in area	-.01	.01	-.01	-.01	.01	-.02	-.01	.01	-.02
Overall support				.04	.01	.18**			
Other special educators							.15	.17	.05
Sp. Ed. director							.15	.16	.07
Related service providers							-.01	.16	-.01

General education teachers			.01	.16	.01
Building administrator			-.03	.15	-.01
Administrator understands role			.12	.14	.10
Sp. Ed. director understands role			.41	.20	.16*
Gen. Ed. teachers understand role			.49	.17	.20**
Shared responsibility			.08	.14	.03
<i>r</i>	.48	.52		.60	
<i>r</i> ²	.23	.27		.36	
Δr^2		.03		.13	

Note: * $p < .05$; ** $p < .01$; Sp. Ed. = Special Education; Gen. Ed. = General Education

Examining teachers' perceived efficacy, Table 17 presents a summary for the reduction in variance for the second model, which included overall support, over a model that included teacher and position characteristics. Overall support was significantly associated with teacher efficacy ($F^*_{(1,191)} = 8.15, p < .01$). Including overall support proportionally reduced the amount of variance (PRE) in a model explaining teacher efficacy by 4% over and above the influences of other teacher and position characteristics. Based on these findings, there is a significant relationship ($r = .21$) between overall support and teachers' perceived levels of efficacy.

Table 17

Analysis of Variance for Teacher and Position Characteristics and Overall Support and Their Relationship to Teacher Efficacy

Source	SSE	df	MSE	F*	<i>p</i>	<i>r</i>	<i>r</i> ² PRE
Regression	21.54	1	21.54	8.15	.01	.21	.04
Residual	504.80	191	2.64				
Total	526.35	192	2.74				

Addressing the variance in teacher efficacy, Table 18 presents a summary for the reduction in variance for the second model, which included individual support factors, over a model that included teacher and position characteristics. The model using individual sources of support has a PRE of 20% over a model that included only teacher and position characteristics. Based on these findings, there is a moderate ($r = .45$) and significant relationship ($F^*_{(9,183)} = 4.12, p < .01$) between the support variables in the model and teachers' perceived ability to meet their students' needs while taking into account the influence of other teacher and position characteristics.

Table 18

Analysis of Variance for Teacher and Position Characteristics and Individual Sources of Support and Their Relationship to Teacher Efficacy

Source	SSE	df	MSE	F*	<i>p</i>	<i>r</i>	<i>r</i> ² PRE
Regression	88.69	9	9.85	4.12	.01	.45	.20
Residual	437.66	183	2.39				
Total	526.35	192	2.74				

Relationships Between Commitment and Satisfaction Variables

The previous analyses explored the relationships between support and satisfaction. As many support variables had significant relationships with satisfaction, the following analysis sought to understand the relationship between teacher satisfaction and commitment. Understanding this relationship addresses the final research question, the relationship between satisfaction and commitment, and extends the understanding of teacher commitment to include its relationship with teacher satisfaction.

The bivariate correlations between the two commitment variables and both satisfaction variables are summarized in Table 19. A small but significant relationship was found between both satisfaction variables and teacher intent to stay ($r = .14, .15$). A moderate ($r = .62$) and significant relationship existed between teacher satisfaction and willingness to choose the profession over again. A weaker relationship was evident between teacher efficacy and willingness to choose the profession over again ($r = .25$).

Table 19

Teacher Satisfaction, Efficacy, Intent to Stay, and Willingness to Choose Profession Over Again

Intent to stay 1 year and 5 years	Pearson Correlation <i>r</i>	<i>p</i>
Satisfaction	.14	.03
Efficacy	.15	.01
Willingness to choose the profession over again	Pearson Correlation <i>r</i>	<i>p</i>
Satisfaction	.62	.01
Efficacy	.25	.01

Summary of Key Findings

Table 20 provides an overview of the significant correlations between the outcome variables related to commitment and the explanatory variables of support. Consistent with the guidelines of Glass and Hopkins (1996) for evaluating the size of relationships, the reported correlations would be considered in the small to moderate range. The strongest relationships were found for the support from building and special education administrators and general education teachers, particularly when administrators and general educators understood the special educator's role and responsibilities.

Table 20

Summary of Significant ($p < .05$) Correlations Between Support and Commitment and Satisfaction

		Commitment		Satisfaction	
		Intent to stay	Would choose profession again	Satisfaction	Perceived efficacy
Overall support		-	.24	.27	.17
Administrator	Helpful/				
Sp. Ed. director	Understands role	.10/ -	.11/.16	.25/.32	.22/.28
Principal	Helpful/	- / -	.19/.16	.25/.14	- /.15
Gen. Ed.	Understands role	- / -	.19/.23	.19/.29	.16/.25
Related service	Helpful	.14	-	-	-
Other special educators	Helpful	.13	.11	-	-
Sense of shared responsibility		.14	.16	.18	.19

Note: Sp. Ed. = Special Education; Gen. Ed. = General Education; Non-significant correlations are noted with a dash (-).

The final section in this chapter presents the descriptive data for the responses teachers gave when asked what they found most challenging and what they liked best about their positions as rural special educators. The categories and themes that emerged from the analysis of the teachers' responses reinforced many of the findings in the

quantitative analysis investigating the relationships between support, teacher commitment, and teacher satisfaction.

Challenges of the Position

When teachers were asked directly what challenges they encountered being a special education teacher in a rural school, teachers commented on issues that are widely acknowledged by special educators in general: parents, role responsibilities including paperwork and testing, and the lack of time.

Parents. The most frequently mentioned comment (21%) involved the challenges with students' parents. "Parents are one of my biggest challenges..." said one teacher of students with behavior disorders. "You can help them with the 6 hours that you have them, but you can't do much about the 18 hours that you don't have them. So much of what these kids come to school with is dependent on what happens at home. If you could help the parents at home provide a little wrap around service, then I think that would help..."

Role responsibilities. Seventeen percent of teachers' comments concerned the responsibilities of their job. "Scheduling [is a challenge] - getting to see all the kids in the time you need to see them so you are not pulling kids from the things they need to be in the regular classroom. It's a nightmare." A few (8%) of teachers commented on federally imposed responsibilities: paperwork, state assessments, and meeting required benchmarks. "Meeting the fantasy of NCLB [is the biggest challenge,]" said one resource room teacher. "We just took our statewide assessment, and we were listed as a failing school because of my students. A six-month gain is a big deal in my experience, but

because they didn't make 3 years worth of gain, I didn't do my job. It is very discouraging. NCLB needs to be reworked with the special education students in mind."

Time. Fifteen percent of teachers' comments referenced the lack of time or the lack of staff to adequately perform the duties of the position and meet students' needs. "The lack of help and time [are challenges]. If the caseloads were smaller, and you had more time to go into classrooms and work with students more, that would be helpful, but because you are stretched for time you can't be there the way you want to. I am the only special educator in the building."

Small and rural. Some challenges (7%) were specifically connected to teaching in a small and rural school. Teachers mentioned professional isolation and the distances they had to travel to get to trainings. The size of the school also meant limited budgets and resources in a time of limited funding. Twenty-six percent of teachers voiced concerns about inadequate staff, combined classrooms, large caseloads, and inadequate school resources, services, and programs. "The diversity in the classroom [is a challenge], I have LD, BD, MR, and autistic with one assistant. It is very difficult," stated one teacher of a self-contained classroom. "It is hard to deal with all those classifications and personalities in one classroom... It is tough. You don't have the options that might be available in a larger district or school. You've got to take care of it yourself." Two percent of the teachers raised concerns regarding lower salaries in rural areas.

Twelve percent of special educators expressed frustration with the lack of support, appropriate expectations, and accommodations provided by general education teachers. "Support from the general education teachers is limited," one teacher said. "Some teachers don't feel my kids should be in their classroom if they are not able to do

everything the regular education students do.” Some of the frustration was related to poorly defined roles and responsibilities in the general education classroom. Typical comments were, “Co-teaching it is not easy -- educational views and the ways that you teach can clash.”

What Teachers Liked Best

Teachers talked about many aspects of their schools and communities when asked what they liked best about being a special educator in a small and rural school. Some aspects were positive characteristics generally associated with being a teacher, some were characteristics of being a special education teacher, and some were characteristics of being a special education teacher in a rural or small town. As expressed by one teacher, “I know the entire school, every face, every name.”

Characteristics of special education. Teachers (14%) enjoyed watching their students make progress and knowing their teaching was making a difference in their students’ lives. School administrators were frequently portrayed as providing students with the services they needed, despite limited resources. “Our special education coordinator is very helpful... For example we have a student who has a hearing impairment and we are getting an... amplifying system for that student's classroom,” said one fifth grade resource room teacher. “Some people might think that type of thing might not happen in a small school like we have... it might take a while, but whatever a student might need, they try real hard to provide that.”

Characteristics of rural special education. Some teacher comments (16%) related to the positive aspects of the students in rural areas. “The kids are more considerate and anxious to learn, even though they have a disability. They are very hard working and

there is not a lot of competition among them about clothing or social status; less behavioral concerns than you would probably see in a city school.”

The majority of the teachers’ positive remarks (77%), however, related to aspects of the position facilitated by teaching in a small, rural school. A “family-like” feeling was made possible by the smaller size of the community, which spilled over into teachers’ relationships within their school community, with their students’ parents, and with their students. “I like the feeling of being connected to everyone because it is small enough,” one teacher said. “You see everybody and have to work with everybody.”

“I love the feeling that your school is like a small family or small community and everyone is supportive and accepting of the kids with disabilities specifically,” said one teacher of students with severe disabilities. “Everyone works together like a team to a common goal, there is a lot helping each other out in our school.” This climate of acceptance also had a positive effect on student interactions. “The acceptance of my students, by everyone in the school [is what I like best],” said one elementary teacher. “The positive interaction they have with the regular education students. I go out to recess and I can’t tell which kids are mine. I taught in a larger school near [name of large city] and it wasn’t like that at all... It is a really good experience here.”

Teachers talked about forming close bonds with other staff in their school, and these relationships translated into a sense of professional support that teachers appreciated. “You really get to know the kids and the families really well in a small town,” remarked one teacher. “That is really nice. I think being in a city school would be more difficult... We are very lucky in this school, [there is a] very supportive administration and special ed. staff. We get a lot of support and appreciation.”

Additionally, the smallness of their school contributed to a more in-depth personal knowledge of families and students. “I get to know the parents really well,” one teacher remarked. “This year they have been supportive. In the larger district I didn't have this type of rapport with parents. Here, they stop by or see you in the hallway, we talk in the parking lot at the store. It's neat.” Teachers (28%) also communicated appreciation for the opportunity to watch students grow up from year to year and see them in a variety of contexts, an opportunity afforded by working in a small school. Teachers made statements such as: “I develop a good strong relationship, as I have them for 2 to 3 years and get a chance to be part of their lives. I am a surrogate mother and a friend. I get to develop a personal relationship with them. I graduated from this school. It is home.”

CHAPTER V

Discussion

Using survey research with a randomly selected national sample ($n = 203$) of rural special education teachers in 55 rural school districts, this study investigated the sources of work-related support and the relationship of that support to teachers' commitment and satisfaction. The results reveal a significant relationship between the extent and helpfulness of the teachers' support networks and the outcome variables related to commitment. Further, individual sources of support significantly contributed to the relationships between support and teachers' commitment and satisfaction.

The relationship between support, commitment, and satisfaction has been well established in the special education literature. Such research has been helpful to educational leaders concerned with developing retention strategies to reduce the national shortage of special education teachers by addressing issues related to teacher attrition. What has been less well understood is the relationship between support, commitment, and satisfaction for special education teachers working in rural school districts, which comprise nearly half of the nation's school districts (Johnson & Strange, 2007). This study, therefore, sought to replicate and extend the findings of previous research to rural special education teachers and assist with efforts to maintain a stable workforce in rural schools. The following discussion summarizes the main findings, discusses directions for future research in rural areas, and poses related implications for rural administrators and educational leaders interested in teacher retention.

Sources And Extent of Work-related Support for Rural Special Education Teachers

Information about the sources and extent of support for rural special education teachers was obtained by identifying the available sources of support and asking teachers to rate the degree of helpfulness from each source. In keeping with the findings from previous research with eight special educators (Gehrke & Murri, 2006), teachers in the current study stated that other special educators in their building provided them with the most helpful source of professional support. Essential support also came from administrators, related service providers, and general education teachers.

Despite the many supports that were available, teachers indicated that they desired additional opportunities to talk with their special education and general education colleagues, naming special education team meetings, grade-level meetings, and online contacts as less available but desired support structures. A recurrent theme in the research with special education teachers is the limited opportunity for collaboration with other special educators and general education teachers. Teachers repeatedly report these opportunities for collaboration and collegiality are a crucial and desired source of support (Hammond et al., 1995; Knapczynyk et al., 2000). These conclusions were further substantiated by the findings in this study.

Perceived Levels of Job Commitment and Job Satisfaction

The second question under investigation probed the perceived levels of job commitment and job satisfaction for rural special education teachers. Most of the teachers (92%) were planning to return to a special education position in their school the following year. This percent dropped dramatically when teachers were asked to project further into the future. Despite a majority of teachers who stated they were satisfied with

the instructional aspects of their position, reported manageable caseloads and a positive relationship with their students, only 58% planned to return to a special education position in their school in the next five years. These findings were not surprising given that 13% were planning to retire (34% of the teachers were over the age of 50) and half (57%) of the teachers in this sample were in their first five years in the position, the time period of the greatest risk for attrition (Singer, 1992; Smith & Ingersoll, 2004). Some teachers reported challenges of the position as contributing to their dissatisfaction, including the demands of special education paperwork, the lack of parent involvement, and the lack of time to adequately address the needs of their students. Twenty percent of the teachers planned to take positions elsewhere, and 5% were transferring out of special education but intended to remain teaching in their rural school. The resulting attrition rate of 29% from special education positions, for the teachers who were not retiring, was more than double the 11% national shortage of special education teachers (Boe, 2006).

Although the teachers' responses projected a high rate of attrition, the teachers in this study did not appear to be teachers that rural administrators would want to lose. As a whole, the teachers interviewed were a qualified and experienced group. Most teachers held their state's highest level of certification and over half held advanced degrees. Almost half of the teachers had more than 11 years of experience in special education. These teachers appeared to be committed to their rural area: most had lived many years in their rural district, if not their entire lives. The majority of teachers (90 – 92%) were willing to choose special education and work in a rural school again if given a second chance to so. However, it is clear that retention strategies will be necessary to retain these teachers in their positions beyond five years.

Relationships Between Work-Related Support and Outcome Variables in Support Models

Work-related support has been demonstrated in prior research (Billingsley, 2004a; Colley & Yovanoff, 1996; Westling et al., 2006) to be an alterable factor of the school environment that is related to decreased levels of professional isolation and increased levels of teacher commitment, satisfaction, and confidence in their ability to effectively provide special education services to their students. Thus, investigation into the sources of work-related support could provide possible strategies for the retention rural special education teachers. In fact, the results of the current study mirror the findings of previous research and suggest important relationships do exist between support, commitment, and satisfaction with this sample of special education teachers in rural areas.

There was convincing evidence for the existence of significant relationships between overall teacher support, individual sources of support, and outcomes related to teacher commitment. The overall extent and helpfulness of teachers' support networks was associated with teacher willingness to choose the profession again, teacher satisfaction, and perceived efficacy. Similarly, models which included individual sources of support to explain teacher commitment and satisfaction had significant relationships with teacher willingness to choose the profession over again as well as both satisfaction variables, even when controlling for the influences of other teacher and position characteristics.

These findings address the questions posed by this research and confirm research hypotheses: as perceived levels of work-related support increased, levels on the outcome variables related to commitment and satisfaction also increased. Given the relative significance of both support models, overall support (which used one parameter rather

than nine) appeared to be the most focused and efficient choice to explain the relationships in question. It should be mentioned here, that a significant relationship between both support models and teacher intent to stay was not evident. However, it is reasonable to speculate that the outcome variable of intent to stay may have been influenced by the moderating effect of an older workforce and the considerable number of teachers in this sample who indicated they were ready to retire.

Relationships Between Variables

In addition to the significance of an overall support model and a model with individual sources of support in explaining teacher commitment and satisfaction, interesting and significant correlations were found between specific explanatory variables and outcome variables. Significant relationships were found between teacher intent to stay and (a) the helpfulness of the support from a special education director, (b) the helpfulness of related service providers, (c) the helpfulness of the support from other special education teachers, and (d) a sense of shared responsibility between special education teachers and others in their school. A greater sense of shared responsibility was associated with increased support from related service providers, general education teachers, and building administrators. In other words, the work-related support teachers received from others helped them to report that they shared the responsibility for providing services to their students, and this shared sense of responsibility was related to their intent to remain in their position. Significant relationships were also found between support variables and the second commitment variable: willingness to choose the profession over again.

Significant correlations with teacher willingness to choose the profession over again were found when (a) administrators, general educators, and other special educators provided helpful support, (b) administrators and general education teachers understood the special education teachers' role and responsibilities, and (c) there was a sense of shared responsibility in the education of students with disabilities. These findings underscore the importance of support from administrators and other teachers in the school, along with a shared sense of responsibility for the education of students with disabilities, when understanding special education teachers' commitment. These results also confirm the research hypotheses: as teachers' ratings of support from administrators and general education teachers and a shared sense of responsibility increased, their ratings on variables related to teacher commitment also increased.

Relationships Between Satisfaction and Commitment

The final question under investigation sought to investigate the relationship between satisfaction and commitment specifically with rural special education teachers. This relationship is reported extensively in the literature (Billingsley, 2004a; Gersten et al., 2001; Miller et al., 1999; Whitaker, 2000). The results of this study support the conclusion that teachers in rural areas more frequently relate the intent to stay and a willingness to choose the profession again when they report increased levels of satisfaction and perceived levels of efficacy. These findings confirm the third hypothesis posed in this research: as levels of satisfaction increased, teachers' levels of commitment increased. Therefore, working environments that can assist teachers in reporting higher levels of satisfaction with the instructional and non-instructional aspects of their job, as well as an increased ability to meet the academic and behavioral needs of the students on

their caseload, are work environments that are more likely to have teachers who report increased levels of commitment to special education in their rural school. Fortunately, the findings from this study have indicated several important factors that are related to such positive work environments and teacher commitment.

Important Relationships to Teacher Satisfaction

The results reported here impart the central conclusion that special education teachers in rural areas who identified wider and helpful support networks were teachers who were more apt to report higher levels of satisfaction, effectiveness with their students, and therefore commitment. These results corroborate and extend the finding of research with special education teachers in general (Billingsley, 2004a; Billingsley & Cross, 1992). As was reported in Table 20, teacher satisfaction and perceived levels of effectiveness were significantly correlated with whether the special education teacher perceived that administrators and general education teachers understood their role and responsibilities. Other specific variables related to teacher satisfaction were: (a) the helpfulness of support from administrators, (b) the helpfulness of support from general education teachers, and (c) a sense of shared responsibility in the education of students with disabilities. These variables will now be examined in detail.

The Importance of Administrative Support

Administrative support is defined here as building and special education administrators who create a school climate where the roles and responsibilities of the special educator are defined and understood, particularly with respect to their role in the general education classroom, and where special educators perceive that their responsibilities in the education of students with disabilities are shared. This type of

administrative support appears to be an important factor to teacher satisfaction, not only for special educators in general (Billingsley, 2004b; Billingsley & Cross, 1992), but for special educators working in rural areas as well. Furthermore, focused support from administrators was related to increased levels of perceived efficacy with students on the special educators' caseload, and this may offset some of the deleterious influences of an increased caseload on teacher intent to stay.

The Increased Role of Support from General Educators in Rural Schools

Support from general education teachers, their understanding of the special educator's role, and their sharing of the responsibility for educating students with disabilities had a positive and significant relationship with teacher commitment and satisfaction. What is interesting about these results is that the support of general education teachers appeared to play such a strong and central role in teacher satisfaction, perceived efficacy, and commitment. Fewer significant relationships with commitment and satisfaction were found for the support from the other special educators in the building, although research with special education teachers in general has reported a relationship to teachers' satisfaction, teacher effectiveness, and their intent to stay (Billingsley 2004a; Gersten et al., 2001; Westling et al, 2006).

Evidence from the quantitative and descriptive findings in the current study provide one possible explanation for the importance of collegial support from general education teachers: the family-like atmosphere, identified by some teachers as an important aspect of teaching in a rural school, may foster supportive relationships between teachers of general education and special education, and these relationships are important to teacher commitment and satisfaction. These results echo the findings from

recent qualitative research (Malloy & Allen, 2007). Researchers identified the presence of a cohesive school community and supportive relationships between teachers when investigating schools with low attrition and high rates of retention.

Several factors may contribute to the importance of the relationship between teachers of special and general education in rural settings. First, while 98% of the special education teachers interviewed stated that support from general education teachers was available, 87% said support from other special education teachers was available. So in some rural and small schools, the opportunity for support from other special education teachers may be limited, and support from general educators is more available. In addition, 75% of the teachers in this sample worked with students who received their education primarily in general education classroom from the general education teacher. Teachers of special and general education, therefore, had frequent opportunities for communication and the necessity for a collegial and collaborative relationship. The importance of frequent interactions with general education teachers in establishing supportive relationships has been reported in research investigating support structures for beginning special education teachers (Griffin et al., 2009). These first-year teachers found additional support from their relationships with general education teachers especially when their classrooms were in close proximity and the interactions were frequent. Therefore, the availability and necessity of contact with general education teachers in rural schools may be the catalyst for a relationship that is important to rural special educators. For these reasons, the important contribution of support from general education teachers to special education teachers' commitment and satisfaction, reported here, is not really surprising.

A Shared Responsibility

The results from the current study also draw attention to the importance of a special education teacher's sense of shared responsibility in the education of students with disabilities, a variable unexamined in other special education research. As teachers' sense of a shared role increased, the levels of reported commitment and satisfaction also increased. Several examples taken from teacher interviews may illustrate this relationship. During the interviews, half of the teachers indicated the responsibility for the education of the students on their caseload fell entirely on their shoulders. Teachers commented that others in their school, including general education teachers, did not always support them or fully understand their role. As one middle school special education teacher explained,

We are still in transition to co-teaching and ultimately we are training the general educators to think differently. But the general educators refer to the students as 'your kids.' If some students are not passing classes... then the pressure is on me to get...the grades up. This should be more of a team effort. There is a lot of accountability going on with being an "*in need of improvement*" school and it [the responsibility] all falls to me.

On the other side of the equation, half of the teachers portrayed a shared responsibility in educating students with disabilities in their schools, citing a team approach, as described in previous research investigating rural schools with few retention difficulties (Nagel et al., 2006). One fourth of the teachers specifically named general education teachers as collaborators in the education of the students they shared. One elementary school special educator's remarks were typical,

If you were to come into our classroom, I am a teacher with 46 students, with myself and two regular education teachers. We teach all together. Students don't differentiate between myself, as the special educator, and the regular education teachers. I am just one teacher on a team. Inclusive settings create a team effort. These are our students not just my students.

New Directions

Future research may want to focus more exclusively on the contributors to special education teachers' sense of a shared responsibility. Additionally, research may want to investigate the relationships between general and special education teachers in rural schools and the factors that contribute to these supportive relationships. Furthermore, as the current study focused on teacher perceptions of support, satisfaction, and commitment, future research may want to specifically investigate the relationship between the provision of work-related support and actual teacher retention data.

Implications

One possible solution to teacher shortages, higher attrition rates, and the demands of the special education position in rural areas may be to capitalize on the unique characteristics of small rural schools and the close and supportive relationships that can develop there. Findings from this study indicate that relationships, particularly with administrators and general education teachers, but also with other special education teachers and related service providers, were central to the variables related to teachers' reported levels of commitment and satisfaction. Furthermore, a climate that fosters a clear understanding of the special educator's role and a shared responsibility for students was also related to teacher satisfaction, perceived efficacy, and commitment. Several

recommendations, as a result of these findings, seem appropriate for administrators and educational leaders interested in strategies to improve teacher retention.

First, administrators will want to provide opportunities for the exchange of personal and professional support by promoting the relationships noted above within the school community. Opportunities to promote these relationships include, but are not limited to, team meetings (e.g., special education teachers, related service providers and special education administrators), grade-level meetings (e.g., special and general education teachers), school gatherings, team teaching, mentoring, peer coaching, or joint teacher lesson study. New members of the faculty may need guidance and support from those who have established relationships within the school and local community, so newcomers can gain entrance to established structures and not become disenfranchised (Huysman, 2008; Malloy & Allen, 2007).

Second, administrators will need to help teachers create time, through structured meetings or flexible scheduling, so teachers can meet, exchange information, discuss student-related issues, share information from students' IEPs, solve problems, and provide support for each other. "The emotional support I get here is probably the reason I have been here this long, the friendships I make with the other teachers that extend beyond my relationship here at school..." said one fifth grade resource room teacher. "I think that is the reason I have been a special education teacher for 26 years because of the support and friendship that is here in the school. Everybody is there for you."

Third, since the small scale of the schools appeared to promote many of the assets mentioned in conjunction with working in rural schools (e.g., formation of family-like relationships within the school; more in-depth relationships with students and families)

federal and state organizations will need to provide the supports necessary to deter school consolidations and maintain small, local schools.

Fourth, as roles and responsibilities of special educators are increasingly moving to inclusive settings in general education classrooms, general and special education teachers may need and desire guidance in how to collaborate effectively so they can collectively meet the needs of students. Professional development may be necessary to promote collaboration skills for both sets of teachers. Research in rural schools (Artesani & Brown, 1998) has found that general education teachers do not always have accurate information about special education eligibility, disability categories, and inclusive practices. Additionally, administrators may want to provide teachers with training or coaching in inclusive practices or co-teaching. Such training helps teachers to understand their roles and responsibilities for an effective delivery of services, and to gain a meaningful sense of a shared responsibility in the education of students with disabilities (Scheeler, Congdon, & Stansbery, 2010). In other words, additional training and strong administrative leadership may be necessary to create effective inclusive service delivery models within rural schools (Gehrke & McCoy, 2007b).

Finally, teacher preparation programs need to prepare special educators to enter the profession with the skills and dispositions necessary to collaborate and consult with general education teachers. Special education teacher preparation programs do not always include opportunities to develop critical collaboration skills (Brownell, Ross, Colon, & McCallum, 2005). Conversely, programs also need to prepare general educators to enter the profession with the skills to collaborate and consult with special education teachers. Practice in collaboratively meeting the needs of diverse learners, is instrumental in

preparing teachers who are comfortable with, and can therefore reap the benefits from, interactions with their colleagues (McHatton & Daniel, 2008).

Limitations

There are several factors related to the sample selection and survey design that created limitations to the results reported in this research. Participants were all volunteers, and the willingness of a certain set of teachers to respond to recruitment efforts may have created a biased sample. Teachers who were consistently unavailable or did not have the time to participate were not represented in this study's results. This sample bias may limit the ability to generalize the reported findings to the population of rural special education teachers as a whole.

In addition, the validity of teacher responses may have been influenced by several factors: time, the order of the questions, and missing data. Time constraints may have affected both the teachers' interpretations of the questions and their answers. Interviews were usually conducted during a teacher's planning period or after school. The anticipated time to complete the interview was 30 to 40 minutes. This limited time frame may have exerted pressure on teachers to respond quickly to questions that involved complicated relationships and inadvertently encouraged teachers to underestimate or overestimate their reply (Tamura, 1992).

The structure of the questions may have also influenced the data collected. Teachers were asked to reduce their interpretation of complex constructs, such as work-related support, to a 4-point scale. Given the brevity of the responses demanded by these questions, teachers may have been reluctant to speak negatively about their colleagues. When offered the opportunity to qualify their perspective in the open-ended questions,

however, teachers were more willing to disclose their honest opinions about their work environment. By asking both closed and open questions on the same construct, a fuller picture of teacher's views was gained (Miles & Huberman, 1994).

The sequence of the questions may have also influenced the responses teachers gave. Questions about satisfaction, what they liked best about their school and what they saw as their biggest challenge followed several questions pertaining to work-related support. This order may have predisposed teachers to talk about support and relationships on the open-ended responses (Tamur, 1992).

Finally, missing data may have created a limitation of the reported results. Some teachers did not have the availability of support from a variety of support sources. For variables with a high percentage (i.e., > 13%) of missing values (i.e., special education team meetings, grade-level meetings, special education teachers in the district, online contacts), the variable was not included in the analysis of the independent sources of support. This limited the picture represented by the analysis for individual sources of support. In truth, the missing data in these cases, rather than presenting a limitation of the study, actually represented a reflection of the inconsistent availability of some support sources for special educators in rural areas. For other variables with a low percentage of missing data (< 5%) and one variable, the helpfulness of support from other special education teachers with a higher percentage (12%), the mean was substituted for the missing value. These substitutions were made to keep the variables in the analysis and may have influenced the results. The inconsistent availability of some support sources had to be considered in the analysis of the data collected.

Conclusions

This research investigated the important relationships between teacher support, commitment, and satisfaction for special education teachers working in schools located in rural areas. Taking demographics, teacher training, and other teacher and position characteristics into account, overall work-related support was significantly associated with the desire to choose the profession over again, teacher satisfaction, and the perception by the teacher that they could meet the needs of the students on their caseload. The extent of the teacher's support network and the degree of helpfulness of available support sources were important to these results. Those teachers who indicated they had a wider network of support sources and considered those sources helpful (e.g., could ask questions, problem-solve work-related issues) were teachers who also reported they were more likely to choose the profession over again, were satisfied with the instructional and non-instructional aspects of their job, and were able to manage their responsibilities.

In addition, significant relationships were present between reported levels of teacher satisfaction and teacher commitment. Consequently, further investigation revealed important relationships between individual sources of support and variables related to intent to stay. The sources of support critical to the relationship between support and the commitment of these rural special education teachers were: (a) support from administrators, (b) support from general education teachers, (c) that others understood the special educator's role and responsibilities, and (d) that others shared the responsibility for educating students with disabilities.

It is hoped that the conclusions of this study will provide useful information germane to the challenges of special education teacher attrition and shortages in rural

areas. The results help to explain how teacher commitment and satisfaction might be impacted by work-related support. According to the teachers in this study, a wider network of helpful support and the sense of a collective responsibility for the education of students with disabilities were indicative of a supportive school culture. These support factors were related to teacher commitment. Since such supportive relationships are alterable elements of the work environment and within the school administrator's locus of control, they can be encouraged, and once established they can be supported to continue. Future research in rural areas may want to investigate interventions that promote collaborative and collegial relationships particularly between teachers of special and general education and study the impact of these relationships on teacher retention.

Certainly, the results of this study suggest these kinds of supportive relationships are critical to the commitment and satisfaction of special education teachers working in rural schools. This information may be valuable to rural administrators and educational leaders seeking to improve teacher retention and therefore the consistency of special education in rural areas.

REFERENCES

- Artesani, J., & Brown, D. (1998). Special education: Challenges for rural school systems. *Journal of Research in Rural Education, 14*, 116-124.
- Billingsley, B. (2004a). Promoting teacher quality and retention in special education. *Journal of Learning Disabilities, 37*, 370-376.
- Billingsley, B. (2004b). Special education teacher retention and attrition: A critical analysis of the research literature. *The Journal of Special Education, 38*, 39-55.
- Billingsley, B., Carlson, E., & Klein, S. (2002). Working conditions and induction support of early career special educators. *Exceptional Children, 70*, 333-347.
- Billingsley, B., & Cross, L. (1992). Predictors of commitment, job satisfaction, and intent to stay in teaching: A comparison of general and special educators. *The Journal of Special Education, 25*, 453-471.
- Boe, E. (2006). Long-term trends in the national demand, supply, and shortage of special education teachers. *The Journal of Special Education, 40*, 390-412.
- Boe, E., & Bobbitt, S. (1997). Why didst thou go? Predictors of retention, transfer, and attrition of special and general education teachers from a national perspective. *The Journal of Special Education, 30*, 138-150.
- Bornfield, G., Hall, N., Hall, P., & Hoover, J. (1997). Leaving rural special education positions: It's a matter of roots. *Rural Special Education Quarterly, 16*, 30-37.
- Bradburn, N., Sudman, S., & Wansink, B. (2004). *Asking questions: The definitive guide to question design – for market research, political polls, and social and health questionnaires*. San Francisco, CA: Jossey-Bass.

- Brownell, M., Bishop, A., & Sindelar, P. (2005). NCLB and the demand for highly qualified teachers: Challenges and solutions for rural schools. *Special Education Quarterly, 24*, 9-14.
- Brownell, M., Ross, D., Colon, E., & McCallum, C. (2005). Review of literature analyzing the critical features of special education teacher preparation: A comparison with general teacher education. *The Journal of Special Education, 38*, 242-252.
- Brownell, M., & Smith, S. (1992). Attrition/retention of special education teachers: Critique of current research and recommendations for retention efforts. *Teacher Education and Special Education, 15*, 229-248.
- Carmines, E., & Zeller, R. (1979). *Reliability and validity assessment*. Sage University series on quantitative applications in the social sciences, series no. 07-001. Beverly Hills, CA: Sage Publications.
- Collins, T. (1999). *Attracting and retaining teachers in rural areas*. Charleston, WV: ERIC Clearinghouse on Rural and Small Schools.
- Converse, J., & Presser, S. (1986). *Survey questions: Handcrafting the standardized questionnaire*. Sage University paper series on quantitative applications in the social sciences, series no. 07-001. Beverly Hills, CA: Sage Publications.
- Cook, L., & Boe, E. (2007). National trends in the sources of supply of teachers in special and general education. *Teacher Education and Special Education, 30*, 217-232.
- Cooley, E., & Yovanoff, P. (1996). Supporting professionals-at-risk: Evaluating interventions to reduce burnout and improve retention of special educators. *Exceptional Children, 62*, 336-355.

- Darling-Hammond, L. (1997). Quality teaching: The critical key to learning. *Principal*, 77, 5-8.
- Davis, M. (2002). Teacher retention and small rural school districts in Montana. *The Rural Educator*, 24, 45-52.
- Downing, J., & Peckham-Hardin, K. (2007). Supporting inclusive education for students with severe disabilities in rural areas. *Rural Special Education Quarterly*, 26, 10-15.
- Dugi, R. (2008). *American Indian Special Educators and Distance Education*. Unpublished manuscript. Retrieved February 11, 2009, from <http://etda.libraries.psu.edu/ETD-db/ETD-search/browse>.
- Forbush, D., & Morgan, R. (2004). Instructional team training: Delivering live, internet courses to teachers and paraprofessionals in Utah, Idaho, and Pennsylvania. *Rural Special Education Quarterly*, 23, 9-17.
- Gehrke, R., & McCoy, K. (2007). Considering the context: Differences between the environments of beginning special educators who stay and those who leave. *Rural Special Education Quarterly*, 26, 32-40.
- Gehrke, R., & Murri, N. (2006). Beginning special educators' intent to stay in special education: Why they like it here. *Teacher Education and Special Education*, 29, 179-190.
- Gersten, R., Fuchs, L., Compton, D., Coyne, M., Greenwood C., & Innocenti, M. (2005). Quality indicators for group experimental and quasi-experimental research in special education. *Exceptional Children*, 71, 149-164.

- Gersten, R., Keating, T., Yovanoff, P., & Harniss, M. (2001). Working in special education: Factors that enhance special educators' intent to stay. *Exceptional Children, 67*, 549-567.
- Glass, G., & Hopkins, K. (1996). *Statistical methods in education and psychology* (3rd ed.). Boston, MA: Allyn & Bacon.
- Glesne, C. (2006). Making words fly: Developing understanding through interviewing. In C. Glesne (Ed.), *Becoming qualitative researchers* (pp. 79-107). Boston, MA: Pearson Education, Inc.
- Griffin, C., Kilgore, K., Winn, J., Wilborn- Otis, A., Hou, W., & Garvan, C. (2009). First-year special educators: The influence of school and contextual factors on their accomplishments and problems. *Teacher Education and Special Education, 32*, 45 – 63.
- Grisham-Brown, J., & Collins, B. (2002). Training rural educators in Kentucky through distance learning: Impact with follow-up data. *Rural Special Education Quarterly, 21*, 12-20.
- Hammond, H., Olson, J., Edson, F., Greenfield, R., & Ingalls, L. (1995). Rural education teams: A team building project. *Rural Special Education Quarterly, 14*, 3-10.
- Hardman, M., Rosenburg, M., & Sindelar, P. (2005). NCLB, IDEA, and alternative routes in preparation of rural special education teachers in high incidence areas. *Rural Special Education Quarterly, 24*, 16-21.
- Hernandez, D. (2008). Teacher induction: Easing the beginning teacher's transition into the profession and reducing attrition. *Dissertation Abstracts, 68*, 4151.

- Hodge, L., & Krumm, B. (2009). NCLB: A study of its effect on rural schools – School administrators rate service options for students with disabilities. *Rural Special Education Quarterly*, 28, 20-27.
- Huysman, J. (2008). Rural teacher satisfaction: An analysis of beliefs and attitudes of rural teachers' job satisfaction. *The Rural Educator*, 29, 31-37.
- Ingersoll, R. (2001). The realities of out-of-field teaching. *Educational Leadership*, 58, 42-45.
- Jimerson, L. (2005). Placism in NCLB – How rural children are left behind. *Equity and Excellence in Education*, 38, 211-219.
- Johnson, J., & Strange, M. (2007). *Why rural matters 2007: The realities of rural education growth*. Arlington, VA: Rural School and Community Trust.
- Kendall, R. (1992). Evaluating the benefits of a computer based telecommunication network: Telementoring and teletraining for educators in rural areas. *Journal of Research in Rural Education*, 8, 41-46.
- Knapczynyk, D., Chapman, C., Rodes, P., & Chung, H. (2001). Teacher preparation in rural communities through distance education. *Teacher Education and Special Education*, 24, 402-407.
- Knapczynyk, D., Frey, J., & Wall-Marenick, W. (2005). An evaluation of web conferencing in on-line teacher preparation. *Teacher Education and Special Education*, 28, 114-124.
- Kornhauser, A., & Sheatsley, P. (1951). Questionnaire construction and interview procedure. In M. Jahoda, M. Deutsch, & S. Cook (Eds.), *Research methods in social relations* (pp. 546 – 575). NY: Dryden Press.

- Kossar, K., Mitchem, K., & Ludlow, B. (2005). No child left behind: A national study of its impact on special education in rural schools. *Rural Special Education Quarterly*, 24, 3-8.
- Lemke, J. (1995). Attracting and retaining special educators in rural and small schools: Issues and solutions. *Rural Special Education Quarterly*, 14, 25-30.
- Lowe, J. (2006). Rural education: Attracting and retaining teachers in small schools. *The Rural Educator*, 27, 28-31.
- Lozano, L., Garcia-Cueto, E., & Muniz, J. (2008). Effect of the number of response categories on the reliability and validity of rating scales. *Methodology*, 4, 73-79.
- Ludlow, B., Conner, D., & Schechter, J. (2005). Low incidence disabilities and personnel preparation for rural areas: Current status and future trends. *Rural Special Education Quarterly*, 24, 15-22.
- Malloy, W., & Allen, T. (2007). Teacher retention in a teacher resiliency-building rural school. *The Rural Educator*, 28, 19-27.
- Mariage, T., & Garmon, M. (2003). A case of educational change: Improving student achievement through a school-university partnership. *Remedial and Special Education*, 24, 215-234.
- McHatton, P., & Daniel, P. (2008). Co-teaching at the pre-service level: Special education majors collaborate with English majors. *Teacher Education and Special Education*, 31, 118-131.
- McLeskey, J., Tyler, N., & Flippin, S. (2004). The supply of and demand for special education teachers: A review of research regarding the chronic shortage of special education teachers. *The Journal of Special Education*, 38, 5-21.

- Menlove, R., Garnes, L., & Salzberg, C. (2003). *A qualified teacher for every student: Keeping the good ones*. Salt Lake City, UT: The American Conference of the American Council on Rural Special Education. (ERIC Document Reproduction Service No. ED476211).
- Miles, M., & Huberman, A. (1994). *Qualitative data analysis: An expanded sourcebook (2nd Ed.)* Thousand Oaks, CA: Sage.
- Miller, D., Brownell, M., & Smith, S. (1999). Factors that predict teachers staying in, leaving, or transferring from the special education classroom. *Exceptional Children*, 65, 201-218.
- Miller, K., Wienke, W., & Savage, L. (2000). Elementary and middle/secondary educator's pre and post training perceptions of ability to instruct students with disabilities. *Rural Special Education Quarterly*, 19, 3-14.
- Monk, D. (2007). Recruiting and retaining high quality teachers in rural areas. *The Future of Children*, 17, 155-174.
- Nagle, K., Hernandez, G., Embler, S., McLaughlin, M., & Doh, F. (2006). Characteristics of effective elementary schools for students with disabilities. *Rural Special Education Quarterly*, 25, 3-12.
- National Center for Education Statistics. (2006a). *National Center for Education Statistics common core of data public elementary and secondary school district universe (Version 1a)*. Retrieved November 28, 2008, from <http://nces.ed.gov/ccd/index.asp>.
- National Center for Education Statistics. (2006b). *Identification of rural locales*. Retrieved November 28, 2008, from http://nces.ed.gov/ccd/rural_locales.asp.

- National Commission on Teaching and America's Future. (2002). *Unraveling the "teacher shortage" problem: Teacher retention is the key*. Washington, DC: National Commission on Teaching and America's Future.
- Prater, M., Harris, T., & Fisher, L. (2007). Special education attrition of the state of Utah: Rural vs. urban school districts. *Rural Special Education Quarterly*, 26, 25-31.
- Provasnik, S., KewalRamani, A., Coleman, M., Gilbertson, L., Herring, W., & Xie, Q. (2007). *Status of education in rural America* (NCES 2007-040). Washington, DC: National Center for Educational Statistics, Institute for Education Sciences, U. S. Department of Education.
- Purcell, L., East, B., & Rude, H. (2005). Administrative perspectives on the No Child Left Behind Act (NCLBA) for students with disabilities in rural settings. *Rural Special Education Quarterly*, 24, 27-31.
- Reeves, C. (2003). Implementing the No Child Left Behind Act: Implications for rural schools and districts. North Central Regional Education Laboratory. Retrieved August 15, 2009, from <http://www.ncrel.org/policy/pubs/html/implicate/index.html>.
- Rosenkoetter, S., Irwin, J., Saceda, R. (2004). Addressing personnel needs for rural areas. *Teacher Education and Special Education*, 27, 276-291.
- Rowland, C., Allen, M., & Education, A. (2007). Emerging strategies and practices to improve teacher quality in at-risk and hard-to-staff schools and subject areas. In C.A. Dwyer (Ed.), *America's challenge: For at-risk schools and teachers* (pp. 71-85). Washington, DC: National Comprehensive Center for Teaching Quality.

- Scheeler, M., Congdon, M., & Stansbery, S. (2010). Providing immediate feedback to co-teachers through bug-in-ear technology: An effective method of peer coaching in inclusion classrooms, *Teacher Education and Special Education*, 33, 83- 96.
- Schwartzbeck, T., Prince, C., Redfield, D., Morris, H., & Hammer, P. (2003). *How are rural districts meeting the teacher quality requirements of No Child Left Behind?* Retrieved September 8, 2009, from www.aasa.org/files/PDFs/Policy/_Teacher_Quality_Study1.pdf.
- Schroeder, L., Sjoquist, D., & Stephan P. (1986). *Understanding regression analysis: An introductory guide*. Sage University paper series on quantitative applications in the social sciences, series no. 07-057. Beverly Hills, CA: Sage Publications.
- Singer, J. (1992). Are special educator's career paths special? Results from a 13-year longitudinal study. *Exceptional Children*, 59, 262-276.
- Smith, T., & Ingersol, R. (2004). What are the effects of induction and mentoring on beginning teacher turnover? *American Educational Research Journal*, 41, 681-714.
- Squires, J. (1995). Evaluation of a rural-based early intervention personnel preparation project. *Journal of Early Intervention*, 19, 328-364.
- Stempien, L., & Loeb, R. (2002). Differences in job satisfaction between general education and special education teachers: Implications for retention. *Remedial and Special Education*, 23, 258-267.
- Tamur, J. (1992). *Asking questions and influencing answers: Questions about questions*. New York, NY; Russell Sage Foundations.
- Theobald, N. (1991). A persistent challenge: Staffing special education programs in rural schools. *Journal of Research in Rural Education*, 7, 39-50.

- U.S. Department of Education. (2008a). *Rural and low-income school programs*. Retrieved February 9, 2008, from <http://www.ed.gov/programs/reaprlisp/index.html>.
- U.S. Department of Education. (2008b). *Small rural school achievement program*. Retrieved February 9, 2008, from <http://www.ed.gov/programs/reapsrsa/eligibility.html>.
- Ware, H., & Kitsantas, A. (2007). Teacher and collective efficacy beliefs as predictors of professional commitment. *Journal of Educational Research, 100*, 303-309.
- Weiss, M. (1999). Perceived workplace conditions and first-year teachers' morale, career choice commitment, and planned retention: A secondary analysis. *Teaching and Teacher Education, 15*, 861-879.
- Westling, D., Herzog, M., Cooper-Duffy, K., Prohn, K., & Ray, M. (2006). The teacher support program: A proposed resource for the special education profession and an initial validation. *Remedial and Special Education, 27*, 136-147.
- Westling, D., & Whitten, T. (1996). Rural special education teachers' plans to continue or leave their teaching position. *Exceptional Children, 62*, 319-335.
- Whitaker, S. (2000). Mentoring beginning special education teachers and the relationship to attrition. *Exceptional Children, 66*, 546-566.

APPENDIX A

Teacher Recruitment Letter

Date

Dear Special Education Teacher:

On behalf of the United States Department of Education, we are conducting a survey about issues and factors affecting special education teachers in rural schools. The National Research Center on Rural Education Support will be conducting this study in approximately 100 randomly selected rural school districts across the United States, including schools in rural areas, and small towns. Using a computer generated randomization procedure, your district was selected.

This study will take place in May of 2009, and it is important that we begin to identify participating teachers at this time. We will follow up this letter with a phone call in the next two weeks to discuss this study and your possible participation. During the survey, you will be asked a series of questions about special education and services in your school or district. The survey should take approximately 30 minutes to complete. Participation is completely voluntary, and all information collected will be strictly confidential, including your name, the name of your school, and district. In the event of a publication or educational presentation resulting from the research, no personally identifiable information will be shared.

It is important that we have a sample of teachers that represent the variety of special education teachers in schools located in rural areas and small towns across the United States. Your participation will help us to create a meaningful picture of the issues and concerns of teachers in these schools. We would like this project serve as a voice for special educators, students with disabilities, and their communities throughout the nation. We hope you will want to help us accomplish this goal.

If you have any questions about this study, please do not hesitate to contact us. You can reach Ann Berry at 570-412-2792 or Kimberly Dadisman at 919-962-8241, or by email at abb175@psu.edu or dadisman@email.unc.edu. All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have any questions or concerns about your rights as a research participant, you may contact, anonymously if you wish, the Institutional Review Board at 919-966-3113 or by email at IRB_subjects@unc.edu (Reference Study # 06-0608). We look forward to talking with you and to your possible participation in this project.

Best regards,

Ann Berry
Pennsylvania State University

Kimberly Dadisman
National Research Center on
Rural Education Support
University of North Carolina

APPENDIX B

Teacher Survey

Survey taker's ID

School

Survey Date and Time

TEACHER SURVEY

Assent Script

Hello, my name is _____. I am a staff member of the National Research Center on Rural Education Support at the University of North Carolina. As part of a research study, we are conducting a phone survey about special education services in small towns and rural schools. We hope that the results of this research will benefit rural schools as it could help identify issues involved with providing special education services to students.

Your district has been randomly selected to participate and we estimate that approximately 300 special education teachers across the United States will be involved in the study. We would like this project to serve as a voice for special educators, students with disabilities, and their rural communities throughout the nation. We hope you will want to help us accomplish this goal.

Your participation in this survey is completely voluntary. This means you do not have to participate unless you would like to and you are free to stop at any time during the survey. You are also free to say that you do not want to answer any of the questions. There is no penalty for refusing to participate, stopping during the survey, or not wanting to answer specific questions.

If you do agree to participate in the survey, you will be asked a series of questions that will take about 30 minutes to complete. You will be compensated \$20 for your time. Everything you say will be strictly confidential, including your name and any other identifiable information. We will assign an identification number to your survey, and will not identify any participating school, district, or individual in any reports, publications, or presentations.

Do you have any questions?

At any time you can call Kimberly Dadisman at 919-962-8241 or Matthew Irvin at 919-843-8940 with questions about the research study. All research on human volunteers is reviewed by a committee to protect your rights and welfare. If you have any questions or concerns about your rights as a research participant you may contact, anonymously if you wish, the Institutional Review Board at 919-966-3113 or by email at IRB_subjects@unc.edu (Reference Study # 06-0608).

Did the teacher agree to take the survey?

Yes

No - if no, end survey now.

You will be paid \$20 for your participation in our survey. Where would you like this payment sent?

	Name
	Mailing Address
	City
	State
	Zip
	Notes (i.e., made out to district? Etc.)

Great! We're ready to begin.

First we would like to ask you a few general questions about your background and your current position.

1. What is the highest level of education that you have completed?
[coder: ask open-ended]

have not completed BA/BS

BA/BS

MS/MEd

Masters' + 15 **[coder: This is a masters' plus 15 extra credits. It is a higher salary step in some states.]**

Other (check)

Other (specify)

refused

Comments

2. What certifications do you currently hold? Please include special education as well as general education certifications, as well as any endorsements.

Certification 1

Certification 2

Certification 3

Certification 4

refused

Comments **[Coder: if they list more than four certifications, add them here]**

3. Did you obtain your special education certification through a traditional teacher training program or through an alternate licensure program?

traditional teacher training program

alternate licensure program

refused
Comments

3a. Approximately how many credits were required for your certification in special education (given that the average course is 3 credits)?

[coder: ask open-ended. if necessary, emphasize that this is special education only, and courses required for certification]

0-12
13-24
25-45
46-69
70+
don't know/remember
refused
Comments

3b. Do you hold your state's highest level of certification/licensure in special education?

Yes
No
Don't know
Refused
Comments

4. Including the current school year (2008-2009 or 2009-2010) how long have you been in your current position in special education?

[Coder: if this is their first year, enter 1]

refused
Comments

5. Including the current school year (2008-2009 or 2009-2010) how long, total, have you taught special education?

[Coder: if this is their first year, enter 1]

refused
Comments

***6. Including the current school year (2008-2009 or 2009-2010) how long, total, have you been teaching?**

[Coder: if this is their first year, enter 1. This includes special education and general education.]

refused
Comments

7. What grade levels do you teach in your current position?

refused
Comments

8. How many students are you currently responsible for providing special education services to? In other words, what is the number of students on your caseload, not including students on a 504 plan.

refused
Comments

9. What types of classrooms do you teach in? I can read a list of options if you'd like.
[coder: read options only if they ask - and if they only list one, select that as the answer for 9a as well and don't ask.]

self-contained classroom?
inclusion classroom?
resource room or learning center?
as a classroom consultant or inclusion specialist?
other?
specify if other
refused
Comments

9a. Which of these would you say is your primary role?
[coder: remind of above selections if needed.]

self-contained classroom?
inclusion classroom?
resource room or learning center?
as a classroom consultant or inclusion specialist?
other' specified in previous question
refused
Comments

10. Approximately how many of your special education students fall into each of the following categories of disabilities or impairments? It's fine if some students who have multiple difficulties end up being 'double counted' in your response.

[coder: This refers to the primary disability on the student's IEP]

Autism
 Deaf-blindness
 Deafness
 Hearing impairment (HI)
 Emotional disturbance (BED, SED)
 Gifted
 Cognitive or intellectual disability (MR)
 Orthopedic impairment
 Other health impairment (OHI)
 Learning disability (LD)
 Traumatic brain injury (TBI)
 Visual impairment (VI)
 Multiple disabilities
 Speech or language impairment as a primary disability
 Speech or language impairment as related service
 refused
 Comments

10a. Do you feel that you are asked to provide services to students outside your areas of certification?

Yes
 No
 refused
 Comments

10b. [IF RELEVANT] Which areas?

refused

11. There are a number of tasks involved in the education of students with disabilities. I am going to read a list of tasks. Please tell me which person, or combination of people, is primarily responsible for each task in your school. Is the special educator, general educator, paraprofessional or someone else primarily responsible as the....

[coder: read all, and do not select more than two for each task]

main teacher of new material in inclusive settings

	special educator general educator paraprofessional other specify if other don't know refused comments
curriculum modification and differentiating instruction	special educator general educator paraprofessional other specify if other don't know refused comments
one-on-one assistance to students in learning new material	special educator general educator paraprofessional other specify if other don't know refused comments
behavior management [Coder: if ambiguous, ask who develops a behavior management plan]	special educator general educator paraprofessional other specify if other don't know refused

	comments
leader of IEP meetings	special educator general educator paraprofessional other specify if other don't know refused comments
lead author of IEP	special educator general educator paraprofessional other specify if other don't know refused comments
supervising paraprofessionals day-to-day supervision]	[Coder: special educator general educator paraprofessional other specify if other don't know refused comments
assisting in health care and hygiene needs	special educator general educator paraprofessional other specify if other don't know

	refused
	comments
assessment of student progress	
	special educator
	general educator
	paraprofessional
	other
	specify if other
	don't know
	refused
	Comments

11a. Which of these do you consider to be your main responsibility? [coder: select one, offer to remind them of their choices if necessary]
main teacher of new material in inclusive settings
curriculum modification and differentiating instruction
one-on-one assistance to students in learning new material
behavior management
leader of IEP meetings
lead author of IEP
supervising paraprofessionals
assisting in health care and hygiene needs
assessment of student progress
refused
Comments

*11b. Are there other tasks that you do regularly, which I didn't name, that help the school or district but don't necessarily involve special education? (i.e., janitor, nurse, after-school activities, test proctor)
refused
Comments

*12. Are you currently employed full-time or part-time as a special education teacher?
full-time
part-time
other
specify if other

	refused Comments
<p>13. Now I am going to ask you some questions about the work-related support you receive as a special educator. By work-related support I mean support that provides you with information and resources or the opportunity to ask questions and problem-solve student-related issues.</p> <p>I am going to read you a list of possible sources of support.</p> <p>Please tell me if each type of support was available or not available to you this school year.</p> <p>[coder: check by name if it is a source of support, and for those where support was available, ask "Would you say this support is very helpful, moderately helpful, minimally helpful, or NOT a helpful source of support at all?"]</p>	
<p>a) mentor teacher</p> <p>very helpful</p> <p>moderately helpful</p> <p>minimally helpful</p> <p>not a helpful source of support</p>	
<p>b) other special educators in your building</p> <p>very helpful</p> <p>moderately helpful</p> <p>minimally helpful</p> <p>not a helpful source of support</p>	
<p>c) other special educators in your district/area</p> <p>very helpful</p> <p>moderately helpful</p> <p>minimally helpful</p> <p>not a helpful source of support</p>	
<p>d) special education team meetings (e.g., special education teachers, director, related service)</p> <p>very helpful</p> <p>moderately helpful</p> <p>minimally helpful</p> <p>not a helpful source of support</p>	
<p>e) online contacts with other special educators</p> <p>[coder: for example, email with SPED contacts in other parts of the country]</p> <p>very helpful</p> <p>moderately helpful</p>	

	minimally helpful not a helpful source of support
f) special education director/supervisor	very helpful moderately helpful minimally helpful not a helpful source of support
g) related service providers (e.g., OT/PT, speech pathologist, school psychologist)	very helpful moderately helpful minimally helpful not a helpful source of support
h) general education teachers	very helpful moderately helpful minimally helpful not a helpful source of support
i) grade-level team meetings (including general education and special education staff)	very helpful moderately helpful minimally helpful not a helpful source of support
j) building school administrator	very helpful moderately helpful minimally helpful not a helpful source of support
k) professional development/training opportunities	very helpful moderately helpful minimally helpful not a helpful source of support
l) university programs or courses	very helpful

	moderately helpful minimally helpful not a helpful source of support
m) professional organizations (CEC, PTA, NEA)	very helpful moderately helpful minimally helpful not a helpful source of support
n) parents of students	very helpful moderately helpful minimally helpful not a helpful source of support
o) community leaders (school board, local leaders)	very helpful moderately helpful minimally helpful not a helpful source of support
p) other? Specify here	very helpful moderately helpful minimally helpful not a helpful source of support
	refused Comments

14. Overall, which source of work-related support has been MOST supportive to you professionally in your role as a special educator? [coder: offer to remind of responses if necessary]

- a) mentor teacher
- b) other special educators in your building
- c) other special educators in your district/area
- d) special education team meetings (e.g., special education teachers, director, related service)
- e) online contacts with other special educators
- f) special education director/supervisor

<ul style="list-style-type: none"> g) related service providers (e.g., OT/PT, speech pathologist, school psychologist) h) general education teachers i) grade-level team meetings (including general education and special education staff) j) building school administrator k) professional development/training opportunities l) university programs or courses m) professional organizations (CEC, PTA, NEA) n) parents of students o) community leaders (school board, local leaders) p) other specified in previous question 	<p>refused</p> <p>Comments</p>
---	--------------------------------

<p>15. Are there any of the supports I mentioned that are not available to you that you feel would be helpful if they were available? [coder: offer to remind of responses if necessary]</p> <ul style="list-style-type: none"> a) mentor teacher b) other special educators in your building c) other special educators in your district/area d) special education team meetings (e.g., special education teachers, director, related service) e) online contacts with other special educators f) special education director/supervisor g) related service providers (e.g., OT/PT, speech pathologist, school psychologist) h) general education teachers i) grade-level team meetings (including general education and special education staff) j) building school administrator k) professional development/training opportunities l) university programs or courses m) professional organizations (CEC, PTA, NEA) n) parents of students o) community leaders (school board, local leaders) p) other specified in previous question 	<p>refused</p> <p>Comments</p>
---	--------------------------------

The next set of questions will ask you about your relationships with others in your school (district) for receiving work-related support.

If the question does not apply to you in your current position please say “Not Applicable”.

To what extent do you agree with the following statements? Indicate whether you Strongly agree, Agree, Disagree, or Strongly disagree.

16. My building administrator understands my role and responsibilities with respect to the students on my caseload.

Strongly agree

Agree

Disagree

Strongly disagree

n/a

refused

Comments

17. My special education supervisor/director understands my role and responsibilities with respect to the students on my caseload.

Strongly agree

Agree

Disagree

Strongly disagree

n/a

refused

Comments

18. The general education teachers in my school understand my role and responsibilities with respect to the students on my caseload.

Strongly agree

Agree

Disagree

Strongly disagree

n/a

refused

Comments

19. The responsibility of providing services for the students with disabilities on my caseload falls entirely on my shoulders.

Strongly agree
 Agree
 Disagree
 Strongly disagree
 n/a
 refused
 Comments

19a. What makes you feel this way?

[coder: this refers to their answer to question 19 only]

refused
 Comments

Next, I would like to know about your plans for your career over the next few years. I'm thinking of various options that people might have in mind, for example, staying in your current position, transferring to another position in your school, transferring to a different position in a different school or leaving teaching all together.

20. For the 2009-2010 (or 2010-2011) school year (that's next year) what are you expecting to do? [coder: ask open-ended, please note directions for each choice carefully]

- a) staying in my current position [skip to 21]
- b) staying in special education, but in a different position in my school [skip to 20g]
- c) staying in special education, but in a different position in a different school [skip to 20g]
- d) continuing to teach in my current school, but no longer in special education [skip to 20g]
- e) continuing to teach, but in a different school and no longer in special education [skip to 20g]
- f) leaving teaching altogether [skip to 20h]

refused
 Comments

20g. What type of position?

[coder: read open-ended, ask 20h after asking this]

- different special education teaching position
- special education position for a private school or organization (includes higher education special ed, or teaching for a local service provider)
- special education leadership or administrative position
- related position (reading specialist, technology)
- general education (kindergarten, librarian)
- administration (not special education)

refused

Comments

20h. What are the reasons you think you'll be leaving your position?

[Coder: skip to 22 after answering this question]

refused

Comments

21. And thinking farther into the future, what do you think you're likely to be doing five years from now?

[coder:

ask open-ended, please note directions for each choice carefully]

a) staying in my current position **[skip to 22]**

b) staying in special education, but in a different position in my school **[skip to 21g]**

c) staying in special education, but in a different position in a different school **[skip to 21g]**

d) continuing to teach in my current school, but no longer in special education **[skip to 21g]**

e) continuing to teach, but in a different school and no longer in special education **[skip to 21g]**

f) leaving teaching altogether **[skip to 21h]**

refused

Comments

21g. What type of position?

[coder:

read open-ended, ask 21h after asking this]

different special education teaching position

special education position for a private school or organization (includes higher education special ed, or teaching for a local service provider)

special education leadership or administrative position

related position (reading specialist, technology)

general education (kindergarten, librarian)

administration (not special education)

refused

Comments

21h. What are the reasons you think you'll be leaving your position?

refused

Comments

To what extent do you agree with the following statements? Would you say you Strongly agree, Agree, Disagree, or Strongly disagree.

22. If I had a chance to do it all over again, I would become a special education teacher.

Strongly agree

Agree

Disagree

Strongly disagree

refused

Comments

23. If I had a chance to do it all over again, I would teach in a school like the one I am in now, in a small town or rural area.

Strongly agree

Agree

Disagree

Strongly disagree

refused

Comments

24. I find real enjoyment in my work, most of the time.

Strongly agree

Agree

Disagree

Strongly disagree

refused

Comments

25. I would recommend being a special educator in a small town or rural school to someone else.

Strongly agree

Agree

Disagree

Strongly disagree

refused

Comments

26. The size of my caseload is manageable.

Strongly agree

Agree

	Disagree
	Strongly disagree
	refused
	Comments

27. I am able to meet the individual <i>academic</i> needs of the students on my caseload this year.	
	Strongly agree
	Agree
	Disagree
	Strongly disagree
	refused
	Comments

27b. I am able to meet the individual <i>behavioral</i> needs of the students on my caseload this year.	
	Strongly agree
	Agree
	Disagree
	Strongly disagree
	refused
	Comments

28. I have found ways to deal with work-related stress.	
	Strongly agree
	Agree
	Disagree
	Strongly disagree
	refused
	Comments

29. In general, being a special education teacher in a small town or rural district is a stressful job.	
	Strongly agree
	Agree
	Disagree
	Strongly disagree

refused
Comments

30. Overall, how satisfied are you with the instructional aspects of teaching and delivering services to your students? By instructional aspects I mean providing instruction in specific skills, and by delivering services I mean things like modifying materials. Would you say you are.... **[coder: this refers to how they feel they are able to perform these tasks]**

Very satisfied
Satisfied
Dissatisfied [coder: ask 30a]
Very dissatisfied [coder: ask 30a]
refused
Comments

30a. [if 30 is dissatisfied or very dissatisfied] Which instructional aspect contributes THE MOST to your sense of dissatisfaction?

refused
Comments

31. Overall, how satisfied are you with the NON-instructional aspects of teaching, for example paperwork or other assigned duties unrelated to teaching, in your school [district]? Would you say you are....

Very satisfied
Satisfied
Dissatisfied [coder: ask 31a]
Very dissatisfied [coder: ask 31a]
refused
Comments

31a. [if 31 is dissatisfied or very dissatisfied] Which non-instructional aspect contributes THE MOST to your sense of dissatisfaction?

refused
Comments

Finally, I would like to ask you some questions about the professional development or training opportunities that are available to you.

***32. How often do you participate in professional development/ training opportunities specific to special education?** **[coder: ask open-ended]**

More than five times a year
Three or four times a year
Once or twice a year
Less than once a year
refused
Comments

*32a. Is this more than your state requires?
Yes
No
Don't know
refused
Comments

*33. I am going to read you a list of professional development/training activities. Please tell me which of the following specific types have been available to you in your district over the past 3 years, and if they have, if you have participated in them. [coder: emphasize <i>by your district</i>. This isn't necessarily just for special education, and can be available locally or by a local educational service agency. For all questions, check if yes.]
a) technology - available? a) technology - did you participate?
b) content-specific training (e.g., social studies, math) - available? b) content-specific training (e.g., social studies, math) - did you participate?
c) inclusion of students in the general education curriculum - available? c) inclusion of students in the general education curriculum - did you participate?
d) classroom management and discipline - available? d) classroom management and discipline - did you participate?
e) grade-level or school-level collaboration - available? e) grade-level or school-level collaboration - did you participate?
f) training in specific disability category - available? f) training in specific disability category - did you participate?
g) special education processes (e.g., IEPs, evaluation/assessment) - available? g) special education processes (e.g., IEPs, evaluation/assessment) - did you participate?
h) working with paraprofessionals - available? h) working with paraprofessionals - did you participate?
i) working with parents - available?

i) working with parents - did you participate?
j) physical management/behavior - available? j) physical management/behavior - did you participate?
k) positive behavior support - available? k) positive behavior support - did you participate?
l) health-related procedures - available? l) health-related procedures - did you participate?
m) safety - available? m) safety - did you participate?
n) alternative assessment - available? n) alternative assessment - did you participate?
o) other? Specify here o) other - did you participate?
refused
Comments

***33a. Are there any of the previously-mentioned types of professional development that were Not Available do you feel would be helpful if they were available?**

[coder: review list of what they said were not available if necessary - don't read entire list unless necessary]

- a) technology
- b) content-specific training (e.g., social studies, math)
- c) inclusion of students in the general education curriculum
- d) classroom management and discipline
- e) grade-level or school-level collaboration
- f) training in specific disability category
- g) special education processes (e.g., IEPs, evaluation/assessment)
- h) working with paraprofessionals
- i) working with parents
- j) physical management/behavior
- k) positive behavior support
- l) health-related procedures
- m) safety
- n) alternative assessment
- o) the 'other' specified in 33
- refused

Comments

***33b. Overall, what professional development/training was MOST helpful to you professionally in your role as a special educator or the past three years?**

[coder: review list of what they said they participated in if necessary - don't read entire list unless necessary]

- a) technology
- b) content-specific training (e.g., social studies, math)
- c) inclusion of students in the general education curriculum
- d) classroom management and discipline
- e) grade-level or school-level collaboration
- f) training in specific disability category
- g) special education processes (e.g., IEPs, evaluation/assessment)
- h) working with paraprofessionals
- i) working with parents
- j) physical management/behavior
- k) positive behavior support
- l) health-related procedures
- m) safety
- n) alternative assessment
- o) the 'other' specified in 33

refused

Comments

***34. Is it difficult to attend a professional development opportunity if it isn't held at your school or in your district?**

Yes

No

refused

Comments

***34a. [IF RELEVANT] Why is it difficult?**

refused

Comments

***35. What format of professional development training delivery do you find to be THE MOST helpful?**

all]

[coder: read

district-level training or inservice
 local or regional training
 state or national training
 online distance education
 video-based distance education
 readings/media on own time
 other?
 specify if other
 refused
 Comments

***36. Does the school or district pay or reimburse you for the cost of participating in professional development?**

Yes, fully
 Yes, partially
 No
 refused
 Comments

We have a few remaining questions.

37. [Coder: record answer either way, but only ask if it isn't clear by this point in the interview.] Finally, are you male or female?

Male
 Female
 refused
 Comments

38. What is your age?

refused
 Comments

***39. What best describes your race or ethnicity?**

Black (not Hispanic)
 Hispanic/Latino
 Asian or Pacific Islander

<p>Native American or Alaska Native</p> <p>White (not Hispanic)</p> <p>other?</p> <p>specify if other</p> <p>refused</p> <p>Comments</p>
--

<p>40. Is the school where you are currently teaching located in the same general area as the place where you grew up?</p> <p>Yes</p> <p>No</p> <p>refused</p> <p>Comments</p>

<p>41. Approximately how many years have you been living in the area you are living in now?</p> <p>refused</p> <p>Comments</p>

<p>42. What do you like best about being a special educator in a small town or rural school [district]? [coder:</p> <p>clarify if necessary]</p> <p>refused</p> <p>Comments</p>
--

<p>43. What is your biggest challenge being a special educator in a small town or rural school [district]? [coder:</p> <p>clarify if necessary]</p> <p>refused</p> <p>Comments</p>

<p>Thank you very much for your participation. I appreciate the time you have spent answering these questions. Your answers have been very helpful.</p>
--

Note. Questions included for NRCRES research purposes are delineated with an asterisk (*).

VITA

Ann Bassett Berry

Education

2005-present Ph.D. Candidate in Special Education, The Pennsylvania State University
1985 M. S. in Special Education, Southern Illinois University
1977 B. A. Skidmore College

Publications, Presentations, and Awards

Berry, A. (April, 2010). *Effects of SRSD instruction for struggling adult writers: Preparing for the GED*. Paper presented at the International Council for Exceptional Children Conference, Nashville, TN.

Berry, A., & Mason, L. (2010). The effects of self-regulated strategy development on the writing of expository essays for adults with written expression difficulties: Preparing for the GED. *Remedial and Special Education*, in press.

Berry, A. & Nolan, J. (May, 2010). *Examining the process of novice student teaching supervisor development*. Paper presented at the American Education Research Association, Denver CO.

Berry, A. & Petrin, R. (November, 2009). *Issues in professional development and teacher retention*. Invited presentation at the National Research Center on Rural Education Support Conference, Chapel Hill, NC.

Berry, A. (September, 2009). *Listening to the special education teachers*. Invited presentation to the Office Concerned with Rural Education (OCRE), Washington, DC.

March, 2010. Research Proposal Award, American Council on Rural Special Education

Professional Experience

2009 Graduate Student Teaching Supervisor and Seminar Instructor
Department of Special Education, Pennsylvania State University,
University Park. PA

2000 – 2005 Special Education Teacher, Students with Mild Disabilities,
Plainfield Elementary School, Meriden, NH

1994 – 2000 College Instructor, Community College of Vermont, White River
Junction, VT and Johnson State College, Johnson, VT

1985 – 1989 Special Education Teacher, Students with Mild Disabilities,
Lebanon Junior High School, Lebanon, NH