



January 2015

Utilizing Novice Teachers' Perceptions And Voices To Make Recommendations For Improving Teacher Preparation For Inclusive Education: A Mixed Methods Study

Keri Lynne Desutter

Follow this and additional works at: <https://commons.und.edu/theses>

Recommended Citation

Desutter, Keri Lynne, "Utilizing Novice Teachers' Perceptions And Voices To Make Recommendations For Improving Teacher Preparation For Inclusive Education: A Mixed Methods Study" (2015). *Theses and Dissertations*. 1763.
<https://commons.und.edu/theses/1763>

This Dissertation is brought to you for free and open access by the Theses, Dissertations, and Senior Projects at UND Scholarly Commons. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of UND Scholarly Commons. For more information, please contact zeinebyousif@library.und.edu.

UTILIZING NOVICE TEACHERS' PERCEPTIONS AND VOICES TO MAKE
RECOMMENDATIONS FOR IMPROVING TEACHER PREPARATION FOR
INCLUSIVE EDUCATION: A MIXED METHODS STUDY

By

Keri L. DeSutter
Bachelor of Arts, South Dakota State University, 1995
Master of Science, Kansas State University, 2001

A Dissertation

Submitted to the Graduate Faculty

of the

University of North Dakota

In partial fulfillment of the requirements

For the degree of

Doctor of Philosophy

Grand Forks, North Dakota
May
2015

This dissertation, submitted by Keri L. DeSutter, in partial fulfillment of the requirements for the Degree of Doctor of Philosophy from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done, and is hereby approved.

Dr. Margaret Zidon, Chairperson

Dr. Robert Stupnisky

Dr. Kari Chiasson

Dr. Tami Carmichael

This dissertation is being submitted by the appointed advisory committee as having met all requirements of the Graduate School at the University of North Dakota and is hereby approved.

Dr. Wayne E. Swisher
Dean of the School of Graduate Studies

Date

PERMISSION

Title Utilizing Novice Teachers' Perceptions and Voices to Make
Recommendations for Improving Teacher Preparation for Inclusive
Education: A Mixed Methods Study

Department Teaching and Learning

Degree Doctor of Philosophy

In presenting this dissertation in partial fulfillment of the requirements for graduate degree from the University of North Dakota, I agree that the library of this University shall make it freely available for inspection. I further agree that permission for extensive copying for scholarly purposes may be granted by the professor who supervised my dissertation work or, in her absence, by the chairperson of the department or the dean of the Graduate School. It is understood that any copying or publication or other use of this dissertation or any part thereof for financial gain shall not be allowed without any written permission. It is also understood that due recognition shall be given to me and to the University of North Dakota in any scholarly use which may be made of any material in my dissertation.

Keri L. DeSutter
May 5, 2015

TABLE OF CONTENTS

LIST OF FIGURES	xi
LIST OF TABLES	xii
ACKNOWLEDGEMENTS.....	xiv
ABSTRACT	xvi
CHAPTER	
I. INTRODUCTION	1
Statement of the Problem.....	2
Need for Study	4
Purpose of the Study	9
Rationale for the Study	9
Research Questions	10
Philosophical Framework	11
Assumptions.....	14
Delimitations.....	14
Researcher Bias.....	15
Summary of Chapter I	16
II. LITERATURE REVIEW	17
The Evolution of Inclusive Education.....	17
United States Supreme Court Cases.....	18

Special Education Legislation.....	19
Regular Education Legislation.....	20
Around the Globe	22
Areas of Expertise Needed for Inclusive Education.....	23
Instructional Practices	23
Collaboration Skills.....	25
Belief Systems.....	26
Inclusive Education and Teacher Preparation	31
Professional Standards	31
Courses.....	33
Field Experiences.....	34
Program Models	36
Assessing Teachers' Perceptions of Preparation for Inclusive Education	38
Qualitative	38
Quantitative	40
Mixed Methods.....	43
Current Understandings of Beginning Teachers' Perceptions of Preparation for Inclusive Education.....	47
Inclusion: A Continued Struggle to Do Well.....	49
Summary of Chapter II	50
III. METHODOLOGY	52
Mixed Methods.....	52
Explanatory Sequential Design	53

Challenges of the Explanatory Sequential Design.....	53
Context and Participants	55
Location.....	55
Participants.....	56
Data Collection	60
Phase I: Quantitative Survey	60
Phase II: Interviews	61
Informed Consent and Confidentiality.....	62
Data Analysis	64
Quantitative Analysis	64
Measures.....	65
Minnesota Standards of Effective Practice.....	66
Inclusive Beliefs: General.....	68
Preparation for Inclusion.....	69
Inclusive Implementation: Classroom Management.....	70
Inclusive Implementation: Instructional Practices	71
Inclusive Implementation: Competence.....	72
Components of Inclusive Education	72
Inferential Statistics.....	74
Qualitative Analysis	75
Deductive Data Analysis.....	76
Inductive Data Analysis	77
Validity.....	79

	Reliability and Credibility	81
	Summary of Chapter III	81
IV.	RESULTS.....	82
	Research Questions	82
	Quantitative Results	83
	Demographic/Background Variables	83
	Research Question One	87
	Descriptive Statistics for Factors Related to Teacher Preparation Content.....	88
	Correlations	91
	Tests of Group Differences.....	93
	Research Question Two	93
	Percentages of Agreement	94
	Correlations.....	95
	Tests of Group Differences	97
	Integrating Quantitative and Qualitative Phases: Predictors.....	98
	Qualitative Findings.....	103
	Participants	103
	Predictor Variables	104
	Preparation for Inclusion Significant Predictors	104
	Predictor 1: Gender.....	104
	Predictor 2: Year of Teaching	104
	Predictor 3: MNSS: Resources	105
	Predictor 4: MNSS: Knowledge and Skills	107

Perceptions of Competence Significant Predictors	109
Predictor 1: Year of Teaching	109
Predictor 2: MNSS: Resources	110
Predictor 3: MNSS: Knowledge and Skills	111
Predictor 4: TP: Beliefs about Children and Teaching.....	112
Themes Related to Research Questions	115
Research Question One.....	115
Knowledge but No Experience	115
Not Enough Tools in the Toolbox	116
Research Question Two.....	118
Creating a Positive Niche for All Learners	118
Communication and Collaboration	120
Social Aspects of Inclusion.....	122
Research Question Three	122
More Coursework	123
More Opportunities.....	124
More Realness	125
Connecting Quantitative and Qualitative Results	126
Summary of Chapter IV	126
V. DISCUSSION	129
Discussion Based on Pragmatic Framework.....	130
Experiences of Students Should Help Guide Curriculum	130
Seek Knowledge in Order to Solve Problems.....	132

How Something Is Studied Is Important	134
Subjects Should Be Viewed As Interdisciplinary	137
Summary of Recommendations for Teacher Educators	139
Limitations	144
Directions for Future Research.....	145
Concluding Remarks	147
APPENDICES	149
Appendix A: Map of Minnesota Regional Service Cooperatives	150
Appendix B: Email Letter to Regional Service Directors	151
Appendix C: Sample Letter of Agreement Provided to Service Cooperative Directors	152
Appendix D: Online Survey: Beginning Teacher Recruitment Email.....	153
Appendix E: Individual Interview: Recruitment Email	154
Appendix F: Survey Codebook	155
Appendix G: Interview Protocol.....	162
Appendix H: Interview Informed Consent.....	164
REFERENCES	168

LIST OF FIGURES

Figure	Page
1. Framework for Pragmatism.....	13
2. Diagram for an Explanatory Sequential Study Titled: Utilizing Novice Teachers' Perceptions and Voices to Make Recommendations for Improving Teacher Preparation for Inclusive Education: A Mixed Methods Study.....	54
3. Map of Steps in the Data Process for Example Codes (Modeled after Fisher & Ociepka, 2011).....	78
4. Display of Quantitative and Qualitative Findings Related to Preparation for Teaching in Inclusive Classrooms.....	127
5. Display of Quantitative and Qualitative Findings Related to Competence for Teaching in Inclusive Classrooms.....	128

LIST OF TABLES

Table	Page
1. Exploratory Factor Analysis of Minnesota Standards of Effective Practice Items	67
2. Exploratory Factor Analysis of Inclusive Beliefs: General Scale	69
3. Exploratory Factor Analysis of Preparation for Inclusion Scale.....	70
4. Exploratory Factor Analysis of Components of Inclusive Education Perceived in Teacher Education Scale	73
5. Personal Characteristics of Participants	84
6. Professional Characteristics of Participants.....	85
7. Background Variables Specific to Students with Disabilities.....	86
8. Minnesota Standards of Effective Practice Factors	88
9. Descriptive Statistics for Components of Inclusive Education: Importance and Teacher Preparation	90
10. Age, Field Experiences, State Standards Factors, Teacher Preparation Factors, and Beliefs, Preparation for Inclusion and Competence for Inclusion Correlations	92
11. Percentages of Agreement for Items Related to Requirements and Demands of Inclusive Education.....	95
12. Demographic, Competence Scale, Inclusive Practices and Classroom Management Items Correlations.....	96
13. Standardized Regression Coefficients, Variance Parameters, and Incremental <i>F</i> Tests for Preparation for Inclusion	100

14. Standardized Regression Coefficients, Variance Parameters, and Incremental <i>F</i> Tests for Competence for Inclusion	101
15. Demographic Data of Interview Participants	104
16. Joint Display Arraying Preparation and Competence Levels by Significant Quantitative Factors from Both Preparation and Competence for Inclusive Education	114

ACKNOWLEDGEMENTS

I would like to thank my advisor and committee chair, Dr. Margaret Zidon. I am grateful for the gentle and consistent way you challenged me with your high expectations. I am also thankful for your support and encouragement during this process. As well, I would like to extend a special thanks to Dr. Robert Stupnisky for serving on my committee and for your exceptional teaching abilities. I will be forever grateful that I took your Statistics II and Mixed Methods courses. The courses, your expectations, and your kind demeanor enabled me to gain essential skills that I will continue to use throughout my career. I would also like to thank Dr. Kari Chiasson and Dr. Tami Carmichael for serving on my committee.

Additionally, I would like to express sincere appreciation for all of the novice teachers who completed the survey and especially to the teachers who shared their thoughts and insights during the interview process. Visiting with each of you was an enriching experience for me.

I would like to also extend gratitude to the faculty and students at Minnesota State University Moorhead (MSUM). My life has certainly been transformed by the opportunities and experiences I have been provided as a faculty member in the School of Teaching and Learning at MSUM.

The font chosen for this dissertation is Arial. Arial is a recommended font by Universal Design for Learning (UDL) experts. UDL principles strive to increase accessibility of teaching methods and learning materials to learners with varying needs and abilities.

Lastly, but most importantly, I would like to thank my husband, Tom. I am beyond grateful for you. Your encouragement, optimism, patience, kindness, loyalty, respect, intelligence, friendship, and love are never ending and always available. Without you I would not be me.

ABSTRACT

The purpose of this explanatory sequential mixed methods study was to examine novice elementary teachers' perceptions of preparedness and competence for teaching in inclusive classrooms in relation to experiences during undergraduate teacher preparation. Factors that correlate with, identify differences between, or predict perceptions of preparation and competence for teaching in inclusive classrooms were examined. A pragmatic framework guided this study.

The responses from eighty-four novice teachers from the state of Minnesota were utilized during the quantitative phase of the study. During this phase participants completed an online survey containing items related to Minnesota Standards of Effective Practice, Inclusive Beliefs, Preparation for Inclusion, Inclusive Classroom Management and Instructional Practices, Competence for Teaching in Inclusive Classrooms, and Components of Inclusive Education identified as important within the literature. Demographic information was also collected. After initial quantitative analysis, qualitative data was collected through in-depth interviews with five novice teachers who completed the online survey.

Quantitative results indicated that coverage of the Minnesota Standards of Effective Practice significantly correlated with higher perceptions of preparation and competence for teaching in inclusive classrooms. Hierarchical multiple regression models for both preparation and competence for teaching in inclusive classrooms also produced significant results. The qualitative data enabled the researcher to identify specific experiences or components related to the significant predictor variables that help to better explain varying levels of perceptions of preparation or competence for teaching in inclusive classrooms. The qualitative results further revealed that novice teachers feel more coursework, more experiences, and more authenticity related to special education, students with disabilities, and inclusive education during teacher preparation would have more fully prepared them for the challenges of teaching all levels of learners in their classrooms. Recommendations for teacher education faculty are provided that mirror the suggestions of the novice teachers.

CHAPTER I

INTRODUCTION

Understanding how to best prepare teachers for today's diverse classrooms has become a concern of national focus (Hill-Jackson & Lewis, 2010). Since 1975 and the passage of P.L. 94-142, the Education for All Handicapped Children Act, the inclusion of students with disabilities in the regular classroom has become increasingly common. More recently, legislation, such as the Individuals with Disabilities Education Improvement Act (IDEIA, 2004) and the No Child Left Behind Act (NCLB, 2001), has placed significant emphasis on all students having access to high-quality instruction at their grade level and has refocused the attention on inclusive education (Richardson, 2010). Furthermore, advocates for students with disabilities and proponents of educational equity and social justice, along with parents and educators from a variety of backgrounds, support the power of inclusive education for students with disabilities as a first step in "helping people value diversity" (Schwarz, 2006, p. 2).

Fulfilling the promise of inclusive education seems to be a challenge that has not yet been met. While reasons for this are complex, research studies (Allday, Neilsen-Gatti, & Hudson, 2013; Alvarez-McHatton & Parker, 2013; Gehrke & Cocchiarella, 2013) indicate lack of understanding regarding the identification, acquisition, development, and application of precise knowledge,

skills, and beliefs needed to create effective inclusive environments as potential inhibitors for teachers attempting to teach in inclusive classrooms. However, current research (Hamre & Oyster, 2004; Klehm, 2014;) and educational policies (e.g., Least Restrictive Environment mandates, the Regular Education Initiative, participation in statewide assessment mandates, and teacher preparation accreditation policies requiring evidence of programs addressing diversity within their programs) should alert teacher preparation faculty that learning how to best prepare preservice teachers to teach in inclusive educational environments is a responsibility to take seriously.

Statement of the Problem

The most current data available from the U.S. Department of Education indicates that 60.5% of students with disabilities spend 80% or more of their school day in regular education classrooms (U.S. Department of Education, National Center for Education Statistics, 2013a). In Minnesota, 61.6% of students with disabilities are reported to spend 80% or more of their school day in regular education environments (Minnesota Department of Education, 2014). However, research has yet to reveal how effective belief systems and skills are developed in teachers preparing for inclusive classrooms (Jordan, Schwartz, & McGhie-Richmond, 2009).

Researchers acknowledge that there is no one process or checklist that can be implemented to ensure new classroom teachers leave teacher preparation programs fully prepared to teach students who are outside of what is socially, politically, and/or culturally considered the norm (Kaur, 2012). However,

there is a continued call to advance understanding in the area of inclusive education to more fully prepare novice teachers (teachers in their first through third years of teaching) for the realities of today's classrooms. For example, Conderman, Johnston-Rodriguez, Hartman, and Walker (2013) state, "Although teacher educators cannot anticipate every situation that beginning teachers may encounter, they should continuously ask what they can do to make the transition from candidate to teacher as seamless as possible" (p. 73).

The Minnesota Department of Education requires all teacher preparation programs submit evidence of meeting rigorous standards related to effective teaching practices, including understanding and teaching students with disabilities and learning differences in the regular classroom. For example, one of the Standards of Effective Practice for Teachers (2010) states, "The teacher must: understand appropriate education for students with disabilities" (Standard 10). Seemingly, standards such as these support the idea that teachers need to have specific skills and attitudes that can meet the needs of diverse learners (Allday, Neilsen-Gatti, & Hudson, 2013). These standards also identify the need for teacher preparation faculty to provide authentic learning experiences embedded in the complex reality of teaching diverse learners.

However, to date, no studies have been done to assess whether addressing these standards during teacher preparation translates into novice teachers' perceptions of preparedness and competence during the first years of teaching. Several authors (Billingsley, Carlson, & Klein, 2004; Fisher & Ociepka, 2011) call for increased research related to beginning teachers, their roles and

responsibilities, and their impact on K-12 student learning. Fisher and Ociepka (2011) assert this should be considered a “critical area of research” (p. 152).

The need for preparation related to inclusive education is further intensified for elementary teachers. Turnbull, Turnbull, and Wehmeyer (2010) report that elementary age students with disabilities are more often served in regular education settings than their secondary age counterparts. This statement is supported by McLeskey, Landers, Williamson, and Hoppey (2012) who investigated U.S. Department of Education data related to the placement of students with disabilities and found the placement of elementary age students with disabilities in the regular classroom rose from 46.08% of students in 1990-1991 to 73.45% of students in 2007-2008, “an increase of approximately 59%” (p. 134). Furthermore, data specific to Minnesota indicates 55% of six- to eleven-year-old students identified with disabilities spend 80% or more of their school day in the general education classroom (Data.gov, 2014).

Need for Study

In recent decades, extensive research efforts have focused on a better understanding of inclusive education. When conducting a literature search using the term “inclusive education” within Education Full Text (H.W. Wilson) supported by EBSCOHost, 1,032 results appeared. These results make it evident that the concept of inclusive education is widely researched and many researchers and scholars are contributing to discussions aimed at answering the wide-array of questions related to inclusive education. Several components of inclusive education commonly found in the literature include collaboration (Ashby, 2012;

Booth, 2011), specific teaching practices such as differentiated instruction (Operti & Brady, 2011; Schwarz, 2006), and teachers' attitudes and beliefs about their own teaching abilities and their students' learning abilities (Jordan, Schwartz, & McGhie-Richmond, 2009). These components are also often cited as influencing educational outcomes for students with disabilities (Berry, 2010).

The initial search results indicate that inclusive education as a broad topic is widely discussed in the literature. However, when conducting another search within Education Full Text (H.W. Wilson) supported by EBSCOHost using the terms "inclusive education and elementary education" 44 results appeared and when further refining the search using the search terms "inclusive education and novice teachers" or "inclusive education and beginning teachers" eight results published between the years of 1997 to 2015 were identified. Participants in these studies included novice teachers in the areas of foreign language, science, and elementary mathematics. One study focused not on novice, but on preservice teachers. One relevant study did present case studies of three beginning elementary teachers participating in a Teacher Learning Cohort focused on helping the teachers "learn how to teach students with disabilities and other high-risk students (Brownell, Yeager, Sindelar, vanHover, & Riley, 2004, p. 174). However, the authors were focused on supporting beginning teachers in urban settings and did not concentrate on understanding the experiences of the teachers during teacher preparation in order to provide recommendations for teacher education faculty. This search reveals that much less attention is focused on the perceptions of novice teachers in relationship to their experiences

during teacher preparation. Most of the literature related to inclusive education and teacher preparation remains concentrated on preservice teacher candidates (Alvarez-McHatton, & Parker, 2013; Ashby, 2012; Gehrke, & Cocchiarella, 2013).

A search of the journal *Teacher Education and Special Education* (2010 to present) was also conducted. One pertinent study, focused on the inclusion of students with Autism Spectrum Disorders (ASD), sought the perspectives of elementary, middle, and high school regular and special education teachers (Able, Sreckovic, Schultz, Garwood, & Sherman, 2015). The researchers utilized focus groups to collect data. The participants included one teacher in the first year of teaching, 10 teachers with 5 to 10 years of teaching and 18 teachers with 10 or more years of teaching. The focus of the study was to identify social support needs of students with ASD along with identifying needs of the teachers who support the inclusion of students with ASD. The study was not focused specifically on relating the teacher preparation experiences of novice teachers to their perceptions of preparedness for teaching in inclusive classrooms or for competence for teaching in inclusive classrooms, but one of the findings was that teachers felt their teacher preparation programs needed to provide specific strategies for working with students with ASD (Able et al., 2015)

Another relevant study, which used a mixed methods approach to understanding the perceptions of novice special education teachers, was found (Conderman, Johnston-Rodriquez, Hartman, & Walker, 2013). The results of this study made the authors aware of several areas for which the novice teachers felt unprepared. Examples of these areas included a need for additional methods

courses to teach content specific subjects and more authentic discussions of challenging issues related to collaboration. The authors acknowledge that identifying areas for improvement is only the first step in the process of improving teacher preparation. The next step would be to implement the feedback provided by the beginning teachers. The participants in this study were not elementary teachers; yet, this study supports the notion that understanding the perceptions of novice teachers can help identify needed changes within teacher preparation programs (Conderman et al., 2013).

Another relevant study examined the content of 109 elementary education bachelor's degree programs in the United States (Allday, Neilsen-Gatti, & Hudson, 2013). Coverage of inclusive education principles such as characteristics of disabilities, differentiating instruction, and collaboration was limited and not clearly evidenced in the teacher preparation programs. Thus, the authors concluded that further study was needed to develop an understanding of how many classes, topics, and related experiences pertaining to inclusive education should be included in elementary teacher preparation programs (Allday et al., 2013). Investigating novice teachers' perceptions of their teacher preparation programs would be one way to begin to understand the courses, topics, and experiences individuals feel they need at the beginning of their career.

A search of dissertations was also completed utilizing ProQuest. Numerous dissertations related to inclusive education, beginning teachers' perceptions, and/or teacher preparation were located. One particularly relevant

dissertation, which utilized purposeful sampling and qualitative methods, investigated the perceptions of first-year teachers (Ackerman, 2004). The study focused on four main objectives related to the perceptions of first-year teachers: 1) level of preparedness entering the first year of teaching, 2) effectiveness of first year of teaching, 2) ability to connect classroom theory with the realities of the classroom, and 4) changes needed to improve the effectiveness of their teacher preparation program (Ackerman, 2004). The study did not, however, focus specifically on novice elementary teachers' perceptions related to inclusive education and any related teacher preparation experiences.

An explanatory mixed methods study was also located. This study investigated special classroom teachers' (e.g., music, art, physical education) attitudes toward inclusion (Hamblin, 2013). The findings revealed lack of training negatively influenced teacher attitude toward inclusion and suggested a modified teacher preparation curriculum (Hamblin, 2013). This research would support the need to explore the perceptions of beginning elementary teachers to confirm if these results generalize to a different population of teachers. After reviewing the keywords and titles of hundreds of dissertations within the last ten years, no other dissertations were identified that specifically utilized a mixed methods approach with a focus on novice elementary teachers' perspectives on preparedness for teaching in inclusive classrooms.

Purpose of the Study

The intent of this mixed methods study was to examine novice elementary teachers' perceptions of preparedness for teaching in inclusive classrooms in relation to experiences during undergraduate teacher preparation.

Rationale for the Study

Ensuring that novice teachers are fully prepared to meet the challenges of teaching in today's diverse classrooms is a priority for teacher preparation programs across the United States. Pugach, Blanton, and Correa (2011) recently traced the historical path of "the purposeful integration of general and special education at the preservice level" (p. 183) and noted, "The pressure for teacher education to prepare the teaching workforce to meet the needs of students who are struggling is unmistakable" (p. 195). While many states require that teacher preparation programs address standards related to teaching diverse student populations (such as students identified with special needs) in their coursework, novice teachers continue to report feeling under-prepared to address the wide range of needs represented in many classrooms throughout the country (Berry, 2010; Conderman & Johnston-Rodriguez, 2009; Hollenweger, 2011).

This research will contribute to the literature focused on novice elementary teachers and best practices for preparing novice teachers to work in inclusive educational environments. The information gained from this research may be useful in helping teacher education faculty in preparing new teachers to meet the needs of all students in their regular education classrooms, particularly students

identified with special needs. The results of this research may also help state departments of education revise initial licensing standards, develop different requirements for field experiences during teacher preparation, initiate new or different assessments for initial teacher licensing, or generally revise requirements for institutions seeking approval of teacher preparation programs.

This research employed an explanatory sequential mixed-methods design (QUAN → QUAL = Gain comprehensive understanding of beginning teachers' perceptions of preparation and competence for teaching in inclusive classrooms). By taking this mixed-methods approach which includes survey data as well as in-depth interviews, this research responds to Johnson and Onwuegbuzie's (2004) argument for "pluralism" (p. 15) in educational research:

Today's research world is becoming increasingly interdisciplinary, complex, and dynamic; therefore, many researchers need to complement one method with another, and all researchers need a solid understanding of multiple methods used by other scholars to facilitate communication, to promote collaboration, and to provide superior research (p. 15).

Research Questions

The following research questions reflect the explanatory sequential design of the study (Creswell & Plano Clark, 2011).

1. What is the relationship between novice elementary teachers' experiences during undergraduate teacher preparation and their perceptions of preparedness (having necessary skills, knowledge, and belief systems) for teaching in inclusive education environments?

2. Do novice elementary teachers perceive themselves as fulfilling the requirements and demands of inclusive education?
3. What are novice elementary teachers' recommendations for teacher preparation programs in relationship to preparing new teacher candidates for inclusive education?

The first two questions are closely related in that they seek to investigate actual experiences of beginning teacher candidates during their teacher preparation programs. The third question seeks to explore ways that teacher preparation programs could better prepare students for inclusive education based on the perspectives and recommendations of novice teachers.

Philosophical Framework

The philosophical view of this research is based on pragmatism. Johnson and Onwuegbuzie (2004) identify pragmatism “as the philosophical partner for mixed methods research” (p. 14) and present several characteristics of this worldview: 1) a practical theory “that informs effective practice” (p. 18), 2) “an explicitly value-oriented approach to research” (p. 17), 3) a perspective that knowledge is constructed and “based on the reality of the world we experience and live in” (p. 18) and 4) an action and outcome-oriented approach to research. Pragmatism emphasizes practice and practicality (Creswell & Plano Clark, 2011).

Pragmatism is also the philosophical worldview that educational philosopher John Dewey embraced (Jaramillo, 2010). Dewey believed that “students’ experiences could provide a basis for intelligent problem solving” (Jaramillo, 2010, p. 39). From this perspective teachers have a responsibility to

design curriculum that matches their students' experiences in order for students to gain problem solving skills. Pragmatism also encourages teachers to view teaching as a process of solving problems related to helping students understand content and develop needed skills for whatever task or subject is being taught.

Gutek (2004) further explains, "Dewey's design of curriculum does not consist of separate discrete subjects..." (p. 78). This statement clarifies that Dewey believed the teaching of school subjects should be interdisciplinary. In this manner, students would use their knowledge in one subject to solve problems in another subject. To further explain, Noddings (1992) states, "John Dewey argued long ago that it is not the particular subject studied that is important but how it is studied" (p. 41). From Dewey's perspective, learning should be cohesive across subject areas and more problem-centered than factual and rote. Educators who take a pragmatic worldview also think school "is a community of students and teachers who are mutually engaged in learning" (Gutek, 2004, p. 76).

Combining both the pragmatic philosophy of mixed methods research with the pragmatic thoughts of educational philosophers such as Dewey, a philosophical framework of pragmatism was developed for this study. This framework is represented in figure 1.

Guided by this framework, this research will begin to establish praxis for teacher educators informed by novice teachers who have had recent experiences in teacher preparation programs. This pragmatic view is summarized in Jaramillo's discussion of the movement toward pragmatic thought

in education: “Teacher educators, in turn, were conceived as social scientists, with the capacity and ability to organize educational practice based on their assessment of students’ needs and experiences” (p. 41).

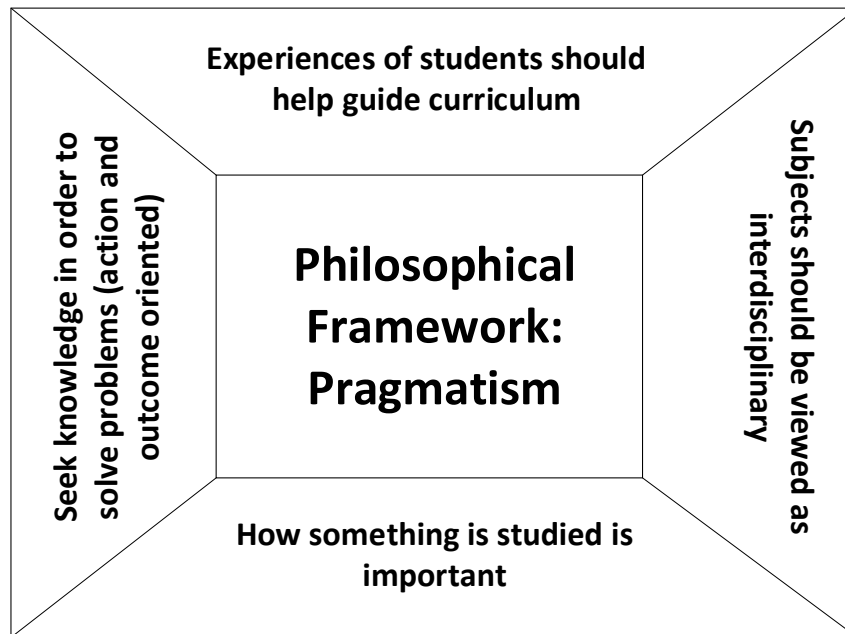


Figure 1. Framework for Pragmatism

This research is interdisciplinary because it utilizes multiple methods to gain understanding regarding the perspectives of novice elementary teachers and their preparation for inclusive education in hopes of informing teacher preparation programs. Studying the topic of inclusive education in this manner takes into consideration that how something is studied is important to gaining proper understanding. This study also has an interdisciplinary focus because it focuses upon regular education teachers’ perspectives of topics important to the field of special education. Consequently, the research design is intended to study novice teachers’ perceptions of preparation and competence for teaching in inclusive classrooms in a manner that will help gain a deep, comprehensive

understanding of their experiences. Thus, the intended outcome of this research is to offer suggestions for teacher preparation programs to apply findings to improve the inclusive education experiences of teachers and K-12 students. This research is action and outcome-oriented.

Assumptions

1. An assumption inherent in survey research is that participants will answer questions honestly and completely.
2. Researcher bias (see below) may influence the types of questions that are asked during the interview phase of this study.
3. It is assumed that participants will be open, honest, and willing to share about their experiences during their teacher preparation programs.
4. It is assumed, despite common standards across Minnesota teacher preparation programs, that participant experiences will vary.
5. It is assumed that when participants are responding to the survey questions, their responses will be confined to perceptions of their teacher preparation program.

Delimitations

1. This study is limited to novice elementary education teachers in the state of Minnesota. Novice teachers were defined as teachers having between one and three years of teaching experience as this is defined as the probationary period for teachers within the state of Minnesota (Teacher Tenure Act, 2011).
2. The research is limited to the state of Minnesota where predefined standards for initial teacher preparation exist.

3. Individuals who graduated with an Elementary Education degree from a Minnesota institution, but who have not applied for a Minnesota teaching license are not included in the study.
4. Novice teachers who hold a Minnesota teaching license, but who are not currently teaching are not included in the study.

Researcher Bias

I entered the field of special education and the teaching profession after the practice of inclusive education had been established in the field. In relationship to my professional experiences, inclusive education is all I have ever known. In all of my K-12 special education teaching experiences, I often assumed the responsibility of advocating for students with special needs to be educated in regular education (e.g., inclusive) environments to the greatest extent possible. Despite the challenges I often faced, I am proud of the work I accomplished in K-12 schools because I was able to establish effective inclusive educational experiences for the students with special needs that I served.

Currently, I am a faculty member teaching special education courses in an integrated elementary and special education licensure program. The program places emphasis on preparing all regular elementary and special education teachers to work in inclusive environments. Just as my work related to inclusive education in K-12 schools was challenging, implementing a teacher education program that integrates regular and special education licensure requirements into a singular cohesive program has also, at times, been a daunting experience. Despite the challenges, I remain committed to the inclusive elementary teacher

education program because of the potential to positively influence outcomes for elementary age students with special needs. My perspective stems from a belief that when provided an appropriate learning environment equipped with appropriate supports and a teacher, or teachers, who believe in them, all children can learn, grow, and succeed.

I am aware that the experiences and beliefs I bring to my research have the potential to create bias. To minimize bias, I will remind myself to remain focused on the research purpose and questions. I will also use a journal to reflect upon my biases and ensure that they are not influencing my data analysis. When interpreting qualitative data I will also utilize the practice of member checking to ensure my interpretation of data reflects the meanings of participants and not my own beliefs.

Summary of Chapter I

This chapter provided an introduction to the research problem along with providing a study purpose and rationale. Research questions were identified along with introducing the philosophical foundations of this mixed-methods explanatory sequential study. Assumptions, delimitations, and researcher bias were also presented. A review of literature will follow in Chapter II.

CHAPTER II

LITERATURE REVIEW

Recently, Booth (2011) stated, “Inclusion is a complex notion and its definition cannot be settled in a single sentence with a few well-chosen words” (p. 304). Consequently, this chapter demonstrates how widespread and multifaceted the literature is related to inclusive education. The chapter provides a brief history of inclusive education, identifies the areas of expertise needed to implement inclusive education, shares recommended standards and models for preparing teachers for inclusive education, and presents current research related to assessing and understanding novice teachers’ perceptions of preparation for inclusive education. The literature review also includes challenges related to inclusive education and concludes with a current status of the continued struggles to prepare teachers with reference to research on teacher perspectives and professional voices. The chapter ends with a summary.

The Evolution of Inclusive Education

Special education, as a field and educational service, is a fairly recent phenomenon dating back approximately forty years (Pugach, Blanton, & Correa, 2011). Schwarz (2006) describes this recent attention to special education as a “revolution” (p. xviii). The following discussion demonstrates that this revolution, historically fronted by parents and advocacy groups, has occurred within federal court and legislative systems within the United States and throughout the world.

United States Supreme Court Cases

Several cases related to students with disabilities have reached the United States Supreme Court. One of the first cases, *Brown v. Board of Education* (1954) is not directly related to students with disabilities; however, many scholars often refer to this landmark racial segregation case as the impetus for allowing students with disabilities access to neighborhood schools (Conroy, Yell, Katsiyannis, & Collins, 2010; Friend, 2008; Yell, 2006; Zirkel, 2005). While some scholars disagree over the direct comparison between including students with disabilities as being equivalent to including students with racial differences (Mock & Kauffman, 2005), the influence that the *Brown* decision had over the educational landscape in the United States cannot be denied.

Several years after *Brown*, court cases directly involving students with disabilities began to reach the Supreme Court. These cases included arguments against the educational inequities that students with disabilities were experiencing (Brizuela, 2011). For example, in 1971, the Supreme Court established that “all children between ages 6 and 21 were to be provided a free public education” and that their educational experiences should be “most like those provided for their peers without disabilities” (Chinn, 2004, p. 10). This determination was a result of the *Pennsylvania Association for Retarded Children (PARC) v. Commonwealth of Pennsylvania* (1971), a class action suit claiming that children with intellectual disabilities (then referred to as mental retardation) in Pennsylvania were being denied their 14th Amendment rights when they were not provided an education in public schools.

A similar class action suit, *Mills v. Board of Education* (1972), was heard in the Supreme Court shortly after the *PARC* case. The Court also ruled in favor of the plaintiffs, a group of parents of children with disabilities from the District of Columbia who argued their children were being denied constitutional rights because they were being excluded from receiving a public education (Chinn, 2004). Both the *Mills* and *PARC* cases “established the proposition that, given two or more education settings, children with disabilities should be placed in the least drastic or most normal setting appropriate, with as little interference and as normal an educational process as possible” (Zigmond, 2006, p. 127). These cases paved the way for federal legislation.

Special Education Legislation

In response to the increasingly apparent educational inconsistencies students with disabilities were receiving across the country (Chinn, 2004), Congress along with President Gerald Ford, passed the Education for All Handicapped Children Act (EAHCA, P.L. 94-142) in 1975. This civil rights law (Turnbull, 2009) is considered to be the most significant special education legislation in the United States (McLaughlin, 2010). The law outlined six guiding principles: least restrictive environment, free appropriate public education, individualized education plans, non-discriminatory evaluations, parental rights, and procedural safeguards. Although P.L. 94-142 has been amended and reauthorized several times, its six guiding principles are still used as guidelines for making educational decisions for students with disabilities in schools across the United States (Yell, 2006). For years, many school professionals have

equated the least restrictive environment provision with inclusion (Mastropieri & Scruggs, 1996).

Since 1975, important revisions to the Education for All Handicapped Children Act were enacted. In the 1990 revision, the law was renamed the Individuals with Disabilities Education Act. The most recent 2004 revision renamed the law again (Yell, 2006). Today, the law is titled the Individuals with Disabilities Education Improvement Act (IDEIA). The 2004 revisions have significant influence on inclusive education because the law was written to align with No Child Left Behind (NCLB, the reauthorized Elementary and Secondary Education Act) in hopes of increasing outcomes for students with disabilities by providing them with highly qualified content area teachers and emphasizing inclusion of students in high-stakes testing (Alvarez-McHatton & McCray, 2007; Conderman & Johnston-Rodriguez, 2009).

Regular Education Legislation

Historically, special education and regular education legislation have been considered separate entities, despite the recent alignment of NCLB and IDEIA (Turnbull, 2009). This is illustrated well in McLaughlin's (2010) discussion of educational equity where it is noted that, until NCLB, policies for regular and special education paralleled each other, but operated separately. Pugach, Blanton, and Correa (2011) also explain that education reform agendas have "generally omitted any mention of special education" (p. 191).

On the other hand, policy advocates like Madeline Will in the 1980s have continuously called for the coupling of regular education and special education.

The Regular Education Initiative (REI), promoted by Will, is often seen as the start of the inclusive education movement (Brownell, Sindelar, Kiely, & Danielson, 2010). More recently, due to continued educational inequities and increasingly diverse student populations, Turnbull (2009) called for Congress to consider strengthening IDEA in order to make it the leading educational law. Turnbull explains that IDEA has been successful in improving the achievement of students with disabilities while data related to NCLB reform efforts show “some, but not adequate” (p. 6) gains for general education students. Turnbull, therefore, argues “IDEA should drive NCLB, and Congress should require schools...to offer related services and the techniques of teaching and learning that special education researchers and practitioners have shown to work” (p. 6).

Undoubtedly, debates over the degree to which students with disabilities should be included in the regular classroom will continue (Mock & Kauffman, 2005). Yet, the arguments calling for increased alignment of IDEA and NCLB should alert educators that these legislations should no longer be viewed simply as mandates to place students with disabilities in the regular classroom for part of their school day. As Pugach et al. (2011) state, “those [students with disabilities] in the general education classroom are expected to be taught and learn the general education curriculum” (p. 191). This alignment forces professionals, general education and special education alike, to consider how to meet the needs of all students in every school, while concurrently placing increased emphasis on preparing all teachers to teach learners with a wide variety of needs and abilities in the regular classroom (Pugach et al., 2011).

Around the Globe

Similar to the challenges found in the United States, Hollwenger (2011) reports that most European countries are facing increasing pressures to provide students with high quality learning experiences in increasingly diverse classrooms and that teacher education programs are responding by attempting to prepare teachers for inclusive classrooms. Supporting this notion, Florian (2009) mentions “an international collaborative network of teacher educators” (p. 533) funded by the Scottish Government that focuses on teacher education reform related to inclusive education.

Similarly, Booth (2011), based upon his perspectives of schooling in England, presents an inclusive curriculum framework for university preparation programs to consider. This value-laden framework consists of concepts such as equality, participation, and respect— values he feels are important for creating inclusive environments. Booth also states, “I see inclusion as connected to the development of democratic participation and global citizenship” (p. 303).

Furthermore, Acedo (2011) states:

We know that global disparities in educational provisions, and differences in teacher education and teacher qualifications within and between countries, exacerbate inequality in educational opportunity. But while the form and structure of teacher education may vary from one country to another, some common issues and challenges in providing a good quality basic education for everyone remain largely unaddressed. Inclusive education represents an area of teacher professional knowledge that is a

legitimate area of concern for teacher education, regardless of national differences in form or structure (p. 302).

The global perspectives and initiatives presented in this section, coupled with court cases and legislation related to inclusive education in the United States, provide a convincing rationale as to the importance of preparing teachers for inclusive educational environments. Fortunately, a significant amount of literature can be found related to the components of inclusive education.

Areas of Expertise Needed for Inclusive Education

In order to prepare teachers for inclusive education, teacher preparation faculty must first conceptualize the necessary areas of expertise inherent to inclusive education. In probing the literature, three themes emerged: instructional practices, collaboration skills, and belief systems.

Instructional Practices

It is widely acknowledged that teacher preparation programs cannot prepare beginning teachers for every scenario they may encounter (Oyler, 2011). However, “underlying the process of inclusion of all children is the assumption the general classroom teacher has a certain amount of knowledge about special education, the students, teaching techniques, and curriculum strategies” (Everington, Stevens, & Renner-Winters, 1999, p. 331). This statement suggests that beginning teachers need to leave preparation programs armed with the knowledge to implement a variety of instructional methods that will assist a variety of learners.

This knowledge of instructional methods often centers on developing understanding of instructional planning frameworks that encourage teachers to address unique needs within their lessons. One such framework is Universal Design for Learning (UDL) which consists of three principles: multiple means of representation, engagement, and expression. These three principles assist teachers in developing lessons that meet a wide range of learning needs (Armstrong, 2012; Courey, Tappe, Siker, & LePage, 2013). UDL is noted by Turnbull and Turnbull (2000) as an exciting advance in curriculum design for improving outcomes for children with disabilities.

The UDL framework can also serve as a bridge between general education and special education when serving students in inclusive classrooms (Courey et al., 2013). Dorow, Fisch, and Uhry (1998) state that general and special educators must learn to communicate through a common set of vocabulary, conceptual framework, and skill-set. The UDL framework is one approach that teacher preparation programs have used to accomplish this task (Courey et al., 2013).

A second approach to responding to a wide range of learner needs is differentiated instruction. Similar to the UDL framework, differentiated instruction principles call for teachers to adjust content, processes, and products in consideration of students' unique learning styles, ability levels, and interests (Tomlinson, 2014). Unfortunately, despite the popularity of differentiated instruction, there is concern that practicing teachers fail to use the methods supported by differentiated instruction (Fuchs, Fuchs, & Stecker, 2010). This

concern indicates that even when teacher candidates can demonstrate their knowledge of inclusive practices through lesson planning that utilizes specific methods or frameworks (e.g., UDL or differentiated instruction), teacher preparation programs must also ensure candidates have experiences implementing these plans (Courey et al., 2013).

Collaboration Skills

An area of expertise that may be even more challenging to develop than applying the instructional practices discussed above is collaboration. Dettmer, Dyck, and Thurston (1999) define collaboration as working jointly on an intellectual task. In order to provide least restrictive environments for students with disabilities, teachers must be able to effectively collaborate (Alvarez-McHatton, & McCray, 2007; Conderman, & Johnston-Rodriguez, 2009; Daane, Beirne-Smith, & Latham, 2001; Dorow, Fisch, & Uhry, 1998; Wigle & Wilcox, 1996). Furthermore, other authors (Banks et al., 2005; Schwarz, 2006; Tanner & Tanner, 2007) suggest that collaboration between regular education teachers, special education teachers, other service professionals (e.g., social workers and therapists), families, and students is inherent for teachers and students to experience success in any classroom. Consequently, it is important for teacher preparation faculty to address this factor when attempting to prepare teachers for today's classrooms.

Collaboration involves a conglomeration of skills including the ability to exhibit collegiality, exchange ideas, listen actively, problem-solve, negotiate, self-advocate, and compromise (Dettmer, Dyck, & Thurston, 1999). Moreover, an

element of interdependence typically should be found within quality collaborative relationships (Cyr, McDiarmid, Halpin, Stratton, & Davis-Delano, 2012). Teacher candidates must, therefore, learn to embrace others' ideas and trust that others will contribute to collaborative goals.

Considering the complexity of this skill set, scholars recommend that teacher candidates have multiple opportunities to collaborate over the course of their program (Santagata & Guarino, 2012). Yet, these experiences should not be reserved only for the university classroom, as Conderman and Johnston-Rodriguez (2009) caution that "Coursework on inclusion, collaboration, or educating students with disabilities is insufficient without opportunities to practice those skills in authentic settings" (p. 241). In other words, like instructional practices, collaboration skills are considered to be components of a teacher's repertoire that typically require not only training, but experience to do well.

Yet, too often in teacher preparation programs, students are told they will need to collaborate with other professionals, but rarely are they given the opportunity to practice effective collaboration skills (Cyr et al., 2012). Consequently, beginning teachers often leave their teacher preparation programs unprepared to effectively collaborate and their prospects of success in their beginning years of teaching may be minimized (Conderman & Johnston-Rodriguez, 2009).

Belief Systems

A third consideration related to preparing inclusive educators involves assisting teacher candidates in developing belief systems that are beneficial for

teaching diverse students. This area of expertise requires teacher candidates to have “habits of thinking and action” (Hammerness et al., 2005, p. 387) that enable them to consider and plan for the needs of all learners in their future classrooms. For example, Tomlinson (2014) describes teachers who utilize differentiated instruction as teachers who “accept, embrace, and plan for the fact that learners bring to school both many commonalities and the essential differences that make them individuals” (p. 4).

Furthermore, in their research involving student teachers, Hamre and Oyler (2004) found that preservice teachers recognize that inclusion is not simply a school procedure; it is an ideological, moral issue involving beliefs about equity and social justice. Other authors support this finding by arguing that in order for the promise of inclusive education to be fulfilled teachers must hold belief systems that promote efforts to create educational equity and eliminate marginalization (Florian, 2009; Kaur, 2012; McLaughlin, 2010; Oyler, 2011; Schwarz, 2006).

To help teacher candidates develop belief systems that support these ideologies, Armstrong (2012) suggests that we think about learning differences in a manner similar to how we think about cultural diversity and/or biodiversity. Armstrong describes the concept of neurodiversity as a strengths-based approach to thinking about differences in the classroom that helps educators “have a deep respect for each child’s unique brain and seek to create the best differentiated learning environment within which it can thrive” (p. 13). Armstrong

refers to “positive niche construction” (p. 13) as a means of providing the necessary differentiated instruction for students with neurodiverse needs.

Armstrong’s concept of niche construction stems from the field of biology. Armstrong explains that scientists currently view niche construction as just as important as natural selection. Niche construction advances the theory of natural selection which viewed the environment as “a static entity to which species must either adapt or fail to adapt” (Armstrong, 2012, p. 13). On the other hand, niche construction views examples of animals adapting their environment (e.g., birds building nests and beavers building dams) as examples of adjusting environmental conditions in order to create a niche and thrive. In applying the concept of niche construction to education, Armstrong identifies seven components important for teachers to understand: 1) strength awareness, 2) positive role models, 3) assistive technologies/Universal Design for Learning, 4) strength-based learning strategies, 5) human resources, 6) positive career aspirations, and 7) environmental modifications. The seven components of niche construction are intended to help teachers to “work diligently to construct a positive niche that fits the unique needs of each individual child with special needs” (Armstrong, 2012, p. 25). In other words, positive niche construction can help students with disabilities survive and thrive in inclusive classrooms.

Yet, mastering concepts such as UDL, differentiated instruction, and positive niche construction may be more challenging than teacher educators realize. As Hammerness et al. (2005) explain there are three problems that preservice teachers face when learning how to teach: 1. Thinking about learning

and teaching in ways that may be different from their experiences, 2. Learning to not only think, but act like a teacher, and 3. Learning how to develop “habits of mind” (p. 359) that can assist in effectively managing the complexities of student needs, curriculum goals, and day-to-day classroom activities. Hammerness et al. explain that developing these skills “can be difficult and emotionally painful” (p. 363) when new teacher’s realize they have to let go of preconceptions of how to teach based on prior experiences. Other authors also state that belief systems are often hard to change (Jordan, Schwartz, & McGhie-Richmond, 2009). Yet, in order to be willing to take on the challenge of applying difficult to master concepts such as UDL, differentiated instruction, and positive niche construction in everyday practice, teachers most hold belief systems that embrace and value difference because as Friend and Pope (2005) state, “Inclusion is a belief system” (p. 57). Consequently, allowing future teachers time to grapple with the complex idea of neurodiversity in the classroom and how neurodiversity may influence teaching practices may be a productive way for teacher preparation programs to influence belief systems.

Additionally, many authors (Hamre & Oyler, 2004; Jordan, Schwartz, & McGhie-Richmond, 2009) suggest that teacher preparation programs should consider creating opportunities for teacher candidates to assess, challenge, discuss, and reflect upon their beliefs in compassionate and encouraging contexts. Although there is no one way to do this, teacher preparation programs could consider specific courses focused on issues of equity and social justice (Frederick, Cave, & Perencevich, 2010) or develop practicum experiences that

ensure opportunities to observe how diversity is addressed in the classroom and then provide time to reflect upon and discuss beliefs regarding the observed classroom practices (Jordan et al., 2009).

More substantial attempts could also model the seminar developed by Hamre and Oyler (2004) which was incorporated into the elementary preservice program at Teachers' College. During the semester, student teachers met once a week in order to share their ideas, thoughts, and concerns about inclusive education. Hamre and Oyler describe the weekly seminars as loosely structured without any direct teaching, thus providing the student teachers opportunities to learn from each other. This is similar to the "Critical Friends Groups" (Gilbert, 2005, p. 38) school districts have implemented to assist beginning teachers. In these groups, members collaborate to "improve teaching practices" (p. 38). Not only do these groups provide the emotional support needed to grapple with changing ideas, they also make teachers more likely to continue trying when they know they are in the company of others who are also working to find ways to help all students achieve (Friend & Pope, 2005).

Regardless of the method(s) teacher preparation faculty utilize, the importance of creating the space to explore preservice teachers' belief systems that are supportive of inclusive environments may best be captured by Haberman (2010) who states:

What effective teachers demonstrate is neither theory nor research: It is craft knowledge learned through practice. Further, it is craft knowledge that can be learned only by individuals who hold a particular ideology

regarding the nature of child development, the nature of learning, and the role of schooling for all children and youth in a free society (p. 136).

Inclusive Education and Teacher Preparation

Despite the compelling literature outlining the importance of instructional practices, collaboration, and belief systems for inclusive education, teacher preparation faculty across the country continue to struggle with identifying and applying the most beneficial, reasonable, and coherent ways to ensure that future teachers have adequately developed skills in each area prior to leaving teacher preparation programs. To support teacher preparation programs, several state and professional organizations as well as educational researchers have provided guidelines and models.

Professional Standards

Standards from national professional organizations can serve as guidance for teacher preparation programs looking to instill in teacher candidates the expertise and skills necessary for inclusive education. The most widely accepted standards are the Interstate Teacher Assessment and Support Consortium (InTASC) Model Core Teaching Standards. The ten InTASC standards were designed to provide guidance to teacher preparation programs on the elements of effective teaching, including addressing diversity in today's classrooms (Council of Chief State Officers, 2014). Specifically, the second standard addressing learning differences states: "The teacher uses understanding of individual differences and diverse cultures and communities to ensure inclusive learning environments that enable each learner to meet high standards" (Council

of Chief State Officers, 2014). Additionally, collaboration, varying instructional practices and dispositions are addressed across multiple InTASC standards. The InTASC standards are widely accepted by almost every leading educational organization including the Council for the Accreditation of Education Preparation (CAEP, formerly known as NCATE), the American Association of Colleges for Teacher Education (AACTE), and the National Education Association (NEA) (Council of Chief State Officers, 2014).

State lawmakers may also provide guidance for teacher preparation programs. The Minnesota Standards of Effective Practice, regulated by the Minnesota Board of Teaching, include eighteen standards related to diverse learners. Examples of these standards include:

Subpart 4. Standard 3, diverse learners. B. The teacher must know about areas of exceptionality in learning, including learning disabilities, perceptual difficulties, and special physical or mental challenges, gifts, and talents;

Subpart 4. Standard 3, diverse learners. I. The teacher must understand that all students can and should learn at the highest possible levels and persist in helping all students achieve success;

Subpart 5. Standard 3, diverse learners. M. The teacher must accommodate a student's learning differences or needs regarding time and circumstances for work, tasks assigned, communication, and response modes (Standards of Effective Practice for Teachers, 2010).

These standards, along with the InTASC standards, provide preparation programs within the state of Minnesota specific guidance on how to prepare teachers for inclusive classrooms.

Courses

With aid from the professional standards, teacher preparation faculty can develop coursework designed to address specific principles that enable teacher candidates to acquire the areas of expertise needed for inclusive classrooms. The literature related to coursework focused on inclusive education is prevalent. However, the overall impact of these courses on teacher practices remains unknown.

For example, the purpose of one recent study was to determine if incorporating research-based methods within instruction at the university level could help close the research to practice gap found in K-12 classrooms (Bain, Lancaster, Zundans, & Parkes, 2009). The results indicated preservice teachers achieved mastery of incorporating evidence-based methods appropriate for inclusive education in lesson plans. This was achieved through university instructors engaging pre-service teachers in activities that built knowledge and awareness, demonstrating specific methods, and giving the preservice teachers opportunities to apply these same methods in lesson design. The results also indicated that when preservice teachers engaged in cooperative learning and peer-assisted learning methods, slightly higher mastery levels were obtained.

VanLaarhoven et al. (2006) provide an additional example of research focused on coursework designed to prepare educators for inclusive classrooms.

This study sought to determine teacher candidates' attitudes towards inclusion by utilizing a required university course where one section was provided without a clinical experience and another section was offered with a clinical experience that placed teacher candidates in teams to co-plan and co-teach at least one lesson at the end of the semester. To assess the teacher candidates' knowledge and competence of instructional practices important to inclusive education teacher candidates completed "curricular probes" (VanLaarhoven et al., 2006, p. 210). The results indicated that teacher candidates in the experimental group scored higher on the curricular probes as well as on the attitudes towards inclusion survey completed by both groups of students. The results also indicated that teacher candidates most valued the experience with collaboration that was provided in the experimental section.

While both of these studies offer encouragement for faculty designing coursework, a significant limitation exists related to how experiences within university coursework transfer to actual classroom practices (Bain et al., 2009). In response to this limitation, one might agree with Alvarez-McHatton and McCray (2007) who state that teacher preparation programs must do more than address the components of inclusive education within a single course. This portion of the inclusive education literature would also point to a need for further research regarding novice teachers' perceptions of their preparation for inclusion.

Field experiences

Similar to recognizing the need for developing effective coursework, teacher preparation scholars also recognize the need to incorporate field

experiences into programs. Lancaster and Bain (2007) sought to determine if a direct field experience and the type of direct field experience (mentoring or inclusive classroom support) influenced preservice teachers' self-efficacy related to teaching students with special needs. The sample for this study was preservice teachers enrolled in a required course on inclusive education. Preservice teachers in the course were divided into three groups. One group did not have a field experience.

A second group participated in mentoring two different at-risk high school students (at-risk was defined as perceptions of underachievement by the school coordinator and students with disabilities were included) for one hour per week. Prior to providing any mentoring, the second group of preservice teachers completed 14 hours of mentorship training. After completing the mentoring training, each pre-service teacher was assigned two mentees. The preservice teachers met with each mentee on an individual basis for one hour per week in the mentee's school. During each session they worked on academic or social skills.

The third group participated in inclusive classroom support with a regular elementary classroom teacher. Prior to helping in the classroom, the preservice teachers were provided with "additional lectures and tutorials on communication, transition, literacy and numeracy difficulties, and assistive technology" (Lancaster & Bain, 2007, p. 250). After participation in the additional lectures and tutorials, the inclusive classroom support included one hour per work in an inclusive classroom where the third group of preservice teachers participated in small

group or individual teaching activities focused on literacy and numeracy skills. These activities were determined each week by the classroom teacher (Lancaster & Bain, 2007).

Prior to and after the experience the preservice teachers completed a previously developed survey related to self-efficacy and interacting with students with disabilities. The results of the survey indicated that the self-efficacy levels of all three groups increased on the post-test. Despite these results, the authors argued that preservice teachers who did not have a field experience component as part of their experience may have overestimated their efficacy. The researchers hypothesized that the field experience may have clarified the enormous challenge of working in inclusive classrooms leading the group who had a direct experience in an inclusive classroom to report self-efficacy scores that more closely matched the group who did not have a field experience (Lancaster & Bain, 2007). The results led the authors to conclude that future research should “explore, more deeply, the role and design of applied experiences in preservice education if they are to contribute maximally to the growth of preservice teachers” (Lancaster & Bain, 2007, p. 254).

Program Models

Reviewing the literature on coursework and field experiences emphasizes the need for cohesive program design. Fortunately, the inclusive education literature also provides several examples of program models. These discussions make it clear that ongoing efforts to better prepare teacher candidates for

inclusive education are being made in teacher preparation programs across the country.

Pugach and Blanton (2009) define three levels of teacher education program models: discrete, integrated, and merged. The authors define these models as existing on a continuum with discrete being the least collaborative and merged being the most collaborative in relation to how programs prepare regular and special education teachers. They describe the middle model as an integrated model where conscientious efforts to integrate and coordinate program components of both regular and special education programs leads to interdependence among both programs. In merged models elementary or secondary teacher candidates are automatically dually licensed in regular and special education. Within the framework of the discrete model very little collaboration occurs between regular and special education in terms of coursework and/or field experiences (Pugach & Blanton, 2009).

Using Pugach and Blanton's framework, several articles describing discrete (Gut, Oswald, Leal, Frederiksen, & Gustafson, 2003), integrated (Blanton & Pugach, 2011; Lombardi & Hunka, 2001;), dual certification (Ashby, 2012; Cyr, et al., 2012; Oyler, 2011), and other program models (Booth, 2011; Operti & Brady, 2011; Pugach & Blanton, 2009) can be found in the literature. The obvious next step related to this component of the inclusive education literature is assessing how well these design efforts have worked as teachers enter the field.

Assessing Teachers' Perceptions of Preparation for Inclusive Education

Research related to preservice teachers' perceptions of experiences during their teacher preparation program is abundant. However, research related to teacher perceptions of their preparation for inclusive education is much less prevalent in the literature. Even less prevalent in the literature are the voices of novice elementary teachers regarding their perceptions of preparedness for teaching in inclusive classrooms. However, studies that utilized qualitative, quantitative, and mixed-methods with a variety of different teachers (pre-service and practicing, elementary and secondary) are summarized below.

Qualitative

DeSimone and Parmar (2006) reporting results from a study investigating the perceptions and practices of seven middle school math teachers in inclusive classrooms state, "The data revealed a paradox, where two out of the three teachers who stated that inclusion was working well had minimum interaction with students with learning disabilities, and three out of four teachers who expressed doubts about inclusion were observed to make active efforts to work with these students" (p. 342). While this study is limited to only one observation in seven individual classrooms, the observations and interviews from this study reveal that teachers, during interviews, thought they were providing appropriate instruction to students with learning disabilities, but classroom observations showed minimal to no specific strategies recommended for students with learning disabilities were incorporated into lessons. These results seem to reveal a disconnect between effective inclusive practices and actual teacher practices.

This study also presents results that are consistent with other studies (Daane, Beirne-Smith, & Latham, 2001). In studying the perspectives of regular education teachers, special education teachers, and administrators, Daane, Beirne-Smith, and Latham (2001) found that all three groups agreed that regular education teachers were not prepared to provide effective instruction for students with disabilities. In interviews, special education teachers noted that regular education teachers were making attempts, but the classroom teachers needed additional help to know what to do. The authors state that all three groups perceived regular education teachers as not skilled in the area of accommodating learning needs leading the authors to conclude that regular education teachers need more training in the instruction of students with disabilities in the regular classroom.

Fisher and Ociepka (2011) utilized interviews (pre-determined, open-ended questions, 30 minutes to 1 hour) with 16 elementary school regular and special education mentor teachers (15 women, 1 man) and one teacher candidate focus group (5 teacher candidates from 1 cohort) to explore K-6 student outcomes resulting from teacher candidate participation in the classroom. Interview transcripts were analyzed via a content analysis using a constant comparative technique; triangulation was achieved through interviewing three groups: general education mentors, special education mentors, and teacher candidates. Member checking was also completed.

Generally, feedback from the mentor teachers was positive in regards to teacher candidates' participation in classroom activities and instruction.

However, the mentor teachers did point to areas for further development and incorporation into the teacher preparation program. First, mentor teachers perceived teacher candidates to have a lack of understanding regarding child development. Second, the mentor teachers felt the teacher candidates were not skilled at using assessment or understanding of students to plan lessons connected to a curriculum plan. Third, the mentor teachers recommended that teacher candidates should observe mentor teachers' actions in order for teacher candidates to overcome tendencies to be judgmental or self-conscious. This recommendation was made because mentor teachers perceived that some teacher candidates did not value the input of mentor teachers enough, did not always view the purposeful actions of mentor teachers positively and were sometimes worried more about themselves than the K-12 students in the room. The results point to a need for continued improvement in the preparation of teachers, despite the study being limited to the performance of teacher candidates from only one teacher preparation program.

Quantitative

Studies that used quantitative methods were also located in the inclusive education literature. Leyser, Zeiger, & Romi (2011), in conducting a large study, surveyed 992 preservice teachers in Israel. The survey consisted of items related to four efficacy factors: teaching efficacy, personal teaching efficacy, social efficacy, and teaching low-achievers efficacy. The researchers sought to compare special education and regular education majors and their perceptions of efficacy in relation to teaching students with special education needs (SEN).

Using the two groups of teacher education majors, the researchers explored three variables (years of education, experience, and coursework or workshops taken) and their relationship to self-efficacy.

The results indicated differences in special education and regular education majors in terms of self-efficacy for teaching students with SEN. Overall, special education majors' self-efficacy on all four factors was significantly higher than regular education majors' self-efficacy even when accounting for years of study (Leyser, Zeiger, & Romi, 2011). Furthermore, the findings indicated that preservice teacher preparation only impacted levels of self-efficacy related to the social domain. Teaching efficacy, personal teaching efficacy, and low achievers efficacy did not appear to be influenced by advanced years in teacher preparation. However, general education preservice teachers who reported having some training in disabilities and inclusion had significantly higher personal teaching efficacy and teaching efficacy for low achievers than those who reported having no training.

From their findings Leyser et al. concluded that one course focused on students with disabilities and inclusion is not sufficient for improving self-efficacy related to teaching students with SEN. However, since special education preservice teachers had overall greater self-efficacy for teaching students with SEN, Leyser et al. suggest regular education preservice teachers may benefit from experiences where they are able to collaborate with special education teacher candidates both in coursework and field experiences. Such opportunities, according to Leyser et al., could help facilitate increased

understanding, skills, and self-efficacy of preservice general education teachers in regards to inclusive education.

Furthermore, the finding that experiences working with students with SEN significantly impacts self-efficacy factors should not be ignored. While this study did not explore the specific types of experiences working with students with SEN the teacher candidates had, it does provide insight into program components that may significantly impact beginning teachers' perceptions of preparation for teaching in inclusive classrooms. Leyser et al. do point out, however, that any type of training is better than very minimal or no training in promoting the self-efficacy of preservice teachers. While this was an international study, it does imply a need to further explore this topic within preservice candidates in the United States.

Alvarez-McHatton and Parker (2013) also explored the perceptions of regular and special education preservice teachers by utilizing the *Attitudes Toward Inclusion Survey* (Alvarez-McHatton & McCray, 2007). Their study involved 32 elementary education preservice teachers and 31 special education preservice teachers. The researchers sought to explore the development of preservice teacher attitudes toward inclusion over the course of a semester and one year later after additional experiences and coursework were completed. To gauge perspectives over time, participants in the study were asked to complete the same survey three times: during the first week of class, at the end of the semester, and one year later. After completion of the course and field experience focused on gaining knowledge about and experience with students

with disabilities, regular education majors reported “a positive increase in their attitude toward inclusion” (Alvarez-McHatton & Parker, 2013, p. 199). These findings, related to experiences with students with special needs, seem to support the conclusions of Leyser et al.(2011).

Yet, the limitation of both the Leyser at al. and the Alvarez-McHatten and Parker (2013) studies, and other studies focused on preservice teachers, is that the authors are unable to know the extent to which increased self-efficacy for teaching students with SEN and positive attitudes toward inclusion translate to applying effective classroom practices during the beginning years of teaching. Further studies that utilize the perceptions of novice teachers are needed to determine if the positive perceptions of inclusion and increases in self-efficacy the preservice teachers reported during teacher preparation translate to perceptions of preparedness and competence for teaching in inclusive classrooms during the beginning years of teaching.

Mixed Methods

Increasingly, scholars are utilizing mixed methods to seek answers to the continual questions surrounding the best form of preparation for inclusive education. Recently, Gehrke and Cocchiarella (2013) completed a single-measure self-report study using nine Likert-type scale items and two open-ended questions (convergent mixed-methods design). Participants included 125 preservice teachers (49 secondary education majors, 52 special education/dual certification majors, and 24 elementary education majors) within one U. S. university. The results indicated that 65% of secondary education majors, 92%

of special education/dual certification majors, and 92% of elementary education majors agreed or strongly agreed that they “can identify characteristics of an effective inclusion structure” (Gehrke & Cocchiarella, 2013, p. 209). However, the results also indicated that “preservice teachers struggled with the transition from theory to practice” (p. 213), in that participants were less able to describe instructional considerations, such as adapting materials and collaborative partnerships, necessary for successful inclusion. As a result of this finding, program faculty have incorporated a field based assignment that requires teacher candidates to interview a special education teacher and “write a description of indicators of inclusion they noted in their field placement settings” (p. 214). While the authors were able to refine field-based assignments to, hopefully, enhance knowledge of inclusive practices, it is also clear that further investigation is needed to clarify the design of field experiences needed to help bridge the theory to practice gap that was found among these preservice teachers.

In an earlier study, Jenkins (2002) also utilized a mixed methods design (questionnaire and focus group interviews) to ascertain feedback on the University of Hawaii at Manoa’s (UHM) newly implemented dual licensure program. Participants were 28 school-based mentor teachers and 28 students completing the first cohort of the program. The questionnaire included items related to communication, collaboration, specific program components related to Hawaii’s teaching standards, and other relevant items drawn from the professional literature related to field-based programs. The focus group

questions focused on elements of the program participants perceived as valuable or not valuable and recommendations for future cohorts.

Jenkins reports very little quantitative data as the information gained from the focus group was deemed to be more informative. Focus group data indicated that students expressed a gain in confidence through the variety of field experiences provided within the preparation program. Students also felt they had gained maturity and communication skills due to personal and professional experiences within the program. The students did recommend “greater integration of special education and elementary general education theory and practice throughout the program” (Jenkins, 2002, p. 369). This research certainly provides positive commentary for dual licensure programs. However, this, like the other previously reported research, leaves a void between understanding preservice teachers’ perceptions of experiences while they are completing their programs and their perceptions of their preparation to teach in inclusive classrooms during their beginning years of teaching.

Conderman, Johnston-Rodriguez, Hartman, and Walker (2013) did solicit the perspectives of 64 novice teachers from one teacher preparation program. The novice teachers were asked to complete a survey containing open- and closed-ended questions. The quantitative portion of the survey contained demographic questions and items related to 25 core competencies identified by program faculty as explicitly identified across coursework within the program. The qualitative portion of the study asked the teachers to comment on beneficial program components, suggest program improvements, and identify current

training needs. The components of teacher preparation programs novice teachers in the study felt were most beneficial included field experiences and student teaching and courses such as behavior management where they were provided with information that they use in practice. They also appreciated the knowledge and helpfulness of their professors. Suggestions for improvement included adjusting courses and field experiences to include more depth related to professional responsibilities such as collaboration, Individualized Education Plan (IEP) writing, and instructional methods for teaching reading and other subject areas.

While Conderman et al. (2013) did utilize the voices of novice teachers, the study has several limitations. First, the perspectives represented only one university teacher preparation program. Second, the study is identified as a mixed methods study in the abstract; however, the study does not take full advantage of mixed methods research. The study was completed using a survey containing both closed- and open-ended questions. The number of participants in the study was 64 and all participants were asked to complete both the quantitative and qualitative portion of the survey. This type of mixed methods research is not ideal for qualitatively exploring a phenomenon in-depth. Furthermore, no mixed methods data analysis techniques were utilized to take advantage of both types of data. For example, there was no apparent attempt made to state a relationship between the quantitative and qualitative data when presenting the results or during the discussion. Finally, in relationship to the

focus of this dissertation, the study was limited to special education, not regular education teachers.

Current Understandings of Beginning Teachers' Perceptions of Preparation for Inclusive Education

Conderman and Johnston-Rodriguez (2009) provide an exemplary model of a pilot study examining inclusive preparation from the perspective of beginning elementary and secondary education teachers and beginning elementary and secondary special education teachers. A random sample of 46 Illinois teachers with six or fewer years of experience completed a survey with both closed- and open-ended questions designed to determine beginning teachers' perceptions of level of importance and preparedness related to components of inclusive education. The results indicated several areas for which general education teachers felt less prepared. Examples of these areas included making accommodations, identifying realistic expectations for students with special needs, and in general, providing access to the general education curriculum. These results led Conderman and Johnston-Rodriguez to conclude that teacher preparation programs need to respond by providing improved experiences and enhanced curriculum.

Berry (2010) in a study including 17 early career regular education teachers and 43 preservice regular education teachers provides additional information for teacher preparation programs to consider. Berry's study used a Q-method technique. Q-method is described as a qualitative approach whereby each participant is given a set of statements and asked to sort the statements on a continuum based on how he/she believes the statement matches his/her point

of view. For example one of the statements in this study was “I’m very apprehensive about inclusion. Special education teachers are experts in their field, and that is how it should be left” (Berry, 2010, p. 81). Participants would then place the statement on one of seven points on a continuum with extremes of “most like my point of view” to “most unlike my point of view” (p. 80). The 24 statements included in this study were designed to assess teachers’ attitudes (anxious/confident and positive/negative) on three topics important to inclusion: 1) instructional accommodations, 2) fairness, and 3) general perceptions.

Upon analysis of each of the responses, three groups were defined as: 1) keen, but anxious, beginners, 2) positive doers, and 3) resisters. Keen, but anxious, beginners described 43 of the participants with 16% of the group consisting of early career teachers. This group’s top rankings indicated they felt confident and had positive attitudes regarding inclusion and accommodations. The second group, positive doers, consisted of 10 participants. Early career teachers represented 40% of this group. The results from this group were very similar to the first group. The results indicated they also had positive attitudes toward inclusion and identified highly with items related to confidence for implementing inclusion. Unfortunately, the group of resisters ($n = 5$), although small was made up of 4 early career teachers. The two statements these teachers felt best represented their beliefs and perceptions indicated a negative attitude toward inclusion. These two statements were “I firmly believe that the inclusion of special education students might hinder the learning of non-special education students” and “I believe having students with disabilities in my class

would affect my attention span to the other children, which would not be fair” (p. 88). Berry’s work seems to support the previous discussion on belief systems as her recommendations center on teacher preparation programs finding ways to help teachers change their attitudes, beliefs, and efficacy toward inclusion.

Inclusion: A Continued Struggle to Do Well

There is evidence to support that teachers’ attitudes of expectant achievement for students with disabilities may indeed affect classroom performance (Klehm, 2014). This evidence may be what is propelling the long-standing debate over how much inclusion is good inclusion. Some advocates argue fervently for the full inclusion of all students in regular classrooms while other advocates argue just as fervently for a continuum of alternative placements to be upheld in order to meet individualized learning needs (Kauffman & Hallahan, 2005). Regardless of one’s viewpoint related to the continuing debate over how much inclusion is best, the data is clear that many students with disabilities, particularly students with learning disabilities, are spending increasing amounts of time in general education classrooms (McLeskey, Landers, Hoppey, & Williamson, 2012). Consequently, preparing teachers to work in inclusive environments is a responsibility for teacher preparation faculty to take seriously.

Despite widespread concerted efforts to define the areas of expertise needed for inclusive education and to understand how to best prepare teachers for inclusive education, teachers and school systems continue to struggle. As Schwarz (2006) states:

There are millions of students with disabilities in the general education classroom. Many of these students with specialized learning needs simply go unserved by special educators. Just as worrisome, only one quarter of classroom teachers or general educators say that they feel prepared to serve these young people. The training, preparation, philosophical base, techniques, and strategies are not there to serve students effectively (p. xix).

This dissertation seeks to gain the perspectives of novice teachers regarding their perceptions of preparedness and competence for teaching in inclusive classrooms. The research also seeks to understand the components of teacher preparation programs that may have influenced these perceptions. As Turnbull and Turnbull (2000) express, educational researchers should hold themselves accountable for engaging in research that will be helpful and beneficial to children, families, and communities. By respecting the voices of these new professionals, the study seeks to honor all of the struggling learners who deserve well-prepared, open-minded, skilled teachers who are committed to providing a high-quality equitable education.

Summary of Chapter II

This chapter presented a comprehensive review of the complex topic of inclusive education. Beginning with the history of inclusion and ending with research evidence to support a continued need to better prepare beginning teachers, the chapter presented a case for research focusing on gaining novice teachers' perspectives on preparation for teaching in inclusive classrooms.

Research presenting perspectives of preservice teachers is widely available and does assist teacher education faculty to identify components helpful to increasing knowledge and self-efficacy for teaching students with special needs. Yet, the research does not resolve the perpetual problem of novice teachers feeling under-prepared for teaching in inclusive classrooms. The chapter illuminated the gapping whole in the literature related to gaining novice teachers' perspectives of their preparation for inclusive education. Research that includes novice teachers would provide information to teacher preparation programs that may help in determining effective and helpful program components for preparing teachers for inclusive education. The research would also add to the literature that is attempting to understand how to accomplish the critical task of preparing all teachers to work with all students— a task that has remained unsettled for far too long.

Chapter III presents the quantitative and qualitative methods utilized in the study.

CHAPTER III
METHODOLOGY
Mixed Methods

Mixed methods research is a form of research that combines research processes (i.e., quantitative and qualitative), philosophies, worldviews, and multiple perspectives in order to gain both breadth and depth of understanding (Creswell & Plano Clark, 2011; Johnson, Onwuegbuzie, & Turner, 2007). Ivankova, Creswell, and Stick (2006) state, “The rationale for mixing both kinds of data within one study is grounded in the fact that neither quantitative nor qualitative methods are sufficient, by themselves, to capture the trends and details of a situation” (p. 3). This study sought to develop a comprehensive understanding of beginning teachers’ perceptions of preparation to teach in inclusive environments. It was hoped that this understanding would lead to advances in teacher preparation related to inclusive education. Consequently, obtaining generalizable quantitative results that could explain relationships between experiences and perceptions of preparedness was undertaken. Also, the qualitative data could provide an in-depth examination of novice teachers’ perspectives. Taken together, a more detailed understanding of the topic gained from a mixed methods approach could provide very beneficial information for teacher preparation programs.

Explanatory Sequential Design

This study utilized an explanatory sequential design. “The mixed-methods sequential explanatory design is highly popular among researchers and implies collecting and analyzing first quantitative and then qualitative data in two consecutive phases within one study” (Ivankova, Creswell, & Stick, 2006, p. 4). This design is beneficial when variables and constructs related to the topic of interest are known (Creswell & Plano Clark, 2011). The rich amount of literature, identified professional standards, and a previously completed pilot study related to inclusive education made designing a quantitative instrument to assess perceptions of preparation a suitable first step in answering the research questions. Once preliminary analysis of survey data was accomplished, follow-up interviews were conducted in order to explore beginning teachers’ perceptions in a more in-depth manner. Figure 2 provides a procedural diagram of the study design.

Challenges of the Explanatory Sequential Design

While the explanatory sequential mixed methods research design is popular and straightforward, researchers must also be prepared for challenges when implementing this design (Creswell & Plano Clark, 2011; Ivankova et al., 2006). Creswell and Plano Clark (2011) note the following four challenges to explanatory sequential designs: 1) the length of time needed to implement both phases of the study, 2) a possible difficulty with securing ethical approval because the design involves two phases, 3) decisions related to which results

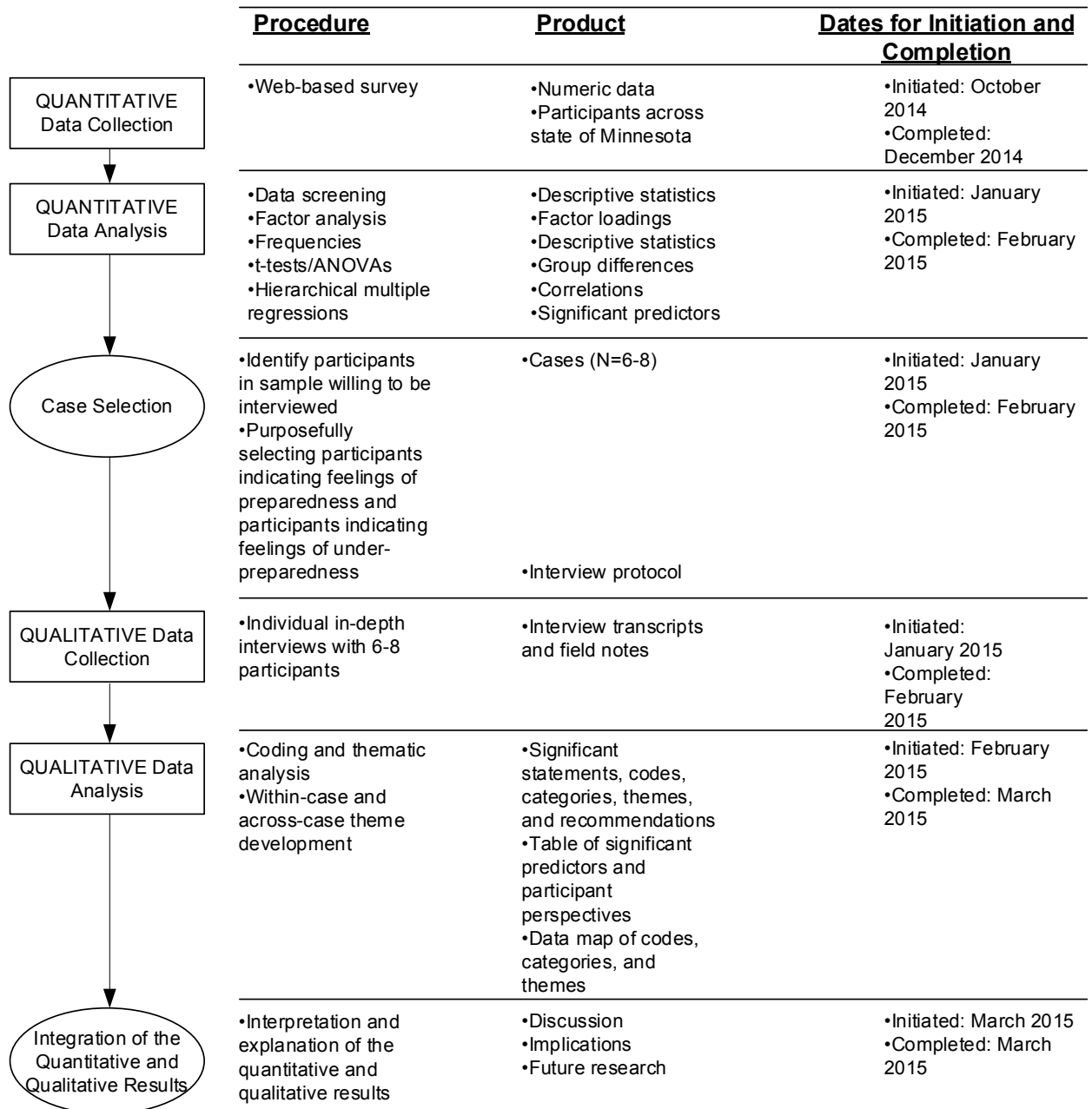


Figure 2. Diagram for an Explanatory Sequential Study Titled: Utilizing Novice Teachers' Perceptions and Voices to Make Recommendations for Improving Teacher Preparation for Inclusive Education: A Mixed Methods Study

need to be further explored during the qualitative phase, and 4) decisions regarding participants for the follow-up qualitative phase.

Plans to address these challenges were carefully considered. In relationship to the length of time needed to complete the study, the research proposal was submitted one year in advance of the anticipated graduation date. This provided an adequate length of time to complete both phases of the study. Secondly, a pilot study was completed for EFR 522: Mixed Methods Research. The pilot study required ethical approval. For the dissertation study, a protocol change noting revisions to the survey, changes to the participant sample population, and minor changes to the consent form from the pilot study were submitted for approval. This drastically simplified the ethical approval process for this study. Finally, Figure 2 indicates that the participants for Phase 2 were identified based on their willingness to be interviewed.

Context and Participants

Location

This research took place in the state of Minnesota. The population of Minnesota in 2014 was 5,303,925 (Suburban Stats, 2014) with a K-12 public school student population of 837,154 during the 2013-14 academic year (Minnesota Department of Education, 2015b). The Minnesota Department of Education (2015a) reports 57,008 valid standard licenses were held in elementary education for the year 2013-14. According to the Minnesota Association of Colleges for Teacher Education (2015), 4,646 teachers were newly licensed in 2014. The number of school age students receiving special

education services across the state during the 2011-12 academic year was 123,353 representing a 12.3% increase from the 2000-01 school year (U.S. Department of Education, National Center for Education Statistics, 2013b).

Participants took part in the quantitative portion of the study at a convenient location where they had access to the Internet. During the qualitative phase of the study, interviews were conducted at a location that was convenient to each participant.

Participants

Currently, the state of Minnesota is divided into 11 regions consisting of nine Regional Service Cooperatives (Appendix A). In order to facilitate recruitment of survey participants, each Regional Service Cooperative director/administrator was contacted via email in mid-August 2014. The content of the email (Appendix B) explained the research project and asked each director if they would be willing to disperse an invitation to beginning elementary teachers within their region. Initially, three directors responded that they were willing to disperse the survey invitation. The directors represented these regions: the Northwest Service Cooperative (Regions 1 and 2), the National Joint Powers Alliance (Region 5), and the Southwest/West Central Service Cooperative (Regions 6 and 8). Letters stating their agreement (Appendix C) were collected to submit with the protocol change. The Lakes Country Service Cooperative (Region 4) director indicated that school superintendents within his region felt that a greater response rate would be obtained if I sent email invitations directly

to the teachers and I indicated my agreement to do this. Follow-up emails were sent to the remaining regions in mid-September with no response.

After submitting letters of agreement and receiving ethical approval, on October 13, 2014 the teacher email invitation (Appendix D) and survey link were sent to directors for dispersal within their respective regions. During November through early December 2014 individual emails were sent to elementary teachers in the Lakes Country Service Cooperative region. The Lakes Country region consists of 48 public school districts and private schools and teachers from 45 of these districts and schools were sent emails.

In all cases, the email invitation invited elementary (K-6) teachers in their first three years of teaching to participate. The email contained details of the online survey, web link, a date to respond by, and thanks for participation. An incentive for participating was also noted in the invitation. The incentive consisted of entering into a drawing to win one of nine \$50.00 gift cards.

In total 165 teachers accessed the survey, with 103 completing the survey for a completion rate of 62%. However, after screening the data and conducting a few of the interviews (see below), it was determined that some of the teachers who completed the survey were not elementary classroom teachers. Consequently, results from 84 beginning teachers were included in the quantitative analysis. While the number of eligible participants who completed the survey is less than the anticipated number at the outset of this research project, the demographic data demonstrate that participants are representative of different regions of the state and the sample is still large enough to feasibly

conduct a wide range of statistical analyses. Demographics for the 84 qualifying participants are presented in Chapter IV.

For the qualitative phase of the study, it was hoped that six to eight interviews would be conducted to allow for theme development across participants. Preliminary data from the participants who indicated their willingness to participate (n = 17) was analyzed to identify the potential participants. Participants who had been clearly eliminated from the first phase of the study were not considered for interviews (n = 5). For the remaining 12, participant summed scores on the survey scales assessing perceptions of preparation and competence were added together. Participants were then ranked from highest to lowest total preparation and competence score. Consideration was also given to the region of the state each participant reported they were teaching in. However, with the limited number of volunteers to choose from, this was given a lesser priority.

Once the scores were ranked, email invitations were sent to participants who represented scores within high, medium, and low ranges. The email invited participants to partake in an individual interview to gain in-depth information related to the survey results. The email contained details of the study purpose, a request to schedule an interview and thanks for participation (Appendix E). No incentive for participation in the interview phase was offered to participants.

Initially, eight interview invitations were sent on January 5, 2015. Out of these eight, two immediately replied and accepted the invitation. Follow-up invitations were sent to the other six on January 9, 2015. After the second

invitation, three more participants accepted the invitation to participate in an interview. Of these five participants, one participant was unable to be reached by phone during the agreed upon time for the interview. Follow-up attempts to reschedule the interview were unsuccessful as the participant stopped responding to my emails. During the interview of another participant, it was determined that she was currently teaching in a special education setting. Even though the participant completed a dual licensure program, her current teaching position eliminated her from the both the quantitative and qualitative phases of the study. Thus, the first attempt at gaining interview participants garnered three qualifying interviews.

A second attempt at gaining interview participants was made on January 16, 2015 by contacting the additional four teachers from the list of 12 as well as sending a third invite to the participants who had not responded to the first two invitations. This resulted in an additional three volunteers. Unfortunately, while conducting these interviews, it was determined that one participant was technically in her fourth year of teaching and one participant was a title teacher. As a result, both of these participants were removed from the quantitative and qualitative data. Hence, at the end of January 2015 four qualifying interviews had been conducted.

In hopes of obtaining at least one more eligible interview as well as an interview from a first year teacher, additional emails were sent to 24 first year teachers who had completed the survey. This resulted in one volunteer. This interview was conducted on February 19, 2015 and provided a fifth source of

data for the qualitative phase of the study. Demographic information on all of the interview participants is reported in Chapter IV.

Data Collection

Phase I: Quantitative Survey

The survey instrument used in this study contained demographic items and scales related to Minnesota licensure standards as well as components of inclusive environments and teaching considerations (Appendix F). Results from the pilot study were used to determine if any of the survey items or scales should be deleted or modified. This analysis yielded the following changes:

1. Clarifying a few statements by adding explanatory phrases such as: *students with disabilities* and *right now*.
2. The items from one of the scales in the pilot study (Inclusive Implementation: General) were dispersed to the Inclusive Implementation: Instructional Practices and Inclusive Implementation: Classroom Management scales. This was done to increase the number of items in the two scales.
3. Age ranges were added to the question asking participants to provide their age. This was done to aid in the data analysis process.
4. A question was added that asked participants to indicate the region in Minnesota they were currently teaching. This was added because a representative sample from across the state of Minnesota was being sought in this study.

After revisions, the online survey instrument contained several demographic variables, 15 statements related to Minnesota Standards of Effective Practice interpreted to be directly related to inclusive education, and scales related to beliefs, preparation, and perceptions of competence related to inclusive education. The instrument also contained a section asking participants to respond in two ways to statements developed from the literature as important for establishing effective inclusive educational environments (e.g., *Teachers who believe all children can learn*, *Teachers who use a variety of strategies when teaching*). Participants were asked to rate how important they felt each statement was to inclusive education as well as how much each statement was addressed during their teacher preparation.

Online survey data was collected using the Qualtrics© survey program. Qualtrics© was selected because once the survey was created, it could be distributed through the University's SSL encrypted site (University of North Dakota, 2015). The online survey took the majority of participants between six and 24 minutes to complete. The survey results are presented in Chapter IV.

Phase II: Interviews

Interview questions from the pilot study were revised, adjusted, and reordered to create questions that were more focused on the topic of inclusive education. Additionally, a question related to collaboration was added. Appendix G provides the revised interview protocol used for this study.

The interview protocol asked the participants to reflect upon their experiences during their teacher preparation programs as well as provide their

thoughts regarding what each participant might change about their program. Participants were also asked to share aspects of their teaching for which they are proud and they wish they could improve. Additionally, participants were asked to describe which aspects of teaching in inclusive classrooms are easier and harder than they initially had thought. The interviews were conducted using a semi-structured format to allow for follow-up questions and to maintain a conversational tone to the interview. Conducting the interviews in a semi-structured, conversational manner allowed the interviews to be carried out in a natural way that communicated to the interviewee that her “views are acceptable and important” (Schatzman & Strauss, 1973, p. 74).

Informed Consent and Confidentiality

Informed consent was handled differently for each phase of this study. For the quantitative phase, a waiver of informed consent was obtained for the pilot study and this was extended for the dissertation study. While the survey did not contain a full consent form, the opening screen of the survey gave a brief introduction to the survey and gave participants the opportunity to voluntarily agree to participate before beginning the survey. If participants clicked on the statement indicating they did not wish to participate, the survey was set to automatically end with a thank you for completing the survey.

For the interview phase, individual written informed consent (Appendix H) was obtained from each participant. With the exception of one interview that was conducted in the participant’s classroom, all interviews were conducted over the phone. Consequently, for the face-to-face interview the participant was given a

copy of the informed consent and it was explained in detail; for the other participants, the consent form was emailed prior to the interview. At the start of each phone call, the participant was thanked for her time and then the consent form was explained and an opportunity to ask questions before the start of the interview was provided. In all cases, participants were informed that names would not be reported and identities would remain confidential. To ensure the confidentiality of participants, interview participants were assigned a number and only those numbers appear in the dissertation.

During the interview phase, there was no link between consent forms and responses. For the interviews conducted via phone, the consent forms were returned via email, printed, and the email was deleted. For the interview conducted in-person the consent form was collected at the time of the interview and the participant was provided with a paper copy of the consent form to keep. All consent forms were kept in a secure location separate from paper and electronic forms of data.

Interviews were audio-recorded. Only the principal investigator has access to the audio recordings. The principal investigator and her dissertation advisor have access to the transcriptions and documents used for data analysis. The principal investigator will keep copies of the audio recordings and transcriptions for a minimum of three years on a password protected computer in a locked office as well as on an external hard drive stored in a secure location.

No more than minimal risk was anticipated for participants taking part in the study. There was a small risk of participants becoming emotionally upset

when answering survey questions regarding their competence and perceived success in relationship to teaching students with disabilities in their classrooms. Although this did present a minimal risk, participants had the opportunity to discontinue completing the survey at any time. There was also minimal risk of participants becoming upset during the interview when answering questions regarding an area of teaching that they wished they could improve. The interview consent form warned of potential emotional reactions and participants were informed they could decline to answer any question or discontinue the interview at any time. No vulnerable participants were included in this research.

Data Analysis

Quantitative Analysis

Statistical Package for the Social Sciences (SPSS 21) software was utilized to analyze survey results. All data from the original 165 responses was downloaded from Qualtrics© directly into SPSS. Variable names were changed to match with variable names created in the codebook in order to facilitate the data screening process. Each participant's set of data was analyzed and decisions were made regarding if the data should remain in the database. In order to determine if the data should be kept or deleted the following process was undertaken:

1. One of the demographic items asked participants to choose which grade level (K-6) they were currently teaching. If this item was skipped, the case was removed from the database. This resulted in 60 cases being removed.

2. The question asking participants to indicate the number of students they currently had in their classroom was analyzed. If the response indicated a large number of students (e.g., 248) they were eliminated from the sample as this was likely an indicator that they were not a K-6 classroom teacher. This resulted in another 18 cases being removed.
3. The item asking participants to indicate if they were in their first, second, or third year of teaching was analyzed. If the item was left blank, they were removed from the database. This resulted in another three cases being removed.

This process resulted in 84 cases remaining in the sample. After carefully reviewing the demographic data related to grade level, classroom size, and year of teaching, the researcher is confident that the 84 cases represent elementary classroom teachers in their first three years of teaching.

Once the final database was established, items needing reverse coding were re-coded accordingly. Frequencies, means, and standard deviations for each item were analyzed for any potentially problematic data. No individual items were noted as problematic beyond the point of removal from further analysis.

Measures. Part of the purpose of this research was to develop reliable scales that can measure perceptions of teacher preparation program elements and their relationship to beginning teachers' beliefs and competence related to inclusive education. Tests for construct validity were conducted using exploratory factor analysis procedures with a Varimax rotation. Factor loadings

were analyzed; items that did not properly correlate to create a factor within a scale were removed. To complete the factor analysis, Cronbach's alphas were analyzed to ensure reliability of each identified factor. Checks for normal distribution were also completed to ensure appropriate use of the factors and scales in inferential statistical analyses.

Minnesota Standards of Effective Practice (MNSS). These items were assessed on a five-point Likert scale (1 = *Strongly disagree*, 5 = *Strongly agree*). Each statement began with the phrase, 'My teacher preparation program addressed...'.

According to the initial factor analysis, there should have been four factors extracted from these 15 items. These four factors would explain 70.56% of the variance related to this scale. However, upon review of the rotated component matrix, factor four contained only one strongly loaded item (MNSS1_1). This does not follow the rule of a scale containing at least three items, so the item was eliminated from any further analysis. The three remaining factors explain 62.89% of the variance within this scale. Table 1 presents the results of the exploratory factor analysis. Item (MNSS1_11) did not strongly load onto any of the three remaining factors, so it was eliminated from the table and from any further analysis.

A reliability analysis was also conducted on each factor. Attempts were made to ensure that each factor was reliable by analyzing the item-total statistics. The Cronbach's alpha for factor one was .81. The Cronbach's alphas for the second and third factors were .85 and .83, respectively. While the reliability of

factor three could have been improved by eliminating item MNSS1_15, this would have meant that the factor would only contain two items, which violates the typical researcher preference for a minimum of three items per factor.

Table 1. Exploratory Factor Analysis of Minnesota Standards of Effective Practice Items

Item	Knowledge and Skills	Philosophies	Resources
MNSS1_2	.64		
MNSS1_3	.75		
MNSS1_4	.75		
MNSS1_5	.75		
MNSS1_14	.61		
MNSS1_6		.61	
MNSS1_7		.87	
MNSS1_8		.83	
MNSS1_9		.67	
MNSS1_10		.62	
MNSS1_12			.88
MNSS1_13			.91
MNSS1_15			.57
Eigen	6.61	1.62	1.32
% Var	23.81	21.60	17.48

Also, the check of reliability demonstrates there is internal consistency within the items of the factor because reliabilities are considered adequate around .70, good if around .80, and great around .90. Consequently, it was determined to leave the item in the factor despite having the opportunity to improve the reliability to .90.

The three factors associated with the MNSS were identified as Knowledge and Skills (factor 1), Philosophies (factor 2) and Resources (factor 3). The

Knowledge and Skills factor contained items including the phrase “how to” (e.g., *My teacher preparation program addressed how to design instruction that uses a student’s strengths as the basis for continued learning*). The Philosophies factor addressed statements related to beliefs (e.g., *My teacher preparation program addressed the idea that all students can and should learn at the highest possible levels*). Factor 3, Resources, contained items pertaining to knowing how to access and apply resources that could facilitate instruction in inclusive classrooms (e.g., *My teacher preparation program addressed identifying when to access appropriate services or resources to meet exceptional learning needs.*). Summed scale distributions were analyzed and all three factors were deemed to be sufficiently normal distributed.

Inclusive beliefs: general. These statements addressed overall feelings related to inclusion. Each statement began with ‘Inclusion...’ (e.g., *Inclusion helps students develop friendships*) and asked participants to respond on a five-point Likert scale. The initial factor analysis revealed three factors which explained 74.26% of the variance related to the scale. However, the third factor contained only two items (IBG1_6, IBG1_8), so it was eliminated from further analysis. The remaining two factors explained 53.87% of the variance which still fulfills the criteria that states factors should account for between 40-70% of the variance among items. Table 2 provides the results of the exploratory factor analysis.

Tests for reliability indicated that factor one’s reliability could have been improved by eliminating item IBG1_1. However, this would result in the factor

containing only two items, so the item was maintained with the factor having a reliability of .80. Factor two's final reliability is .76. Factor one is identified as Inclusive Beliefs: Academic because it contains items related to inclusion and academic benefits (e.g., *Inclusion helps students with disabilities academically*).

Table 2. Exploratory Factor Analysis of Inclusive Beliefs: General Scale

Item	Inclusive Beliefs: Academic	Inclusive Beliefs: Social
IBG1_1	.63	
IBG1_3	.90	
IBG1_4	.86	
IBG1_2		.69
IBG1_5		.87
IBG1_7		.77
Eigen	3.28	1.57
% Var	28.23	25.64

Factor two is identified as Inclusive Beliefs: Social because it contains items related to inclusion and social benefits (e.g., *Inclusion helps all students develop acceptance of others*). The summed scales of these two factors indicated the academic factor has a normal distribution. The social factor was outside the bounds of a normal distribution with skewness slightly out of the boundaries of ± 1.00 at -1.39. The kurtosis was more problematic at 3.11. However, it was decided to still include the factor in further inferential analysis. This was decided because of the literature indicating the importance of beliefs to effective inclusive classrooms.

Preparation for inclusion. Statements related to beginning teachers' perceptions of their coursework and experiences during their teacher preparation

program and their current level of training were assessed on the same five-point Likert scale previously noted. The rotated component matrix indicated that PI1_8R should be eliminated because the item lacked correspondence with the other seven items. The seven items, considered as one factor, explain 43.25% of the variance. Table 3 presents the factor loadings for this scale.

Table 3. Exploratory Factor Analysis of Preparation for Inclusion Scale

Item	Preparation for Inclusion
PI1_1	.69
PI1_2R	.56
PI1_3	.75
PI1_4	.80
PI1_5	.64
PI1_6	.79
PI1_7	.67
Eigen	3.50
% Var	43.25%

The reliability analysis resulted in the removal of an additional item (PI1_2R) to slightly improve the reliability ($\alpha = .82$) and make the scale more parsimonious. The descriptive statistics for this scale indicated a normal distribution.

Inclusive implementation: classroom management. Five statements related to classroom management considerations for teachers in inclusive classrooms were the next group of items (e.g., *Classroom management is more difficult because of the inclusion of students with disabilities*). These items were also assessed on a five-point Likert scale. The factor analysis on this scale indicated that two factors should be extracted from the scale. However, the first

factor would contain only two items. The reliability ($\alpha = .58$) on the second factor was checked and because of the low reliability and the concern that it only explained 32.53% of the variance within the scale it was deemed not adequate for further analysis. However, due to the importance of classroom management in relationship to inclusive implementation, two items from the scale (CM1_1 and CM1_5) were identified as items for use in further analysis. These items were chosen because of their close relationship to assessing perceptions of meeting the demands of inclusive education. Results of the individual item descriptive statistics will be presented in Chapter IV.

Inclusive implementation: instructional practices. The next group consisted of items related to instructional practices implemented in inclusive classrooms (e.g., *Due to the implementation of specific instructional practices (ex: differentiated instruction, accommodations/modifications), inclusion is working well in my classroom*). The initial factor analysis revealed three factors within this scale. However, one factor contained only two items, eliminating it from further analysis. Reliability checks were conducted on the remaining two factors. Unfortunately, the reliability ($\alpha = .39$) for one of the remaining factors was not adequate. This left one remaining factor, however, this factor only explained 26.23% of the variance within the scale. This does not account for the recommended amount of variance for which a factor should account. Consequently, this scale was not used for further analysis. Individual items (IP1_6, IP1_7, and IP1_8) that were deemed most closely related to assessing participants' perceptions of meeting the demands of inclusive education were

identified for further analysis. Individual item descriptive statistics for these items are reported in Chapter IV.

Inclusive implementation: competence. These statements related to beginning teachers' overall feelings of competence related to inclusive education. The initial factor analysis revealed two factors. However, there were not enough statements within the scale to support two factors, so a second exploratory analysis was conducted with items comp1_1, comp1_4, and comp1_5. These three items loaded onto one factor and as a factor explain 59% of the variance among items. The reliability was .65. The descriptive statistics for this scale indicated a normal distribution. This scale, like the preparation for inclusion scale and inclusive beliefs scales, was used as a dependent variable to answer the research questions. While it is preferred for the reliability to be closer to .70 or higher, the scale was deemed adequate enough for further analysis due to its importance for answering the research questions.

Components of inclusive education. These 18 items were identified from the literature as important for inclusive classrooms and schools (e.g., *Teachers who understand characteristics of disabilities*). Participants were asked to rate how important they felt each component was for inclusive education and how well they felt each component was addressed within their teacher preparation programs. Participants were asked to respond using a four-point scale (scale 1 = 1 = *not important*, 2 = *somewhat important*, 3 = *important*, 4 = *highly important*; scale 2 = 1 = *not addressed at all*, 2 = *talked about, but not emphasized*, 3 = *emphasized*, 4 = *highly emphasized*). This portion of the survey

was modeled after Conderman, Johnston-Rodriguez, Hartman, and Walker's (2013) study. In this study Conderman et al. asked novice special education teachers to respond to 25 statements in two ways based on their perceptions of preparedness and confidence. The four-point scale developed for this portion of the survey was a replica of the four-point scale Conderman et al. used.

The teacher preparation ratings were analyzed to establish potential factors within the scale because the focus of this study was to determine if experiences during teacher preparation could predict feelings of beliefs, competence, and preparation. The factor analysis revealed three factors that explained 66.92% of the variance. Table 4 presents the factor loadings for this scale.

Table 4. Exploratory Factor Analysis of Components of Inclusive Education Perceived in Teacher Education Scale

Item	Disability Specific Considerations	Beliefs about Children and Teaching	Beliefs about Learning
Components1_2_8	.79		
Components1_2_9	.73		
Components1_2_10	.61		
Components1_2_14	.64		
Components1_2_15	.71		
Components1_2_16	.82		
Components1_2_17	.77		
Components1_2_18	.77		
Components1_2_1		.76	
Components1_2_2		.84	
Components1_2_3		.74	
Components1_2_6		.55	
Components1_2_7		.58	
Components1_2_13		.63	
Components1_2_4			.82
Components1_2_5			.84
Components1_2_11			.50
Components1_2_12			.50
Eigen	9.09	1.85	1.11
% Var	28.81	21.77	16.35

Each of the factors had very good reliabilities ($\alpha = .92, .85, \text{ and } .89$). One item (Components1_2_11) was removed to obtain the reported reliability of the third factor. The factors are identified as Disability Specific Considerations (e.g., *Teachers who have knowledge of typical and atypical human development*), Beliefs about Children and Teaching (e.g., *Teachers who believe all children are important.*), and Beliefs about Learning (e.g., *Teachers who believe learning occurs in a variety of ways*). The Disability Specific Considerations factor and the Beliefs about Children and Teaching factor were normally distributed. The Beliefs about Learning factor was slightly outside of the bounds of a normal distribution (skewness, -1.40; kurtosis, 1.60). However, these results were not significant enough to cause concern related to further analysis.

Factors were not analyzed for the ratings related to personal feelings of each component of inclusive education statement. Descriptive statistics for the individual items related to this portion of the survey instrument are reported in Chapter IV.

Inferential statistics. Once the factor analyses were complete, inferential statistics were utilized to answer the research questions. Tests of group differences were conducted. T-tests comparing gender, age (traditional vs. non-traditional age of graduates), completing a teacher preparation program in Minnesota, attending IEP meetings, having more than one teaching license, and the level of teaching (primary or intermediate) on the dependent variables of competence, preparation, and beliefs were conducted. Analyses of Variances (ANOVAs) were also carried out to analyze group differences. For example,

ANOVAs were conducted to test for group differences between first, second and third year teachers and inclusive education perceptions regarding preparation for inclusion and competence. If any significant findings were found follow-up tests with an adjusted alpha level were performed to analyze between which groups differences occurred.

A series of hierarchical multiple regressions were also conducted that incorporated demographic variables, the factors related to the Minnesota Standards of Effective Practice, and the components of inclusive education to predict beliefs, preparation and competence for teaching in inclusive classrooms. Several significant predictors were identified. Results of the hierarchical multiple regressions are reported in Chapter IV.

Qualitative Analysis

After each interview was transcribed, the transcript was emailed to the participant for member checking. Two of the participants responded that they found reading the transcription interesting and they did not feel any changes were needed. The other participants did not respond. After member checking, each interview transcription was entered into *ATLAS.ti*© 7 for analysis. The analysis began with the identification of significant statements and codes. Codes were assigned using exact words or phrases from the participants, referred to as “in vivo coding” (Creswell & Plano Clark, 2011, p. 208).

Upon completion of the coding, deductive and inductive analysis procedures were utilized to analyze the data. Cho and Lee (2014) state “One unique characteristic of qualitative content analysis is the flexibility of using

inductive and deductive approaches or a combination of both approaches in data analysis” (p. 4). Initially, a deductive approach, which starts with “preconceived codes and categories” (Cho & Lee, 2014, p. 4), was undertaken utilizing the significant predictor variables from the multiple regressions. This deductive approach served as a mixing point for the quantitative and qualitative data. After completing the deductive analysis, the data was analyzed a second time using an inductive approach. “The primary purpose of the inductive approach is to allow research findings to emerge from the frequent, dominant, or significant themes inherent in raw data...” (Thomas, 2006, p. 238). It was deemed important to use both approaches during the qualitative data analysis phase to ensure that no important themes were missed.

Deductive data analysis. For explanatory sequential designs, data analysis occurs in three phases: quantitative, qualitative and “an analysis of ...how the qualitative data help to explain the quantitative data” (Creswell & Plano Clark, 2011, p. 221). For this study, this was accomplished by using the significant predictor variables from the multiple regressions as initial categories for grouping the qualitative codes. Including “predetermined topic codes [or categories] in the qualitative analysis that are based on the important factors identified in the quantitative results” (p. 236) is a recommendation made by Creswell and Plano Clark. After relevant codes were assigned to each of the significant predictor variables, each of the cases (e.g., individual participant transcripts) were analyzed to determine if any differences could be identified between the participants based on their level (high, medium, low) of perceptions

of preparedness and competence for teaching in inclusive classrooms. This procedure is similar to a sequential mixed analysis technique described by Onwuegbuzie and Leech (2004) as qualitative contrasting whereby qualitative data is analyzed to determine “why...groups differed on the quantitative instrument” (p. 781). This process was also utilized to facilitate the presentation of a joint display of quantitative and qualitative data that is presented in Chapter IV.

Inductive data analysis. Following the deductive data analysis, constant comparison analysis methods (Leech & Onwuegbuzie, 2008) were used to reanalyze the qualitative data. This technique was deemed appropriate because the interviews were conducted to gain a thorough understanding of the phenomenon of inclusive education and beginning teachers’ perceptions of their preparation. To start the inductive data analysis process, codes were reassigned to new categories. The *ATLAS.ti 7*© software assisted in maintaining organization as well as enabled the researcher to visualize the relationship between codes and categories (Creswell & Plano Clark, 2011). Categories were grouped into themes and analyzed within the context of each of the research questions.

Figure 3 presents a data map illustrating the development of the themes for each of the research questions. For example, one of the topics that participants mentioned frequently was differentiation. This became a category. Upon analysis of the codes within that category, it was clear that participants had heard a lot about the concept of differentiation in their teacher preparation

programs, but were given very few opportunities to implement differentiated instructional practices in classrooms. This consensus among the participants developed into the theme *knowledge but no experience*.

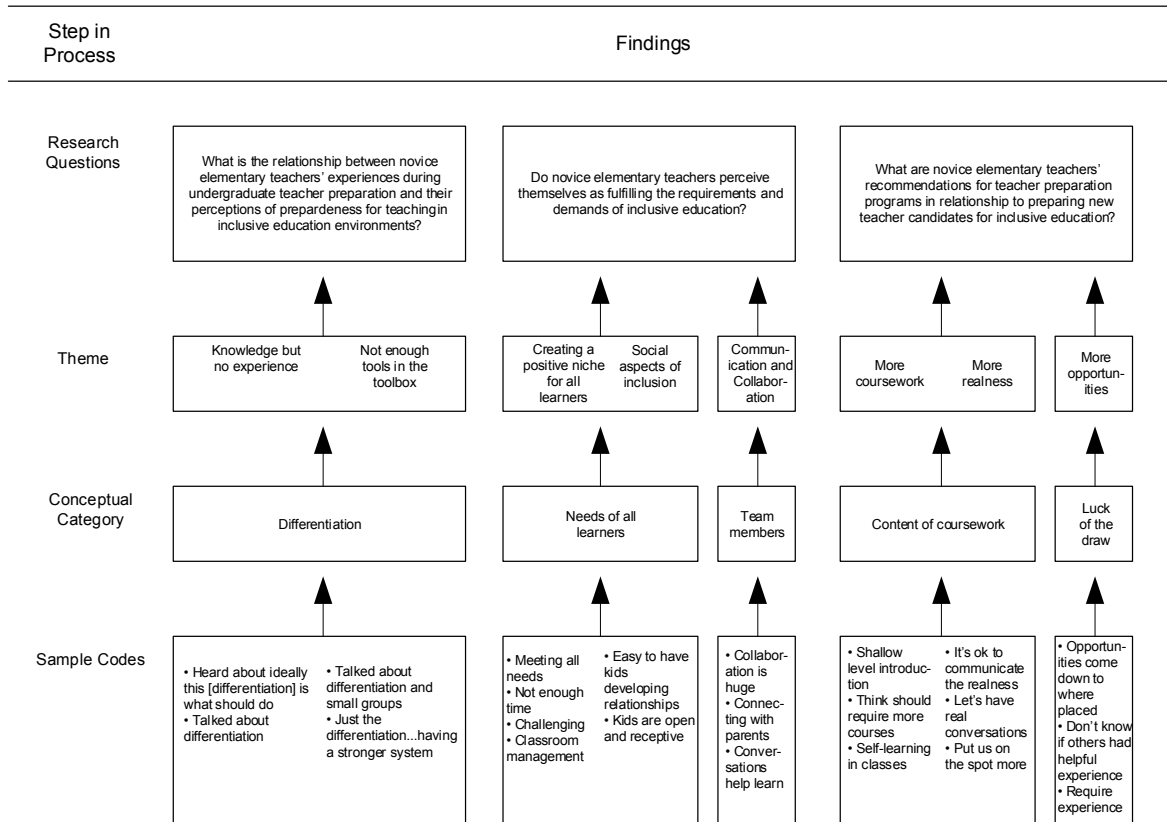


Figure 3. Map of Steps in the Data Process for Example Codes (Modeled after Fisher & Ociepka, 2011)

An additional example displayed in Figure 3 is the theme *creating a positive niche for all learners*. This theme stemmed from the codes of participants stating they were challenged by not having enough time to plan a variety of different lessons, by not feeling like they were able to meet the needs of all learners, and that they were unsure how to manage their classrooms for different types of small group activities. These codes were grouped into the category of needs of all learners which turned into the theme *creating a positive*

niche for all learners (something that the participants did not perceive themselves as highly competent in doing). The above examples followed a systematic process of analysis whereby discrete pieces of data were coded, grouped into categories, and then organized to create themes (Creswell & Plano Clark, 2011; Leech & Onwuegbuzie, 2008). The themes and significant findings from the preparation for inclusion and competence for teaching in inclusive classrooms factors are presented together at the end of Chapter IV. Additionally, themes and related quantitative findings were utilized in Chapter V to make recommendations for teacher preparation faculty.

Validity

“Validity differs in both quantitative and qualitative research, but in both approaches, it serves the purpose of checking on the quality of the data, the results, and the interpretation” (Creswell & Plano Clark, 2011, p. 210). In relation to quantitative validity, attention was given to both content and construct validity. Content validity was established by referencing related literature and professional standards when developing the survey instrument. Construct validity was ascertained through the factor analysis procedures. Internal validity was also considered during the design phase of the study because the study intended to gain a representative sample from across the state of Minnesota. The representative sample enables inferences to be made to the larger population of novice teachers across the state.

Qualitative validity was achieved by incorporating multiple strategies into the data collection and analysis process. One strategy that was utilized was data

triangulation. “Data triangulation refers to the use of multiple data sources using a single method” (Johnson & Christensen, 2012, p. 270). Through the use of interviews with multiple people at different times data triangulation was achieved in this study (Johnson & Christensen, 2012). A second strategy that was utilized to promote validity of the qualitative data was member checking. Member-checking involves asking participants to review findings for accuracy (Creswell & Plano Clark, 2011) and “is perhaps the most important strategy” (Johnson & Christensen, 2012, p.266) for ensuring qualitative research validity. Finally, validity was also maintained via a reflexive journal to record researcher thoughts during the duration of the study (Roulston, 2010). The journal allowed the researcher to record “thoughts, ideas, hunches, and questions that arise during the research process” (Roulston, 2010, p. 122). These recordings allowed the researcher to maintain awareness of “potential biases and predispositions as these may affect the research process and conclusions” (Johnson & Christensen, 2012, p. 266).

The mixed methods nature of the study also required that considerations were made to ensure validity was maintained when connecting data. Creswell and Plano Clark (2011) offer several strategies for maintaining validity while conducting mixed methods research and these suggestions were incorporated during the data collection, data analysis, and interpretation stages of the study. For example, the recommendation that the same individuals who participate in the quantitative phase of the study participate in the qualitative phase to follow-

up on findings was followed. Also, completion of the pilot study enhanced the validation of the survey instrument.

Reliability and Credibility

In quantitative research, reliability considers how free a measurement is from error. To determine reliability of the quantitative data, correlations between measures were analyzed. To determine internal consistency (reliability) of multi-scale items Cronbach's alphas were analyzed prior to conducting any inferential statistics.

Credibility can be achieved in qualitative research through a variety of different means, including member-checking and triangulation. As described above, the study design included the use of both member-checking and triangulation. Verbatim transcriptions are also another means to establish reliability and all interviews were transcribed verbatim in this study.

Summary of Chapter III

This chapter described the methodology that was utilized in this explanatory sequential mixed methods study. The study sought participation from novice elementary teachers across the state of Minnesota to answer research questions related to experiences during undergraduate teacher preparation and perceptions of preparedness related to educating students with disabilities in the regular classroom. Quantitative and qualitative analysis methods were presented along with considerations for maintaining validity and reliability. Chapter IV presents the results.

Chapter IV

RESULTS

This chapter presents both the quantitative and qualitative results of the study. Quantitative results are presented followed by the qualitative findings. The chapter will end by offering a presentation of the connection between the quantitative and qualitative findings.

Research Questions

The purpose of this mixed-methods study was to examine novice elementary teachers' perceptions of preparedness for teaching in inclusive classrooms in relation to experiences during undergraduate teacher preparation. The study followed an explanatory sequential design (Creswell & Plano Clark, 2011). The research questions reflect the design of the study.

1. What is the relationship between novice elementary teachers' experiences during undergraduate teacher preparation and their perceptions of preparedness (having necessary skills, knowledge, and belief systems) for teaching in inclusive education environments?
2. Do novice elementary teachers perceive themselves as fulfilling the requirements and demands of inclusive education?

3. What are novice elementary teachers' recommendations for teacher preparation programs in relationship to preparing new teacher candidates for inclusive education?

Quantitative Results

Demographic/Background Variables

The initial part of the survey contained several demographic variables. These variables assisted in characterizing the sample as well as provided groupings that were utilized to explore group differences. Table 5 presents demographic variables related to personal characteristics of the participants. Included in this data are characteristics unrelated to the participants' teaching positions as well as two questions related to the participants' teacher preparation program. This set of data shows that the sample is representative of the population of elementary teachers as 78.6% of the teachers in the sample are female. The data also confirm that 82.1% of the participants completed a teacher preparation program within the state of Minnesota (MN). Finally, the data indicates that the majority of the participants' age is representative of the age of a recent college graduate.

Demographic variables were also included that assisted in identifying professional characteristics of the participants. These variables included the current year of teaching, the region of the state where each participant was teaching, the grade level of current teaching assignment and if the participant held more than one teaching license. This set of demographic data is presented in Table 6. The data confirm that a representative sample from across the state

of MN was obtained. The data also indicate the sample is well-balanced between first, second, and third year teachers with the largest number of participants being second grade teachers.

Table 5. Personal Characteristics of Participants

Characteristic	Number	Percent
Sex		
Male	18	21.4
Female	66	78.6
Age in Years		
22-25	53	63.1
26-29	15	17.9
30-34	6	7.1
35-39	3	3.6
40 and older	6	7.1
Completion of MN Preparation Program		
Yes	69	82.1
No	15	17.9
Semesters of Field Experience Prior to Student Teaching		
5 or more	43	51.2
4	16	19
3	14	16.7
2	7	8.3
1	4	4.8

Table 6. Professional Characteristics of Participants

Characteristic	Number	Percent
Year of teaching		
First	27	32.1
Second	24	28.6
Third	33	39.3
Region*		
Northwest	13	15.5
Northeast	2	2.4
Lakes Country	26	31
National Joint Powers Alliance	2	2.4
Southwest/West Central	33	39.3
South Central	2	2.4
Southeast	1	1.2
Metropolitan	5	6.0
Grade		
K	12	14.3
1	8	9.5
2	18	21.4
3	16	19.0
4	13	15.5
5	10	11.9
6	7	8.3
More than 1 license		
Yes	32	38.1
No	52	61.9

*Region 7 (Resource Training and Solutions Cooperative) was inadvertently left out of the options for participants to choose from. This region is in the central portion of the state near the Metropolitan area.

A final set of background variables were included that are specific to teaching students with disabilities in inclusive classrooms. These variables included items asking participants to indicate the number of currently identified students with disabilities (SWD) in their classrooms, the types of disabilities that were represented in their classrooms, the types of support services offered for the students with disabilities in their classrooms, and if they had attended an IEP meeting for any of the students in their classrooms. This set of data is presented in Table 7. The data demonstrate that 90.5% of the participants had at least one student with an identified disability in their classroom. The types of disabilities represented and the supports received by the students with special needs in the participants' classrooms are presented in order from most to least reported.

Table 7. Background Variables Specific to Students with Disabilities

Variable	Number	Percent
Number of SWD		
5 or more	24	28.6
4	15	17.9
3	12	14.3
2	18	21.4
1	7	8.3
0	8	9.5
Disabilities		
Learning Disabilities	64	76.2
Speech/Language Impairments	58	69.0
Emotional/Behavioral Disorders	50	59.5
Intellectual Disabilities	29	34.5
Autism	27	32.1

Table 7. cont.

Variable	Number	Percent
Other Health Impairments	13	15.5
Developmental Delay	12	14.3
Multiple Disabilities	8	9.5
Physical Disabilities	7	8.3
Deaf/Hard of Hearing	5	6.0
Traumatic Brain Injury	4	4.8
Blind/Visual Impairment	3	3.6
Deaf and Blind	0	0
Supports		
Para in classroom	57	67.9
Resource room	57	67.9
Speech/Language therapy	57	67.9
Social worker	39	46.4
Counselor	27	32.1
Occupational therapy	26	31.0
Physical therapy	9	10.7
Special education teacher in classroom	8	9.5
Other	3	3.6
No support	3	3.6
IEP Meeting		
Yes	71	84.5
No	13	15.5

Research Question One

The relationship between novice elementary teacher's experiences during undergraduate teacher preparation and their perceptions of preparedness for teaching in inclusive classrooms was the focus of the first research question. To

quantitatively answer this question descriptive statistics from the Minnesota Standards of Effective Practice and teacher preparation factors, correlations between these factors and inclusive beliefs, as well as perceptions of preparation and competence were reviewed. Finally, to specifically address the research question, results from *t*-tests were analyzed to determine if differences were present between groups with different experiences during their teacher preparation programs.

Descriptive statistics for factors related to teacher preparation

content. Table 8 presents the item descriptive statistics for the factors related to the Minnesota Standards of Effective Practice (MNSS). The means for the items within the Resources factor range between 3.36 and 3.69 on a five-point scale. The items within the other MNSS factors have means between 4.00 and 4.53 with the exception of MNSS1_5 which has a mean of 3.65.

Table 8. Minnesota Standards of Effective Practice Factors

Label	Item	<i>M</i>	<i>SD</i>
<i>Knowledge and Skills</i>			
<i>My teacher preparation program addressed...</i>			
MNSS1_2	How to design instruction that uses a student's strengths as the basis for continued learning	4.00	0.74
MNSS1_3	How to include varied learning styles, performance modes, and multiple intelligences in instructional plans	4.19	0.76
MNSS1_4	How to identify differences in approaches to learning and performance	4.12	0.84
MNSS1_5	How to recognize and deal with dehumanizing biases, discrimination, and prejudices	3.65	1.04
MNSS1_14	How to develop a learning community in which individual differences are respected	4.29	0.82

Table 8. cont.

Label	Item	<i>M</i>	<i>SD</i>
<i>Philosophies</i>			
<i>My teacher preparation program addressed...</i>			
MNSS1_6	How student's learning is influenced by individual experiences, talents, and prior learning	4.24	0.69
MNSS1_7	The idea that all students can and should learn at the highest possible levels	4.47	0.60
MNSS1_8	The idea that teachers should persist in helping all students achieve success	4.53	0.50
MNSS1_9	Identifying and designing instruction appropriate to a student's stages of development, learning styles, strengths, and needs	4.35	0.62
MNSS1_10	Teaching approaches that are sensitive to the varied experiences of students	4.10	0.71
<i>Resources</i>			
<i>My teacher preparation program addressed...</i>			
MNSS1_12	How to access appropriate services or resources to meet exceptional learning needs	3.38	1.01
MNSS1_13	Identifying when to access appropriate services or resources to meet exceptional learning needs	3.36	1.03
MNSS1_15	How to apply technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities	3.69	0.98

Table 9 presents item descriptive statistics for the components of inclusive education factors. The most interesting results relate to the means for items within the disability specific considerations factors. Several of the items within the disability specific considerations factor: teacher preparation have means less than three; this is the only factor that has items with means that are below three. The means for the same factor within the importance scale are above three which is consistent with the other factors in both scales.

Table 9. Descriptive Statistics for Components of Inclusive Education: Importance and Teacher Preparation

Label	Item	Importance		Teacher Preparation	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<i>Disability Specific Considerations</i>					
Components1_8	Support personnel who are readily accessible for assisting with implementing inclusion	3.56	0.55	2.65	0.87
Components1_9	Professionals who share responsibility for students' success	3.65	0.53	2.85	0.85
Components1_10	Teachers who believe families should be partners in education	3.89	0.32	3.18	0.75
Components1_14	Teachers who respect others' input	3.86	0.35	3.19	0.76
Components1_15	Teachers who are knowledgeable about laws and regulations related to students with disabilities	3.61	0.52	2.82	0.79
Components1_16	Teachers who have knowledge of typical and atypical human development	3.55	0.55	2.82	0.82
Components1_17	Teachers who understand characteristics of disabilities	3.60	0.57	2.90	0.75
Components1_18	Teachers who possess conflict resolution skills	3.78	0.41	2.92	0.86
<i>Beliefs about Children and Teaching</i>					
Components1_1	Teachers who believe all children are important	3.99	0.11	3.53	0.62
Components1_2	Teachers who believe all children can learn	3.94	0.25	3.62	0.54
Components1_3	Teachers who believe learning is a lifelong process	3.91	0.29	3.50	0.62
Components1_6	Teachers who believe assessment is a critical component of the learning process	3.48	0.66	3.37	0.65
Components1_7	Teachers who value collaboration	3.75	0.47	3.17	0.83
Components1_13	Teachers who use a variety of assessment techniques	3.73	0.47	3.37	0.65

Table 9. cont.

Label	Item	Importance		Teacher Preparation	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<i>Beliefs about Learning</i>					
Components1_4	Teachers who believe learning occurs in a variety of ways	3.90	0.30	3.63	0.54
Components1_5	Teachers who believe learning styles vary	3.89	0.32	3.60	0.65
Components1_12	Teachers who use a variety of strategies when teaching	3.90	0.30	3.68	0.52

Correlations. Correlations among age, field experiences, the Minnesota state standards factors, the teacher preparation factors and the scales indicating perceptions of inclusive beliefs, preparation, and competence were conducted.

Table 10 presents the results with several significant correlations noted.

In relationship to experiences during teacher preparation, the preparation for inclusion scale significantly correlates with all of the Minnesota State Standards factors and the teacher preparation factors. These correlations indicate that the more novice teachers perceived these factors being addressed within their teacher preparation program the more prepared they feel during their beginning years of teaching. Likewise, the competence scale is significantly correlated with all of the Minnesota Standards of Effective Practice factors and the teacher preparation factor identified as disability specific considerations. The significant positive correlations indicate that the more these factors were perceived to be addressed within these novice teachers' preparation programs the more competent they feel. Unsurprisingly, the preparation for inclusion scale and the competence scale are significantly correlated. Indicating the more

Table 10. Age, Field Experiences, State Standards Factors, Teacher Preparation Factors, and Beliefs, Preparation for Inclusion and Competence for Inclusion Correlations

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	---											
2. FE	-.01	---										
3. MNSS K&S	-.39**	.06	---									
4. MNSS PL	-.17	.08	.61**	---								
5. MNSS RS	-.09	.14	.57**	.45**	---							
6. TP DSC	-.09	.07	.41**	.44**	.63**	---						
7. TP BCT	-.07	.02	.46**	.57**	.49**	.65**	---					
8. TP BL	.01	.03	.49**	.52**	.51**	.59**	.68**	---				
9. IB Academic	-.28*	.05	.12	.00	.02	.08	.05	.17	---			
10. IB Social	-.23	.10	.14	.15	-.03	.06	.07	.11	.54**	---		
11. PFI	-.26*	-.00	.59**	.44**	.57**	.52**	.40**	.41**	.12	-.05	---	
12. Competence	-.24*	-.04	.45**	.27*	.43**	.28*	.05	.14	.24*	.08	.64**	---

FE = Field Experiences; MNSS = Minnesota State Standards; K&S = knowledge and skills; PL = philosophy; RS = resources; TP = Teacher Preparation; DSC = disability specific consideration; BCT = beliefs: children and teaching; BL = beliefs: learning; IB = Inclusive Beliefs; PFI = preparation for inclusion

* $p < .05$, ** $p < .01$ (2-tailed)

preparation these novice teachers feel they experienced, the more competent they feel teaching students with disabilities in their classrooms. Interestingly, the inclusive beliefs factors (academic and social) were not significantly correlated with the factors assessing experiences during teacher preparation. The academic beliefs factor was significantly correlated to the competence factor, but not at the high level of the other significant correlations noted within Table 10.

Contrary to what the literature would suggest no significant correlations were found between field experiences and the beliefs, preparation for inclusion, or competence factors. Another surprising finding reveals several negative significant correlations between age and inclusive beliefs: academic, preparation

for inclusion and competence. These negative correlations indicate that as age goes up beliefs about academic benefits of inclusion and perceptions of preparation and competence related to teaching in inclusive classrooms go down.

Tests of group differences. Tests of group differences were also conducted to answer the first research question. A series of *t*-tests comparing students completing a Minnesota teacher preparation program to those who did not complete a teacher preparation program within Minnesota were conducted. No significant differences were found related to inclusive beliefs, preparation, or competence. A similar series of *t*-tests compared teachers with more than one teaching license to those with only one teaching license; again, no significant differences were found.

Lastly, because it was hypothesized that age could affect experiences during teacher preparation, *t*-tests comparing teachers with reported ages between 22-25 and those 26 and older were completed. These two age groups were created because they represent students who are the traditional age of a recent undergraduate versus a nontraditional age for graduating from an undergraduate program. A significant finding revealed that younger beginning teachers felt more prepared for inclusion than older beginning teachers, $M_s = 22.32$ versus 20.27 , $t(74) = 2.133$, $p < .05$.

Research Question Two

Research question two asked if novice elementary teachers perceived themselves as fulfilling the requirements and demands of inclusive education. To

answer this question percentages of agreement were figured for the classroom management and instructional practices items identified as most closely related to assessing the research question. As discussed in Chapter III, factors were not able to be developed for these two scales; consequently, it was decided to utilize individual items to assist in answering the research questions. These items helped to explain if this sample of novice teachers felt they were able to plan effectively and manage their classrooms when students with disabilities are present. Furthermore, to help clarify how different groups of teachers may perceive themselves in relationship to this question, additional tests of group differences were conducted.

Percentages of agreement. Table 11 presents percentages of agreement, means and standard deviations for survey items related to the second research question. These items show that the majority (69.1%) of participants agree they were successfully teaching students with disabilities in their classrooms (Comp1_5). Most participants (63.1%) also agree inclusion is working well in their classrooms due to differentiated instruction and the use of accommodations and modifications (IP1_8). Furthermore, the data seems to indicate that most participants feel their class size is suitable for meeting the needs of students with disabilities as only 15.5% of participants agreed with item CM1_5. Notably, less than the majority (33.3%) of participants agreed that they had enough planning time to develop lesson plans for students with disabilities in their classrooms (IP1_6).

Table 11. Percentages of Agreement for Items Related to Requirements and Demands of Inclusive Education

Label	Item	% Some Form of Agree	M	SD
<i>Classroom Management</i>				
CM1_1	Classroom management is more difficult because of the inclusion of students with disabilities	44.1	3.23	0.98
CM1_5	My class size is too big to meet the needs of students with disabilities in my classroom	15.5	2.57	0.95
<i>Instructional Practices</i>				
IP1_6	I have enough planning time to develop lesson plans that account for the students with disabilities in my classroom	33.3	2.88	1.01
IP1_7	The demands of the curriculum make it difficult to include students with disabilities in my instructional plans	34.6	3.11	0.95
IP1_8	Due to the implementation of specific instructional practices (ex: differentiated instruction, accommodations/modifications), inclusion is working well in my classroom	63.1	3.66	0.68
<i>Competence</i>				
Comp1_1	I feel competent when teaching students with disabilities in my classroom	64.3	3.69	0.64
Comp1_4	I feel confident about my ability to know what adjustments need to be made for students with disabilities in my classroom	61.9	3.64	0.79
Comp1_5	I am successfully teaching students with disabilities in my classroom	69.1	3.81	0.52

Correlations. Correlations among demographic variables, the competence scale and items IP1_6, IP1_7, IP1_8, and CM1_5 and CM1_1 were conducted. As previously discussed, the inclusive implementation and classroom management items were specifically chosen as they were deemed most closely related to the research question. Table 12 presents the results with several significant correlations noted.

The most significant correlation exists between the competence scale and IP_6. This indicates that the more beginning teachers believe they have enough planning time the more competent they feel. Interestingly, there is also a

Table 12. Demographic, Competence Scale, Inclusive Practices and Classroom Management Items Correlations

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Age	---										
2. FE	-.01	---									
3. Year	.25*	.01	---								
4. SWD	.07	-.12	.02	---							
5. Grade	-.27*	.04	.08	-.24*	---						
6. Competence	-.24*	-.04	-.25*	.14	-.05	---					
7. IP1_6	-.25*	-.01	-.31**	.17	.09	.34*	---				
8. IP1_7	.14	-.12	.31**	-.08	-.04	-.06	-.14	---			
9. IP1_8	-.03	-.11	-.03	-.12	-.15	.31**	.12	.25*	---		
10. CM1_5	.18	-.04	.11	-.10	.26*	-.19	-.17	.19	-.09	---	
11. CM1_1	.18	.11	.05	-.18	.18	-.10	.07	.26*	-.14	.18	---

FE = Field Experience; SWD = Students with Disabilities; IP = Instructional Practices; CM = Classroom Management

* $p < .05$, ** $p < .01$ (2-tailed)

significant positive correlation between year of teaching and agreeing with the statement that curriculum demands make it difficult to include students with disabilities in the classroom (IP1_7). Another interesting correlation related to years of teaching indicates that as years of teaching go up, feelings of having enough planning time to develop lesson plans that account for students with disabilities (IP1_6) goes down. Another important correlation exists between competence and IP1_8. This significant positive correlation indicates that the more participants strongly agreed with the statement related to the implementation of specific instructional practices, the higher their competence levels were. Another significant positive correlation exists between item CM1_5 and grade level. This indicates that as grade level goes up participants more

strongly agreed that their class size was too big to meet the needs of students with disabilities in their classrooms.

Tests of group differences. T-tests were conducted to determine if any differences were present between gender, IEP attendance, level of teaching (K-3 or 4-6) and the competence scale along with the individual items noted above. The only significant difference that was found revealed that males report significantly higher levels of competence related to inclusive education than females, $M_s = 11.86$ versus 10.93 , $t(72) = 2.28$, $p < .05$.

ANOVAs were also conducted to determine if any differences were present between first, second, and third year teachers and any of the identified dependent variables relevant to this question. Significant differences were found between first, second, and third year teachers and item IP1_6 ($F(2, 73) = 3.92$, $p < .05$). Follow-up independent samples t -tests were run using a Bonferroni adjustment when analyzing for significance. The t -test revealed that first year teachers agree to a higher extent that they have enough planning time to develop lesson plans that account for students with disabilities in their classrooms than third year teachers, $M_s = 3.23$ versus 2.50 , $t(52) = 2.80$, $p < .017$. Similarly, the ANOVA testing for differences between year of teaching and item IP1_7 revealed a significant difference, $F(2, 73) = 3.97$, $p < .05$. Follow-up t -tests with a Bonferroni adjustment for testing significance indicated a significant difference between first and third year teachers exists. This difference indicates that third year teachers more strongly agree that the demands of the curriculum make it

difficult to include students with disabilities in the classroom, $M_s = 2.73$ versus 3.43, $t(52) = -2.92$, $p < .017$.

Integrating Quantitative and Qualitative Phases: Predictors

Prior to analyzing the qualitative data, a series of exploratory hierarchical multiple regressions were completed to determine if demographic variables and/or any of the state specific and teacher preparation factors could predict perceptions of preparation for inclusion, inclusive beliefs, and/or competence for teaching in inclusive classrooms.

Sequential multiple regression was performed with each predictor variable entered in an order that was determined by the researcher as follows: Step 1: gender (dummy-coded 0 = female, 1 = male), age, completion of preparation program in Minnesota (dummy-coded 0 = no, 1 = yes), number of field experiences during preparation; Step 2, current year of teaching, grade level (dummy coded 4-6 = 0, K-3 = 1) and licenses (dummy coded 0 = not more than one, 1 = more than one); Step 3, number of students with disabilities and IEP meeting attendance (dummy coded 0 = no, 1 = yes); Step 4, MNSS: knowledge and skills, MNSS: philosophies, and MNSS: resources; Step 5, TP: disability specific consideration, TP: beliefs about children and teaching, TP: beliefs about learning. The rationale for this order of entry was the previously discussed groupings of demographic variables and the two sets of scales related to teacher preparation. The Minnesota Standards of Effective Practice factors were entered prior to the recommended teacher preparation components because,

theoretically, the Minnesota standards are required components of preparation programs within the state of Minnesota.

The overall regressions including all five sets of variables were not significant for predicting inclusive beliefs related to academics or social benefits. However, the overall regressions, including all five sets of predictor variables, were statistically significant for predicting perceptions of preparation for inclusion and competence. The results for the model predicting preparation for inclusion were $R = .76$, $R^2 = .57$, adjusted $R^2 = .46$, $F(15, 56) = 5.06$, $p < .05$. Preparation for inclusion could be predicted well from the five sets of variables, with approximately 46% of the variance in perceptions of preparation for inclusion accounted for by the regression. The results of the model predicting competence were $R = .70$, $R^2 = .50$, adjusted $R^2 = .36$, $F(15, 55) = 3.59$, $p < .05$. Competence for teaching in inclusive classrooms could be predicted well from the five sets of variables, with approximately 36% of the variance in feelings of competence for teaching in inclusive classrooms accounted for by the regression. Results for the hierarchical multiple regressions related to preparation for inclusion and competence are summarized in Tables 13 and 14.

To assess the contributions of individual predictors within the preparation for inclusion model, the t ratios for the individual regression slopes were analyzed for each variable when it first entered the regression equation. In Step 1 of the preparation for inclusion analysis, gender was statistically significant, $t(67) = 2.71$, $p < .05$; $R^2_{\text{increment}}$ was .177. The result indicates that males reported higher scores on preparation for inclusion than females. The $R^2_{\text{increment}}$ was .068 in Step

Table 13. Standardized Regression Coefficients, Variance Parameters, and Incremental *F* Tests for Preparation for Inclusion

Predictors	Preparation for Inclusion				
	Step 1 β	Step 2 β	Step 3 β	Step 4 β	Step 5 β
<i>Personal characteristics</i>					
Gender	.31**	.29*	.24	.19	.19
Age	-.21	-.16	-.15	-.05	-.03
MN	-.04	-.01	.01	-.09	.13
FE	-.06	-.06	-.04	-.07	-.08
<i>Professional characteristics</i>					
Year		-.26*	-.32*	-.16	-.14
Level		-.00	-.05	-.04	-.06
Licenses		.06	.08	.13	.12
<i>Disability background variables</i>					
SWD			.23	.21	.21
IEP			.07	-.05	-.06
<i>Minnesota state standards</i>					
K&S				.25	.28*
PL				.09	.10
RS				.35**	.29*
<i>Teacher prep factors</i>					
DSC					.22
BCT					-.08
BL					-.07
<i>Variance explained</i>					
Adjusted R^2	.13	.16	.18	.46	.46
<i>F</i>	3.60**	2.96**	2.69**	6.12**	5.06**
<i>F</i> change	3.60**	1.91	1.57	12.08**	0.91

MN = completion of preparation program in Minnesota; FE = Field experiences; SWD = students with disabilities; IEP = Individualized Education Program; K&S = knowledge and skills; PL = philosophies; RS = resources; DSC = disability specific considerations; BCT = beliefs: children and teaching; BL = beliefs: learning

* $p < .05$, ** $p < .01$

2. Gender remained a significant predictor in Step 2 and year of teaching also became a significant predictor ($t(64) = -2.28, p < .05$).

In Step 3 gender was no longer a significant predictor, but year of teaching remained a significant negative predictor with an $R^2_{\text{increment}}$ for this step of .036.

In Step 4, a significant increase in $R^2_{\text{increment}}$ was noted when adding the Minnesota Standards of Effective Practice factors. Year of teaching was no

Table 14. Standardized Regression Coefficients, Variance Parameters, and Incremental *F* Tests for Competence for Inclusion

Predictors	Competence for Inclusion				
	Step 1 β	Step 2 β	Step 3 β	Step 4 β	Step 5 β
<i>Personal characteristics</i>					
Gender	.21	.18	.12	.07	.16
Age	-.20	-.19	-.18	-.10	-.03
MN	-.01	.01	.01	.07	.12
FE	-.09	-.13	-.12	-.14	-.17
<i>Professional characteristics</i>					
Year		-.23	-.31*	-.20	-.14
Level		.05	.02	.04	.02
Licenses		-.17	-.16	-.11	-.11
<i>Disability background variables</i>					
SWD			.18	.17	.16
IEP			.14	.07	.03
<i>Minnesota state standards</i>					
K&S				.27	.33*
PL				-.08	.11
RS				.29*	.32*
<i>Teacher prep factors</i>					
DSC					.22
BCT					-.50**
BL					-.05
<i>Variance explained</i>					
Adjusted R^2	.05	.10	.10	.25	.36
<i>F</i>	1.96	2.14	1.84	2.93**	3.59**
<i>F</i> change	1.96	2.23	.84	5.08**	4.27**

MN = completion of preparation program in Minnesota; FE = Field experiences; SWD = students with disabilities; IEP = Individualized Education Program; K&S = knowledge and skills; PL = philosophies; RS = resources; DSC = disability specific considerations; BCT = beliefs: children and teaching; BL = beliefs: learning

* $p < .05$, ** $p < .01$

longer significant when accounting for the resources factor ($t(59) = 3.21$ $p < .05$).

In Step 5, with the addition of the teacher preparation components, the

Minnesota knowledge and skills factor became a significant predictor ($t(56) =$

2.19, $p < .05$; $R^2_{\text{increment}} = .021$). The resources factor also remained a significant

predictor ($t(56) = 2.33$, $p < .05$). The positive slopes of these factors indicate the

more they were included within teacher preparation programs the more

beginning teachers feel prepared for inclusion. Overall, the Minnesota Standards of Effective Practice provided the strongest set of predictors for perceptions of preparation for inclusion.

To assess the contributions of individual predictors in the competence model, the t ratios for the individual regression slopes were reviewed for each variable when they first entered the model. No significant predictors were identified in Steps 1 and 2 indicating that none of these demographic variables alone or as a group significantly predict feelings of competence for teaching in inclusive classrooms. One significant predictor was identified in Step 3. Years of teaching was a significant predictor ($t(61) = -2.102, p < .05; R^2_{\text{increment}} = .022$). The negative slope indicates that as number of years teaching goes up the perceived competence level goes down in relationship to teaching students with disabilities. In Step 4, year of teaching was no longer a significant predictor, but the resources factor became a significant predictor ($t(58) = 2.23, p < .05; R^2_{\text{increment}} = .164$). In Step 5, the knowledge and skills factor ($t(55) = 2.36, p < .05; R^2_{\text{increment}} = .118$) and the resources factor ($t(55) = 2.39, p < .05$) were significant predictors. These predictors with positive slopes indicate that the more these variables were included in the preparation programs of these beginning teachers the more competent they feel. Interestingly, a significant predictor was noted with a negative slope in Step 5. The beliefs about children and teaching factor ($t(55) = -3.02, p < .01$) indicates an emphasis on this variable during teacher preparation did not contribute to increased feelings of competence for these beginning teachers.

In summary, after accounting for all other variables entered into the regression, the MNSS: knowledge and skills and resources were significant predictors for preparation for inclusion as well as for competence for teaching in inclusive classrooms. Both of these were positive predictors. Additionally, after accounting for all other variables, the beliefs about children and teaching factor was a negative predictor for competence for teaching in inclusive classrooms.

As described in Chapter III, these predictors became a mixing point in the data analysis process as they were used as a first step in qualitative data analysis. A category for each significant predictor was created within *ATLAS.ti* 7© to deductively analyze the qualitative data to determine if these predictors appeared as salient findings within the data. As well, the data was analyzed to help explain specifically what types of experiences related to these significant predictors could help more explicitly explain the differences between levels of preparation and competence.

Qualitative Findings

Participants

Data from the five qualifying participant interviews was analyzed to assist in more deeply understanding the quantitative findings. The demographic data of the participants indicates a representation from different grade levels, years of experience, and levels of competence and preparation was achieved. Table 15 provides demographic data related to each of the participants.

Table 15. Demographic Data of Interview Participants

Participant	Grade	Year	Students in Class	Level of Competence and Preparation
1	2	3	23	high
2	4	3	27	low
3	K	2	26	medium
5	3	2	13	low
8	1	1	19	high

Predictor Variables

Initially, qualitative data analysis consisted of assigning in vivo codes. After assigning codes, categories for each of the significant predictor variables from the multiple regressions were created. Each category (i.e., predictor variable) was assigned relevant codes. It was possible for codes to be designated to more than one category. The discussion below provides a summary of important findings within each category.

Preparation for Inclusion Significant Predictors

Predictor 1: gender. All of the interview participants were female, so the qualitative data cannot help to explain possible differences between males and females regarding their perceptions of preparation for inclusion.

Predictor 2: year of teaching. Greater experiences with multiple students and situations related to inclusive education may explain why increased years of experience have a negative impact on perceptions of preparation for inclusion. For example, participant 1, in her third year of teaching, expresses that she thinks a lot about the concept of Least Restrictive Environment for students with disabilities:

I just don't always feel like it's best for everybody and it's not always best for the student with needs. You know, figuring out Least Restrictive Environment, I mean I get all that and the concept I just don't feel like the actual application of it... if it's always best and so that is challenging for me in looking at these kiddos and trying to figure [LRE] out.

Participant 8, however, did not discuss any of the technicalities of serving students with special needs in the regular classroom. She was more willing to accept that "it's just the way it is." Her perspective may be limited by her lack of experiences with different situations related to inclusion. Year of teaching is further discussed in the following discussion related to the significant predictors for competence for teaching in inclusive classrooms.

Predictor 3: MNSS: resources. This factor assessed whether or not participants preparation program assisted candidates in gaining knowledge related to knowing how and when to identify resources, including technology, and services to meet exceptional learning needs. Overall, this group of teachers agreed that parents were a helpful resource for them in teaching the students with exceptionalities in their classrooms. For example, participant 5, who felt she was unprepared to teach her student with dyslexia, has taken advantage of training that the student's parent received.

Well, our school is fortunate to have Hailey's Hope in the building. So, we have some tutoring going on with that. Umm, fortunately the parent of the student has been involved with that, so I have been able to learn from the

parent going through the tutoring training. [The teacher has not received the training.]

Similarly, participant 3 discussed her relationship with a parent whose child struggles behaviorally.

Well, I think, well, with one of my students I talked to his mom on the phone you know maybe once a week or email couple times a week just to talk about...because she is still trying to figure out his medication. You know he is going to the doctor a lot. So I think we collaborate a lot talking about what his behaviors are like. Is this medication working? What times of day does it start wearing off? What can we do to get him academically where he needs to be? So I think there is a lot of collaboration there.

Another resource that these participants viewed as important was other teachers. Participant 5 indicated that something she wished she could do would be to observe and talk with an experienced teacher.

Being able to have that time to watch them to be in the classroom to observe what they do. Umm...maybe even sitting down with them and have them help explain how you prepare for that. What you do, explain the process, it seems like, I mean we all know teachers work hard and a lot on your own time, but sometimes I feel like I am not even sure where... ok where do I go to even get that extra stuff, so that I have things for at least the upper level students, where do I go, you know what is best, what do I give them, what don't I give them. Just experience with a really good educator; that is what I would like to see.

Another area related to knowledge of accessing resources which helps to explain levels of perception of preparation for inclusion relates to beginning teachers comfort level in using paras and aides in the classroom. For example, participant 2 explained the challenge of gaining comfort in utilizing paras as a resource.

I was working with paras who were my age or older than me and sometimes that was difficult to kind of know your place and where you should be telling them what to do I guess and where the special ed should be umm because technically they are under their supervision or whatever but they are in my classroom for the whole day. So, I guess that was something that was a little bit challenging for at least a beginning teacher or otherwise I think the more collaboration the better for all of them, but we have had a strong team that works together on each student that has been really helpful.

Predictor 4: MNSS: knowledge and skills. This set of items addressed whether or not the participants' teacher preparation program taught teachers how to design instruction geared towards a student's strengths, include varied learning styles and performance modes in plans, and develop a classroom community that respects differences.

Interview participants regularly referred to differentiating as something that they knew was needed in order to meet student needs and that this was something they learned during their teacher preparation experiences. For example, participant 1 who indicated a high level of preparation and competence

stated, “So I think I had a greater understanding of that [teaching individual students differently during one-on-one piano lessons], but I think learning about basic differentiating I think was a little eye opening and helpful for me.”

On the other hand, participant 2, who ranked low in the preparation and competence scales stated:

I think we had, like we talked a lot about differentiation and you know the small groups kinds of things, but I felt like especially with special ed that was not a big part of my preparation and I mean can really only think of one quarter of a class that that was really dedicated to special needs and you know there is such a wide variety of things that you encounter it's almost that was, I don't know, like reading a Wikipedia article on special ed.

In terms of how teacher preparation programs helped prepare candidates to plan and design instruction for meeting variances in learning abilities, participant 5, who also ranked low on the preparation and competence scale, summarizes best what may influence perceptions of feeling more or less prepared:

I mean, you know, we heard a lot about ideally this is what you should be doing in your classroom. You know you should be differentiating, but I don't know if I really got those strategies for ok, how do I differentiate? What do I do with those other students?

Participants also spent a significant amount of time discussing how to manage small groups in order to meet student needs. All of the participants expressed a

strong desire to plan instruction to meet individual student needs, but struggled with the best way to do that. Participant 2, a third year teacher, explained:

And I'm noticing it's getting better every year that I'm in the classroom, but it is always a challenge to plan out um differentiated lessons when you have all your lessons that you're planning and then you are taking like smaller and smaller groups and doing and conferring individually and planning for those so that it is time well spent and worthwhile for each student.

Perceptions of Competence Significant Predictors

Predictor 1: year of teaching. Interestingly, the quantitative results indicated that as years of teaching increased levels of competence decreased. Consequently, for this predictor, responses from participants 1 and 2 were compared to participant 8's responses to determine if any patterns or themes could help explain this result.

The following statement from participant 2 indicates that reflection may be one of the reasons participants with more years of experience report decreased levels of competence:

But it's kind of hard when you are going into a classroom your first or second year and you want to be making a strong impact in that first year and then you look back at it and say I could have done so much more if I had known this, that, and the other thing.

This participant seems to be expressing that the more experience a teacher gains, the more he/she realizes what could have been done. She went on to

state, “I feel like there has been more learning in the last two-and-a-half years just here on the job.”

Meanwhile, participant 8, a first year teacher, seemed to be more focused on applying the skills she learned in college.

I am learning so many things that we talked about in college and we went through in our classes but until you are in your first year teaching you don't realize some of the things you actually talk about until you are in that situation.

However, what she doesn't have is a perspective of changing her practices in order to better help her students. Her comments are more innocently focused on accepting the reality of today's diverse classrooms. This statement provides an example of her thought process:

Well, any classroom you go into that you know those are the dynamics of the situation [diversity of learners] that you are going to be put in and that it's finding the balance and that is something too. I think that is another thing that you learn in your first year of teaching.

Predictor 2: MNSS: resources. Like years of teaching, the resources factor was also a significant predictor for the preparation for inclusion variable. In relation to competence for teaching in inclusive classrooms, access to resources was something that participant 8, whose competence and preparation for inclusion ranked within the high level explained, “You can feel comfortable asking for help because, like I said, there are teachers around you and in the school that have been in your shoes before and they are willing to help you out.”

On the other hand, participant 5, who ranked low on the preparation and competence scales, stated, “Being able to have that time to watch them to be in the classroom to observe what they do. Maybe even sitting down with them and have them help explain how you prepare for that [diverse needs in the classroom].” This comment illustrates participant 5’s thought process well. Unlike the other participants who seemed to be proactive in seeking out help and asking questions, participant 5 seemed to be hesitant to ask for help.

Predictor 3: MNSS: knowledge and skills. Participants provided a rich amount of comments related to their feelings of competence in applying the knowledge and skills needed to meet all students’ needs. As previously stated, all participants expressed a sincere desire to teach students at an appropriate level, but their feelings of competence for implementing differentiated practices was limited. This was particularly true when considering the needs of students with disabilities. Participants often questioned themselves and their practices while also expressing feelings that they did not quite know enough yet. For example, this statement was made by participant 1:

I mean obviously any classroom you have varying needs, varying learning styles and you are differentiating to meet all those needs, but then you have some with more significant disabilities, how do you handle that? How do you make that happen successfully, efficiently all that?

Participant 3 also felt overwhelmed and doubted her competence in relationship to her knowledge and skills when she learned she would have three students with disabilities in her classroom.

I think, you know at the beginning of the year I found out that I had three kids in my class that were coming in with IEPs. I felt like how am I ever going to know how to make accommodations for them or how am I going to, you know, get them what they need? But I think... so, I was overwhelmed kind of by how do I know what to do?

Participant 2 also commented on the relationship between knowledge and skills and competence.

I think this goes more to the curriculum side of things and it gets a bit more difficult than I thought to develop a learning plan and figure out which small groups they could work in or how to teach them during the whole group setting adapting the assignments and curriculum and even my style of teaching to what they need and things like that.

Her comment speaks to what the literature refers to as creating positive niche construction for students with neurodiverse needs. She reveals in this comment that she knows she should design instruction that includes various learning styles, performance modes and student strengths, but she is unsure of her skills and abilities for designing and implementing such lessons.

Predictor 4: TP: beliefs about children and teaching. The items in this factor assessed how much teacher preparation programs placed emphasis on believing all children are important and can learn. Items also included assessing whether teacher preparation emphasized assessment processes, collaboration, and lifelong learning. Again, all participants expressed a strong desire to help all of the students in their classroom. It seemed that in some ways

participants' beliefs about children and their responsibility for teaching all learners may have influenced their competence levels in a negative way. Participant 8 explained:

For example, I have some kids who are probably ready for second grade. I mean they could probably be in second grade and they would be just fine and then of course you have the lower ones where you know ok they're a little bit behind in math and reading and so finding the balance in being able to target both of those kids and that's most difficult and trying to find the differentiation and making sure you're just not centering it on the average students that you are able to meet the needs of the lower levels and the ones who are on track and the ones who are gifted. Those I think are the struggles and just trying to make sure you are meeting all of their needs.

Participant 1 also expressed how belief systems may influence teachers to work hard to meet student needs:

Again, I think it depends on the temperament of the teacher. For me I can be so extreme and kill myself practically trying to make sure the best is happening for every student and I only have 24 hours in a day and I need to sleep.

This comment does not directly address issues of competence, yet, it does suggest that stronger beliefs about children and teaching may influence teachers to feel they are not sufficiently meeting every student's needs regardless of how hard they work.

Table 16 presents a summary of four variables from the regression models and correlations that produced significant results for both the preparation and competence for teaching in inclusive classrooms variables. This table provides a concise synopsis of participant perspectives and highlights the differences between the high, medium, and low participants.

Table 16. Joint Display Arraying Preparation and Competence Levels by Significant Quantitative Factors from Both Preparation and Competence for Inclusive Education

Level of Preparation and Competence for Inclusive Education	Participant	MNSS:K&S	TP: BCT	MNSS:RS	TP:DSC
High	1	-Focused not just on differentiation but of doing it successfully -Prior knowledge and experience with teaching individual students	-Wants to meet needs -Social aspect easy	-Willing to advocate for students to get needs met	-Referred to understanding of LRE and grappled with how much inclusion is best for students
	8	-Feels has lots of knowledge, but needs support	-Wants to meet needs -Enjoyed and embraced different ways of thinking expressed in her students	-Learned to ask for help	-Learned about AT and really enjoyed special education class in program
Medium	3	-Questioned ability to make accommodations -Believes experience will be only way to feel prepared	-Wants to meet needs -Feels social aspect is easy	-Communicates with parents in multiple ways, multiple times per week	-Spoke of special education law class and courses that helped understand disability characteristics
Low	2	-Seeking out further PD -Only quarter of class focused on special education	-Wants to meet needs -Was worried about social aspect at first	-Uncomfortable using paraprofessionals and uncertain of boundaries when assigning tasks for paraprofessionals	-Described course as only reaching shallow level
	5	-Didn't feel like she was given any strategies	-Wants to meet needs -Thought would have problems interacting, but doesn't	-Learned from the parent -Wants to have more time with experienced teacher -Doesn't know where to access resources	-Knows had course, but doesn't recall anything she is using from it

MNSS = Minnesota State Standards; K&S = Knowledge and Skills; TP = Teacher Preparation; BCT = Beliefs: Children and Teaching; RS = Resources; DCS = Disability Specific Considerations

Themes Related to Research Questions

After analysis was completed to specifically address the predictor variables, codes were reanalyzed in an inductive manner to identify other categories that existed within the data. Themes within the categories were then identified. In the following discussion, themes are discussed in relationship to the related research question.

Research question one. This research question focused on the relationship between experiences during teacher preparation and perceptions of preparedness for teaching in inclusive classrooms. The predictor variables previously discussed shed light on participants' experiences during teacher preparation and how these experiences helped them feel more or less prepared for teaching students with learning differences in their classrooms. Other themes related to experiences during teacher preparation also emerged in the data. These themes include having the knowledge but not the experience and not having enough tools in the toolbox.

Knowledge but No Experience. Overall, this group of beginning teachers felt their teacher preparation programs provided them with a high quality education. All five of the interviewees made positive comments about their teacher preparation and were conscientious to not too strongly criticize their programs. At the same time, the data revealed a consensus that coursework related to students with disabilities was not enough to fully prepare them for teaching students with disabilities in their classrooms. For example, participant 8 explained:

I feel like I have a lot of knowledge with those kids if they have other disabilities, but I am not sure how I would react to having those students just because at one point, it's one thing to be able to talk about those things and have knowledge about them but until you have a student who may have more than a kind-of a disability than a learning one it is tough and I feel like I would be ok, but again I would definitely need support to help me.

Further clarifying the *Knowledge But No Experience* theme, participant 1 explained:

You know the ideology, just the understanding, but the actual nitty-gritty.

So what do you do when you have those extremes? One child who doesn't even know his letters and is sitting in your second grade reading group? And so I think you hear some situations, what do you do here?

And I don't know, even if you discuss that and prepare, I don't know if you fully understand until you are experiencing it.

Not Enough Tools in The Toolbox. The above quotation also relates to the second theme of teaching concepts versus strategies. All of the interview participants seemed to have strong conceptual understandings of what should be done in an inclusive classroom to meet the needs of all learners. All of the participants referred to the concept of differentiation and understood the importance of differentiation for meeting student needs. Unfortunately, the only strategy the participants seemed to have related to differentiation was grouping students based on learning levels. While this is one important component of

differentiation, this is not the only way to differentiate instruction. Not having enough tools in the toolbox was expressed by participants in this way:

Participant 1: So, to me a little more practical hands-on experience would be good. Rather than, I don't know...I think those idealistic conversations, this is what inclusion is, this is how we do it and da-da-da. Yeah, I don't know, it doesn't work that easily for me.

Participant 2: Actually that's why I've signed up to do a certificate course that our district is offering for professional development that is gifted and talented because I have been in the cluster classroom this year and then part of that is dealing with underserved and twice exceptional learners. So gifted and talented and all the special ed areas. So, I think that is going to help me a lot to understand different exceptionalities and be stronger in my differentiation. So I guess I have had to seek out opportunities to get better at that. I think it was something that was kind of lacking in the preparation in like the undergrad.

Participant 3: I think experience is going to be the only thing that's really going to do that, but I do feel like that was the area that I was, I felt a little less prepared was just what do I do with one kid who doesn't care about my classroom management?

Participant 5: It was taught the concept, but just not here is what you do.

Participant 8: It is one of those things that I graduated from a great program and I had some fabulous professors and I had some really great classes and I am glad that I went to XXX for school, but I wish that they

would have given us more scenario type situations and you know put us on the spot more with those kind of things -- really had us really truly think about what we would do.

Research question two. The second research question sought to understand beginning teachers feelings related to meeting the demands of teaching in inclusive classrooms. Analysis of the interview data revealed several challenges that participants were struggling to overcome in order to feel like they were effectively educating all students in their classrooms. The themes related to these challenges were creating a positive niche for all learners and communication and collaboration. On the flip side, a positive theme related to the social aspects of inclusion for students with disabilities emerged during this portion of the data analysis.

Creating a Positive Niche for All Learners. This theme revealed itself in many ways throughout the interviews. This is the area that seemed to be at the forefront of each of the participants' minds. Interestingly, not only were these teachers worried about the needs of their struggling learners, they were equally as worried about the students who they felt needed to be challenged at a higher level. Comments related to this theme focused on not knowing how to plan for each student's needs or not having sufficient time to plan for individual needs. While reflecting on her first experience teaching students with disabilities in her classroom, participant 1 explained:

It was challenging to know what to do to meet the needs of each kid, you know. And you don't want to neglect the average students or the above

average needs, but it feels like these kiddos [students with disabilities or low achievement] take so much time and energy. That's the challenge of it to me.

Participant 3 corroborated this thought when she stated:

I think one thing is that I try to differentiate as much as I can, umm, and I think with the, you know with, the kids that are at kindergarten level and the kids that are below kindergarten level I feel like it is a lot easier to differentiate for them because you can see exactly where they are. You know what they don't know and what they can work on, but the ones that are above level I feel like sometimes I don't differentiate for them as well as I could and I don't have, I feel like I don't have time to really know what level they're at.

Furthermore, even when participants were able to create small group activities for different levels of learners they often expressed discomfort in their abilities to efficiently manage small groups in a manner that utilized time effectively for all learners. For example, participant 5 explained:

I guess the ones that I kind-of have the problems with are the ones that are way ahead that really know the stuff and they can move a lot quicker and its keeping them challenged, not knowing what to do to keep those students challenged. You know I am able to connect with all of them, but it's keeping them doing something that challenges them and keeps their attention that they don't sit there and say, "Well, I already know this." It is that part that is challenging for me. It's kind of those upper level kids and

keeping them motivating to keep moving on cause a lot of times they get done and they're sitting there reading a book or you know try some extra math packets things like that, just not having that time to really work with that upper group because I am focused on the ones that aren't getting it.

In general, participant comments like this revealed these beginning teachers did not feel they were meeting the demands of inclusive education well.

Unfortunately, they did not feel they were able to meet the needs of their students because they were unsure how to create a positive niche for all learners in the classroom.

Communication and Collaboration. Similar to findings discussed within the literature, these beginning teachers were challenged by the high level of collaboration skills needed to successfully implement inclusion. Participant 2, for example, was challenged simply by the amount of collaboration that she realized was necessary.

And then just the amount of communication with special ed teachers, with paras, with parents, with administration, with school psychologists. You know there is just so many more people involved which is great because you have a great team working together, but it is a lot a lot of expectation for communication that sometimes I feel like I am dropping the ball on.

The participants were also unsure of professional boundaries that exist, but that they may be unaware of. Participant 1 explains that this made meeting the demands of inclusive education more challenging.

I just didn't know where that balance, I didn't want to over step my bounds. I didn't know what those were. I didn't know what my boundaries were in a sense and so you just kind of have to step out and tip-toe around and figure out how do I approach this to keep the relationship and not communicate that I feel like somebody else isn't doing their job, but at the same time advocate for this student to have what is best there.

While the participants struggled to find the best ways to collaborate with other professionals, the data revealed a higher level of comfort in communicating with the parents of children with special needs in their classrooms. As previously reported, the participants viewed parents as an accessible resource and perhaps because of this, the findings illustrate that the participants placed high value in communicating with parents. The participants spoke of making home visits, talking to parents at the end of each school day, and reported feeling badly if they were unable to connect with parents. Participant 3 explained it in this way:

So I think there is a lot of collaboration there [with a parent of a student with behavior challenges], but then on the other hand I have one of my other students I almost never talk to his parents because a lot of times he gets removed from the room and then the special ed teacher is the one that is communicating regularly. So to me that feels kind-of...I don't know I feel kind-of bad that I don't talk to his parents as much...

Her comment also further illustrates the complexity of establishing collaborative roles and responsibilities while also developing relationships with individuals,

such as parents, that are important to the education of students with disabilities in inclusive classrooms.

Social Aspects of Inclusion. “But I would say to me it’s really easy to have kids in the classroom developing the social aspect, relationships with other students that sort of thing,” stated Participant 1. All participants agreed that having students in the classroom for social inclusion was the least challenging part of inclusive education. Participant 2 was pleasantly surprised by the reactions of her students without disabilities to her students with disabilities. She stated:

I think, in thinking about the rest of the class, like going in and thinking about teaching in an inclusive classroom and going through your class list you see you have 5 or 6 special ed students in your classroom and going in you are thinking about all the other students who aren’t special ed, but really they are so open and receptive and they have a lot of questions about students who have special needs, but they are always coming in with good intentions and really they are just curious about it and they are not trying to be rude. So, I think that I was worried about being a buffer between special ed students and regular ed students, but really I don’t need to be. They are very inclusive just naturally, so that was probably something that was more surprising to me.

Research question three. The third research question sought to gain recommendations from novice teachers in order to find ways to better prepare teachers for inclusive education. This research question was directly addressed

by a question in the interview protocol that stated: “If you could change one thing about your teacher preparation program and how it prepared you for an inclusive classroom what would it be?” Themes related to participant responses to this question include *More Coursework*, *More Opportunities*, and *More Realness*.

More Coursework. All participants indicated they were required to complete at least one introductory special education course during their teacher preparation. Participants found the course meaningful, but also recognized that one course was not enough to fully prepare them for the inclusive classroom. As participant 2 stated, “It [the introductory special education course she was required to take] was truly I mean we had, we did go through all the different types of you know IEP, identification, and things like that, but it was really just that shallow level introduction to it.”

Unfortunately, when further probed about practices that they have implemented from their teacher preparation program, none of the teachers communicated anything specific such as developing lesson plans based on a UDL framework or coursework that helped them grapple with the complexities of managing diverse classrooms. This lack of commentary within the data reveals that this was likely missing from the participants’ preparation programs.

Participant 2 further explains:

So I think there is just a wide range of what student teachers are exposed to as far as that [students with disabilities in the cooperating teacher’s classroom] and then once there are, once we are actually in our own classrooms you could be working with a completely different group or

different skills or things that you really didn't have any experience in. So, I would just say just kind of expanding that experience and at least the knowledge base of all of the different things that you might encounter.

More Opportunities. The above quotation also links to the second theme related to recommendations for teacher preparation programs: *More Opportunities.* The participants repeatedly stated that having more experience in inclusive classrooms and working directly with students with disabilities would have better prepared them for their current teaching positions. Although the participants acknowledged that it would be hard to do, they felt that ensuring teacher candidates had experiences working in classrooms containing students with special needs was highly important. Participant 5 in response to what she would recommend for improving her teacher preparation program simply stated, "I think more experience with, I guess I hate to use the word experience again, but an experienced educator in inclusive teaching."

The development of this theme was unsurprising as field experiences are discussed in the literature as an important factor in contributing to teacher candidate self-efficacy. The interview participants clearly indicated that they felt teacher candidates should be given opportunities to experience inclusive classrooms during assigned field experiences. For example, participant 3 when asked to reflect upon experiences she had during her teacher preparation that she was able to use in practice explained:

I think to have had more opportunities to work with students with special needs which, of course, comes down to where you are placed. You know

I don't think it could be possible for everybody to have a chance to work with a student with a disability every time they were placed somewhere, but I think it would have really helped to come up with ideas because then you could see well the student does this and this is how she [the cooperating teacher] deals with it.

Supporting this idea, when asked about what she would change in her teacher preparation program in relationship to preparing for teaching in inclusive classrooms, participant 2 stated, "I think it's just, it would be more beneficial, or even if it was required, that you do a clinical experience in an inclusive classroom. We didn't have any of that."

More Realness. A final recommendation from these novice teachers relates to the desire for teacher preparation faculty to be more open and authentic about the realities of teaching. These beginning teachers were open-minded regarding the realities they face in terms of diversity in their classrooms. Each teacher also held strong belief systems that manifested in a desire to help every child succeed. However, they felt their teacher preparation programs glossed over the impact that diversity can have on their lesson planning and teaching practices. For example, participant 8 stated, "I wish that they would have given more scenario type things and really told us the hard things about teaching." As if in response to this statement, participant 1 stated, "It's [students with disabilities in the classroom] the elephant in the room in a sense, let's talk about it and talk about the challenges that come with it."

Connecting Quantitative and Qualitative Results

Figures 4 and 5 are provided in order to present the relationship between the quantitative and qualitative data for the dependent variables preparation and competence for teaching in inclusive classrooms. These figures are provided to enhance understanding of how the quantitative and qualitative data informed the researcher.

Summary of Chapter IV

This chapter presented results from quantitative and qualitative data analysis. Quantitative data was presented followed by a discussion linking significant quantitative predictors to the qualitative data to help explain the results. The qualitative analysis helped to explain the quantitative results. Both sets of data revealed that coursework, experiences with students with disabilities during teacher preparation, and an emphasis on disability specific content within preparation programs can influence perceptions of preparation and feelings of competence for teaching in inclusive classrooms. Chapter V will discuss conclusions and recommendations based on this study's findings and related literature.

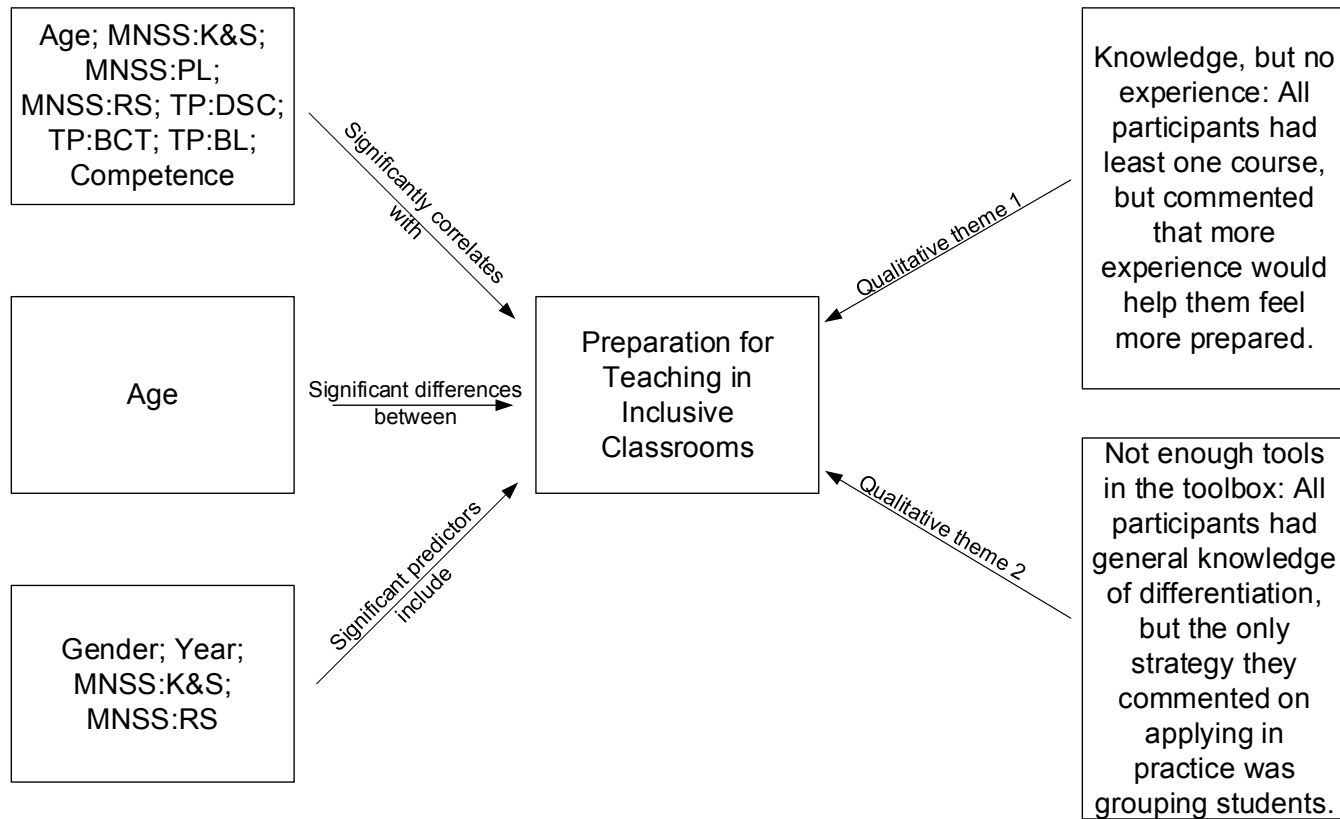


Figure 4. Display of Quantitative and Qualitative Findings Related to Preparation for Teaching in Inclusive Classrooms. MNSS = Minnesota state standards; K&S = knowledge and skills; PL = philosophies; RS = resources; TP = teacher preparation; DSC = disability specific considerations; BCT = beliefs: children and teaching; BL = beliefs: learning

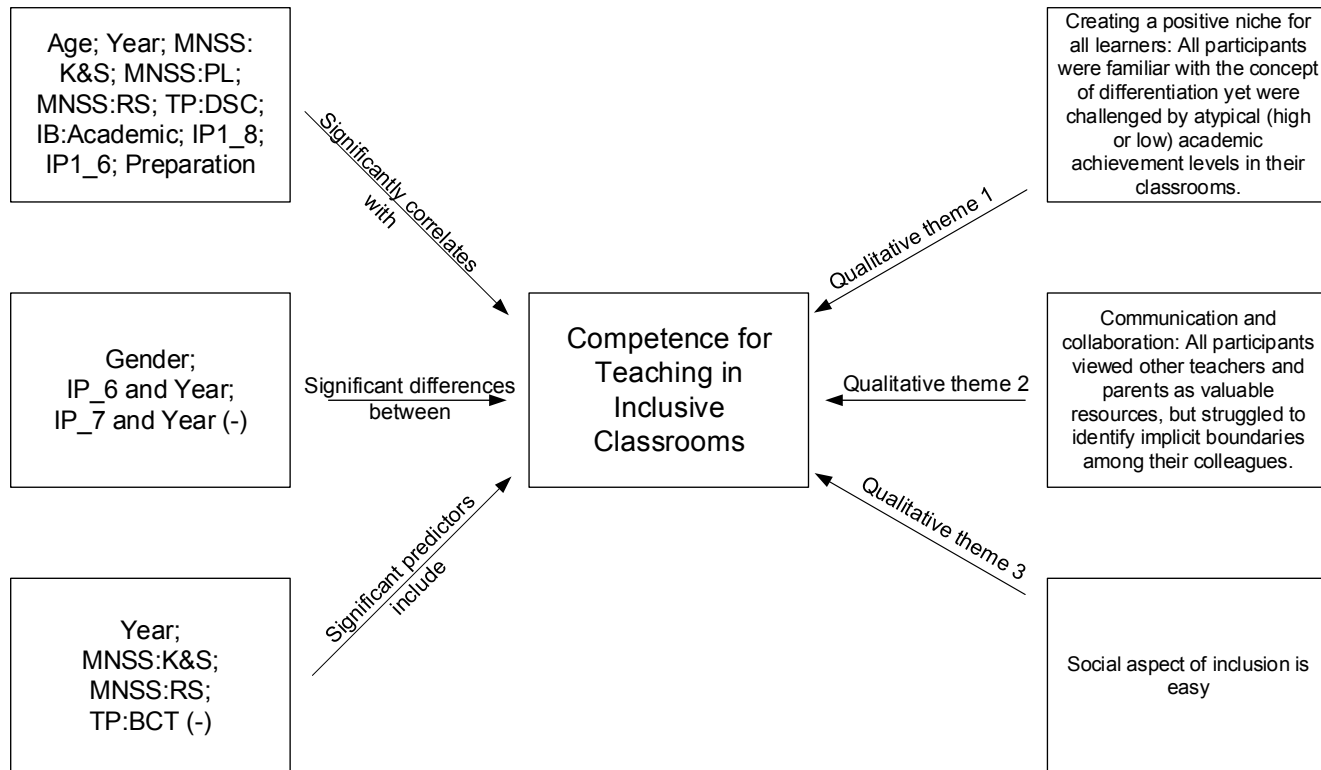


Figure 5. Display of Quantitative and Qualitative Findings Related to Competence for Teaching in Inclusive Classrooms. MNSS = Minnesota state standards; K&S = knowledge and skills; PL = philosophies; RS = resources; TP = teacher preparation; DSC = disability specific considerations; IB = inclusive beliefs; IP = instructional practices; BCT = beliefs: children and teaching

Chapter V

DISCUSSION

The purpose of this study was to explore novice teachers' perceptions of their preparation, competence, and beliefs for teaching in inclusive classrooms. In particular the study was undertaken in hopes of helping teacher preparation faculty understand the perceptions of beginning teachers in order to determine factors that may help novice teachers feel more prepared and competent when first entering classrooms that have students with disabilities. The following research questions directed the study:

1. What is the relationship between novice elementary teachers' experiences during undergraduate teacher preparation and their perceptions of preparedness (having necessary skills, knowledge, and belief systems) for teaching in inclusive education environments?
2. Do novice elementary teachers perceive themselves as fulfilling the requirements and demands of inclusive education?
3. What are novice elementary teachers' recommendations for teacher preparation programs in relationship to preparing new teacher candidates for inclusive education?

The study was conducted using an explanatory sequential mixed methods design. This design was utilized as it is complementary to the pragmatic

framework that guided this study. When looking through a pragmatic lens, research designed to develop widely understood knowledge related to a specific topic fosters professional communication and problem solving. Consequently, in order to honor the philosophy of pragmatism, this discussion was organized around the framework presented in figure 1. Each side of the frame is discussed within the context of the research study and related literature. Recommendations are presented at the end of each segment. The chapter concludes with limitations of the study and directions for future research.

Discussion Based on Pragmatic Framework

This discussion is not hierarchical in nature. Each component of the pragmatic framework is discussed in an order that facilitates connections between findings and recommendations.

Experiences of Students Should Help Guide Curriculum

Many pragmatists believe that “the curriculum comes from students’ experiences—their interests, needs, and problems” (Gutek, 2004, p. 77). Noddings (1992) also states that “John Dewey (1963) argued years ago that teachers had to start with experience and interests of students and patiently forge connections between that experience and whatever subject matter was prescribed” (p. 19). In this research project the data indicated that 76 out of 84 novice teachers were educating students with disabilities in their classrooms. The data also revealed that students identified with all but one category of disability were represented in the classrooms of these novice teachers. Consequently, these beginning teachers’ experiences have been shaped by high

demands for educating students with a wide range of learning needs. As a result, during the interviews these teachers expressed strong concerns related to not knowing the best ways to plan lessons that match each child's learning level. This concern was identified by the theme *Not Enough Tools in The Toolbox*. Repeatedly, interview participants mentioned not knowing how to best manage small groups, not knowing what curriculum materials might work best, and not knowing exactly how to make accommodations and modifications during instruction. Unfortunately, Fuchs, Fuchs, and Stecker (2010) seemed to be correct when they concluded that practicing teachers fail to use methods related to differentiated instruction. For example, although these novice teachers used the terms differentiation or differentiating multiple times throughout the interviews, they still felt unsure how to instruct students with varying needs. As previously mentioned, the only strategy they explicitly mentioned related to differentiation was grouping students by learning level.

This finding is an indication that teacher candidates need more instruction related to specific strategies and methods, more practice with incorporating taught strategies and methods in instructional plans, and more practical experience implementing plans in order to feel prepared and competent to meet a wide range of student needs. Similar to the *Not Enough Tools in the Toolbox* theme, the *Knowledge, but No Experience* theme related to preparation for teaching in inclusive classrooms supports this conclusion.

A pragmatic recommendation derived from these results and findings states: In order to develop curriculum to meet the needs, interests, and problems

of novice teachers as they enter the field, teacher educators should include explicit instruction and practice in UDL, differentiation, and positive niche construction (Armstrong, 2012) across coursework and field experiences.

Seek Knowledge in Order to Solve Problems

In a discussion of pragmatism's connection to the United States' education system, Gutek (2004) states:

American education has shown a definite belief in the idea that knowledge is valued because it can be applied in order to improve the human condition, increase productivity, and help solve problems...Pragmatism encourages the process-oriented, problem-solving instruction that is so popular with American teachers (p. 71-72).

This statement is especially relevant to this research as the main purpose was to gain increased understanding of novice teachers' experiences during teacher preparation and their perceptions of preparation and competence for teaching in inclusive classrooms during the beginning years of teaching. Specifically, the study was undertaken in order to help solve the long-reported problem of novice teachers feeling underprepared to teach in diverse classrooms (DeSimone & Parmar, 2006). While under-preparation remained a salient finding within this study's qualitative data, both the quantitative results and qualitative themes derived during the analysis related to research question three begin to provide reasonable options for teacher preparation faculty to implement within teacher preparation programs in order to address this critical problem.

The quantitative data revealed that the more novice teachers perceived the Minnesota State Standards related to knowledge and skills, philosophies, and resources were addressed in their teacher preparation program the more likely they were to report feeling prepared to teach in inclusive classrooms. Likewise, a significant predictor of perceptions of preparation was higher ratings of knowledge and skills and resources being addressed within teacher preparation programs. For perceptions of competence for teaching in inclusive classrooms, significant predictors were also the knowledge and skills and resources factors. These results are corroborated by the qualitative themes from research question three. The three themes of *More Coursework*, *More Opportunities*, and *More Realness* indicate that beginning teachers feel that if these three elements were incorporated at a higher or more advanced level in their teacher preparation programs they would have felt more prepared.

In order to use the findings from this study to begin to address the problem of beginning teachers feeling underprepared for teaching in inclusive classrooms, a second recommendation developed from the results of this study states: Teacher preparation programs should consider revising coursework to address more disability specific content, requiring at least one authentic experience working with students with atypical learning needs, and incorporating more scenario based learning activities for teacher candidates to develop problem-solving skills related to teaching diverse students.

How Something Is Studied Is Important

The mixed methods design of this study relates specifically to the philosophical framework component which emphasizes how something is studied is important. As illustrated in the review of literature, researchers have been studying inclusive education for decades; yet, they remain puzzled by how to best prepare beginning teachers for the realities of inclusive classrooms. The rigorous methods employed in this study begin to fill persistent holes within the literature. The combination of quantitative and qualitative data and the understanding gained from studying the topic by applying a mixed methods approach confirms Dewey's argument that how something is studied is important (Noddings, 1992).

For example, pragmatically, one of the most interesting findings that would not have become evident without the mixed methods design was the theme that identified novice teachers felt the social aspect of inclusion is easy. Results during the quantitative phase of the study indicated that beliefs related to academic considerations of inclusion (e.g., *Inclusion helps students with disabilities academically*) and beliefs related to social considerations of inclusion (e.g., *Inclusion helps students develop friendships*) were significantly correlated. However, there were no other significant correlations related to the beliefs related to the social aspects of inclusion. Particularly, the factor identified as inclusive beliefs: social was not significantly correlated to perceptions of preparation or competence for teaching in inclusive classrooms. Also, the quantitative finding that revealed an increased emphasis on beliefs about children and teaching

predicts a lower level of competence is somewhat counterintuitive. Yet, the qualitative data help to explain these results.

An increased emphasis on beliefs about children and teaching during teacher preparation negatively predicts competence for teaching in inclusive classrooms was explained by the participant who stated she would “practically kill herself” to make sure her student’s needs are being met. This statement illustrates what all five of the interview participants felt: a strong belief that all of the children in their classrooms deserved educational experiences that would help them learn and grow. However, the teachers were not able to uphold this intense belief because they did not have enough strategies to support a variety of student needs. Accordingly, their perceptions of competence for teaching students with learning differences seemed to suffer.

Contrary to the vast array of literature (Armstrong, 2012; Frederick, Cave, Perencevich, 2010; Hamre & Oyer, 2004; Jordan, Schwartz, McGhie-Richmond 2009; Schwarz, 2006) focused on the need to create belief systems supportive of inclusive education, the results of this study would indicate that teachers have the appropriate belief systems, but not the appropriate tools to fulfill these belief systems. The results appear to be confirming Armstrong (2012) who advocates for a system where teachers learn how to create a positive niche for all students in the classroom by understanding how to use student strengths, create positive role models, utilize assistive technology and UDL, employ strength-based strategies, capitalize on human resources, and make environmental modifications. While a few of the interview participants were able to capitalize on

paras/aides in their classrooms and a few others mentioned attempts at finding different ways for students to express their understandings, none of the teachers seemed to have a clear process for how they might plan both large and small group instruction to effectively meet the needs of all learners in their classrooms.

As a consequence of this finding, a third recommendation developed from the results of this study states: Teacher preparation programs should continue to emphasize instilling positive belief systems towards all children, but should couple this emphasis with specific frameworks (e.g., positive niche construction) and/or in-depth study of instructional models such as UDL and differentiation. This recommendation also comes full circle in relationship to the pragmatic framework. The framework places emphasis not just on what is studied, but how it is studied. The findings from this study support this notion. As previously discussed these teachers were clearly familiar with the concept of differentiation, but were not taught in a way that enabled them to apply the components of differentiated instruction to their classroom practices. Gehrke and Cocchiarella (2013) also found preservice teachers have difficulty moving from theory to practice. The results of this study indicate that this problem extends into the beginning years of teaching. Thus, designing teacher preparation programs that address more carefully how the subject of inclusive education and students with disabilities is addressed in coursework would, according to the results of this study, be highly beneficial to novice teachers.

Subjects Should Be Viewed as Interdisciplinary

Holding a pragmatic philosophy of teaching and learning often means that subject matter is viewed “in an interdisciplinary way” (Gutek, 2004, p. 78).

Regrettably, these beginning teachers did not view their preparation for teaching in inclusive classrooms as an interdisciplinary experience. When asked about specific components of their preparation programs that helped prepare them for inclusive education, these teachers referred specifically to the course(s) designated as a special education course(s). However, the less such courses were perceived as providing information beyond the factual level, the less the novice teachers perceived themselves to be prepared and competent for teaching in inclusive classrooms. This finding was supported by the quantitative data as evidenced in Table 16 within Chapter IV.

Interestingly, the quantitative data confirms that novice teachers perceived content related to teaching diverse learners to be addressed within their teacher preparation programs as means for items related to MNSS: knowledge and skills and MNSS: philosophies were consistently above 4.00 on a five-point Likert scale. In other words, these results indicate that for the most part beginning teachers agreed or strongly agreed that the Minnesota Standards of Effective Practice interpreted to be directly related to inclusive education were addressed within their programs. Similarly, all of the disability specific considerations items within the teacher preparation scale had means above 2.50 on a four-point scale indicating that beginning teachers perceived topics related to teaching students with disabilities identified within the literature were talked about and/or

emphasized within their teacher preparation programs. Yet, when asked about specific inclusive education strategies the five interviewees gained during their teacher education preparation that they were able to implement in their beginning years of teaching, they often responded that they were left with more questions than answers. The interviewee participants noted hearing a lot about differentiation, but not learning about the strategies that would enable them to actually differentiate.

It seems what these novice teachers experienced during their teacher preparation was a disjointed system of standards related to teaching students with diverse learning needs and disability specific considerations being addressed in a discrete course. Unfortunately, this course was often an introductory special education course covering a broad array of topics. Without follow-up during advanced methods coursework where scenarios or other authentic application activities could be incorporated, these novice teachers seemed to experience exactly what the literature cautions against: a singular course that has limited impact on knowledge, attitudes, and practices (Banks et al., 2005). Therefore, a fourth recommendation developed from the results of this study states: In order to ensure teacher candidates have opportunities to gain the appropriate amount of knowledge and skills to feel prepared and competent for teaching in inclusive classrooms, teacher preparation programs within Minnesota should be designed to infuse the Minnesota State Standards related to diverse learners across introductory and advanced level coursework.

Summary of Recommendations for Teacher Educators

Taken together the four previously mentioned recommendations indicate that teacher preparation programs within the state of Minnesota should consider not just the language of the standards they are required to meet within their programs, but the intent of the standards in preparing teacher candidates for the reality of teaching. The recommendations support Conderman and Johnston-Rodriguez (2009) who also concluded from their research with beginning elementary and secondary teachers that teacher preparation programs need to improve experiences and curriculum in order to better prepare teachers. To state this in simple terms, the themes presented in the data analysis from research question three can be referenced: *More Coursework, More Opportunities, More Realness*.

However, teacher preparation faculty should not take this set of recommendations as an indication that entire programs need to be revised and reapproved. On the contrary, it is the researcher's belief that these recommendations can be achieved with very little disruption to how programs are currently structured. For example, the recommendation for more coursework does not mean that some courses need to be abolished while new courses are created. A more enriching, realistic, and inclusive experience for teacher candidates would be to have important topics related to inclusive teaching infused more explicitly throughout existing coursework. This would create an interdisciplinary approach to the curriculum by simultaneously incorporating regular education and special education methods and philosophies. For

instance, the seven components of positive niche construction could be divided across two or more courses to help teacher candidates develop a systematic process for meeting student needs. The seven components of niche construction are strength awareness, positive role models, assistive technology/Universal Design for Learning, strength-based learning strategies, human resources, positive career aspirations, and environmental modifications (Armstrong, 2012).

The component of strength-based learning strategies refers to capitalizing on a student's strengths to overcome areas of deficit (Armstrong, 2012). In order to do this, teachers must use the strength awareness component to understand a student's strengths, not just his/her deficits. An example of using strength-based learning strategies in instruction is allowing a student with a learning disability who is highly visual to draw a storyboard to capture the sequence of a story (Armstrong, 2012). After studying several strength-based strategies in an instructional methods course, students could be assigned to create a lesson plan that incorporates strength-based strategies for students with neurodiverse needs who have a variety of strengths (e.g., visual-spatial strengths). Ideally, if the recommendation for more opportunities were also incorporated into the instructional methods class, teacher candidates would also have an opportunity to teach the lesson and reflect upon questions such as: Were the specific strength-based strategies you incorporated in your lesson helpful in assisting the struggling learners in the classroom? If you had not incorporated the strength-

based strategy in your lesson how do you think the student(s) with a neurodiverse need would have performed during the lesson? (Armstrong, 2012).

Additionally, considerations for using the component Assistive Technology (AT)/Universal Design for Learning (UDL) from the positive niche construction framework could be incorporated into a classroom management course. While AT/UDL are often thought of as considerations for lesson planning, during a classroom management course teacher candidates could be introduced to how this component can also help in improving the behavior of students with neurodiverse needs. For example, students with Autism may benefit from computer applications that help them communicate, learn routines, or learn social skills (Armstrong, 2012). Teacher candidates could be given an assignment to explore the variety of applications available and identify how the application might aid in improving the behavior of a student with Autism. Similar to the lesson plan assignment, if teacher candidates were able to observe an example of technology that helped a student with neurodiverse needs perform successfully in the regular classroom, they could reflect upon how the technology facilitated a student's appropriate behavior, academic learning, and/or communication (Armstrong, 2012). These examples demonstrate that teacher education faculty could utilize the positive niche construction framework within courses that are required in most teacher preparation programs.

Similarly, more opportunities does not necessarily mean that teacher preparation programs need to be redesigned in order to make room for an increased number of credits devoted to field experience. Multiple options exist

that would assist teacher candidates to have more opportunities to interact with diverse students. These options include incorporating opportunities for volunteer experiences in diverse settings across a number of courses or incorporating diverse experiences into the structure of specific classes so that during the course of the semester, class time is spent working directly with diverse students. The latter option would mean that teacher candidate time in university classrooms would be reduced, but it would allow for the intentional integration of course content into the field and upon return from the field, instructors could foster opportunities for reflection.

A final consideration related to more opportunities comes from the interviewees specifically recommending the requirement of at least one field experience where they were guaranteed to work with diverse learners. One interviewee stated it “was the luck of the draw” if teacher candidates were placed in settings where a wide variety of needs were present. The interviewees acknowledge that it may not be possible for every candidate, during every field experience, to be placed in settings where students with different types of learning needs are present. Yet, the interviewees’ recommendation for more opportunities should not be taken lightly. Again, without changing program or university requirements, teacher preparation faculty in collaboration with field experience faculty could develop a tracking system that ensures all candidates’ experiences reflect a wide variety of school settings. This system would include strategically placing students in at least one classroom setting during the course of their program where students with special needs are present during the time

teacher candidates are also present. Teacher candidates could then have specific expectations for planning and implementing instruction for learners who have a variety of learning needs. The heightened expectation for teacher candidates to delve more deeply into the learning needs present in a classroom would need to be acknowledged when developing the expectations within this system. Consequently, this approach would involve increased collaboration between cooperating teachers and university faculty.

Lastly, the recommendation for teacher preparation faculty to incorporate more realness/authenticity would logistically be the simplest recommendation to achieve. More realness, according to the interviewees, involves increased discussions about the realities of teaching in diverse classrooms. The theme *More Realness* was identified by interviewees stating they wanted more opportunities to “talk about the hard things of teaching” and to discuss openly the challenges of teaching in inclusive classrooms. More realness would also be highly achievable if the first recommendation related to infusing disability specific content across more coursework was put into action.

More realness means that beginning teachers recognize that teaching is a challenging profession and that during their teacher preparation they want to be able to openly talk about the challenges they may face. This recommendation is clearly supported in the literature related to belief systems where authors recommend opportunities for reflection and discussion related to the challenges of teaching in diverse classrooms (Hamre & Oyer, 2004; Jordan, Schwartz, & McGhie-Richmond, 2009). Being real would subsequently allow teacher

candidates to develop critical thinking and problem-solving skills necessary for teaching learners with diverse needs.

Limitations

This study was limited to beginning teachers within the state of Minnesota. While attempts were made to obtain a representative sample from across the state, most of the participants were from three regions in the western part of the state. These regions consist mainly of rural or small urban communities. Therefore, the experiences and perceptions of this sample of beginning teachers may be different than beginning teachers who are teaching in urban settings in or outside the state of Minnesota.

Also, the final sample for the quantitative portion of the study consisted of 84 responses. A larger sample size would have provided more confidence that the results are generalizable to the population of beginning teachers who have similar characteristics. The study was also focused only on elementary teachers, so generalizing the results to secondary or K-12 teachers is not possible.

Finally, only five interviews were analyzed during the qualitative phase of the study. Although common themes were derived from the interviews, obtaining the perspectives of additional teachers would assist in increasing the credibility and transferability of the qualitative findings. In particular, only one first year teacher was interviewed during this study, so substantiating the significant quantitative findings related to year of teaching was limited by only having the perspective of one first year teacher. Likewise, although the interview phase was open to both male and female teachers, no male beginning teachers participated

in the interviews. Thus, attempts could not be made to help understand why male beginning teachers reported higher levels of competence than female beginning teachers in this study.

Directions for Future Research

This pragmatic, mixed methods study was designed to contribute to the body of literature related to inclusive education. Specifically, this study sought to fill a gap in the literature related to utilizing the perspectives of novice teachers in order to improve teacher preparation programs, particularly in the state of Minnesota where the research was conducted. This study was conducted in two phases with the first phase quantitatively gaining novice teacher perspectives regarding experiences during teacher preparation along with perceptions of competence and preparation for teaching in inclusive classrooms. The second phase consisted of conducting in-depth interviews with a handful of participants from the quantitative sample. The mixed methods approach of the study provides a significant contribution to the topic of inclusive education in relationship to teacher preparation experiences.

The study also provides directions for further research. Staying within the boundaries of Minnesota, a future study could seek to gain a larger number of participants from urban areas of the state in order to determine if teaching in urban versus rural areas contributes to perceptions of competence during the beginning years of teaching. Similarly, the researcher could seek out a collaborative relationship amongst faculty at some of the other state universities in Minnesota in order to gain a larger sample of participants. If this was done, it

could also prove interesting to collect more exact data on where beginning teachers completed their preparation in order to develop more specific recommendations for program improvement.

This research could also be conducted across state boundaries. It would be interesting to determine if beginning teachers report significant differences in their competence level if they teach in a state such as North Dakota which has a statewide mentoring program for novice teachers in their first year of contracted teaching (North Dakota Teacher Support System, 2013).

The same methods utilized in this study could also be utilized to gain the perceptions and perspectives of novice secondary and/or K-12 teachers. Results from elementary, secondary, and K-12 beginning teachers could then be compared to determine if teacher education faculty need to incorporate specific considerations into program courses or field experiences based on the licensure level the teacher candidates' enrolled in such courses and/or field experiences are seeking.

Another interesting avenue to pursue would be utilizing focus groups that asked participants to discuss their experiences during teacher preparation and then had the groups suggest recommendations for improvement. All of the interview participants enjoyed the opportunity to talk about their profession. They also seemed to feel respected as a professional as the researcher expressed a genuine interest in learning from each of them. Consequently, focus groups might be attractive to beginning teachers as they would have a sense of camaraderie within the group. Focus groups might also provide an opportunity for

more specific recommendations to develop as participants would be able to react to each other's recommendations.

Lastly, a further area of research would involve incorporating one or more of the recommendations into teacher preparation programs and determining the effects of the recommendation on novice teachers' perceptions of preparation and competence. In order for this avenue of research to be most helpful, baseline data from program graduates would need to be collected and then as the recommendations are made, follow-up data on new program graduates would need to be collected to determine the effectiveness of the implemented recommendations. This type of research would be attractive to accrediting bodies that encourage programmatic self-study.

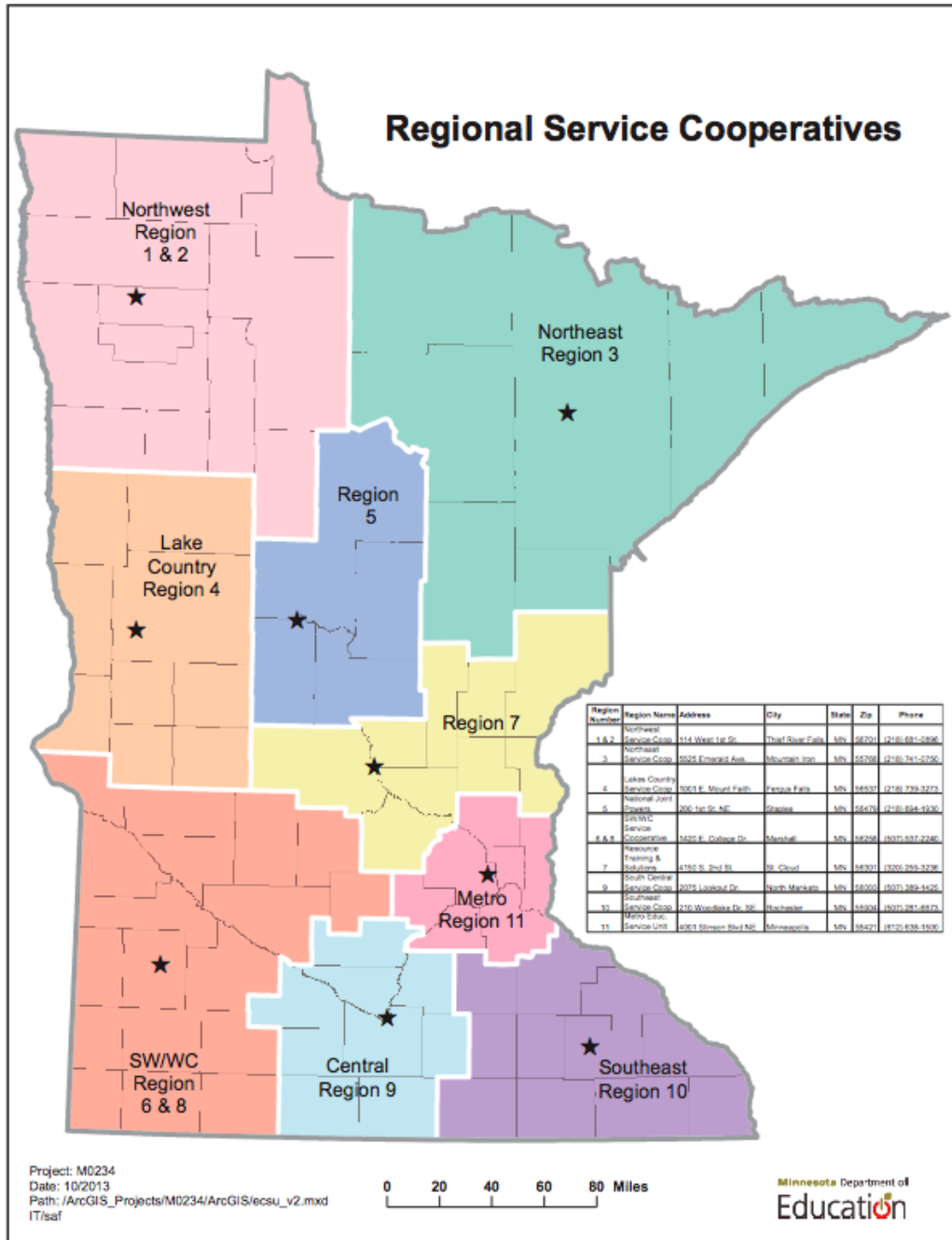
Concluding Remarks

This study makes it clear that novice teachers are challenged by the demands of inclusive education. Although the teachers in this study felt that their teacher preparation programs were addressing many of the components cited in the literature as important to creating inclusive classrooms, when explored more deeply the teachers struggled to find ways to apply the concepts that were talked about in their university courses. Yet, this study provides clear, reasonable, and low-cost recommendations that can be implemented within teacher preparation programs with just a little creativity, collaboration, and problem-solving. Implementing the study's recommendations could help to alleviate the concerns related to teaching in inclusive classrooms expressed by beginning teachers in their first three years of teaching. In order to respect the students who have a

variety of learning needs and abilities in every beginning teacher's classroom, teacher education faculty can no longer leave it up to beginning teachers to figure inclusive education out on their own.

APPENDICES

Appendix A Map of Minnesota Regional Service Cooperatives



Appendix B
Email Letter to Regional Service Directors

Dear XXXXX:

I am writing as a faculty member at Minnesota State University Moorhead (MSUM) and as a doctoral student at the University of North Dakota (UND). I am hopeful that you will be willing to assist me with completing my dissertation research this fall by distributing a survey link to elementary teachers within your region.

To explain, my research is focused on beginning regular education elementary teachers and their perceptions of preparation for teaching in inclusive classrooms. My study will be a mixed methods study in which I will invite beginning elementary teachers (teachers within their first three years of teaching) from across the state of Minnesota to complete a survey. The survey contains items developed from the Minnesota Standards of Effective Practice as well as from the literature on inclusive education. Following preliminary analysis of the survey results, I will also ask a smaller sample of these beginning teachers if they would be willing to participate in an individual in-depth interview to better understand and interpret their responses.

By gaining beginning teacher perspectives regarding their teacher preparation experiences, I am hopeful that the results of my research will help inform teacher preparation programs across the state of Minnesota and will consequently translate to better inclusive experiences for students with disabilities across the state.

Your assistance in dispersing the survey link will be integral in assisting me with gaining a large sample size for generalizable results. If you would be willing to disperse the survey link to elementary teachers within your region, I will provide you with a sample letter which states your agreement that I will submit with paperwork necessary to proceed with my study.

If you have any questions I can be reached by email (desutter@mnstate.edu) or telephone at 218-477-5942.

Thank you for your consideration.

Sincerely,

Keri DeSutter

Appendix C
Sample Letter of Agreement Provided to Service Cooperative Directors

August 21, 2014

UND Institutional Review Board:

This letter is to confirm that XYZ Cooperative agrees to assist with the study: Uncovering Beginning Teachers' Perceptions of Preparation for Inclusive Education: A Mixed Methods Study. The research is being conducted by Keri DeSutter, UND graduate student. I understand that XYZ Cooperative is agreeing to disperse a survey link provided by Keri to invite beginning elementary teachers within our region to participate in the study. Other than dispersing the survey link, XYZ Service Cooperative will have no other involvement in the research.

Thank you for your time,

Appendix D
Online Survey: Beginning Teacher Recruitment Email

Dear Teachers:

I hope you are experiencing a rewarding school year. You are receiving this email because your regional service cooperative has agreed to assist me in completing my dissertation research. **If you are a beginning teacher in your first three years of teaching, I would like to thank you in advance for considering participation.**

My research study is seeking to gain the opinions of teachers in their first three years of teaching. The survey link included in the email contains items related to perspectives and preparation for teaching in inclusive classrooms. Your participation is critical for the completion of this study and for assisting teacher preparation programs to understand how to better prepare future teachers.

If you choose to participate you will be given an opportunity to enter into a drawing to receive one of nine \$50.00 VISA gift cards. In exchange for your participation, you will also be given an opportunity to request a summary of the results when they are completed. All email information will be kept confidential and will only be accessed by me.

The survey will take you approximately 15 minutes to complete. The survey will be available from approximately [date] to [date]. To complete the online survey, simply click on the link below:

[web link]

Thank you again for considering participation,

Keri DeSutter

Appendix E
Individual Interview: Recruitment Email

Dear valued participant,

Thank you for completing the online survey related to your opinions and preparation for teaching in inclusive classrooms. The survey helped me to gain insights into the experiences of beginning teachers. Based on the results of your survey responses, I would like to invite you to participate in an individual interview so that I can gain further insights into your perspectives and experiences. The interview would take approximately 1 hour and can be schedule at a location, time, and date this is convenient for you. Participating in this interview will be crucial for assisting teacher preparation programs understand how to better prepare future teachers.

Please send an email to desutter@mnstate.edu if you would be willing to participate in an individual interview with me.

Thank you again for your participation,

Keri DeSutter

Appendix F Survey Codebook

Independent Variables: Demographics, MN Specific Standards Scale, Teacher Preparation Components of Inclusive Environments

Dependent Variables: Inclusion Beliefs: General, Preparation for Inclusion, and Inclusive Implementation Scales, Inclusive Implementation: Competence

Instructions to Participants:

The following statements relate to your beliefs about qualities of inclusive educators as well as your perceptions of your teacher preparation program. Although some items are similar, there are differences between them, so you should treat each item as a truly separate question. The best approach is to ANSWER EACH ITEM FAIRLY QUICKLY. That is don't try to count up the number of times you felt a certain way, but rather chose the alternative that seems to reflect your view most closely. Reach each item carefully and respond using the scale provided."

DEMOGRAPHIC VARIABLES

NAME	ITEM
ID	Random number identifying each participant.
Gender	Your gender is: 1-female 2-male
Year	What year of teaching are you currently completing? 1-1 2-2 3-3
Age	What is your age in years? 1 = 22-25 2 = 26-29 3 = 30-34 4 = 35-39 5 = 40 and older
MN	Did you attend a university in MN for your education/teacher preparation program? 1 = yes 2 = no
IEP	Have you attended IEP/Team meetings for students identified with disabilities in your classroom? 1 = yes 2 = no
SWD	How many students with disabilities do you currently have in your classroom? 1 = 1

	<p>2 = 2 3 = 3 4 = 4 5 = 5 or more</p>
level	<p>Please indicate the grade level in which you are currently teaching: 0 = kindergarten 1 = 1st grade 2 = 2nd grade 3 = 3rd grade 4 = 4th grade 5 = 5th grade 6 = 6th grade</p>
students	<p>How many total students are currently in your class:</p>
licenses	<p>Do you have other teaching licenses besides your elementary teaching license? 1 = yes 2 = no If yes, please indicate your other license:</p>
region	<p>In what region of Minnesota are you currently teaching? 1 = Northwest Region 2 = Northeast Region 3 = Lakes Country Region 4 = National Joint Powers Alliance Region 5 = Southwest/West Central Region 6 = Resource Training and Solutions Region 7 = Central Region 8 = Southeast Region 9 = Metro Region</p>
FE	<p>Other than student teaching, how many additional experiences did you have in K-6 classrooms during your teacher preparation program (experiences may include practicum, volunteering, completing course requirements, etc.)? 1 = 1 2 = 2 3 = 3 4 = 4 5 = 5 or more</p>
Types	<p>Indicate the types of disabilities students are identified with in your classroom right now (choose all that apply): 1 = learning disabilities 2 = emotional/behavioral disorders 3 = developmental/cognitive disabilities 4 = autism 5 = speech/language impairments</p>

	6 = other health impairments 7 = deaf/hard of hearing 8 = developmental delay 9 = physical disabilities (orthopedic impairment) 10 = multiple disabilities 11 = deaf/blind 12 = traumatic brain injury 13 = visual impairment/blindness
supports	Students with disabilities in my classroom receive extra support from the following professionals (choose all that apply): 1 = para in the classroom 2 = special education teacher in the classroom 3 = special education teacher in resource room or special education classroom 4 = speech/language therapist 5 = occupational therapist 6 = physical therapist 7 = social worker 8 = counselor 9 = other, please indicate 10 = students with disabilities in my classroom do not receive support from any other professional in the school

MN Specific Standards

Please read each item carefully and respond to it as honestly as you can.

MN Specific Standards: The following statements are related to standards that are required to be addressed in all approved teacher preparation programs within the statement of MN. These specific statements were developed based on the standards that are interpreted to be directly related to inclusive education.

Scale: 1 = strongly disagree 5= strongly agree

MNSS1	Items My teacher preparation program addressed....
MNSS1_1	Areas of exceptionality in learning, including learning disabilities, perceptual difficulties, and special physical or mental challenges
MNSS1_2	How to design instruction that uses a student's strengths as the basis for continued learning
MNSS 1_3	How to include varied learning styles, performance modes, and multiple intelligences in instructional plans
MNSS1_4	How to identify differences in approaches to learning and performance
MNSS1_5	How to recognize and deal with dehumanizing biases, discrimination, and prejudices
MNSS1_6	How student's learning is influenced by individual experiences,

	talents, and prior learning
MNSS1_7	The idea that all students can and should learn at the highest possible levels
MNSS1_8	The idea that teachers should persist in helping all students achieve success
MNSS1_9	Identifying and designing instruction appropriate to a student's stages of development, learning styles, strengths, and needs
MNSS1_10	Teaching approaches that are sensitive to the varied experiences of students
MNSS1_11	How to accommodate a student's learning differences or needs regarding time and circumstances for work, tasks assigned, communication and response modes
MNSS1_12	How to access appropriate services or resources to meet exceptional learning needs
MNSS1_13	Identifying when to access appropriate services or resources to meet exceptional learning needs
MNSS1_14	How to develop a learning community in which individual differences are respected
MNSS1_15	How to apply technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities

Inclusive Beliefs: General

Please read each item carefully and respond to it as honestly as you can.

Inclusive Beliefs, General: These statements relate to participants overall perceptions of inclusion.

IBG1	Items
IBG1_1	Inclusion is a good idea.
IBG1_2	Inclusion helps students develop friendships.
IBG1_3	Inclusion helps students with disabilities academically.
IBG1_4	Inclusion helps regular students academically.
IBG1_5	Inclusion helps all students develop acceptance of others.
IBG1_6	Inclusion inhibits the learning of regular students. R
IBG1_7	Inclusion fosters a sense of community for all learners in the school.
IBG1_8	Inclusion makes teaching students with disabilities in the regular classroom too hard. R

Preparation for Inclusion

Preparation for Inclusion: These statements relate to beginning teachers' perceptions of their current level of preparation for inclusion and their teacher preparation program.

PI1	Items
-----	-------

PI1_1	I have the training to implement inclusion successfully.
PI1_2	My teacher preparation program provided adequate training for implementing accommodations.
PI1_3	I have adequate training to differentiate instruction.
PI1_4	My university coursework gave me the ability to manage behavioral difficulties of students with disabilities.
PI1_5	I have adequate training to collaborate with others regarding the education of students with disabilities.
PI1_6	I have adequate training to meet the needs of students with emotional or behavioral challenges.
PI1_7	My teacher preparation program provided me with experiences working with students with a variety of disabilities.
PI1_8	I would be better able to teach students with disabilities in my classroom with further preparation. R

Inclusive Implementation: Classroom Management

Inclusive Implementation, Classroom Management: These statements relate to classroom management considerations for teachers in inclusive classrooms.

CM1	Items
CM1_1	Classroom management is more difficult because of the inclusion of students with disabilities.
CM1_2	I have had to adjust my classroom management because of students with disabilities in my classroom.
CM1_3	My classroom routines are different because of students with disabilities in my classroom.
CM1_4	I enforce different rules when students with disabilities are in my classroom than when they are not.
CM1_5	My class size is too big to meet the needs of students with disabilities in my classroom.

Inclusive Implementation: Instructional Practices

Inclusive Implementation, Instructional Practices: These statements relate to instructional practices implemented in inclusive classrooms.

IP1	Items
IP1_1	I spend more time planning because of students with special needs in my classroom.
IP1_2	Students with disabilities take more of my time during academic instruction.
IP1_3	I cover less academic content due to the inclusion of students with disabilities in my classroom.
IP1_4	I have the appropriate instructional materials to implement inclusion successfully.

IP1_5	I use many of the adjustments that I make for students with disabilities for other students without disabilities in my classroom.
IP1_6	I have enough planning time to develop lesson plans that account for the students with disabilities in my classroom.
IP1_7	The demands of the curriculum make it difficult to include students with disabilities in my instructional plans.
IP1_8	Due to the implementation of specific instructional practices (ex: differentiated instruction, accommodation/modifications), inclusion is working well in my classroom.

Inclusive Implementation: Competence

Inclusive Implementation, Competence: These statements relate to beginning teachers' overall feelings of competence related to inclusive education

Comp1	Items
Comp1_1	I feel competent when teaching students with disabilities in my classroom.
comp1_2	I feel competent when teaching normally achieving students in my classroom.
comp1_3	I was very apprehensive about having students with disabilities in my classroom. R
comp1_4	I feel confident about my ability to know what adjustments need to be made for students with disabilities in my classroom.
comp1_5	I am successfully teaching students with disabilities in my classroom.

Components of Inclusive Environments

Components: The following components have been identified as important for inclusive classrooms and schools. Participants will be asked to rank how important they feel each component is as well as how well each component was addressed within their teacher preparation program.

Components1	Items
Components1_1	Teachers who believe all children are important.
Components1_2	Teachers who believe all children can learn.
Components1_3	Teachers who believe learning is a lifelong process.
Components1_4	Teachers who believe learning occurs in a variety of ways.
Components1_5	Teachers who believe learning styles vary.
Components1_6	Teachers who believe assessment is a critical component of the learning process.
Components1_7	Teachers who value collaboration
Componetns1_8	Support personnel who are readily accessible for assisting with implementing inclusion
Components1_9	Professionals who share responsibility for students success
Components1_10	Teachers who believe families should be partners in

	education.
Components1_11	Teachers who create child-centered environments
Components1_12	Teachers who use a variety of strategies when teaching
Components1_13	Teachers who use a variety of assessment techniques
Components1_14	Teachers who respect others' input
Components1_15	Teachers who are knowledgeable about laws and regulations related to students with disabilities
Components1_16	Teachers who have knowledge of typical and atypical human development
Components1_17	Teachers who understand characteristics of disabilities
Components1_18	Teachers who possess conflict resolution skills

Appendix G

Interview Protocol

- The principal investigator, Keri DeSutter, will collect interview data.
- Interviews will be audio-recorded using two digital recording devices.
- The principal investigator will also take notes.
- All interviews will take place in a quiet room with the door closed.
- Depending on the location and preference of the interviewee, interviews may be conducted via Skype.
- Interviews will be conducted with approximately 6-8 beginning teachers.
- Each interview will last approximately one hour.

-Interviews will begin with introductions:

“Thank you for participating in this interview today. My name is Keri DeSutter and I am conducting research designed to gain the perspectives on beginning teachers and their preparation for inclusive education. Your participation is very important to helping me understand this topic in a comprehensive manner.”

-Consent form will be summarized, participants will be given a chance to read it and sign.

“Please read the consent form. In brief, your comments will be confidential, so please answer openly and honestly. You may choose not to answer any questions during the interview. I will be audio recording the interview so that I can transcribe the interview and analyze the information you provide.

-Interviewees will be provided a copy of the consent form for their records.

-The procedure of the interview will be semi-structured and will be based on the following questions:

1. Tell me something about your teaching that makes you proud.
2. Tell me about one of the your first experiences teaching a student with a disability in your classroom. What was that experience like? What did you learn?
3. What aspects of inclusive teaching are easier than you expected?
4. What aspects of inclusive teaching are harder than you expected?
5. Tell me something about your teaching that you wish you could improve.
6. If an inexperienced teacher asked you for advice about teaching in inclusive classrooms, what advice would you give?
7. If you could change one thing about your teacher preparation program and how it prepared you for an inclusive classroom what would it be?
8. Can you tell me about an experience you have had collaborating with parents, paras, or other teachers related to a student with a disability?
9. Can you give me an example of an experience during your teacher preparation (or inservice training) that you were able to use and put into practice related to inclusive education?

10. What courses or field experiences did you have that related to inclusive education and/or students with disabilities? Can you describe how they were helpful?

11. Anything else you would like to share?

-Follow-up questions will also be utilized to help clarify or further develop participants' ideas. Follow-up questions will also help the researcher gain information on the specific research questions when appropriate.

-After 60 minutes, the researcher will end the interview.

-Participants will be thanked and told that interview transcripts will be sent to them in the coming weeks. The researcher will request that each participant review the transcript to ensure accuracy of the transcription.

-Immediately following each interview the researcher will record thoughts and reflections in a field journal.

Appendix H
Interview Informed Consent

THE UNIVERSITY OF NORTH DAKOTA
CONSENT TO PARTICIPATE IN RESEARCH

TITLE: *Uncovering beginning teachers' perceptions of preparation for inclusive education: A mixed methods study*

PROJECT DIRECTOR: *Keri DeSutter*

PHONE # *701-205-5332*

DEPARTMENT: *Teaching and Learning*

STATEMENT OF RESEARCH

A person who is to participate in the research must give his or her informed consent to such participation. This consent must be based on an understanding of the nature and risks of the research. This document provides information that is important for this understanding. Research projects include only subjects who choose to take part. Please take your time in making your decision as to whether to participate. If you have questions at any time, please ask.

WHAT IS THE PURPOSE OF THIS STUDY?

As a beginning teacher in the first three years of teaching, you are invited to be in a research study about beginning teachers' opinions regarding their preparation for teaching in inclusive classrooms.

The purpose of this research study is to learn more about how to better prepare teachers for today's diverse classrooms by surveying and interviewing teachers who have recently graduated from a teacher preparation program.

HOW MANY PEOPLE WILL PARTICIPATE?

This study has two phases, the first phase was an online survey that invited approximately 250 beginning teachers to complete an online questionnaire. From those participants, approximately 6-8 people will take part in the interviews during the second phases of this study.

HOW LONG WILL I BE IN THIS STUDY?

In addition to the time it took to complete the online survey, your participation in this phase of the study will last approximately 60 minutes.

WHAT WILL HAPPEN DURING THIS STUDY?

You were selected as an interview participant based on your indicated willingness when completing the online survey as well as based on your individual results on the survey. The interview will be conducted in an informal, conversational format at a location that is convenient for you. The interview will explore your insights on being a beginning teacher in an inclusive classroom. It will be your choice as to how detailed you want to answer the questions. Interviews will be audio-recorded.

WHAT ARE THE RISKS OF THE STUDY?

There may be some risk from being in this study. Although there is minimal risk in this study, some participants may feel somewhat uncomfortable or embarrassed discussing their experiences as a beginning teacher. These risks are not viewed as being in excess of “minimal risk.” Should you become upset at any point in this study, you may stop at any time or choose not to answer any questions. If you would like to talk to someone about your feelings about this study, you are encouraged to contact, Minnesota Crisis Connection at 1-866-379-6363.

WHAT ARE THE BENEFITS OF THIS STUDY?

You may benefit personally from being in this study by reflecting on the factors that have affected your success in teaching in an inclusive classroom. In the future, other people might benefit from this study because the researcher hopes that the knowledge gained through your participation will assist teacher preparation programs to better prepare future teachers.

ALTERNATIVES TO PARTICIPATING IN THIS STUDY

This section is not applicable to this study.

WILL IT COST ME ANYTHING TO BE IN THIS STUDY?

You will not have any costs for being in this research study.

WILL I BE PAID FOR PARTICIPATING?

You will not be paid for participating in this portion of the research study. During phase 1 of the study, you were given the opportunity to enter into a drawing to receive a \$50.00 VISA gift card for your participation in the online survey.

WHO IS FUNDING THE STUDY?

The University of North Dakota and the research team are receiving no payments from other agencies, organizations, or companies to conduct this research study.

CONFIDENTIALITY

The records of this study will be kept private to the extent permitted by law. In any report about this study that might be published, you will not be identified. Your study record may be reviewed by Government agencies, the UND Research Development and Compliance office, and the University of North Dakota Institutional Review Board.

Any information that is obtained in this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. You should know, however, that there are some circumstances in which we may have to show your information to other people. For example the law may require us to show your information to a court or to tell authorities if we believe you have abused a child, or you pose a danger to yourself or someone else. Confidentiality will be maintained by means of anonymous transcripts of all interviews. You have the right to review and edit all transcripts. Consent forms will be kept in a locked and secure location with only the primary researcher having access to the consent forms and personal data. After 3 years, all data will be destroyed.

If there is a written report or article about this study, I will describe the study results in a summarized manner so that you cannot be identified.

IS THIS STUDY VOLUNTARY?

Your participation is voluntary. You may choose not to participate or you may discontinue your participation at any time without penalty or loss of benefits to which you are otherwise entitled. Your decision whether or not to participate will not affect your current or future relations with the University of North Dakota.

CONTACTS AND QUESTIONS?

The researcher conducting this study is Keri DeSutter. You may ask any questions you have now. If you later have questions, concerns, or complaints about the research please contact Keri DeSutter at 218-477-5942 during the day and at 701-205-5332 after hours. You may also contact Dr. Margaret Zidon at 701-777-3614.

If you have questions regarding your rights as a research subject, you may contact The University of North Dakota Institutional Review Board at **(701) 777-4279**.

- You may also call this number about any problems, complaints, or concerns you have about this research study.
- You may also call this number if you cannot reach research staff, or you wish to talk with someone who is independent of the research team.

- General information about being a research subject can be found by clicking “Information for Research Participants” on the web site: <http://und.edu/research/resources/human-subjects/research-participants.cfm>

I give consent to be audiotaped during this study.

Please initial: **Yes** **No**

I give consent for my quotes to be used in the research; however I will not be identified.

Please initial: **Yes** **No**

Your signature indicates that this research study has been explained to you, that your questions have been answered, and that you agree to take part in this study. You will receive a copy of this form.

Subjects Name: _____

Signature of Subject

Date

I have discussed the above points with the subject or, where appropriate, with the subject’s legally authorized representative.

REFERENCES

- Able, H., Sreckovic, M. A., Schultz, T. R., Garwood, J. D., & Sherman, J. (2015). Views from the trenches: Teacher and student supports needed for full inclusion of students with ASD. *Teacher Education and Special Education, 38*(1), 44-57.
- Acedo, C. (2011). Preparing teachers for inclusive education. *Prospects, 41*, 301-302.
- Ackerman, E. (2004). *Effective teacher preparation programs from the perspective of first year teachers* (Doctoral dissertation). Retrieved from ProQuest.
- Allday, R. A., Neilsen-Gatti, S., & Hudson, T. M. (2013). Preparation for inclusion in teacher education pre-service curricula. *Teacher Education and Special Education, 36*(4), 298-311.
- Alvarez-McHatton, P., & McCray, E. D. (2007). Inclination toward inclusion: Perceptions of elementary and secondary education teacher candidates. *Action in Teacher Education, 29*(3), 25-32.
- Alvarez-McHatton, P., & Parker, A. (2013). Purposeful preparation: Longitudinally exploring inclusion attitudes of general and special education pre-service teachers. *Teacher Education and Special Education, 36*(3), 186-203.

- Armstrong, T. (2012). *Neurodiversity in the classroom: Strength-Based strategies to help students with special needs succeed in school and life*. Alexandria, VA: ASCD.
- Ashby, C. (2012). Disability studies and inclusive teacher preparation: A socially just path for teacher education. *Research and Practice for Persons with Severe Disabilities*, 37(2), 89-99.
- ATLAS.ti (version 7) [Computer software]. Berlin, Germany: Scientific Software Company GmbH.
- Bain, A., Lancaster, J., Zundans, L., & Parkes, R. J. (2009). Embedding evidence-based practices in pre-service teacher preparation. *Teacher Education and Special Education*, 33(3), 215-225.
- Banks, J., Cochran-Smith, M., Moll, L., Richert, A., Zeichner, K., LePage, P., ... McDonald, M. (2005). Teaching diverse learners. In L. Darling-Hammond & J. Bransford (Eds.), *Preparing teachers for a changing world: What teachers should learn and be able to do* (pp. 232-274). San Francisco, CA: Jossey-Bass.
- Berry, R. A. W. (2010). Preservice and early career teachers' attitudes toward inclusion, instructional accommodations, and fairness: Three profiles. *The Teacher Educator*, 45, 75-95.
- Billingsley, B. S., Carlson, E., & Klein, S. (2004). The working conditions and induction support of early career special educators. *Exceptional Children*, 70, 333-347.

- Blanton, L. P., & Pugach, M. C. (2011). Using a classification system to probe the meaning of dual licensure in general and special education. *Teacher Education and Special Education, 34*(3), 219-234.
- Booth, T. (2011). The name of the rose: Inclusive values into action in teacher education. *Prospects, 41*, 303-318.
- Brizuela, G. (2011). Making an "IDEA" a reality: Providing a free and appropriate public education for children with disabilities under the Individuals with Disabilities Education Act. *Valparaiso University Law Review, 45*(2), 595-635.
- Brownell, M. T., Sindelar, P. T., Kiely, M. T., & Danielson, L. C. (2010). Special education teacher quality and preparation: Exposing foundations, constructing a new model. *Exceptional Children, 76*(3), 357-377.
- Brownell, M. T., Yeager, E. A., Sindelar, P. T., vanHover, S., & Riley, T. (2004). Teacher learning cohorts: A vehicle for supporting beginning teachers. *Teacher Education and Special Education, 27*(2), 174-189.
- Chinn, P. C. (2004). *Brown's* far reaching impact. *Multicultural Perspectives, 6*(4), 9-11.
- Cho, J. Y., & Lee, E. (2014). Reducing confusion about grounded theory and qualitative content analysis: similarities and differences. *The Qualitative Report, 19*(64), 1-20.
- Conderman, G., & Johnston-Rodriguez, S. (2009). Beginning teachers' views of their collaborative roles. *Preventing School Failure, 53*(4), 235-244.

- Conderman, G., Johnston-Rodriguez, S., Hartman, P., & Walker, D. (2013). Honoring voices from beginning special educators for making changes in teacher preparation. *Teacher Education and Special Education, 36*(1), 65-76.
- Conroy, T., Yell, M. L., Katsiyannis, A., & Collins, T. S. (2010). The U.S. Supreme Court and parental rights under the Individuals with Disabilities Education Act. *Focus on Exceptional Children, 43*(2), 1-16.
- Council of Chief State Officers. (2014). *InTASC Model Core Standards at a Glance*. Retrieved from http://www.ccsso.org/Resources/Publications/InTASC_Standards_At_a_Glance_2011.html
- Courey, S. J., Tappe, P., Siker, J., & LePage, P. (2013). Improved lesson planning with Universal Design for Learning (UDL). *Teacher Education and Special Education, 36*(1), 7-27.
- Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research* (2nd ed.). Los Angeles, CA: Sage.
- Cyr, E., McDiarmid, P., Halpin, B., Stratton, J., & Davis-Delano, L. C. (2012). Creating a dual licensure program in elementary and special education that prepares culturally responsive teachers. *Interdisciplinary Journal of Teaching and Learning, 2*(3), 158-168.
- Daane, C. J., Beirne-Smith, M., & Latham, D. (2001). Administrators' and teachers' perceptions of the collaborative efforts of inclusion in the elementary grades. *Education, 121*(2), 331-338.

Data.gov. (2014). *2012 IDEA Part B child count and educational environments*.

Retrieved from <https://explore.data.gov/Education/2012-IDEA-Part-B-Child-Count-and-Educational-Envir/5t72-4535>

DeSimone, J. R., & Parmar, R. S. (2006). Issues and challenges for middle school mathematics teachers in inclusion classrooms. *School Science and Mathematics, 106*(8), 338-348.

Dettmer, P., Dyck, N., & Thurston, L. P. (1999). *Consultation, collaboration, and teamwork for students with special needs* (3rd ed.). Boston: Allyn & Bacon.

Dorow, L. G., Fisch, L., & Uhry, J. (1998). Knowledge, values, and teaching practices needed for inclusive teaching. *Educational Forum, 62*(3), 226-233.

Everington, C., Steven, B., & Renner-Winters, V. (1999). Teachers' attitudes, felt competence, and need of support for implementation of inclusive educational programs. *Psychological Reports, 85*, 331-338.

Fisher, M., & Ociepka, A. (2011). We're all in this together: Identifying meaningful outcomes for K-6 students of teacher candidates. *Teacher Education and Special Education, 34*(2), 152-175.

Florian, L. (2009). Preparing teachers to work in 'schools for all.' *Teaching and Teacher Education, 25*, 533-534.

Frederick, R., Cave, A., & Perencevich, K. C. (2010). Teacher candidates' transformative thinking on issues of social justice. *Teaching and Teacher Education, 26*, 315-322.

- Friend, M. (2008). *Special education: Contemporary perspectives for school professionals* (2nd ed.). Boston, MA: Pearson Education, Inc.
- Friend, M., & Pope, K. L. (2005). Creating schools in which all students can succeed. *Kappa Delta Pi Record*, 41(2), 56-61.
- Fuchs, D., Fuchs, L. S., & Stecker, P. M. (2010). The “blurring” of special education in a new continuum of general education placements and services. *Exceptional Children*, 76(3), 301-323.
- Gehrke, R. S., & Cocchiarella, M. (2013). Preservice special and general educators’ knowledge of inclusion. *Teacher Education and Special Education*, 36(3), 204-216.
- Gilbert, L. (2005). What helps beginning teachers? *Educational Leadership*, 36-39.
- Gut, D. M., Oswald, K., Leal, D. K., Frederiksen, L., & Gustafson, J. M. (2003). Building the foundations of inclusive education through collaborative teacher preparation: A university-school partnership. *College Student Journal*, 37(1), 111-127.
- Gutek, G. L. (2004). *Philosophical and ideological voices in education*. Boston, MA: Allyn and Bacon.

- Haberman, M. (2010). A modest proposal for making teacher education accountable: How to make university-controlled teacher education and alternative certification programs accountable for the quality of teachers in schools serving children and youth in poverty. In V. H. Jackson & C. W. Lewis (Eds.), *Transforming teacher education: What went wrong with teaching training, and how we can fix it* (pp. 121-152). Sterling, VA: Stylus.
- Hamblin, C. L. (2013). *Teachers' attitudes concerning students with special needs in area special classes* (Doctoral dissertation). Retrieved from ProQuest.
- Hammerness, K., Darling-Hammond, L., Bransford, J., Berliner, D., Cochran-Smith, M., McDonald, M., & Zeichner, K. (2005). How teachers learn and develop. In L. Darling-Hammond & J. Bransford (Eds.), *Preparing teachers for a changing world: What teachers should know and be able to do* (pp. 358-389). San Francisco, CA: Jossey Bass.
- Hamre, B., & Oyler, C. (2004). Preparing teachers for inclusive classrooms: Learning from a collaborative inquiry group. *Journal of Teacher Education, 55*(2), 154-164.
- Hill-Jackson, V., & Lewis, C. W. (Eds.). (2010). *Transforming teacher education: What went wrong with teacher training and how we can fix it*. Sterling, VA: Stylus.
- Hollenweger, J. (2011). Teachers' ability to assess students for teaching and supporting learning. *Prospects, 41*, 445-457.

- Ivankova, N. V., Creswell, J. W., & Stick, S. L. (2006). Using mixed-methods sequential explanatory design: From theory to practice. *Field Methods*, 18(1), 3-20.
- Jaramillo, N. A. (2010). Liberal progressivism at the crossroads: Toward a critical philosophy of teacher education. In V. H. Jackson & C. W. Lewis (Eds.), *Transforming teacher education: What went wrong with teacher training and how we can fix it* (pp. 37-57). Sterling, VA: Stylus.
- Jenkins, A. S. (2002). Partnerships for dual preparation in elementary, secondary, and special education programs. *Remedial and Special Education*, 23(6), 359-374.
- Johnson, B., & Christensen, L. (2012). *Educational research: Quantitative, qualitative, and mixed approaches (4th Ed.)*. Thousand Oaks, CA: SAGE.
- Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, 33(7), 14-26.
- Johnson, R. B., Onwuegbuzie, A. J., & Turner, L. A. (2007). Toward a definition of mixed methods research. *Journal of Mixed Methods Research*, 1(2), 112-133.
- Jordan, A., Schwartz, E., & McGhie-Richmond, D. (2009). Preparing teachers for inclusive classrooms. *Teaching and Teacher Education*, 25, 535-542.
- Kauffman, J. M., & Hallahan, D. P. (Eds.). (2005). *The illusion of full inclusion: A comprehensive critique of a current special education bandwagon*. Austin, TX: Pro-Ed.

- Kaur, B. (2012). Equity and social justice in teaching and teacher education. *Teaching and Teacher Education, 28*, 485-492.
- Klehm, M. (2014). The effects of teacher beliefs on teaching practices and achievement of students with disabilities. *Teacher Education and Special Education, 37*(3), 216-240.
- Lancaster, J., & Bain, A. (2007). The design of inclusive education courses and the self-efficacy of preservice teacher education students. *International Journal of Disability, Development, and Education, 54*(2), 245-256.
- Leech, N. L., & Onwuegbuzie, A. W. (2008). Qualitative data analysis: A compendium of techniques and a framework for selection for school psychology research and beyond. *School Psychology Quarterly, 23*(4), 587-604.
- Leyser, Y., Zeiger, T., & Romi, S. (2011). Changes in self-efficacy of prospective special and general education teachers: Implication for inclusive education. *International Journal of Disability, Development and Education, 58*(3), 241-255.
- Lombardi, T. P., & Hunka, N. J. (2001). Preparing general education teachers for inclusive classrooms: Assessing the process. *Teacher Education and Special Education, 24*(3), 183-197.
- Mastropieri, M.A., & Scruggs, T. E. (1996). Teacher perceptions of mainstreaming/inclusion, 1958-1995: A research synthesis. *Exceptional Children, 63*(1), 59-72.

- McLaughlin, M. J. (2010). Evolving interpretations of educational equity and students with disabilities. *Exceptional Children, 76*(3), 265-278.
- McLeskey, J., Landers, E., Williamson, P., & Hoppey, D. (2012). Are we moving toward educating students with disabilities in less restrictive settings? *The Journal of Special Education, 46*(3), 131-140.
- Minnesota Association of Colleges for Teacher Education. (2015). *Profession Ready—Prepared, Effective, Accountable*.
- Minnesota Department of Education. (2014). *Data Reports and Analytics, Special Educational Instructional Settings, Ages 6-21 (B5)*. Retrieved from <http://w20.education.state.mn.us/MDEAnalytics/Data.jsp>
- Minnesota Department of Education. (2015a). *Data Reports and Analytics, 2013-14 Summary of Valid Standard Licenses*. Retrieved from <http://w20.education.state.mn.us/MDEAnalytics/Data.jsp>
- Minnesota Department of Education. (2015b). *Schools, Districts, and Teachers at a Glance, Minnesota Education Statistics Summary*. Retrieved from <http://w20.education.state.mn.us/MDEAnalytics/Summary.jsp>
- Mock, D. R., & Kauffman, J. M. (2005). The delusion of full inclusion. In J. M. Kauffman & D. P. Hallahan (Eds.), *The illusion of full inclusion: A comprehensive critique of a current special education bandwagon* (pp. 295-316). Austin, TX: Pro-Ed.
- Noddings, N. (1992). *The challenge to care in schools: An alternative approach to education*. New York, NY: Teachers College Press.

- North Dakota Teacher Support System. (2013). *North Dakota Mentoring Program*. Retrieved from <https://www.nd.gov/espb/TeacherSupport/Mentoring/Mentor%20Program%20Brochure%202013-14.pdf>
- Onwuegbuzie, A. J., & Leech, N. L. (2004). Enhancing the interpretation of “significant” findings: The role of mixed methods research. *The Qualitative Report*, 9(4), 770-792.
- Opertti, R., & Brady, J. (2011). Developing inclusive teachers from an inclusive curricular perspective. *Prospects*, 41, 459-472.
- Oyler, C. (2011). Teacher preparation for inclusive and critical (special) education. *Teacher Education and Special Education*, 34(3), 201-218.
- Pugach, M. C., & Blanton, L. P. (2009). A framework for conducting research on collaborative teacher education. *Teaching and Teacher Education*, 25, 575-582.
- Pugach, M. C., Blanton, L. P., & Correa, V. I. (2011). A historical perspective on the role of collaboration: Making good on the promise of teaching all students. *Teacher Education and Special Education*, 34(3), 183-200.
- Qualtrics (Version 61401) [Computer software]. Provo, UT: Qualtrics.
- Richardson, J. W. (2010). When policies meet practice: Leaving no teacher behind. In V. Hill-Jackson & C. W. Lewis (Eds.), *Transforming teacher education: What went wrong with teacher training and how we can fix it* (pp. 199-222). Sterling, VA: Stylus.

- Roulston, K. (2010). *Reflective interviewing: A guide to theory & practice*. Thousand Oaks, CA: SAGE.
- Santagata, R., & Guarino, J. (2012). Preparing future teachers to collaborate. *Issues in Teacher Education, 21*(1), 59-69.
- Schatzman, L., & Strauss, A. L. (1973). *Field Research: Strategies for a Natural Sociology*. Englewood Cliffs, NJ: Prentice Hall.
- Schwarz, P. (2006). *From disability to possibility: The power of inclusive classrooms*. Portsmouth, NH: Heinemann.
- Standards of Effective Practice for Teachers. (2010). Retrieved from <https://www.revisor.mn.gov/rules/?id=8710.2000>
- Statistical Package for the Social Sciences (SPSS) (Version 21) [Computer Software]. Armonk, NY: IBM.
- Suburban Stats. (2014). *Current population demographics and statistics for Minnesota by age, gender, and race*. Retrieved from <http://suburbanstats.org/population/how-many-people-live-in-minnesota>
- Tanner, D., & Tanner, L. (2007). *Curriculum development: Theory into practice* (4th ed.). Upper Saddle River, NJ: Pearson.
- Teacher Tenure Act, §§ 122A.41 (2011).
- Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation, 27*(2), 237-246.
- Tomlinson, C. A. (2014). *The differentiated classroom: Responding to the needs of all learners* (2nd ed.). Alexandria, VA: ASCD.

- Turnbull, H. R. (2009). A modest proposal in four parts. *Focus on Exceptional Children, 42*(1), 1-10.
- Turnbull, H. R., & Turnbull, A. P. (2000). Accountability: Whose job is it, anyway? *Journal of Early Intervention, 23*(4), 231-234.
- Turnbull, A., Turnbull, R., & Wehmeyer, M. L. (2010). *Exceptional lives: Special education in today's schools* (6th ed.). Upper Saddle River, NJ: Pearson.
- University of North Dakota. (2015). *Using Qualtrics*. Retrieved from <http://und.edu/tech-support/students/qualtrics.cfm>
- U.S. Department of Education, National Center for Education Statistics. (2013a). *Digest of Education Statistics, 2012* (NCES 2014-015), Chapter 2. Retrieved from <http://nces.ed.gov/fastfacts/display.asp?id=59>
- U.S. Department of Education, National Center for Education Statistics. (2013b). *Digest of Education Statistics*, Table 204.70. Retrieved from http://nces.ed.gov/programs/digest/d13/tables/dt13_204.70.asp
- Van Laarhoven, T., Munk, D. D., Lynch, K., Wyland, S., Dorsch, W., Zurita, L., Rouse, J. (2006). Project ACCEPT: Preparing pre-service special and general educators for inclusive education. *Teacher Education and Special Education, 29*(4), 209-212.
- Wigle, S.E., & Wilcox, D. J. (1996). Inclusion: Criteria for the preparation of education personnel. *Remedial and Special Education, 17*(5), 323-328.
- Yell, M. (2006). *The law and special education* (2nd Ed.). Upper Saddle River, NJ: Prentice Hall.

- Zigmond, N. (2006). Where should students with disabilities receive special education services? Is one place better than another? In B. G. Cook & B. R. Schirmer (Eds.), *What is special about special education? Examining the role of evidence-based practices* (pp. 127-135). Austin, TX: Pro-Ed.
- Zirkel, P. A. (2005). Does Brown v. Board of Education play a prominent role in special education law? *Journal of Law & Education*, 34(2), 255-271.

