



University of
Massachusetts
Amherst

Inclusion of Students with Learning and Behavior Problems: Knowledge, Attitudes, and Inclusive Practices in Turkey

Item Type	Dissertation (Open Access)
Authors	Ugurlu, Hanife Ece
DOI	10.7275/10236122.0
Download date	2025-07-04 16:40:08
Link to Item	https://hdl.handle.net/20.500.14394/17269

Inclusion of Students with Learning and Behavior Problems: Knowledge, Attitudes, and
Inclusive Practices in Turkey

A Dissertation Presented

by

HANIFE ECE UGURLU

Submitted to the Graduate School of the
University of Massachusetts Amherst in partial fulfillment
of the requirements for the degree of

DOCTOR OF PHILOSOPHY

September 2017

College of Education
University of Massachusetts Amherst

© Copyright by Hanife Ece Ugurlu 2017

All Rights Reserved

Inclusion of Students with Learning and Behavior Problems: Knowledge, Attitudes, and
Inclusive Practices in Turkey

A Dissertation Presented

By

HANIFE ECE UGURLU

Approved as to style and content by:

Michael P. Krezmien, Chair

John C. Carey, Member

Zehra Fareen Parvez, Member

Joseph B. Berger, Senior Associate Dean
College of Education

DEDICATION

This dissertation is dedicated to my mother, my grandfather, and to the memory of my uncle Erdinc Bilbay...

ACKNOWLEDGMENTS

I would like to express my deepest gratitude and thank to my advisor and dissertation committee chair Dr. Michael P. Krezmien my committee members, Professor John C. Carey and Dr. Z. Fareen Parvez who contributed to the completion of my dissertation. I would never have been able to finish this work without their support and guidance.

A very special gratitude goes out to my advisor, Dr. Michael P. Krezmien, for his excellent leadership, guidance, encouragement, and patient that helped and inspired me to develop professionally during my pursuit of doctorate in special education.

I would like to extend my sincerest thanks to my family and friends for their love, support, and encouragement.

ABSTRACT

INCLUSION OF STUDENTS WITH LEARNING AND BEHAVIOR PROBLEMS: KNOWLEDGE, ATTITUDES, AND INCLUSIVE PRACTICES IN TURKEY

SEPTEMBER 2017

HANIFE ECE UGURLU

COLLEGE OF EDUCATION

Ph.D., UNIVERSITY OF MASSACHUSETTS AMHERST

Directed by: Professor Michael Krezmien

Inclusive education has become one of the primary goals of education policy across the world in order to achieve education for all. However, there have been various interpretations with respect to what constitutes inclusive education. In addition, limited research exists on teachers' perceptions, knowledge, and competencies related to inclusive education and students with special needs. The purpose of preliminary research in this study was to validate the Turkish version of the International Survey of Inclusion. The purpose of the second study was to examine Turkish teachers' beliefs, knowledge, and skills about inclusion of students with diverse learning and behavioral needs. The preliminary analyses showed that the Turkish version of the instrument was valid and reliable measure to assess Turkish teachers' perceptions about inclusion. For the second study, the data were collected from a total of 397 Turkish general and special educators at in-service and pre-service level. Results indicated that Turkish educators viewed inclusion as placing students with special needs in general education settings. In addition, results showed that Turkish educators had positive perceptions about their knowledge and skills in order to teach students with special needs in inclusive settings; however, they

had less positive beliefs with regards to inclusion of students with special needs in general education classrooms. Additionally, Turkish teachers' perceptions of inclusive education varied by different types of disability categories. Results also showed that special and general educators at in-service and pre-service levels could not be properly predicted by their perceived knowledge and skills. Despite the positive perceptions about knowledge and skills, the participants demonstrated a lack of strategic knowledge used to support students with specific learning disabilities and emotional behavioral disorders. Implications for practice and future directions based upon the findings were discussed.

Keywords: *inclusion, students with disabilities, teacher attitudes, strategic knowledge, inclusion of specific learning disabilities, inclusion of students with emotional behavioral disorders*

TABLE OF CONTENTS

	Page
ABSTRACT.....	vi
LIST OF TABLES.....	x
LIST OF FIGURES.....	xii
CHAPTER	
1. INTRODUCTION.....	1
1.1 Historical Overview of Inclusion in the U.S.....	2
1.2 Historical Overview of Inclusion in Turkey.....	5
1.3 Attitudes and Inclusive Education.....	12
1.4 Inclusion of Students with Learning Disabilities and Emotional Behavioral Disorders.....	13
1.5 Aims of the study.....	18
2. LITERATURE REVIEW.....	20
2.1 Search Procedure.....	21
2.2 U.S. Survey Research.....	21
2.2.1 In-Service General Education Teachers Attitudes.....	22
2.2.2 In-Service General and Special Education Teachers.....	26
2.2.3 In-Service Special Education Teachers.....	36
2.2.4 Pre-service Teachers Attitudes.....	40
2.3 Turkish Survey Research.....	46
2.3.1 Sample description.....	48
2.3.2 Setting description.....	50
2.3.3 Procedure.....	51
2.3.4 Findings.....	54
2.4 Summary of the Literature Review.....	59
3. METHOD.....	64
3.1 Research Design.....	64
3.2 Instrument.....	67
3.2.1 Pilot Study.....	69
3.3 Setting.....	75
3.4 Participants.....	76
3.5 Survey Administration Procedures.....	80
3.6 Data Analysis.....	81
4. RESULTS.....	86
4.1 Descriptive Statistics.....	86
4.2 Factor Analysis and Reliability of the Instrument.....	96
4.3 Differences in Teacher Attitudes, Perceptions, and Knowledge Related to Different Types of Disabilities.....	99
4.4 Differences in Attitudes, Perceptions, and Knowledge of Pre-service/ In-service and General/Special Educators.....	114

4.5 Factors Explaining Teachers' Perceptions, Knowledge, and Skills Related to Inclusion.....	116
4.6 Analysis of Definition of Inclusion.....	122
4.7 Analysis of Effective Strategies Data	125
5. DISCUSSION.....	130
5.1 Psychometric Properties of Turkish version of International Survey of Inclusion.....	130
5.2 Turkish Educators' Perceptions, Knowledge, and Skills Regarding Inclusive Education	131
5.3 Factors Explaining Turkish Educators' Perception, Knowledge, and Skills.....	134
5.4 Turkish Educators' Perception, Knowledge, and Skills Regarding Different Types of Disabilities	135
5.5 Differences in Perceptions, Knowledge, And Skills Regarding Inclusion by Teacher Groups.....	138
5.6 Turkish Educators' Strategic Knowledge Regarding Students with Specific Learning Disabilities and Emotional Behavioral Disorders	143
5.7 Limitations of the Study.....	144
5.8 Implications for Practice.....	145
5.9 Implications for Research	149
5.10 Conclusion	151
APPENDIX: INTERNATIONAL SURVEY OF INCLUSION.....	154
BIBLIOGRAPHY	166

LIST OF TABLES

Table	Page
3.1 Demographic Information of the Participants (n= 397).....	79
4.1 Descriptive Statistics for the Items Related to Beliefs about Inclusion.....	91
4.2 Descriptive Statistics for the Items Related to Beliefs about Students with Disabilities and Peer Interaction	93
4.3 Descriptive Statistics for Items Related to Teachers' Perceptions about Knowledge and Skills	97
4.4 Factor Loadings for the Turkish version of International Survey of Inclusion Scale	98
4.5 Overall Descriptive Statistics and t-test Results for Sum Scores of Items 13 to 16	100
4.6 Overall Descriptive Statistics and t-test Results for Sum Scores of Items 17 to 21	101
4.7 Descriptive Statistics and t-test Results for In-Service General Educators' Sum Scores of Items 13 to 16	103
4.8 Descriptive Statistics and t-test Results for In-Service General Educators' Sum Scores of Items 17 to 21	104
4.9 Descriptive Statistics and t-test Results for In-Service Special Educators' Sum Scores of Items 13 to 16	106
4.10 Descriptive Statistics and t-test Results for In-Service Special Educators' Sum Scores of Items 17 to 21	107
4.11 Descriptive Statistics and t-test Results for Pre-Service General Educators' Sum Scores of Items 13 to 16	109
4.12 Descriptive Statistics and t-test Results for Pre-Service General Educators' Sum Scores of Items 17 to 21	110
4.13 Descriptive Statistics and t-test Results for Pre-Service Special Educators' Sum Scores of Items 13 to 16	112
4.14 Descriptive Statistics and t-test Results for Pre-Service Special Educators' Sum Scores of Items 17 to 21	113

4.15 Structure Matrix Showing Correlations Between Variables and Functions ...	117
4.16 Discriminant Function Analysis Classification Results.....	120
4.17 Multinomial Logistic Regression Classification Results for Knowledge and Ability Scores.....	122

LIST OF FIGURES

Figure	Page
1.1 Educational Placements for Students with Disabilities in Turkey.....	11
3.1 Model for Research.....	64
4.1 The Combined-Group Plot.....	118
4.2 Territorial Map.....	119

CHAPTER 1

INTRODUCTION

Inclusive education is now a worldwide trend having a tremendous impact on education of students with disabilities. Inclusive education is a complex and multidimensional concept resulting in various interpretations of inclusive education across the countries. Initially, the concept of inclusive education was viewed as placing students with special needs in general education settings, which indeed refers to integration. A more comprehensive view of inclusive education has evolved over time; however, some countries still view inclusion as a concern with students with special needs and their placement in general education settings. Although, placement is one dimension of inclusive education philosophy, it is more than simply the practice of placing students with disabilities in general education. Instead, inclusive education suggests effective means of educational placement that is suitable to students' characteristics, interests, and educational needs. Additionally, in contrast to integration, inclusive education involves in promoting equal access to quality of education for all learners.

Recently, the concept of inclusive education is seen as a process of promoting equity and quality in education and of increasing participation and belongingness of all students through appropriate educational approaches that address and respond a wide range of academic and behavioral needs. Additionally, inclusive education considers learning difficulties as a result of barriers in curriculum and ineffective ways of teaching and involves in changes in curriculum and instructional strategies in order to make education accessible and responsive to the needs of diverse learners (UNESCO, 2005). In

order to implement inclusive education effectively, there is a need of continues search for educational approaches that are responsive to the needs of all learners. Furthermore, inclusive education fosters a shared responsibility that encompasses educators, parents, and all students in order to create meaningful, accessible, and welcoming learning environment for all learners. Therefore, in addition to the importance of effective educational practices, inclusion efforts across countries should emphasize the necessity of collaboration and support and appreciation of diversity in order to ensure not only equality, also quality of education that allows all learners to reach their fullest potential (Loreman, Forlin, Chambers, Sharma, & Deppeler, 2014; Sharma, Loreman, & Forlin, 2012).

1.1 Historical Overview of Inclusion in the U.S.

The Civil Rights movement has resulted in tremendous transformation for the education of students with disabilities in the United States. *Brown v. Board of Education* (1954) decision inspired parents of children with disabilities to advocate for equal educational opportunities for their children. Soon after, the Elementary and Secondary Education Act (ESEA) of 1965 addressed inequalities in education for disadvantaged children, including those with disabilities, and in 1966 amendment of the ESEA provided funding in order to help states to develop effective programs for students with disabilities, thereby, ensure their access to quality of education. The ESEA was renamed Education of the Handicapped Act (EHA) in 1970 and aimed to expand grant programs in order to improve education for disadvantaged students. The other important decisions that have been a greater impact on education of students with disabilities are *Pennsylvania Association for Retarded Citizens (PARC) v. Pennsylvania* (1972) and *Mills v. Board of*

Education (1972). *PARC* and *Mills* decisions resulted in EHA amendments of 1974 that required states receiving federal funding to ensure educational opportunities for students with disabilities and students who are gifted and talented. The amendment also established due process procedures. In 1973, Section 504 of the Rehabilitation Act of 1973 was passed as the first federal civil rights law that prohibits discrimination against persons with disabilities (Yell, 2012). Despite these improvement efforts in education, students with disabilities were excluded from public schools, they were placed in segregated schools, those receiving an education were provided a low quality of education that was insufficient to fulfill their educational needs, and some of them had not been educated at all (Yell, 2012) until 1975, when Congress enacted the Education for All Handicapped Children Act (EAHCA). EAHCA, also known as Public Law 94-142, mandated free and appropriate public education for all students with disabilities and mandated education in the least restrictive settings. In addition, EAHCA of 1975 protected the rights of students with disabilities by requiring the use of nondiscriminatory evaluation and placement procedures, as well as their parents right to procedural due process and involvement in their child's education. In 1986, an amendment to the EAHCA extended the right to free and appropriate public education and required states to develop and implement early intervention programs for infants and toddlers with disabilities and develop individualized family service for their parents. In 1990, an amendment to the EAHCA renamed the law as the Individuals with Disabilities Education Act (IDEA) and emphasized the importance of using of person first language. IDEA of 1990 also mandated individualized transition planning for students with disabilities ages 16 or older. The IDEA amendments of 1997 required students with

disabilities to have greater access to general education curriculum and their participation in statewide assessments. Additionally, IDEA of 1997 placed greater focus on improving special education services and educational outcomes of students with disabilities.

Likewise, No Child Left Behind (NCLB) Act of 2001, the reauthorization of the ESEA, aimed to increase educational outcomes of all students including those with disabilities. NCLB asserted that all children would learn and educational achievement of students with disabilities would be improved and raised standards and expectations for those students. In order to improve educational goals for educational achievement of students with disabilities, NCLB required inclusion of students with disabilities in assessment and schools' accountability system. Further, NCLB required the use of scientifically proven educational practices in order to assure improved educational outcomes for all students (Turnbull, 2005). NCLB also addressed the issue of adequately trained educators and established requirements for highly qualified teachers. The IDEA 2004 was built upon NCLB and expanded its emphasis on the responsibilities of schools and educators with regards to promoting access to general education curriculum for students with disabilities and their participation in statewide assessments. With NCLB and IDEA 2004, policy efforts for education of students with disabilities have shifted the emphasis from equal access to education to quality of education. In addition to their inclusion in statewide assessments, the number of students with disabilities receiving education in inclusive settings has been increasing.

IDEA classifies a child with disability as having specific learning disabilities, speech or language impairments, mental retardation, emotional disturbance, autism, orthopedic impairments, traumatic brain injury, deaf/blindness, multiple disabilities,

developmental delays, visual impairments, hearing impairments, and other health impairments. IDEA does not specify attention deficit-hyperactivity disorder as one of its disability categories, but some students with this disorder may receive services under other health impairment. Students who are gifted and talented are not eligible for special education services under IDEA.

IDEA does not use the term inclusion. However, IDEA requires education of students with disabilities in the least restrictive environment (LRE) that is mostly general education settings unless such settings do not satisfactorily respond the educational needs of a child with disability despite the use of supplementary aids and services (IDEA, 2004). According to U.S. Department of Education (2015), 95 % of students with disabilities receives education in regular schools, of 61.8 % spend at least 80% of their time in general education classrooms. Nevertheless, there has been still achievement gap between educational outcomes of students with and without disabilities (McLaughlin, Krezmien, & Zablocki, 2009) leading to a continuous debate over the readiness and willingness of educators for inclusive education that have an important effect on implementation of effective inclusive practices.

1.2 Historical Overview of Inclusion in Turkey

Educational rights of children with disabilities were first ensured by Elementary Education Act (Ilkogretim ve Egitim Kanunu) of 1961 that mandated special elementary education for children with special needs. The first special education law regarding inclusion of students with special needs was Children with Special Needs Act (Ozel Egitime Muhtac Cocuklar Kanunu) of 1983 suggesting schools to take steps in order to educate students with special needs with their typically developing peers. The Act of

1983 states that students with special needs should be included in general education settings if their characteristics and conditions are appropriate; however, the act does not clearly define the term inclusion or specify what constitutes “appropriate” for a child’s inclusion. Due to uncertainty within this special education policy, inclusive practices had not been properly in practice until Special Education Legislation of 1997.

In 1997, the Turkish Ministry of National Education (Milli Egitim Bakanligi [MEB]) established 573 Special Education Legislation that ensures education of students with special needs with their peers without disabilities. This legislation defines inclusion as educational environments that are developed to ensure reciprocal interaction between individuals with and without special needs and to achieve maximum level of educational goals. Furthermore, the legislation emphasized the importance of developing individualized education program for every child who has special needs. This legislation requires education of students with special needs with their typically developing peers in all school types (public and private) and grade levels, by the use of appropriate strategies and techniques in accordance with their individualized education programs. The legislation also mandates preschool education for all children with special needs. According to 573 Special Education Legislation, general education curriculum is followed in special schools and classrooms; however, based on characteristics and academic abilities of students with special needs, a special education curriculum may be implemented in these settings. In addition, the legislation indicates that students with special needs for whom general education classrooms is not an appropriate placement should be placed in special education schools or classrooms. According to this

legislation, such separate schools and classrooms should include students with similar disabilities (MEB, 1997).

The Special Education Services Regulation (2000) suggests that every child with special needs has a right to receive education with their peers without special needs and inclusive education programs should be developed based upon individuals' educational needs, instead of their deficiencies. Additionally, the legislation redefined the term inclusive education as special education practices that are based upon supportive educational services provided to students with special needs receiving education with their peers without special needs in public or private preschool, elementary, and secondary schools, as well as informal educational settings. This legislation suggests the use of general and/or vocational education curriculum within special education schools and classroom. The legislation is also suggests the use of special education curriculum that targets development of academic and social skills of students with special needs placed in separate educational settings.

The Special Education Services Regulation of 2000 specifies the criteria for inclusion of students with disabilities as (a) not having multiple disabilities, (b) being identified at an early age, and (c) having mild or moderate intellectual disabilities. This legislation also specifies two types of inclusive practices that are full time inclusion and part time inclusion. According to the legislation, in full time inclusion, students with disabilities receives education in general education classrooms. The legislation states that a maximum of two students with special needs should be placed in an inclusive classroom. In part time inclusion, students with special needs receiving education in special education schools or classrooms should participate in some general education

activities with their peers without disabilities. In addition to these inclusive education practices, the legislation suggests that students without disabilities may receive education in special education schools implementing reverse inclusion programs.

The Special Education Services Regulation of 2000, defined 18 disability categories including cognitive deficiencies, mild cognitive deficiencies, moderate cognitive deficiencies, severe cognitive deficiencies, profound cognitive deficiencies, hearing impairment, visual impairment, orthopedic impairment, impairments resulted from tendon inflammations, speech and language deficiencies, specific learning disabilities, multiple disabilities, emotional behavioral disorders, social maladjustment, chronic diseases, autism, attention deficit hyperactivity disorder, and gifted and talented students. However, unlike IDEA, Turkish law does not specify disability categories used to determine eligibility of a child for special education services. The Special Education Services Regulation of 2000 required general education teachers to ensure social acceptance of students with special needs in inclusive settings and to implement instructional practices and assessments based upon the unique educational needs and characteristics of students with special needs (MEB,2000).

The Special Education Services Regulation of 2006 introduced the term least restrictive environment and required placement of students with special needs in the least restrictive educational settings. This legislation also specifies the ways for implementing resource room practices in inclusive schools and evaluating educational performance of students with special needs in inclusive settings. In addition, this legislation removed the criteria for inclusion related to students' characteristics established by The Special Education Services Regulation of 2000 that were problematic in terms of acceptance of

all learners as suggested by inclusive education philosophy. However, the legislation has maintained to limit the number of students with special needs included in general education settings.

In 2012, Special Education Services Regulation was amended based on the principles of the United Nations Convention on the Rights of Persons with Disabilities ratified by Turkey in 2008 (Meral & Turnbull, 2014). The Special Education Services Regulation of 2012 placed greater emphasis on the responsibilities of teachers including general education, special education, and branch teachers and encourages collaboration between educational professionals with regards to teaching students with special needs in inclusive settings. This legislation removed the definitions of chronic diseases and social maladjustment (MEB, 2012). With this legislation, students with intellectual disabilities and students with autism spectrum disorders may be included in inclusive settings or they may receive education within the same special education classrooms or schools. However, if a student with one of these categories has severe behavior problems, the legislation suggests the use of one-on-one education in order to prepare such student for group activities. Additionally, the legislation suggests that students with hearing, visual, and orthopedic impairments may be included in inclusive classrooms or they may receive education in the same special education classrooms or schools.

Special education policy in Turkey suggests the use of several approaches to educate students with special needs with respect to placement and curriculum including placement in general education setting with general education curriculum, placement in separate classrooms in regular schools with general education curriculum or special education curriculum, and placement in separate schools with general education

curriculum or special education curriculum. Additionally, the number of special education schools has doubled since 2010. However, inclusion policy should primarily focus on developing an educational system that is responsive and accessible to all learners.

Turkish educational policy tends to segregate students with special needs within the special education system through like-ability grouping on the basis of type and severity of disabilities. Turkish inclusive education policy should be reformed in order to make general education available and accessible to all students, especially those with severe academic and social problems. In addition, Turkish inclusive education policy do not address the necessity of identifying the deficiencies in education system and limitations in curriculum and instruction, instead, it focuses on students' characteristics and learning difficulties. Turkish policy should reconsider inclusive education philosophy and should focus on reforms in general education in order to improve quality of education for all students.

According to the Turkish Statistical Institute's data on disability, 12.29% of entire population had a disability (i.e. 9.7% identified with chronic diseases and 2.58% identified with orthopedic impairment, speech and language impairments, visual impairments, hearing impairments, and intellectual disabilities) and approximately nine percent consisted of school-age population (Turkiye Istatistik Kurumu, 2002). In 2002, 40.97% of students with orthopedic impairment, speech and language impairments, visual impairments, hearing impairments, and intellectual disabilities completed elementary school, 5.64% completed middle school, 6.9% finished high school, and only 2.42% earned a college degree.

The number of students with special needs placed in general education settings has been growing as a result of improvement in inclusionary policy. According to the National Education Statistics for the 2010-11 academic year, a total of 141,248 students with special needs received formal education. Of those, 92,355 were placed in inclusive settings. 2015-16 academic year statistics indicated that a total of 288,489 students with special needs enrolled in formal education and 202,541 of them were placed in inclusive classrooms. Figure 1 summarizes 2015-16 academic year data on the proportion of students with disabilities in Turkey placed in separate and inclusive settings across different school levels. Although approximately 70% of Turkish students with disabilities receive education in inclusive settings, a lack of knowledge exists regarding the success of inclusive education. In addition, only few studies have been conducted regarding educators' knowledge and beliefs about students with disabilities and inclusive practices. Increased understanding related to teachers' knowledge and beliefs is particularly important in order to shift from integration to inclusive education reform.

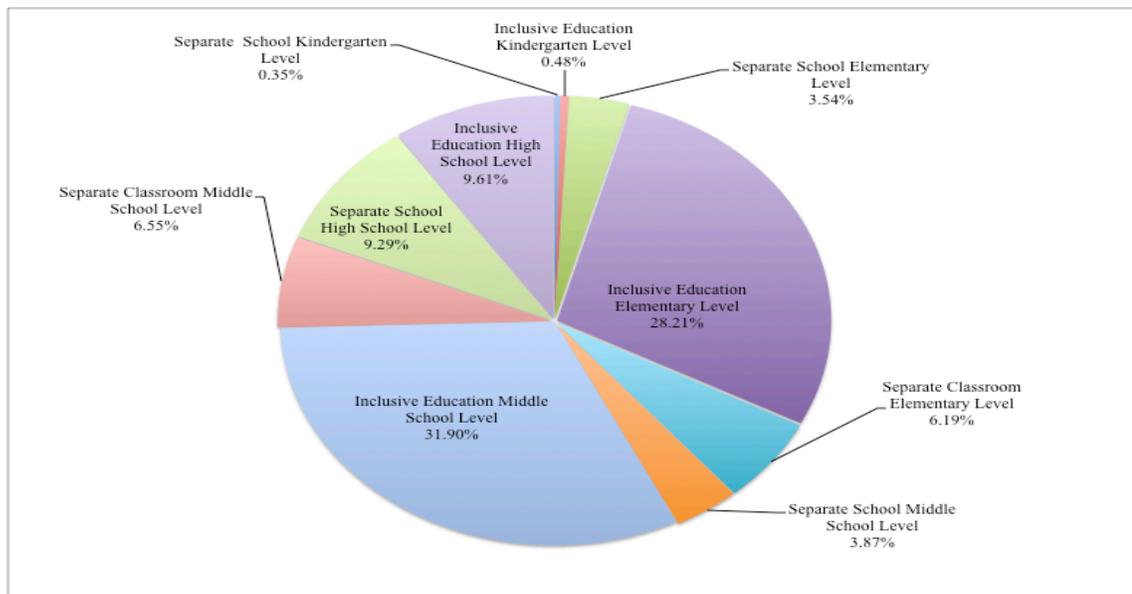


Figure 1.1 Educational Placements for Students with Disabilities in Turkey

1.3 Attitudes and Inclusive Education

The concept of inclusion continues to evolve through social trends, policy initiatives, and research, while the debate continues over the implementation of inclusive education. Teacher knowledge, skills, and attitudes, collaboration between educators and parents, professional development, resources, and parent, community and administrative support are key factors affecting successful implementation of inclusive education (Muccio, Kidd, White, & Burns, 2014; Friend, 2011). Amongst these, attitudes toward inclusive education and students with disabilities, especially teachers' attitudes, have been considered one of the most important components of inclusive education (Antonak & Larrivee, 1995; Brandes & Crowson, 2009; Ernst & Rogers, 2009; Wilkins & Nietfeld, 2004). Attitudes toward inclusive education lead either success or failure of inclusive education in practice due to its key principle regarding appreciating and valuing diversity.

On the basis of the theory of cognitive dissonance, Van Overwalle and Jordens (2002) explained an attitude as the link between (a) affective cognitive or belief about the attitude object and (b) feelings, behaviors, and intentions towards the interaction of the attitude object. According to this theory, understanding the factors behind feelings, beliefs, and thoughts plays an important role in attitudes. For this reason, within the inclusive education research, there has been a greater emphasis on identification of teacher attitudes regarding inclusion and factors related to these attitudes. In inclusive education research, the factors found to be related to teachers' attitudes are (a) years of teaching experience, (b) training on inclusion and disabilities, (c) student's type and severity of disability, (d) personal relations with an individuals with disabilities, (e) available resources and support, (f) teacher's gender, and (g) the grade level taught

(Avramidis, Bayliss, & Burden, 2000; Avramidis & Norwich, 2002). However, studies examining the link between some of these variables and teachers' attitudes toward inclusion have been limited or mostly inconclusive; thus, there is a need for more research on variables affecting teachers' attitudes in order to develop appropriate teacher training models that can foster favorable attitudes among educators, thereby improving success of inclusive practices.

1.4 Inclusion of Students with Learning Disabilities and Emotional Behavioral Disorders

One of the important factors that requires considerable attention in inclusive research is teacher knowledge regarding disability and inclusive practices. Only few studies have existed that examines teacher knowledge and its effects on attitudes toward inclusion and these studies indicate that teachers demonstrate lack of knowledge regarding certain types of disabilities and effective inclusive practices. The need for such examination is greater within the context of inclusive education literature in Turkey, because the body of Turkish inclusion literature has mostly focused on teacher attitudes toward inclusion of students with disabilities in general.

IDEA defines specific learning disabilities as a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. Disorders included. Such term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. Such term does not include a learning

problem that is primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage. (IDEA 20 U.S.C. §1401 [2004], 20 C.F.R. §300.8[c][10]).

The Special Education Services Regulation of 2012 defines specific learning disability as a person who needs special education and support services due to difficulties in one or more of information processes that are necessary for understanding and using spoken and written language and difficulties in listening, speaking, reading, writing, spelling, paying attention, or doing mathematical calculation. (Section 1, Article 4 [bb]). Compared to the IDEA's definition, Turkish legal definition of specific learning disabilities does not include important factors related to learning disabilities and this may result in misidentification of culturally and linguistically diverse children in this category.

IDEA of 2004 no longer required the use of IQ achievement discrepancy model to identify students with specific learning disabilities and suggested the use of Response to Intervention (RtI) model. RtI requires implementation of effective practices and focuses on removing instructional barriers causing learning difficulties; therefore the model aims to eliminate misidentification of struggling learners as having specific learning disabilities. IDEA's recommendation related to the use of RtI shifted focus from identification of specific learning disabilities on the basis of deficit model to the fit between learner's needs and curriculum because RtI suggests suggests the use of responsive curriculum arrangements, supports, and modifications in order to prevent learning problems. On the other hand, Turkey uses merely discrepancy model for

identification of specific learning disabilities without an attempt to explain mismatch between instruction and learners' educational needs.

The other disability category interested in this study is emotional and behavioral disorders. IDEA uses the term emotional disturbance and defines this category as

...a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child's educational performance:

- a. An inability to learn that cannot be explained by intellectual, sensory, or health factors.
- b. An inability to build or maintain satisfactory interpersonal relationships with peers and teachers.
- c. Inappropriate types of behavior or feelings under normal circumstances.
- d. A general pervasive mood of unhappiness or depression.
- e. A tendency to develop physical symptoms or fears associated with personal or school problems. (IDEA 20 U.S.C. , §1401 [2004], 20 C.F.R. §300.8 [c][4]).

IDEA's definition of emotional behavioral disorder includes schizophrenia, but it does not include social maladjustment. Likewise, The Special Education Services Regulation of 2012 removed the definition of children who are socially maladjusted. This regulation defines emotional behavioral disorder as a person who needs special education and support services due to displaying developmentally inappropriate emotional reactions and behaviors that differ from social and cultural norms. Turkish legal definition is too narrow and does not specify identification criteria that underline the characteristics associated with this condition. The RtI model is also used for preventing and intervening

behavior problems in the U.S. In addition, Positive Behavioral Interventions and Supports (PBIS) is another approach used in the U.S. schools in order to address behavior problems through effective interventions. On the other hand, Turkey is in need of such preventative approaches that advocate the use of effective behavioral interventions.

U.S. Department of Education's (2015) annual data for 2013-2014 school year showed that children and youth (ages between 3 to 21) identified as having specific learning disabilities constituted 35% of population served under IDEA. Emotional disturbance constituted 6.3% of the population receiving special education services under IDEA. During Fall 2013, 67.8% of students with specific learning disabilities and 45.1% of students with emotional behavioral disorders spent 80% or more of instructional time in general education settings. In Turkey, no national data exist representing the prevalence rates of specific learning disabilities and emotional behavioral disorders. Given the prevalence rates of these disability categories in the U.S. and the lack of Turkish inclusion literature related to students with specific learning disabilities and emotional behavioral disorder, research specifically focuses on Turkish teachers' perceptions and knowledge about inclusion of such students is a necessity. Only few studies exist examining teachers' knowledge and attitudes related to students with specific learning disabilities. These studies indicated that Turkish education professionals have had limited knowledge about specific learning disabilities. For instance, in one study conducted by Dogan (2013), Turkish and elementary school teachers demonstrated lack of knowledge related to dyslexia. Similarly, in the other study (Yangin, Yangin, Onder, Savlig, 2016), pre-service elementary teachers and faculty in teacher training programs showed a lack of knowledge with respect to different types of specific learning

disabilities. Likewise, in a case study conducted by Karadeniz (2013), elementary school teachers showed a lack of knowledge about dyscalculia. In addition, in a study (Kacan, 2004) that aimed to identify the needs of elementary school teachers regarding in-service training, 42.9% of teacher stated that they were in need of in-service training on teaching students with specific learning disabilities and 48.1% of them were in need of in-service training on improving positive behaviors. There has been no known study examining teachers' knowledge about emotional behavioral disorders. Only one study (Rakap and Kaczmarek, 2010) has been known that aimed to evaluate general education teachers' willingness to work with students with learning disabilities and behavioral problems.

In order to improve educational and functional outcomes of students with specific learning disabilities and emotional behavioral disorders in inclusive settings, teachers should implement effective evidence-based practices. The use of effective practices is also required by the NCLB of 2001 and IDEA of 2004 (Cook, Tankersley, Cook, & Landrum, 2008). NCLB of 2001 specifically uses the term *scientifically based research* that refers the instruction and educational practices of which effectiveness have been proven through reliable research (Cook et al., 2008). In the U.S. inclusive education literature, only few studies have examined teachers' knowledge of effective educational practices used in inclusive settings. On the other hand, no known investigation has existed that aims teachers' awareness of effective and scientifically proven strategies that have potential to improve academic and behavioral outcomes of students with specific learning disabilities and emotional behavioral disorders in inclusive settings. Such research is needed in order to improve pedagogical competence of education

professionals in the ways that they can provide meaningful educational opportunities to the students with diverse learning and behavioral needs.

1.5 Aims of the study

The body of current inclusive research in Turkey is limited with respect to evaluation of (a) Turkish teachers' attitudes, knowledge, and skills regarding inclusion of students with different types and severity of disabilities, (b) their perceptions regarding students with specific learning disabilities and emotional behavioral disorders and their abilities to teach these students in inclusive settings, and (c) their knowledge about evidence-based practices used for students with these disabilities. Furthermore, in Turkey, limited number of standardized survey instruments has been utilized in order to measure teachers' attitudes toward inclusion. The *Opinion Relative to Integration of Students with Disabilities* (developed by Antonak and Larrivee, 1995; adopted by Kircaali-Iftar, 1996) is one of the widely used scales in Turkey. The other attitudinal scale is the *Sentiments, Attitudes, and Concerns about Inclusive Education Revised* (SACIE-R) scale developed by Forlin, Earle, Loreman, and Sharma (2011) and adapted by Bayar, Ozaskin, and Bardak in 2015. In addition, the *Teacher Efficacy Scale* (developed by Gibson and Dembo in 1984 and adopted by Diken in 2004) and the *Teacher Efficacy for Inclusive Practices* (TEIP, developed by Sharma, Loreman, and Forlin in 2011 and adapted by Bayar in 2015) are instruments used to assess Turkish teachers' efficacy with respect to teaching in inclusive settings.

The primary purpose of this study is to validate Turkish version of International Survey of Inclusion designed to measure teachers' attitudes, competencies, and knowledge in the context of inclusive education through Likert-scale and open-ended

items including descriptive vignettes of students with different types of disabilities (i.e. specific learning disabilities, mild intellectual disabilities, severe intellectual disabilities, and emotional and behavioral disorders). The second purpose of this study is, in part, to understand the attitudes, knowledge, and skills of Turkish special and general educators with respect to students with learning disabilities and emotional behavioral disorders and education of such students in inclusive settings.

CHAPTER 2

LITERATURE REVIEW

Several reviews of inclusive education research have existed (e.g. Avramidis & Norwich, 2002; Scruggs & Mastropieri, 1999) that provide important information regarding the issues related to implementation of this philosophy. However, these reviews had been completed prior 2004, when IDEA of 2004 shifted the focus from equality of education to quality of education through standard-based education and test-driven accountability system. Likewise, Turkish special education law has extended the responsibility of general education teachers to meet unique educational needs of individuals with disabilities since 2006. Only one study (Sucuoglu, 2004) has known that reviewed inclusive education research Turkey, but this review included studies conducted between 1980 and 2005.

Previous reviews on inclusion literature emphasized the importance of fostering positive attitudes toward inclusion in order to promote success of inclusion in practice (Avramidis & Norwich, 2002; Scruggs & Mastropieri, 1999). Thus, identification of factors related to these attitudes is essential to form more positive attitudes among education professionals and to remove barriers to successful inclusion. In addition, because current educational policy in both countries holds general education teachers responsible for the success of students with various abilities and learning needs, inclusive research has increasingly focused on teachers' knowledge and abilities to teach diverse students. The purpose of this review is to summarize the most recent body of the U.S. and Turkish literature with regards to inclusive practices and attitudes toward inclusion and to determine factors related to educators' attitudes.

2.1 Search Procedure

Several procedures were used to identify the studies included in the literature review. First, the Educational Resource Information Center (ERIC), Academic Search Premiere, PsychInfo, and PsychArticles were databases used for two searches. Second, search terms were identified for two searches. Keywords used in the first search were *inclusion* and *special education*, and keywords used in the second search were *inclusion* and *disability*. Third, the limiters *peer reviewed journals*, *academic journals*, *publication dates of 2004 to present*, and *empirical studies*, were applied to these searches. The first search yielded 507 records, and the second search yielded 930 records for journal articles. From a total of 1437 titles, the journal articles published in a language other than English, and the articles that were not related to the field of education were eliminated. Then, the remaining 975 journal articles were classified as inclusion-related and not inclusion-related articles. This classification yielded 415 inclusion-related articles that were read in order to identify quantitative studies and to remove studies that were not conducted in the U.S. and Turkey. A total of 93 journal articles were identified and read. Of those, 18 survey studies (13 studies conducted in the U.S. and five in Turkey) examining education professionals' perceptions and knowledge regarding inclusion were included in this review.

2.2 U.S. Survey Research

Thirteen U.S. survey studies on education professionals' perceptions and knowledge about inclusion were included in this review. The survey reports provided data on teacher candidates and in-service general and special educators across various school levels. Ten U.S. survey studies were conducted with in-service education professionals. Respondents

included 1606 teachers. Approximately 58% of respondents were general education teachers and 42% were special education teachers from different school levels.

Remaining three studies conducted with a total of 413 teacher candidates.

The U.S. survey research reviewed here aimed to examine several factors that might have an impact on attitudes held by educators with respect to inclusion. These factors examined in the selected U.S. studies included (a) teacher characteristics (gender, grade level taught, experience, training, professional development, and teaching discipline), (b) child's characteristics (type and severity of disability), and (c) educational environment (time, support, resources, and collaboration).

2.2.1 In-Service General Education Teachers Attitudes

In the reviewed literature, two studies (DeSimone & Parmar, 2006; Ross-Hill, 2009) specifically focused on examining attitudes of general education teachers. The purpose of Ross-Hill's study was to explore attitudes of elementary and secondary level general education teachers toward the practice of inclusion and to examine differences in attitudes of teachers teaching different grade levels.

In contrast to Ross Hill's study, DeSimone and Parmar conducted a survey study that focused on a certain subject area general educators working at one school level and their attitudes toward inclusion of a certain type of disability. The researchers specifically aimed to examine middle school mathematics general education teachers' knowledge and beliefs regarding teaching students with learning disabilities (LD) in inclusive settings. In addition, this study investigated middle school mathematics teachers' ability to adapt instruction for their students with LD. Desimone and Parmar also aimed to identify

middle school mathematics teachers' beliefs regarding their pre-service preparation and administrative support and resources.

2.2.1.1 Sample Description

Both studies (DeSimone & Parmar, 2006; Ross-Hill, 2009) were conducted with general education teachers, but grade level taught by the respondents varied. Ross-Hill recruited the sample of general education teachers (N=73) working at different school levels. In this study, the respondents consisted of 10 pre-school, 11 elementary first to fourth grade, 12 elementary fifth to sixth grade, 22 secondary seventh to eighth grade, and 18 secondary ninth through twelfth grade general education teachers. By contrast, the sample of general educators (N=228) in the study of Desimone and Parmar included only middle school mathematics teachers. The response rate was 73% for the study of Ross-Hill and 63% for the study of Desimone and Parmar. In addition to the grade level taught, Ross-Hill reported years of experience and years of pre- and in-service training. Desimone and Parmar also reported respondents' years of experience in teaching and inclusion, and level of training related to math methods and inclusion or LD, but also provided more detailed information regarding demographic variables including gender (70% female), educational level, level of support services, and level of administrative support.

2.2.1.2 Setting description

Ross-Hill (2009) recruited the sample from three public elementary and secondary schools in rural, southeastern US school districts, whereas Desimone and Parmar (2006) selected the sample of general education teachers from 19 different states. In the study of Desimone and Parmar, 60.9% of the sample were from Mid Atlantic, 19.3 of the sample

were from New England, 7% of them were from West, 6.6.% of them were from Southwest, 4.4% of them were from South, and 1.7% of the sample were from Midwest. 49% of the respondents reported that they worked at suburban, 25% urban, and approximately 15% rural school districts

2.2.1.3 Procedure

In Ross-Hill's (2009) study, the participants were recruited from elementary and secondary level general educators working at rural school districts. No description was provided with regards to survey administration. The researcher used statistical analysis and data that were based on the survey implemented in the study. In order to evaluate differences in responses of preschool, elementary, and secondary teachers, the author used t test. In the other study, Desimone and Parmar (2006) obtained names of middle school mathematics teachers from professional organizations and school districts. The authors mailed surveys to a total of 361 mathematics teachers teaching in inclusive middle school settings. The researchers also conducted follow-up interviews.

2.2.1.4 Findings

Results from both studies (Ross-Hill, 2009; Desimone & Parmar, 2006) indicated that although general education teachers' attitudes toward inclusion of students with special needs were generally positive, they were less likely to believe in the success of inclusion and their ability to meet unique needs of students with special needs. In Ross-Hill's study, academic training did not have a significant impact on teachers' attitudes. Nevertheless, the participants in this study agreed that adequate training would make them confident to meet educational needs of students with disabilities.

Likewise, the findings from the study of Desimone and Parmar emphasized the importance of adequate training in special education in order to make general educators confident to teach students with special needs in general education settings. In this study, course-work and workshops in mathematics methods did not have a significant impact on teachers' level of confidence to teach students with LD, but the participants found workshops related to LD beneficial to work with these students. For instance, 45.6% of teachers expressed that teacher preparation programs were not helpful to develop instructional philosophy for teaching math to students with LD. Approximately 50% of them believed that their teacher preparation programs failed to provide specific information regarding characteristics and learning needs of students with LD and instructional strategies for teaching math to such students. While the results from Ross-Hill's study revealed no significant effect of years of experience on attitudes of different grade level general educators, Desimone and Parmar found this variable as having impact on the perceived ability to meet educational needs of students with disabilities in inclusive classrooms.

With respect to the relationship between attitudes toward inclusion and grade level taught, the study of Ross-Hill revealed mixed and inconclusive results. The author only reported statistically significant difference in attitudes of (a) preschool and secondary seventh through eighth grade teachers, (b) elementary first through fourth and secondary seventh through eighth grade teachers, and (c) elementary first through fourth and ninth through twelfth grade teachers. On the other hand, the findings showed no statistically significant difference in attitudes of (a) preschool and elementary first, fifth, and ninth grade teachers, (b) elementary first through fourth and fifth through sixth grade

teachers, (c) preschool and secondary ninth through twelfth grade teachers, (d) elementary first through fourth and fifth through sixth grade teachers, (e) elementary fifth through sixth and secondary ninth through twelfth grade teachers, and (f) secondary seventh through eighth and ninth through twelfth grade teachers.

In terms of relationship between type of disability and attitudes toward inclusion, Desimone and Parmar found that the majority of mathematics teachers (80.3%) believed that students with LD should be given opportunity to learn math with their peers without disabilities. However, only 41.6% of these educators believed that an inclusive classroom was the best instructional placement for students with LD to learn math, while 37.3% of inclusion mathematics teachers were undecided about inclusive placement of students with LD to teach math. In addition, the findings suggested the necessity of administrative support for successful inclusion. Compared to those working in schools with less support, teachers working in schools with high levels of support found inclusion more effective and perceived themselves more comfortable adapting instruction for the students with LD.

2.2.2 In-Service General and Special Education Teachers

Six studies (Damore & Murray, 2009; Dedrick, Marfo, & Harris, 2007; Dymond, Chun, Kim, & Rengzaglia, 2013; Ernst & Rogers, 2009; Segall & Campbell, 2012; Wilkins & Nietfeld, 2004) were conducted with both general and special education teachers. Three of these six survey studies (Dedrick et al., 2007; Dymond et al., 2013; Ernst & Rogers, 2009) aimed to address the need for development of reliable and valid attitudinal scales. In particular, Dedrick et al. investigated the possible impacts of question wording in an attitudinal scale. The researchers examined the effects of using

three types of referent (i.e. students with mild disabilities, students with severe disabilities, and students with disabilities) on the psychometric characteristics of the scale. Dedrick et al. also examine the effects of the referents on external variables including gender, type of teachers, teaching experience, experience at current school, training on inclusion, and the participants' response level.

On the other hand, Ernst and Rogers (2009) aimed to develop a new scale demonstrating adequate psychometric qualities specifically designed to measure high school teachers' attitudes toward inclusion. The researchers also aimed to examine the relationship between high school teachers' attitudes toward inclusion and teacher related variables including gender, level of pre- and in-service training, experiences with inclusive practices, and their access to instructional resources.

In the other study, Dymond et al. (2013) addressed the issue of lack of knowledge about standards and components of inclusive high school service learning programs for students with disabilities. In response to this issue, the researchers developed a survey aimed to validate the elements, methods, and barriers to inclusive high school service learning. This instrument was designed to explore perceptions of service learning coordinators about the importance and use of these elements and methods.

Two of six studies (Damore & Murray, 2009; Segall & Campbell, 2012) conducted with both general and special education teachers involved in comparison of these teachers. In particular, Damore and Murray aimed to investigate the differences between special and general educators with respect to their perceptions of components for collaborative teaching practices. In addition, the researchers explored types of collaborative teaching practices used in participating urban elementary schools and

examined the perception of teachers about inclusive and collaborative teaching practices. On the other hand, Segall and Campbell examined differences between attitudes and knowledge of general and special educators regarding inclusion of students with Autism Spectrum Disorder (ASD). The researchers also aimed to explore factors affecting education professionals' knowledge and attitudes towards inclusion of students with ASD.

Only one of six studies (Wilkins & Nietfeld, 2004) investigated the effects of an inclusion training program on attitudes of in-service general and special education teachers. More specifically, the researchers assessed the impacts of Project Winning Ideas Network for Schools (WINS) on attitudes of middle school teachers toward the practice of inclusion. In this study, the authors compared pre and post-training attitude scores of the teachers in the Project WINS and non Project WINS schools and evaluated whether the training program had a positive change in attitude scores of the participants attending at least one training session.

2.2.2.1 Sample description

Six studies (Damore & Murray, 2009; Dedrick et al., 2007; Dymond et al., 2013; Ernst & Rogers, 2009; Segall & Campbell, 2012; Wilkins & Nietfeld, 2004) provided data on a total of 860 general (approximately 72%) and special (28%) education teachers. Two studies (Dedrick et al., 2007; Segall & Campbell, 2012) had a total of 412 teachers including elementary (49%), middle (20%), and high school (31%) general and special educators. One study (Damore & Murray, 2009) recruited only elementary school level educators (N=118) including both special (32%) and general education (68%) teachers. One study (Wilkins & Nietfeld, 2004) recruited only middle school educators (N=89)

consisting of 80% general education teachers and 20% special education teachers. The remaining two studies (Dymond et al., 2013; Ernst & Rogers, 2009) recruited only high school educators (N=241) including both general (82%) and special (18%) education teachers. Response rates of these six studies ranged from 24% to 100%, with an average of 47%.

Five studies (Damore & Murray, 2009; Dedrick et al., 2007; Ernst & Rogers, 2009; Segall & Campbell, 2012; Wilkins & Nietfeld, 2004) reported information about participants' gender showing that the majority of survey respondents (80%) from the reviewed studies were female. Two studies (Ernst & Rogers, 2009; Segall & Campbell, 2012) reported ethnicity of the respondents. In the study of Ernst and Rogers, the majority of the participants (97%) were White, while in the study of Segall and Campbell the majority of the participants (91%) were Caucasian.

Only one of the six studies (Damore & Murray, 2009) did not report information regarding the participants' experience. Dedrick et al. (2007) reported total years of experience in teaching (ranged from 0.5 to 36) and at current school (ranged from 0.5 to 32). Wilkins and Nietfeld (2004) only reported the participants' years of teaching experience. Ernst and Rogers (2009) reported years of teaching experience and experience in teaching inclusive classrooms. In this study, 43% of the respondents had 16 or more years of teaching experience, 30% of them were with 5 to 10 years of teaching experience, 14% with 11 to 15 years of teaching experience, and 11% with 0 to 4 years of teaching experience. In terms of experience in inclusive classrooms, 28% had 5 to 10 years experience, 21% with 1 to 4 years, 3.4% with no experience, 3.4% with 11 to 15, and 11% had 16 or more years experience. Dymond et al. (2013) reported the

respondents' years of experience in service-learning programs. Finally, Segall and Campbell (2012) reported the participants' years of experience in current position and professional experience related to autism.

2.2.2.2 Setting description

Two of six studies (Damore & Murray, 2009; Dymond et al., 2013) were conducted in Midwestern region. In particular, Damore and Murray conducted their study in Chicago. They selected 20 elementary schools that were representative of different geographical locations in Chicago. In the other study, Dymond et al. selected 655 public high schools from one Midwestern state in the U.S. From 190 public high schools that returned the survey, 84 schools indicated that they offered inclusive service-learning programs; thus, those schools were included in this study.

Two studies (Dedrick et al., 2007; Segall & Campbell, 2012) conducted in Southeastern region. Dedrick et al. conducted their study in a school district consisting of 21 elementary, middle, and high schools in Florida. Segall and Campbell conducted their study in the state of Georgia. They recruited 49 schools, of 33 included that were located in 15 counties in the state.

One study (Ernst & Rogers, 2009) was conducted in one of the Northeastern states, Connecticut, and recruited the participants from all public high schools in this state. In the other study, Wilkins and Nietfeld (2004) did not state the region in which the study was conducted. The researchers recruited the sample from four schools consisting of grades 6, 7, and 8. One of the Project WINS and one of the non Project WINS schools located in rural area with low SES. The other Project WINS and non Project WINS schools located in suburban area with higher SES.

2.2.2.3 Procedure

Three studies (Dymond et al., 2013; Segall and Campbell, 2012; Wilkins & Nietfeld, 2004) followed similar procedures with regards to participant selection and survey administration. Dymond et al., the service learning coordinators were mailed a cover letter describing the study along with the survey, postage-paid return envelope, and a raffle ticket. The service learning coordinators were asked to distribute the survey to their colleagues working at their schools as instructed within the cover letter. Wilkins and Nietfeld also asked the principals from the participating schools to distribute the survey to the teachers working at their schools and then to return the completed surveys to the researchers. Similarly, Segall and Campbell contacted the department of special education from each county to recruit their participants. The researchers mailed packets of materials to the school administrators and asked administrators to distribute surveys to the education professionals.

Ernst and Rogers (2009) used Dilman's method for participant selection. They randomly selected a total of 10 high schools from 146 as listed in the state's Department of Education website. The researchers obtained electronic mail addresses of the teachers from the selected schools' website. In the other study, Damore and Murray (2009) obtained permission from the principals at the selected schools. Only one principle declined the participation in the study. In order to ensure a random process of survey distribution, the researchers counted the total number of teachers' mailboxes working at the schools agreed to participate in the study. Then, they divided the total number of mailboxes by 10 to determine the number of surveys distributed per school. After this

process, surveys with a letter explaining the study, a \$3 gift card, and a postage-paid envelope to return the survey were placed into the teachers' mailboxes.

In the other study, Dedrick et al. (2007) randomly assigned their participants to three experimental conditions in which one of three variations of the survey instrument was used. Comparison of demographic characteristics of the sample across three experimental conditions demonstrated no significant differences supporting that effective randomization procedures were used to assign participants in three conditions. However, the authors did not provide additional information regarding the procedures of implementation of the survey forms.

Only three studies (Dymond et al., 2013; Ernst & Rogers, 2009; Segall & Campbell, 2012) made follow-up contacts in order to increase response rates. Ernst and Rogers sent three letters at two-week intervals in order to encourage participation. Segall and Campbell also made three follow-up contacts and randomly selected four participants to receive monetary reward in order to increase response rates. Likewise, Dymond et al. made three follow-up contacts and randomly selected five respondents for a \$20 gift certificate. Particularly, Dymond et al. sent a postcard reminder to nonrespondents within three weeks. Two weeks later, the researchers mailed another copy of the study materials to the participants who did not complete the survey. After the third attempt made, the researchers either mailed or called 115 randomly selected principals who did not respond, but 84 principals responded. The majority of the principals (89%) who did not complete the survey indicated that they did not offer a service-learning program at their schools, which was the primary issue the study aimed to assess.

2.2.2.4 Findings

Overall, results from six studies (Damore & Murray, 2009; Dedrick et al., 2007; Dymond et al., 2013; Ernst & Rogers, 2009; Segall & Campbell, 2012; Wilkins & Nietfeld, 2004) suggest that while general and special educators have had positive beliefs regarding inclusion, several factors may have an impact on the strength of these beliefs. Findings regarding the effects of some teacher-related factors revealed inconclusive results. For instance, two of these studies (Dedrick et al., 2007; Ernst & Rogers, 2009) investigated the effects of gender and both studies found a relationship between this variable and attitudes of teachers. Ernst and Rogers found that male high school teachers had more positive attitudes about inclusion than female teachers. On the other hand, Dedrick et al. found that female teachers reported less favorable attitudes than males when the question wording included student with severe disabilities; whereas male teachers reported less favorable attitudes than females when the question wording included students with mild disabilities. Dedrick et al. found no significant effect of gender when the question wording included students with disabilities.

Experience is the other teacher-factor having potential to affect teachers' attitudes. Four of reviewed studies (Dedrick et al., 2007; Ernst & Rogers, 2009; Segall & Campbell, 2012; Wilkins & Nietfeld, 2004) examined the effects of experience on attitudes. Ernst and Rogers found that experience with inclusion had a positive impact on teachers' attitudes toward inclusion. Similarly, Wilkins and Nietfeld found more experienced teachers were more likely to have positive attitudes toward inclusion. Segall and Campbell found that professional experience with autism was a strong predictor of positive attitudes toward inclusion of students with ASD. In addition, the authors found

significant relationship between experience and knowledge and use of inclusive practices. However, Dedrick et al. found no significant impact of teaching experience on teachers' attitudes toward inclusion when question wording included students with mild disabilities, with severe disabilities, or with disabilities.

Educator's position is another teacher-related variable that may have an impact on attitudes. Three studies (Damore & Murray, 2009; Dedrick et al., 2007; Segall & Campbell, 2012) examined differences in attitudes of various types of education professionals. All three studies indicated that special education teachers had more positive attitudes towards inclusion than did general education teachers. In the study of Segall and Campbell, the authors also found that special educators and school psychologists had greater scores than general educators and administrators on the measures of knowledge and awareness of strategies related to ASD. Special educators' knowledge scores were lower than school psychologists' knowledge scores.

Another teacher-related factor affecting teachers' beliefs regarding inclusion is training. Four of six studies (Dedrick et al., 2007; Ernst & Rogers, 2009; Segall & Campbell, 2012; Wilkins & Nietfeld, 2004) examined the impact of training. Ernst and Rogers found that high school teachers with more pre- and in-service trainings on inclusion were more likely to have positive attitudes compared to those with less training. Similar findings revealed in the study of Dedrick et al. suggesting more training resulted in less negative attitudes toward inclusion. In the other study conducted by Segall and Campbell, results revealed a significant relationship between knowledge of ASD and attitudes. In this study, results also indicated that compared to special education teachers, general education teachers demonstrated lack of knowledge regarding ASD and effective

strategies used for students with this condition. However, Wilkins and Nietfeld found no significant effect of the Project WINS, an inclusion training program, on the participants' attitudes toward inclusion. In this study, the results showed that the program only improved the scores related to academic climate. Results from this study suggest that training methods implemented in inclusion programs need improvements in order to promote a positive change in teachers' attitudes toward practice of inclusion.

Two studies (Dedrick et al., 2007; Segall & Campbell, 2012) provided information about attitudes of teachers with respect to inclusion of certain type and severity of disability. Particularly, Dedrick et al. found that when the wording in survey item changed from "students with severe disabilities" to "students with mild disabilities", teachers' attitudes toward inclusion became more favorable. In the second study conducted by Segall and Campbell, results indicated that all professionals had positive attitudes toward inclusion of students with ASD and all agreed that attitude of staff was crucial for the success of inclusion. However, general education teacher demonstrated a lack of knowledge regarding ASD, which was found a predictor of awareness and use of effective strategies for inclusion of such students.

Three of six studies (Damore & Murray, 2009; Dymond et al., 2013; Ernst & Rogers, 2009) examined the importance of environmental factors for successful inclusion. In the study of Ernst and Rogers, the findings revealed a significant relationship between teacher attitudes and access to support and resources. In the other study, Damore and Murray found that collaborative practices necessary to support inclusion were not adequately implemented in schools. The findings showed that although special and general education teachers believed some forms collaborative teaching practices existed

in their schools, only few reported the use of these practices. In the third study, Dymond et al. found lack of money and time to co-plan were the greatest barriers to inclusion of students with disabilities in service-learning programs.

2.2.3 In-Service Special Education Teachers

Two of ten studies (Crawford & Tindal, 2006; Suter & Giangreco, 2009) involved in exploring the issues of special educators regarding inclusion of students with special needs. In particular, Crawford and Tindal (2006) examined the policy and practice knowledge and beliefs of teachers and administrators regarding inclusion of students with disabilities in statewide assessment. The researchers also examined the differences in the views of teachers and administrators in regards to the usefulness of the statewide test scores in guiding instructional practices and increasing school accountability.

The other survey study conducted by Suter and Giangreco (2009) aimed to identify indicators of the use of special education service delivery. In their study, the researchers explored special educators' caseloads, time use, and paraprofessionals being responsible for supervising. In addition, the researchers aimed to determine characteristics of students with disabilities receiving one-to-one supports.

2.2.3.1 Sample description

Two studies (Crawford & Tindal, 2006; Suter & Giengreco, 2009) included survey reports from a total of 445 special educators 531 administrators. Both researchers reported the response rate. The response rate was 30% for the study of Crawford and Tindal and 91% for the study of Suter and Giengreco. The majority of respondents (81%) were female. Respondents in two studies had an average of 12 years of experience working as a special educator. The majority of respondents earned graduate degrees

(76.5%). In the study of Crawford, 97% of participants were European American.

Twenty-three participating teachers in this study did not hold special education license.

Suter and Giengreco reported the roles of participating special educators included consulting special educator (N=43), resource room teacher (N=8), case manager (N=7), self contained special education teacher (N=4), and a combination of these roles (N=23). Seven special educators did not provide information regarding their roles. Special educators provided information about the paraprofessional under their supervision and the students with disabilities on their caseloads.

2.2.3.2 Setting description

One research on special educators (Crawford & Tindal, 2006) took place in the state of Oregon; whereas the other study (Suter & Giengreco, 2009) was conducted in Vermont. Compared to the study of Crawford and Tindal, Suter and Giengreco provided a more detailed description for setting. The researchers selected 19 schools to conduct their study. Four schools located in urban, eight schools located in suburban, and seven schools located in rural settings. The participating schools included seven elementary, six elementary/middle, three middle, and three high schools from six districts. The number of students enrolled in these school ranged from 159 to 1360, with 14% of students from diverse racial/ethnic background and 8% of English language learners. The special education teachers employed by the participating schools ranged from 3 to 14 per school, with an average of seven special educators. On average, 83% of paraprofessionals were assigned to special education in these schools. Approximately 7% to 18% of enrolled students identified as having a disability and had an EIP. The range of general education placement among these students was from 56% to 100%.

2.2.3.3 Procedure

Crawford and Tindal (2006) and Suter and Giengreco (2009) followed different procedures for participant selection and survey administration. In the study of Crawford and Tindal (2006), a proportional, stratified, random sampling plan was used in order to recruit the participants. The authors coded the schools located in Oregon by level, geographic region, and size, and then, they constructed a matrix consisting of size-by-level category and eight geographic regions in which 1251 schools in the state included. Fifty percent of the schools were randomly selected. The surveys were mailed to all special education teachers working at the selected schools. In order to increase response rate, the authors made follow-up contacts and sent a postcard survey to the participants who did not return the survey in two weeks.

On the other hand, Suter and Giengreco (2009) selected 14 schools from a project directed by one of the authors, remaining five schools in which one-on-one paraprofessional supports provided to students having IEPs were identified through recommendation of the Vermont Department of Education. The authors contacted selected administrators in order to invite them to participate in their study. The authors provided information regarding the purpose of their study and data collection procedures. The administrators who agreed to participate in the study shared the information regarding the study with the special educators working at their schools. The researchers held an-hour long meeting with all participating special educators in order to obtain consent forms and distribute the *Special Educator Questionnaire* and the *Student Characteristics Questionnaire*.

2.2.3.4 Findings

Results from two studies (Crawford & Tindal, 2006; Suter & Giangreco, 2009) have raised several issues regarding effective approaches to inclusive education. The concerns emerged from these studies were related to full participation and free and appropriate education. These problems were mostly reported within the context of inclusion of students with complex learning needs and behavioral problems. For instance, In Crawford and Tindal's study, results showed that 51% of special educators found information regarding decision making about the participation of students with disabilities in statewide assessments available to them. In addition, 52% of special educators stated that they were familiar with the state's assessment system designed for students with significant disabilities. In this study, 62% of special educators were very familiar with extended reading, writing, and math assessments designed for students with significant disabilities. Knowledge and availability of information about statewide assessment is essential in order to ensure active and effective participation of students with special needs in the assessment process.

The findings from the other study (Suter & Giangreco) also affirmed concerns regarding full participation and appropriate education. In this study, special educators reported that 82% of students receiving one-on-one paraprofessional supports were identified as having moderate or severe behavior problems, 74% of them were having moderate or severe intellectual disabilities, and 20% of them were identified as having moderate or severe physical, hearing, vision, or other health impairments.

Both studies revealed findings related to effective inclusive practices and appropriate education. In the study of Crawford and Tindal, 30% of teachers believed that test results

were not useful in guiding instructions and only 14% of special educators indicated that test results used to increase school accountability. Another important factor that may have a negative impact on inclusive education is large caseloads of special educators. In the study of Suter and Giangreco, approximately 60% of special educators reported large caseloads including 14 to 20 or more students having IEP, 504, or EST plan. According to the findings of this study, students with disabilities received 45% of instructions from teachers, 38% from paraprofessionals, and 16% from special educators. Furthermore, results indicated that a total of special educators who provided one-on-one supports to the students with disabilities was less than a total of paraprofessionals. These findings raise concerns regarding effective and appropriate support for students with special needs in inclusive settings.

2.2.4 Pre-service Teachers Attitudes

Improving effectiveness of teacher training programs is one of the central issues that needs to be addressed within the research on inclusive education. In the selected literature, one of the study concerning improvement of pre-service teachers' skills in order to make them prepared to work with students with diverse learning needs was conducted by Brown, Welsh, Hill, and Cipko (2008). In this experimental study, the researchers sought to examine the effects of embedding special education instruction in general education evaluation and measurement course on knowledge, competency, confidence, and attitudes of pre-service teachers in regards to meeting unique needs of students with LD and describing appropriate adoptions used for such students within the teaching and assessment process.

The other study that address the need for improving effectiveness of teacher preparation programs was conducted by Barned, Knapp, and Neuhart-Pritchett (2011). According to Barned et al. (2011), few studies have focused on the perception of early childhood educators and little is known about attitudes of educators toward inclusion of students with ASD. In their study, Barned et al. (2011) addressed this gap in existing literature and aimed to examine knowledge and attitudes of pre-service teachers toward inclusion of students with ASD in general education settings, particularly in early childhood education.

In another study conducted with pre-service teachers, Brandes and Crowson (2009) sought to determine the factors associated with negative attitudes held by pre-service teachers toward inclusion of students with disabilities in general education settings. The researchers specifically examined whether socio-political ideologies (i.e. right-wing authoritarianism and cultural conservatism, social dominance orientation, and economic conservatism) of pre-service teachers and their personal discomfort with disability affect their attitudes toward students with disabilities and the policy of inclusion.

2.2.4.1 Sample description

Three studies (Barned et al., 2011; Brandes & Crowson, 2009; Brown et al., 2008) provided data on a total of 413 pre-service teachers. Approximately, 44% of participants held junior standing, followed by 42% senior, 10% sophomore, and 2.6% graduate level. Remaining 1.4% included missing data o class standing or students who were in their first year in college. Two studies (Barned et al., 2011; Brandes & Crowson, 2009) provided information regarding participants' gender. The majority of the pre-service

teachers (78%) were female in the study of Brandes and Crowson, while Barned et al. included only female pre-service teachers.

Brandes and Crowson (2009) did not report the participants' majors. On the other hand, Barned et al. (2011) and Brown et al. (2008) provided information about the participants' majors. Barned et al. recruited pre-service teachers who were either enrolled or interested in enrolling in early childhood teacher training programs; whereas Brown et al. recruited pre-service teachers with a variety of majors including 21.2% special education, 18.3% secondary education, 4.8% early childhood education, 9.1% other majors.

Only one study (Brandes & Crowson, 2009) provided information regarding participants' ethnicity. In this study, 82.1% of the participants were White, 6.3% were multiracial/multiethnic, 4.7% were Native American/Alaska Native, and 2.1 were African American. 4.8% of the participants included either Asian, or Hispanic/Latino, or those who did not specify their race/ethnicity.

2.2.4.2 Setting description

Brown et al. (2008) conducted their study in a regional university in Philadelphia, Pennsylvania. The university had student enrollment of 13000. The researchers distributed the surveys to the participants in class. On the other hand, Barned et al. (2011) conducted their study in a large southeastern university. The authors selected the subjects from a pool of pre-service teachers enrolled in an undergraduate level educational psychology course. Brandes and Crowson (2009) indicated that they selected the participants from a required introductory special education course, but they did not provide information regarding setting.

2.2.4.3 Procedure

In three studies (Barned et al., 2011; Brandes & Crowson, 2009; Brown et al., 2008) the researchers followed different procedures. Barned et al. used the *Autism Inclusion Questionnaire* (AIQ) developed by Segall; however, they modified the original scale for this study. The authors also conducted interviews with 4 of the participants after the completion of the survey. A typological analysis was employed to the interview data. In the other study conducted by Brandes and Crowson, the second author obtained approval from instructor who offered a required undergraduate level special education course in order to recruit the sample of pre-service educators. The researchers informed the participants about their rights and responsibilities in the study. The participants were notified that they would get extra course credit for their participation in the study. The participants were provided a packet including all measures used in the study.

Brown et al. conducted a pretest-posttest design with the students enrolling in an undergraduate level evaluation and measurement course offered in the fall 2006. The authors developed a self-report survey to evaluate the participants' knowledge and attitudes in regards to learning disabilities and teaching students classified as having LD. The required evaluation and measurement course contained six sections and students enrolled in one of these sections. Three sections were identified as experimental group including 109 teacher candidates, and the other three sections were the control group consisting of 99 teacher candidates. Experimental and control groups were taught by different by different professors. The experimental group was taught by a professor with more experience and training in special education than the professor taught the control group. For experimental group, small group activities and large group instruction on

learning disabilities was embedded in the evaluation and measurement course content. Control group were taught the common course content without embedded special education instruction. The survey was distributed to the students at pre and post training.

2.2.4.4 Findings

In one study (Brandes & Crowson, 2009), the researchers aimed to examine the effects of socio-political ideologies on pre-service teachers' attitudes toward inclusion. Results showed that the strongest predictor of opposition to inclusion was negative attitudes toward students with special needs. In addition, the participants who scored higher in social dominance orientation, right-wing authorization, and economic and cultural conservatism were more likely to score higher in opposition to inclusion and negative attitudes toward students with special needs. The findings also indicated that social dominance orientation and discomfort with disability added greater explanatory power in predicting opposition to inclusion and negative attitudes toward student with special needs than did cultural conservatism and right-wing authorization.

In the other two studies (Barned et al., 2011; Brown et al., 2008), results emphasize the importance of teacher training in terms of increasing knowledge of certain type of disability. In the study of Brown et al., results showed that there were statistically significant differences between experimental and control groups with respect to ability to accurately define the terms learning disability and mental retardation. At posttest, the majority of pre-service teachers in experimental group could define learning disabilities (93%) and mental retardation (84%). The greatest treatment gain score was observed in the experimental group's confidence level in meeting the needs of students classified as LD (60.3%). The second greatest gain score was found in experimental group's

knowledge in regards to assessment adaptations used for students with learning disabilities.

Likewise, in the other study conducted by Barned et al., results indicate the necessity of increasing knowledge of pre-service teachers with respect to certain type of disabilities. The results of this study showed that only 6.7% of the participants agreed that ASD was a developmental disorder. 53.3% of the participants perceived the role of genetic factors as a cause of ASD. Forty percent of the sample believed that children with ASD could not outgrow this condition. Twenty percent of the participant incorrectly perceived that traumatic experience could cause an ASD. 73.3% of the participants thought that ASD existed only in childhood. 26.7% of the sample believed that behavior therapy was an effective intervention for children with ASD. 46.7% of the sample believed that children with ASD would not benefit from early intervention. 73.3% of the participants agreed that interventions used for children ASD were universal. 66.7% of the participants had misconception that children with ASD were alike. Eighty percent of early childhood education pre-service teachers stated disagreed that medication could alleviate the symptoms of ASD. All but one participant disagreed that children with ASD had special talents. All participants perceived that social understanding, language, and sensory functioning were not the core deficit areas in ASD. 86.7% of the participants disagreed that the diagnostic criteria for Asperger's Syndrome were identical to high functioning autism. Only one pre-service teacher perceived that most children with ASD had intellectual disabilities.

The results of this study also showed that 86.7% of the participants supported the inclusive education for students with special needs, and 93.3% supported the inclusion of

students with ASD in general education settings. However, 53.3% of the pre-service teachers agreed that all students with ASD should be included in general education settings. In addition, 67.7% of them believed that a special school would be the most appropriate placement for students with ASD. 86.7% of the participants found inclusive education beneficial to increase the learning experiences of students with ASD, and 100% agreed that inclusive education was beneficial for students without disabilities. 46.7% of the participants indicated that students with special needs should be taught by only special education teachers, and 53.3% of them stated that students with ASD should be taught by only special education teachers. Nevertheless, 80% of the participants believed that a good general education teacher could aid students with ASD. 93.3% of the participants confirmed the importance of paraprofessional support for successful inclusion of students with ASD. The results indicated that student's academic ability (60%), personality (80%), and severity of disability (86.7%) were perceived as important factors affecting inclusion of students with ASD in general education settings. All participating pre-service teachers agreed that increased interaction between students with ASD and students without disabilities was a crucial factor for successful inclusion. The pre-service teachers indicated that one-on-one intervention (86.7%) and medication and drug therapy would be useful to successfully include students with ASD in general education settings.

2.3 Turkish Survey Research

Five survey studies investigating teachers' attitudes and inclusive education in Turkey were included in this review. These survey studies provided information regarding pre-service elementary level general education teachers and pre-school and elementary school

level general educators. Survey respondents included a total of 633 in-service general education teachers. Only one study included the sample of pre-service teachers.

Three studies (Gokdere, 2012; Sari, 2007; Secer, 2010) from the selected studies aimed to examine the effects of training on attitudes toward inclusion. Particularly, Gokdere aimed to compare attitudes of in-service and pre-service teachers towards inclusion. In this study, the researcher examined the potential effects of taking a mandatory undergraduate level special education course on teacher candidates' knowledge of disability and inclusion. Pre-service educators in teacher training programs in Turkey have been required to take an introductory special education course since 2009. For this reason, Gokdere investigated knowledge of educators who graduated from teacher training programs prior 2009 and those who were still in teacher training programs or graduated after 2009. In addition, Gokdere examined the level of interaction with individuals with disabilities and the level of anxiety regarding inclusive practices among pre- and in-service teachers.

In the other two studies (Sari, 2007; Secer, 2010), the researchers conducted experimental studies in order to examine the effects of in-service teacher training programs on attitudes. Secer specifically focused on the effects of in-service inclusion training on attitudes of preschool teachers toward inclusion. On the other hand, Sari examined the effects of an in-service teacher training program on teachers' knowledge and attitudes toward inclusion of students who are deaf. Sari aimed to assess teachers' overall attitudes toward inclusion of students who are deaf and to evaluate whether the in-service teacher training resulted in a change in teachers' attitudes and competencies regarding teaching such students in inclusive settings.

Remaining two studies involve in examining general educators' attitudes toward inclusion (Rakap & Kaczmarek, 2010) and developing a scale designed to determine factors and barriers to inclusion (Kucuker, Acarlar, & Kapci, 2006). Rakap and Kaczmarek (2010) indicated that only few studies examined attitudes of general education teachers towards inclusion of students with disabilities. Rakap and Kaczmarek assessed the impacts of teacher and child related variables on teachers' attitudes toward inclusion. Additionally, the researchers assessed willingness of general educators to include a student with severe learning disabilities in their classrooms because none of the studies existed in the literature that focused on the inclusion of students with severe learning disabilities. In the last study included in this review, Kucuker et al. aimed to develop a scale to explore preschool teachers' perspectives about supportive factors and barriers to implement inclusive practices in preschool settings. Moreover, in their study, the researchers aimed to assess psychometric properties of this newly developed scale.

2.3.1 Sample description

Sample size recruited for five Turkish studies (Gokdere, 2012; Kucuker et al., 2006; Rakap and Kaczmarek, 2010; Sari, 2007; Secer, 2010) ranged from 66 to 194. All participants included in five studies were general educators. Respondents consisted of included 262 elementary level educators, 249 pre-school educators, and 112 teacher candidates in elementary school teaching. In one study (Sari, 2007), the school level participants worked at did not specified. Only one study (Rakap & Kaczmarek, 2010) provided data on the participants' grade level assignment. In this study, 36 teachers taught first graders, 46 taught second graders, 36 taught third graders, 41 were fourth

grade teachers, 35 were fifth grade teachers. Overall, 65% of the participants were female.

Four studies (Kucuker et al., 2006; Rakap and Kaczmarek, 2010; Sari, 2007; Secer, 2010) reported participating in-service general educators' years of teaching experience. In the study of Secer, 34 teachers had 1 to 5 years of experience, 15 had 6 to 10 years of experience, 10 had 11 to 15 years of experience, and 7 had 16 or more years of experience. In the study of Sari, the mean years of experience was 9.9 years for the experimental group of teachers and 10.5 years for the control group. In the study of Kucuker et al., years of experience among the participants ranged from 1 to 33 years (mean=9.11). In the study of Rakap and Kaczmarek, 12 teachers had less than one year teaching experience, 44 had 1 to 4 years teaching experience, 46 had 5 to 9 years teaching experience, 26 had 10 to 14 years, and 66 had more than 14 years teaching experience.

Two studies (Kucuker et al., 2006; Rakap & Kaczmarek, 2010) provided information with respect to having students with special needs in class. In the study of Kucuker et al., all participants reported that they had at least one student who had been formally diagnosed with a disability in their classroom. In the study of Rakap and Kaczmarek, approximately, 30% teachers reported that they had no students with disabilities, 29% teachers had one student with disabilities, 15% had two students with disabilities, 7% said they had three students with disabilities, 6% had four students with disabilities, and 5% had five students with disabilities.

Only Kucuker et al. (2006) provided information about participants' education levels and majors. In this study, 10.4% of the participants had a high school diploma, 39.3% earned a pre-bachelor's degree, and 49.2% earned a bachelor's degree. 60.7% of the

participants majored in preschool education, 25.7% majored in child development, 4.4% majored in elementary school education, and 7.7% reported their majors as “other”.

Only one study (Rakap & Kaczmarek, 2010) provided information regarding participants’ level of training related to the field of special education. In this study, the majority of participants (72%) reported that they did not received training on special education, 22% teachers indicated that they took a special education course, 2.6% teachers received in-service special education training, and 2.6% teachers had special education certificate.

One study (Rakap & Kaczmarek, 2010) explicitly reported response rate. In this study, the researchers sent to surveys to a total of 500 general education teachers; of those 201 returned the surveys yielding a response rate of 40.2%. Seven of the returned surveys were not included in the study due to the large number of incomplete parts.

2.3.2 Setting description

One study from the selected literature (Gokdere, 2012) conducted with the sample of in-service teachers from elementary schools located in a northern city, Amasya. The participating pre-service teachers were selected from Amasya University. In the other selected study, Secer (2010) recruited the participants from 33 schools in Konya located in the Central Anatolia region of Turkey. Sari (2007) indicated that the sample of teachers was selected from 24 schools; however, the author did not provide further information about the setting the study took place. Kucuker et al. (2006) recruited the teachers working at preschools across all regions of Turkey. Seventy-five percent of the teachers worked at the preschools in developed cities and 25% were from preschools located in developing cities. 49.7% of the participants worked at public kindergartens and

46.4% worked at nurseries. Lastly, Rakap and Kaczmarek (2010) selected the sample of general education teachers from 65 public schools located in seven cities located in three regions of Turkey. The cities included Kastamonu, Konya, Samsun, Aksaray, Sinop, Tokat, and Agri. Forty-five percent of participating teachers worked at public schools located in villages and 55% teachers worked at public schools located in the centers of selected cities.

2.3.3 Procedure

In two studies (Rakap & Kaczmarek, 2010; Secer, 2010), the researchers used a random sampling approach in order to select the participants. In the study of Rakap and Kaczmarek, the sample of general education teachers was randomly selected from a list of schools in seven cities. Secer selected odd numbers from the list of teachers established by Konya Local Education Authority in order to recruit the sample of preschool teachers. In the study of Rakap and Kaczmarek, first, the researchers obtained approval to conduct the study from the Ministry of National Education. Then, the principals of the selected schools were sent the survey packages to distribute the materials to the teachers who agreed to participate in the study. The teachers completed the surveys in two weeks and returned them to the school principals. The researchers collected the surveys from the principals.

In three studies (Rakap & Kaczmarek, 2010; Sari, 2007; Secer, 2010), the researchers conducted a pilot study in order to validate measures used in their studies. Secer conducted a pilot study in order to validate the *Opinions Relative to Mainstreaming* (ORI; developed by Antonak and Larrivee, 1995, and adapted by Kircaali-Iftar, 1997). For the pilot study, 10 preschool teachers who were not included in the actual study

completed the scale. Likewise, Rakap and Kaczmarek conducted a pilot study in order to determine understandability of the language and the average time needed to complete the survey materials. The survey package included the ORI and the *Teachers' Willingness to Work with Children with Severe Disabilities* (TWSD) scales that were translated in Turkish. The pilot study conducted with 25 teachers. The results revealed a satisfactory level of reliability. The findings of the pilot study also suggested that no revision was necessary to conduct actual study. Sari (2007) also used the *Opinions Relative to Mainstreaming* scale. However, the researcher conducted a pilot study to validate only the *Competency Rest on Teaching the Deaf* developed by the author. This scale was designed to assess knowledge of teachers about characteristics of students who are deaf and practices used to teach students who are deaf. This competency scale was piloted with 10 teachers working with students with hearing impairment. The participants of the pilot study were not included in the actual study

Another study in which a researcher-developed scale was used was conducted by Kucuker et al. (2006); however, a pilot study was not conducted to validate the newly developed instrument. The researchers developed the *Supports Scale for Pre-School Inclusion* (SSPI) scale by following several steps including (a) the review of literature in order to identify established supportive factors and barriers affecting success of inclusion, (b) the creation of the items, and (c) the review of the scale by faculty members from various fields in education and preschool teachers. Based on the recommendations made by other professionals, two items were removed from the scale resulting in a total of 34 items. The participating teachers were recruited through Ministry of Education. The

surveys were distributed by the Department of Research Institute of Ministry of Education to public and private preschools across all regions.

In the study of Sari (2007) and Secer (2010), the researchers used pretest and posttest experimental design. In the study of Secer, the researcher administered the survey to the preschool teachers at pre- and post-in-service teacher training. All participating teachers returned the surveys; however, the surveys with incomplete parts were not included in data analysis. The training consisted of six sessions implemented for five days. Each session included one-hour lecture on eight topics related to students with special needs, overview of inclusion, placement, collaboration with parents, and individualized education. After the completion of the training, the survey was administered to the participants. Similarly, Sari were administered the instruments at pre- and post-training to both experimental and control groups. The in-service teacher training included eight sessions implemented for three hours per week with a total of 21 hour training.

Gokdere (2012) combined various instruments in order to examine pre- and in-service teachers' attitudes toward inclusion, anxiety level in regard to the practice of inclusive education, and their interactions with individuals with special needs. Instrument utilized in the study included the *Attitudes Toward Inclusive Education Scale* (developed by Wilczenski, 1992), the *Interactions with Disabled Person's Scale* (developed by Gething 1991), and the *Concern about Inclusive Education Scale* (developed by Sharma and Desai, 2002). A demographic information part was included in the data collection tool in order to determine the participants' demographic characteristics. The author adapted these scales in Turkish; however, he did not provide information about the procedures

followed within the adaptation process. Furthermore, the researchers did not explain the procedures used for distribution of the surveys.

2.3.4 Findings

Results from selected Turkish studies (Gokdere, 2012; Kucuker et al., 2006; Sari, 2007; Secer, 2010; Rakap & Kaczmarek, 2010) provided information with respect to the relationship between teacher-related and child-related factors and Turkish educators' beliefs and perceptions about inclusive education.

Four of five studies (Gokdere, 2012; Sari, 2007; Secer, 2010; Rakap & Kaczmarek, 2010) examined the effects of training and knowledge on attitudes. In the study of Gokdere (2012), the findings showed that both pre- and in-service teachers had low scores of knowledge, interest, and confidence level in terms of special education and teaching students with disabilities in general education classrooms. The researcher found a significant relationship between knowledge and concern level, which was also found as being related to concern level. The participants with low level of knowledge regarding inclusion had lower scores of confidence level regarding teaching students with special needs than those with medium or above level of knowledge. Additionally, the participants who had high level of confidence had low level of concern.

The results from one study (Sari, 2007) indicated a significant change in post-training scores of experimental group on the perceived competencies and attitudes, while the post-test scores of control group remained almost stable. After completing the training, the teachers in experimental group reported more positive beliefs regarding their competencies to teach students with hearing impairment and inclusion of such students in general education settings. Furthermore, the post-test scores showed that there was a

statistically significant difference between the experimental and control groups in terms of their perceived competencies and benefits of inclusion.

Likewise, Secer (2010) found that the in-service teacher training on inclusion resulted in significant changes in teachers' scores on the benefits of inclusion, competencies of students with disabilities, and the negative impacts of inclusion. The participating preschool teachers were more likely to have positive beliefs regarding benefits of inclusion and student competencies after attending the training. However, the findings revealed no significant difference in scores of teacher competencies at pre- and post-training. The participants reported that they had sufficient competencies to meet the needs of students with special needs in inclusive settings.

Secer (2010) and Sari (2007) indicated that the in-service teacher trainings might have potential to increase positive attitudes toward inclusion of students with disabilities. On the other hand, the results from the study conducted by Rakap and Kaczmarek (2014) revealed no significant relationships between teachers' level of special education training and attitude scores. Nevertheless, the participants having special education certificate were more likely to have positive attitudes than the teachers with no training.

Two studies (Gokdere, 2012; Rakap & Kaczmarek, 2010) examined the effects of gender and age. Gokdere found a significant difference in participants' gender and level of interaction with individuals with special needs. The findings from this study showed that female respondents had higher level of interaction compared to interaction level of males. On the other hand, Rakap and Kaczmarek examined relationships between teachers' gender and their attitudes towards inclusion. Although the findings revealed no relationship between gender and attitudes, female teachers' total scores were slightly

lower than the male teachers' scores. With respect to the impact of age, Gokdere found a significant relationship between participants' age and their interaction level with individuals with disabilities. The participants aged between 19 to 29 years had highest scores of interaction level. Rakap and Kaczmarek found no relationship between the participants' age and attitudes. However, the highest mean score was found in the group of teacher aged older than 40 years and the lowest mean score was observed in the group of teacher aged between 31 and 40 years. On the other hand, the teachers aged between 21 and 30 were more likely than the other age groups to be willing to work with students with physical, severe cognitive, and severe behavioral disabilities.

Two studies (Kucuker et al., 2006; Rakap & Kaczmarek, 2010) investigated the effects of experience on beliefs and attitudes regarding inclusion. The findings from the study of Kucuker et al. showed that necessity dimension scores of experienced teachers were significantly lower than the scores of less experienced teachers, whereas no significant difference was found in the support dimension scores of experienced and inexperienced teachers. Rakap and Kaczmarek found no relationship between years of teaching experience and attitudes toward inclusion. However, the teachers with least and most experienced in teaching had higher mean scores than those with teaching experience fell in between. In addition, the respondents who had no students with disabilities and the teachers having four or more students with disabilities had the lowest mean score. The respondents with 1 to 4 years of teaching experience had the highest mean score in terms of willingness to work with students with physical, severe cognitive, and severe behavioral disabilities.

Only one study (Kucuker et al., 2006), examined the effects of education level. The teachers with a high school degree had higher ratings for the availability of support compared to the teachers with pre-bachelors and bachelors degrees. For the necessity dimension, the findings showed a significant difference between teachers with bachelor's and pre-bachelor's degrees.

One of five studies (Rakap & Kaczmarek, 2010) investigated the effects of grade level taught on teachers' attitudes. The findings showed that there were no significant relationships between teachers' grade level taught and their attitudes towards inclusion. Nevertheless, third and fourth grade teachers' mean scores were higher than first, second, and fifth grade teachers.

Rakap and Kaczmarek (2010) also examined the effects of type of disability on attitudes. Results showed that 32% of the participants felt comfortable working with students with physical disabilities, 28.4% felt comfortable working with mild and moderate learning disabilities, 19.6% felt comfortable working with students with speech and language delays, 14.4% were comfortable working with students with behavioral problems, 12.4% felt comfortable working with students with mild intellectual disabilities, 2.6% felt comfortable working with students with hearing impairment, 2.1% were comfortable working with students with vision impairments, and only 1% were comfortable working with students with autism. The teachers who were uncomfortable working with students with special needs had a lower mean score compared to the mean score of teachers who were comfortable working with such students.

In terms of the effects of child-related factors on teachers' willingness, Rakap and Kaczmarek (2010) found that the teachers were more willing to work with students with

physical disabilities (44.6%), followed by students with severe cognitive disabilities (36.6%). Student with severe behavioral disabilities (22.7%) were the least preferred type of students to be included in general education classrooms among the teachers. In addition, the majority of teachers (73.7%) were willing to attend in-service training to learn new strategies that would help them to teach students with physical disabilities, students with severe cognitive disabilities (72.2%), and severe behavioral disabilities (58.8%). Many teachers stated that they would provide accommodations to the students with physical disabilities (81.4%), students with severe cognitive disabilities (77.3%), and students with severe behavioral disabilities (67.1%) in order to facilitate students' participation in educational activities. More than 80% of the respondents agreed to collaborate with the parents of children with three types of disabilities. Moreover, over 75% of the participants reported that they would help typically developing students to understand the disabilities their peers had and facilitate their interaction with students with disabilities.

Two studies (Kucuker et al., 2006; Rakap & Kaczmarek, 2010) sought to examine the relationship between environmental factors and inclusive education. In the study of Kucuker et al. (2006), the ratings of preschool teachers revealed the overall mean score of 3.55 indicating that the preschool teachers perceived all items as necessary to implement successful inclusion. For support dimension, the overall mean score was 2.08 suggesting that support level was perceived low for successful inclusion. The results showed that the factors perceived as necessary for successful preschool inclusion were reported unavailable to preschool teachers to implement inclusion. The results also revealed acceptable level of reliability and validity for the scale developed by the researchers.

In the other study, Rakap & Kaczmarek (2010) investigated differences in the attitudes of general education teachers working at different locations. The findings showed that the teachers working at the villages had higher mean score compared to the teachers working at city centers. Additionally, the teachers working at villages had higher mean score of willingness to work with students with physical, severe cognitive, and severe behavioral disabilities than those working at the city centers.

2.4 Summary of the Literature Review

The U.S. survey research conducted in the U.S. provided data for respondents including in-service general and special education teachers and pre-service teachers in regards to their views of inclusion. In eight studies, the data included responses from general education in-service teachers, and in eight studies, the data included responses from in-service special education teachers. One study provided data on preschool educators, six studies provided data on elementary level educators, five studies included middle school educators, and six studies included high school teachers. In the review of Scruggs and Mastropieri (1996) that included survey reports from 1958 to 1995, the majority of respondents were elementary level teachers and these studies provided less information on high school educators. Compared to the previous research on teacher attitudes toward inclusive education, the recent body of literature reviewed here is more representative in terms of respondents' school level. In addition, three studies included responses from teacher candidates majored in early childhood, elementary, secondary, and special education. On the other hand, the review of Turkish literature revealed limited research on attitudes of different types of educational professional regarding inclusion. Turkish literature reviewed here provided data on only preschool and

elementary school general educators. Only one Turkish survey study provided data from pre-service teachers and the sample was majored in elementary education. Additionally, the number of respondents included in the reviewed Turkish studies ranged from 68 to 194 with an average of 149, while the number of respondents in the U.S. studies ranged from 15 to 353 with an average of 155. Turkey is need of inclusive education research that aims to examine perceptions of teachers across different school level and teaching discipline.

Researchers found attitudes held by educators might be affected by several factors. These factors include (a) teacher characteristics (gender, grade level taught, experience, professional development, and teaching discipline), (b) child's characteristics (type and severity of disability), and (c) educational environment (time, support, resources, and collaboration). While the reviewed literature showed inconsistency with respect to effects of gender, age, and grade level taught on attitudes, there has been a consensus in the importance of professional development through adequate and effective teacher trainings in order to shape more positive attitudes toward inclusion and students with special needs. Moreover, availability of support and resources was found one of the most salient factors affecting teachers' beliefs regarding inclusion. Support and resources were considered an important component of successful of inclusion.

The review of U.S. studies shows that education professionals have had positive attitudes toward inclusive education and students with special needs. However, teachers seemed doubtful with respect to effectiveness of inclusive practices. Furthermore, American teachers were less likely to believe the benefits of inclusive placement for students with complex learning needs and severe behavioral problems. Special education

teachers were more likely to have positive attitudes than general education teachers with regards to students with disabilities and inclusion. In terms of inclusion of students with disabilities, Turkish teachers demonstrated less favorable attitudes when compared to attitudes of American teachers.

As the review of Avramidis and Norwich (including research from 1984 to 2000) has revealed, the U.S. literature in this review shows that the nature and severity of disability have an impact on attitudes and beliefs regarding inclusion of students with disabilities in general education settings held by many education professionals, especially those general educators, secondary level educators, administrators, and teacher candidates. Similar findings within the Turkish literature have found suggesting that the nature of disability as an important predictor of attitudes toward inclusion. Results from Turkish survey reports are consistent with the review of Avramidis and Norwich (2002) indicating teachers are more likely to willing to work with students with physical disabilities than the students with learning disabilities, emotional behavioral disorders, hearing impairment, and visual impairment. In addition to these categories, one of the reviewed Turkish studies found autism and emotional behavioral disorders as the least preferred types of disabilities (Rakap & Kaczmarek, 2010).

With respect to years of experience, the results from the reviewed survey reports appear inconsistent. Some of the U.S. studies found this factor as an influencing variable with respect to attitudes of education professionals (e.g. Desimone & Parmar, 2006; Ernst & Rogers, 2009; Segall & Campbell, 2012), while some of them found no relationship between these two variables (e.g. Dedrick et al, 2007). Likewise, the review of Turkish research examining experience reveals inconclusive results. Although the review of

literature showed mixed results in terms of the effects of years of teaching experience, experience with inclusion and students with specific types of disabilities appeared as having impact on education professionals' confidence level to work with such students.

Although positive attitudes of education professionals are considered as an important component of inclusion, they may not guarantee effective implementation of inclusive practices in accordance with current educational policy in the U.S. and Turkey. Policy efforts in both countries have held general education teachers responsible to meet educational needs of students with special needs. However, access to general education curriculum for students with special needs remains problematic due to teachers' lack of knowledge with regards to students with disabilities and effective inclusive practices. The selected literature shows general education teachers are not sufficiently prepared to work with students with diverse educational needs. Survey reports reviewed here indicates that systematic and intensive pre-service and in-service trainings are essential in order to increase knowledge of disabilities and awareness of effective strategies that are needed for successful inclusive education. Improving effectiveness of teacher training programs is a need for quality of education in inclusive settings. This issue is also essential to ensure establishment of special education policy that encourages inclusion movement.

The other factors that need considerable attention are personnel and material resources and school support available to teachers. Problems associated to these environmental factors can create barriers to inclusion in practice. Similar implications emerged from the previous reviews of Avramidis and Norwich (2002) and the review of Scruggs and Mastropieri (1996). Particularly, the need for research that places greater

emphasis upon training and environmental factors may be greater in Turkish inclusive literature.

In this review, the majority of the studies used the data obtained through surveys that mostly utilized Likert-type scales, and such data only reflected perceptions of the sample. Few studies used additional data obtained through interviews or observations, which is essential to validate the survey instrument. In addition, small sample size, low return rates, and narrow geographic regions have been identified as the limitations in the line of this research suggesting the need for caution in interpretation of results.

CHAPTER 3

METHOD

3.1 Research Design

I used a survey methodology for this dissertation, utilizing the same procedures used with the pilot study described below. I conducted the survey with pre-service and in-service general and special education teachers in Turkey using the validated International Survey of Inclusion developed by Krezmien (2017). The survey allowed me to examine (a) teacher perceptions of inclusion, (b) teacher knowledge of disabilities and inclusion, and (c) teacher knowledge of effective strategies to meet unique needs of students with disabilities in the context of inclusive education. The pilot study and the inclusionary research included in the literature review helped me to devise a model for this study (See Figure 3.1).

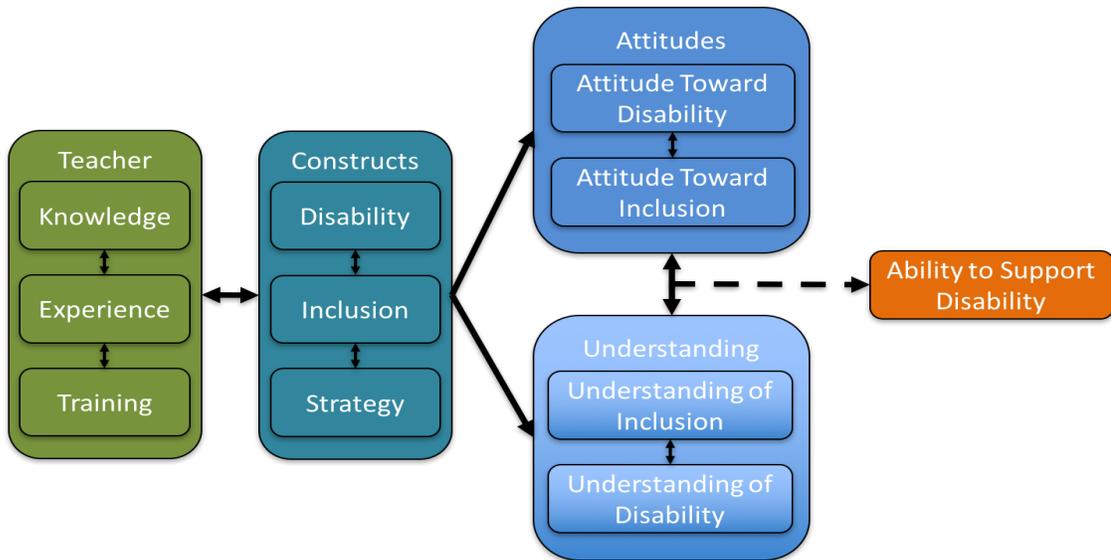


Figure 3.1 Model for Research

The model shows that a teacher’s knowledge, experience, and training affect the way that a teacher considers disability, inclusion, and strategies used to support students

with disabilities. A teacher's knowledge, experience, and training influence each other. For instance, a pre-service teacher who is trained as a special educator will have had experience working with students with disabilities in practicum experiences. This training and experience will influence knowledge; and the acquired knowledge will influence how a teacher participates and learns from the experience. The way a teacher considers the constructs also influence the representative elements within the constructs. For instance, an in-service general education teacher may have experienced difficulties working with a student with a disability in his or her classroom. This experience influences how disability is internally considered, and also affects the way that the teacher considers inclusion as a practice. It also influences the teacher's consideration of strategies, which the teacher may find inadequate to meeting the needs of a student with a disability, thereby changing the way that they consider the value or utility of an inclusive model of instruction. Finally, the constructs of disability, inclusion, and strategy affect and are affected by teacher knowledge, experience, and training.

The model represents the survey used in this study in the Attitudes and Understanding components. The survey is designed to measure teacher attitudes of students with disabilities and inclusion, as well as to measure a teacher's knowledge of disability and inclusion. In the analysis, I discuss teacher attitudes (shown in the Attitudes component of the model) as well as perceptions of ability (shown in the Understanding component of the model). The model also represents the Ability to Support Disability. This is not captured within the study, but does represent the underlying importance of the survey research in helping me to identify the strengths and limitations of Turkish teachers with respect to supporting students with disabilities, which will help me to help define

and support the development and implementation of successful inclusive practices in the future.

Specifically, the following research questions were examined in this study:

1. How do teachers perceive inclusion and students with disabilities?

Hypothesis: Turkish teachers perceive inclusion as a placement.

2. Do teachers have different perceptions of students with different types of disabilities?

Hypothesis: Turkish teachers have a positive attitude toward students with mild intellectual disabilities and specific learning disabilities.

Hypothesis: Turkish teachers have a negative perception of students with autism, severe intellectual disabilities, and emotional behavioral disorders.

3. What factors explain teachers' perception, knowledge, and skills with respect to inclusion?

Hypothesis: Perceived Abilities & Knowledge to Support Students with Special Needs, Beliefs About Inclusion, Administrative Support and Time, Collaboration, and Needs for Inclusion are the factors that explain teacher perceptions, knowledge, and skills with respect to inclusion.

4. Do special educators and general educators have different perceptions, knowledge, and skills with respect to disability and inclusion?

Hypothesis: Special educators have more positive perceptions about knowledge and skills with respect to disability and inclusion than general educators.

Hypothesis: Special Educators have more positive attitude toward student with disabilities than general educators.

Hypothesis: There are no differences between special educators and general educators with respect to their views of inclusion.

5. Do teachers know effective strategies to support for students with specific learning disabilities and emotional behavioral disorders?

Hypothesis: Teachers have limited knowledge of effective strategies for students with specific learning disabilities and emotional behavioral disorders.

3.2 Instrument

The instrument is a validated International Survey of Inclusion (see Appendix) that has been translated into Turkish and validated through the pilot study described below. The survey is divided into two parts. The first section of Part 1 includes nine questions related to demographic information (i.e. gender, age, grade level taught, position, school name worked at, percentage of students with special needs in regular class, years of teaching experience, experience with students with special needs, and type of school worked at). The second section of Part 1 includes two open-ended questions, one multiple choice question, and 45 quantitative items that use a Likert scale items to measure teacher perceptions and teacher knowledge of inclusion and students with disabilities. Four items in the second section of Part 1 consist of descriptive vignettes of students with emotional behavioral disorders (EBD), severe intellectual disabilities (SID), mild intellectual disabilities (MID), and specific learning disabilities (SLD). These items have been developed based upon the factors from the Attitudes Toward Inclusive Education Scale (ATIES; Wilczenski, 1992). Five items included in Part 1 include questions on strategic and characteristic knowledge, ability to prepare students for independent living and working, and assumed possibility for participation in working life

for students with EBD, SID, MID, SLD, and autism (ASD). The other items in Part 1 aims to evaluate teachers' beliefs about their abilities to meet unique needs in class, inclusive education, the need for collaboration between general and special educators, the need for additional training, the acceptance of students with disabilities by their peers, and full participation of students with special needs in all school activities, and the need of special educator in general education classes. These items have been developed in compliance with the Opinions Relative to Integration (ORI; Antonak & Larrivee, 1995), the Sentiments, Attitudes, and Concerns about Inclusive Education Revised (SACIE-R) scale (Forlin et al., 2011), and the Teachers Attitudes Toward Inclusion Scale (TATIS; Stanley, Grimbeek, Bryer, & Beamisch, 2003), of which content validation has been well established.

Part 2 consists of eight open ended questions that are designed to measure teacher knowledge of effective strategies to support students with and without disabilities in inclusive classrooms. The third section includes four descriptive vignettes of teaching related situations related to students with EBD, SLD, SID, and MID. For each vignette, there are two items requiring open-ended responses that assess teachers' knowledge of effective teaching strategies that are responsive to the unique needs of students with special needs in general education settings.

I translated the survey instrument into Turkish. In order to check the relevancy and appropriateness of the translation, Turkish version of the survey was sent to a special education professor working at a university in Turkey. The professor was asked to translate the Turkish version of the survey in English. No significant differences were found between the original and translated survey instrument. Turkish version of the

survey instrument was piloted in order to explore psychometric properties of the scale by using a mixed method approach.

3.2.1 Pilot Study

The data were collected from a total of 164 survey respondents including teacher candidates, graduate students, and in-service teachers. Faculty members from College of Education, Bolu Abant Izzet Baysal University, Turkey were contacted in order to select a sample of teacher candidates for the pilot study. The study conducted with a total of 150 students whose professors allowed survey administration in their classes. 57.3% of the teacher candidates were female (N=86) and 42.7% were male (N=64). The ages of the teacher candidates ranged from 19 to 25, with a mean age of 21.91 (SD=1.10). 67.3% (N=101) of the participants majored in special education, and the remaining 32.7% (N=49) majored in elementary school teaching. Fourteen percent of the participants (N=21) were second-year college students, 24% of them (N=36) were third-year college students, and 62% were fourth-year college students. 90.7% of the teacher candidates (N=136) reported that they had no professional experience.

In addition to the teacher candidates, seven graduate students majored in Special Education from Bolu Abant Izzet Baysal University completed the survey. The participating graduate students consisted of two males and five females in the age range of 29 to 38 years (M=32.57, SD=3.25). The participating graduate students had five to 15 years professional experience (M=2, SD= 0.00) and one to six years professional experience working with students with special needs (M=3, SD=2.64).

Prior conducting the study with teacher candidates, the school administrator from one of the elementary schools in Aydin, Turkey was contacted in order to distribute the

survey instrument to the teachers. The surveys were completed by six in-service elementary school general education teachers and one school administrator. There were three females and four males aged between 38 to 54 years ($M=45.66$, $SD=5.95$). The sample of in-service teachers had 16 to 32 years of professional experience ($M=24.57$, $SD=5.76$). Four participating general education teachers indicated that they had experience working with students with special needs.

3.2.1.1 Factor Analysis

I conducted an exploratory factor analysis with varimax rotation in order to analyze factorial structure of the survey instrument. The factor analysis yielded five factors that accounted for 67.89% of total variance. Factor 1 (Perceived Abilities & Knowledge to Support Students with Special Needs) accounted for 29.19% of variance, Factor 2 (Beliefs About Inclusion and Students with Special Needs) accounted for 13.73% of variance, Factor 3 (Administrative Support and Time) accounted for 10% of variance, Factor 4 (Perceptions of and Needs for Inclusion) accounted for 8.05% of variance, and Factor 5 (Needs for Inclusion and Peer Interaction) accounted for 6.92% of variance. The factors were consistent with the factors identified in a parallel line of research using the same survey in Germany (Przbilla, Lauterbach, Boshold, Linderkamp, & Krezmien, 2016). The factors were also consistent with factors identified in a parallel line of research using the same survey in the U.S. (Larmon, Krezmien, & Ugurlu, 2017: Unpublished Research).

A Cronbach's coefficient alpha was used in order to examine the internal consistency of the survey instrument. Results revealed the alpha coefficient of .890 indicating a good reliability score for the overall survey instrument. The coefficient alpha

were .881 for Factor 1 and .882 for Factor 2 showing a good reliability scores; .953 for Factor 3 indicating excellent internal consistency. An acceptable internal consistency was found for Factor 4 (0.482) and Factor 5 (0.508).

In order to examine criterion validity of the survey instrument, a two-tailed independent t test was performed and the mean scores of general educators and special educators were compared. Results showed a statistically significant difference between special and general educators in Factor 1. The mean scores of special educators in regards to perceived abilities and strategic and characteristic knowledge to support students with special needs were greater than the scores of general educators. No significant differences were found for Factor 2 (Beliefs About Inclusion and Students with Special Needs), Factor 3 (Administrative Support and Time), Factor 4 (Perceptions of and Needs for Inclusion), and Factor 5 (Needs for Inclusion and Peer Interaction).

3.2.1.2 Cognitive Interview

I also used a cognitive interview process to establish survey validity in the context of the Turkish educational system.

Participants. One of the faculty members from the department of intellectual disabilities at the Abant Izzet Baysal University, Bolu was contacted in order to recruit the sample for the cognitive interview study. Five (N=5) doctoral students were selected for the study. All interviewees were female. The interviewees ranged in age from 29 to 38 years old (M=33.2, SD=3.70). The interviewees had 5 to 15 years professional experience (M=7.8, SD=4.20). Four of the participants reported that they were working at the universities as a faculty member.

Procedure and Data Analysis. Consent forms were obtained from each participant prior to the interview. Cognitive interview was conducted in a small class at the university. Think aloud approach in conjunction with verbal probing technique was utilized. The interview process was completed approximately in two hours. The interview was audiotaped and transcribed for data analysis.

Cognitive interview data were analyzed based upon the four step model of cognitive processing in responding surveys suggested by Bradburn, 2004; Ryan, Gannon-Slater, and Culbertson, 2012; and Schwartz (2007). The model consists of four components including comprehension, retrieval, judgment, and response. The issues identified through the transcribed interview were coded in accordance with these four components. Issues related to comprehension were coded as (a) missing part of the question, (b) not reading the directions, (c) being confused by complexity, (d) misunderstanding of terms, and (e) lexical ambiguities. Retrieval problems were coded as (a) firsthand experience or secondhand knowledge, (b) quality and quantity of cues, and (c) the fit between terminology used in the survey and respondents' experiences. Problems associated with judgment were coded as (a) respondents' unwillingness to make a judgment based on the information and/or experiences they have and (b) the use of shortcut strategies resulting in superficial interoperation of a question. Finally, issues related to response were coded as (a) social desirability, (b) boundaries between response categories, (c) fit between intended response and response format, and (d) order effects.

Results. All participants read the directions, but one stated that the use of repeated statements within the directions were unnecessary. 19.4% of coding indicated that comprehension problems were related to difficulties with understanding of questions

or directions. 25.8% of coding showed the respondents had problems resulted from misunderstandings of terms, while 29% of the comprehension problems caused by lexical ambiguities. 41.9% of coding indicated that the participants had retrieval problems associated with firsthand experience or secondhand knowledge, while 25.8% of coding showed retrieval issues resulted from the lack of fit between terminology and experience. 6.5% of retrieval issues involved in poor quality of cues. For instance, all participants agreed that in an inclusive classroom, there would not be five students with special needs as stated in the open-ended questions. In addition, the participants stated that they had difficulties in responding open-ended questions due to the use of term “strategy”. They indicated that the use of more broad term, such as “approach” or “way”, would make easier to respond these questions. 58.1% of coding caused by judgment problems were related to respondents’ unwillingness or inability to judge based on their experiences. 3.2% of coding indicated problems with the use of shortcut strategies. 33.3% of coding indicated problems associated with documenting response resulted from boundaries between categories and 35.5% of response problems were caused by a poor fit between intended response and answering format. For example, for open-ended questions, some participants believed that open-ended strategy related questions might be changed to multiple-choice questions in order to make these questions easier for respondents. Some participants also thought that for some items, they felt undecided and suggested inclusion of undecided in the scale.

The participants were also asked to rate the survey instrument with regards to its fairness, usefulness, simplicity, and efficiency on a 4-point Likert scale. All participants reported that they mostly liked the survey ($M=3$, $SD=.00$) and agreed that the survey

instrument was very fair ($M=4$, $SD=.00$). Although the participant believed five categories included in survey were fairly represented, they suggested that other disability categories, such as physical disabilities, hearing impairment, and visual impairment should be included in the survey. The participants found the survey useful ($M=3.2$, $SD=0.44$) and efficiently designed ($M=3$, $SD=1.00$). Four participants reported that the survey instrument was somewhat easy, while one of them indicated that it was somewhat difficult to complete ($M=2.80$, $SD=0.44$).

The findings from the cognitive interview indicated that the survey was valid. There were two primary issues identified through the cognitive interview. The first was related to the difficulty of answering open-ended questions that they reported were difficult to answer. This finding was unique to the Turkish population, but it was determined that the difficulty reflected a lack of knowledge of effective strategies on the part of the interviewees, not an issue with the format or content of the survey.

The second primary issue was related to the disability categories designed in the survey. The interviewees reported that they felt that the survey should have included categories such as “physical disabilities” and “vision impairments.” The interviewees also struggled answering questions about students with emotional disabilities and learning disabilities. These findings were related to the issues within the Turkish special education system, which still focuses on students with intellectual disabilities and physical disabilities. The Turkish system is currently behind other countries like the U.S. and Germany in the identification and support of students with LD (Kargin, & Guldenoglu, 2016) and emotional disabilities. One of the goals of the proposed survey research is to understand Turkish teacher perceptions, knowledge, and skills with respect

to these two populations of learners. Consequently, the two primary issues identified by the interviewees reflected an issue with the Turkish special education system, not with the validity of the survey or the survey items.

3.3 Setting

The sample (N= 578) consisted of pre-service and in-service general and special educators from all seven regions of Turkey. 40.8% of participants were from Black Sea region, 11.1% of them were from Marmara region, 7.8% of them were from Aegean region, 6.4% of them from Southeastern region, 6.2% of them from Central Anatolia, 2.9% were from Eastern, and 2.1% were from Mediterranean region. For 22.7% of the sample, such information was missing. 20.9% of in-service general education teachers were from Aegean region of Turkey, 18.6% of them from Marmara region, 17.1% of them from Black Sea region, 8.5% of them from Central Anatolia, 8.5% of them from Southeastern region, 6.2% of them from Eastern region, and 3.1% of them from Mediterranean region. 22.9% of in-service general educators were from Southeastern region, 15.2% of them were from Marmara region, 15.2% of them from Aegean region, 13.3% of them were from Central Anatolia, 8.6% of them were from Black Sea, 6.7% of them were from Eastern, and 4.8% of them were from Mediterranean region.

The majority of pre-service general educators (83.1%) were students at Duzce University. 2.9% of them were students at Bolu Abant Izzet Baysal University. Six percent of pre-service general educators were students at Sakarya University (1.5%) , Anadolu University (1.5%) , Marmara University (1.5%), and Usak University (1.5%). 7.3% of pre-service educators were students at other universities located in different cities in Turkey. 52.2% of pre-service special educators were students at Bolu Abant

Izzet Baysal University, 20.9% were students at Duzce University, 12.2% were students at Sakarya University, 7% of them were students at Anadolu University, and 7% of them were from various universities across Turkey.

3.4 Participants

I administered electronic version of the survey to a total of 578 pre-service and in-service teachers, of those, 572 agreed to participate in the study. However, 175 of the participants returned surveys included significant amount of incomplete questions and those participants were considered as non-completers. Remaining 397 respondents returned surveys that could be included in the data analyses yielding 68.7% of response rate. Of those, 317 participants responded all items in Part 1 resulting in 54.8% completion rate. With respect to survey completion, no significant differences were found between in-service and pre-service participants and teachers' grade level taught. Gender and position were found significant with regards to survey completion status. Female respondents (72% female completers) were more likely to complete the survey compared to male respondents (58% male completers). Additionally, general educators (78% completers), administrators (64% completers), and school counselors (63% completers) were more likely to complete the survey compared to special educators (59% completers).

Final sample included 397 in-service (N=187) and pre-service (N=210) teachers. Four participants indicated that they were graduate students working as teachers. The majority of respondents were female (N=282). Ages of the participants ranged from 18 to 74. 47% of the participants aged between 18 to 23, 19.3% were between 24 to 29, 15.7%

were between 30 to 35, 8.4% were between 36 to 41, 3.2% were between 42 to 47, 3.1% were 47 or more, and age information were missing for 3.2% of the participants.

Overall, 57.4% of the participants were general educators, 42.6% of them were special educators. Approximately 60% of pre-service teachers indicated that they would work as general educators and 40% of them would work as special educators. 57.2% of in-service teachers stated that they were working as general educators and 42.8% of them stated that they were working as special educators. Participants' experience in teaching ranged from 0 to 52 years. 53.4% of participants reported 0 to 2 years of teaching experience, 10.8% had 3 to 5 years of teaching experience, 11% had 6 to 10 years of teaching experience, 9.6% had 11 to 15 years of teaching experience, 2.3% had 16 to 20 years of teaching experience, and 5.1% had 21 and more years of teaching experience. Remaining 7.8% of participants did not report their experience in teaching.

Approximately 54% of the participants reported that they had experience in working with students with disabilities. Approximately 54% of the participants indicated that they were teaching or expected to teach 1st to 4th grades, 17% of them were teaching or expected to teach 5th to 8th grades, 18% 9th to 12th, 1.6% 1st to 8th, 2.1% 1st to 12th, 0.5% 1st to 4th and 9th to 12th, and 0.8% 5th to 12th grades. Approximately 46% of in-service teachers identified themselves as 1st to 4th grade teachers, 23% were 5th to 8th grade teachers, 17% were 9th to 12th grade teachers, and remaining 4% were teaching multiple grade levels. Thirty-five percent of in-service teachers were working at elementary schools, 18% were from middle schools, 18% were from public special education schools, 13% were from private special education schools, 3.5% were working at preschools, 3.5% working at private schools and 7% were working at different types of

high schools. Approximately 22% of pre-service teacher indicated that they planned to work at preschools, 38% elementary schools, 7% middle schools, 17% high schools, 12% public special education schools, 4% private special education schools, and 1% private schools. Forty-two percent of pre-service teachers enrolled in special education programs, 20% of them enrolled in elementary education, 25% early childhood education, 8% mathematics teaching, and 5% enrolled in science and social studies teaching. Pre-service teachers included first- to fourth-year college students.

With respect to the percentage of students with disabilities taught (item 6), there was a significant difference between general and special educators. 87.7% of pre-service general educators stated that 0 to 10% of their students would have a disability ($M= 1.24$, $SD= 0.8170$) and 86.1% of in-service general educators indicated that 0 to 10% of their student had a disability ($M= 1.3115$, $SD= 0.9541$). Interestingly, 34.6% of pre-service special educators assumed that they would have 0 to 10% of students identified with a disability and 33.6% of them believed that they would have 91 to 100% of students with a disability ($M= 2.94$, $SD= 1.7311$), while the majority of (81%) in-service special educators stated that 91 to 100% of their students had a disability ($M= 4.37$, $SD= 1.3901$). Demographic information of the participants is presented in Table 3.1.

3.4.1 Recruitment

I recruited pre-service teachers by contacting faculty members working at the selected public universities. I contacted the faculty via Facebook in ordered to introduce my research to their students. Then, I asked faculty to post the recruitment letter explaining the study and the link to survey on their Facebook account in order to recruit pre-service teachers. I also contacted administrators and in-service teachers that I knew

personally in order to explain the study and ask them if they were interested in participating in this study. I asked administrators and in-service teachers to share the recruitment letter and the link to the study via Facebook messenger with the in-service teachers working at their schools.

Table 3.1 Demographic Information of the Participants (n= 397)

Demographic Variables	Sample n (%)
Gender	
Female	282 (71.1)
Male	115 (28.9)
Teaching Discipline	
General Education	228 (57.4)
Special Education	169 (42.6)
Teaching Status	
Pre-service	210 (52.9)
In-service	187 (47.1)
Years of teaching experience	
0-2	212 (53.4)
3-5	43 (10.8)
6-10	44 (11)
11-15	38 (9.6)
16-20	9 (2.3)
21 or >	20 (5.1)
Missing	31 (7.8)
Experience of teaching students with special needs	
Yes	213 (53.7)
No	184 (46.3)
Percentage of students with disabilities in class	
0-10	232 (58.4)
11-40%	34 (8.5)
41-61%	8 (2)
61-90%	12 (3)
91-100%	111 (28.1)

The recruitment letter included the purpose of the study, the criteria for eligibility to participate in the study, and the contact information of the researcher. The criteria for participation in the study were (a) being a teacher candidate majored in special education,

elementary school teaching, early childhood education, and other teacher training programs and (b) being an in-service general education teacher or an in-service special education teacher.

3.5 Survey Administration Procedures

The study involved an electronic administration of the International Survey on Inclusion: Turkish. I have developed an electronic version of the survey in Survey Monkey. Survey administration procedures involved several steps described below:

1. I contacted six faculty members from Faculty of Education, administrators, and in-service teachers. I sent a Facebook message to each faculty member in order to explain my study. I asked them if they were volunteer to post the link to the survey on their Facebook. I turned the recruitment letter into a Facebook post for them to share. All of six faculty members responded favorably and each of them shared the Facebook post for the teacher candidates they were working with.
2. I also sent Facebook messages to the administrators and in-service teachers explaining my study and asked them if they were volunteer to participate in the study. I asked the administrators and in-service teachers to share the survey with their colleagues in their school. The administrators and in-service teachers who agreed to share the survey sent the link to the survey with the explanation to the other teachers via Facebook by adding me to the recipients.
3. One week after the initial Facebook posts, I sent a message to the faculty in order to ask them repost the survey as a reminder follow-up in order to increase the response. In addition, the second Facebook posts included a

request to finish the survey in order to increase the completion rate. In addition, I shared the second Facebook post on my account for the administrators and in-service teachers that I contacted. The second post with the request to completion increased the response rate from 29% to 42% and increased the completion rate from 24% to 38%.

4. After one week from the second attempt, I made the third follow-up contacts in order to ask the faculty to share the Facebook post that included the explanation of the study, a request to complete the survey, and the link to the survey. The third Facebook posts increased the response rate from 42% to 68% and increased the completion rate from 38% to 54.8%.

3.6 Data Analysis

All survey data were retrieved from Survey Monkey in SPSS. I used both quantitative and qualitative data analyses to understand the data. I used descriptive and inferential statistics to analyze the Likert scale items (items from 12 to 22).

Descriptive Statistics. I used descriptive statistics in order to examine the means and distributions of the sample reporting on the Likert scale items. This analysis helped me to understand how the participants responded on the items and to describe overall perceptions and knowledge of the participants about inclusion and students with disabilities. In addition, I examined the means and standard deviations for special education and general education pre-service and in-service teachers.

Factor Analysis. I conducted a factor analysis consistent with the analysis conducted in the Pilot Study. I transferred the items that measure attitudes toward inclusion of students with disabilities (items 13 to 16) into indices by using means. I also

used the means of the items regarding knowledge and perceptions related to five disability categories (items 17 to 21) in order to transfer them into indices. Lastly, I included eight items under the item 22. As a result, for 18 variables, I performed a principle component factor analysis, with varimax rotation in order to explore the factorial structure of the survey. In addition, I used split-half reliability method in order to determine reliability of the scale.

Paired Sample t-Tests. To determine if there are differences in the teacher attitudes, perceptions, and knowledge of different disability categories including specific learning disabilities (SLD), emotional behavioral disorders (EBD), severe intellectual disabilities (SID), moderate intellectual disabilities (MID), and autism (ASD). I conducted a series of paired sample t-tests comparing responses on pairs of specific items. First, I added the raw scores for EBD, SID, MID, and SLD (13, 14, 15, 16) that evaluated teachers' beliefs regarding ability to teach in general education settings, administrative support, time for instructional planning, and academic and social success of the student in general classroom. Second, I calculated the raw scores for each of the disability categories including SLD, EBD, SID, MID, and ASD in items 17, 18, 19, 20, and 21 that assessed teachers' strategic and characteristic knowledge, ability to prepare for adulthood, and assumptions regarding participation in working life regarding students with these disabilities. For instance, I added raw scores for 17a, 18a, 19a, 20a, and 21a to obtain a total score on items related to specific learning disability. Then, I conducted a series of paired sample t-tests in order to determine if the participants have different attitudes, perceptions, and knowledge regarding different types of disability categories.

General Linear Model. General Linear Model (GLM) was used in order to determine differences in attitudes, perceptions, and knowledge of different types of disabilities by Teaching Discipline (Special Education/General Education) and Teaching Status (In-service Teachers/Pre-service Teachers). Dependent variable was the sums of the raw scores for each disability category used in the previous analysis. Independent variables were Teaching Discipline and Teaching Status. In particular, I hypothesized that there would be differences in general and special educators with regards to characteristic and strategy knowledge.

Discriminant Function Analysis. I conducted a discriminant function analysis in order to determine if group memberships could be predicted based on the factor scores from the factor analysis. The predictor (independent variable) was the sums of the raw scores for items using the sum raw scores from items 13 to 16, 17 to 21, and 8 items from question 22 used in the previous analysis. The grouping (dependent) variable was the Teaching Discipline (Special Education / General Education) and Teaching Status (Pre-service and In-service Teacher). This analysis allowed me to use responses on 18 items to predict group membership. I examined differences in general and special educators and pre-service and in-service teachers with respect to their perceptions and knowledge of students with disabilities.

Analyses of Qualitative Data. I also examined the responses on the open-ended items. For the purposes of this study, I was interested in two key findings. First, how the Turkish teachers define inclusion. Second, what Turkish teachers know about effective strategies for students with learning disabilities and emotional and behavioral disorders.

Definition of Inclusion. For the definition of inclusion, I used content analysis approach in order to understand how Turkish teachers define inclusion. I used deductive category application by using pre-determined categories that were created in accordance with the essential components underlined by the definition of inclusive education. These categories and subcategories were:

1. Inclusion as a placement

- Placement of students with special needs in general education classrooms
- Placement of students with special needs in separate classrooms in regular schools
- Placement of students with special needs in general education settings (either in general education classrooms or separate classrooms in regular schools)
- Placement in the least restrictive environment

2. Inclusion as equity in education

- Full participation
- Belonging
- Access to general education curriculum
- Access to extracurricular activities

3. Inclusion as quality in education

- Accommodations/Modifications
- Effective educational practices
- Individualized support and services

4. Inclusion as collaboration/shared responsibility

I entered responses on item 10 from the survey participants in SPSS and based on the pre-determined categories, I assigned the codes that apply to the participants' responses. After the coding, I calculated the frequencies of the categories in order to identify common themes emerged from the participants' definitions. An independent evaluator who is fluent in English and Turkish and has expertise in special education in Turkey and in the U.S. independently coded the participants' definitions and calculated the frequencies of the categories. I run a correlation analysis to determine the reliability of the independent coding.

Effective Strategies. In order to determine the extent to which Turkish teachers know about effective strategies for students with SLD and EBD, I coded the responses from items 24, 25, 26, and 27. I and an independent evaluator who is a bilingual in English and Turkish and has expertise in special education in Turkey and in the U.S. independently evaluated the rank of the quality of the items. I established a set of criteria that each evaluator used to rank the quality of the responses. Each evaluator used the tool to score each response as a "0" (does not include an effective strategy), a "1" (includes a partial description or general term for a strategy identical to a specific effective and scientifically validated strategy), or a "2" (includes a description of an effective and scientifically validated strategy). I run a correlation analysis of the two independent ratings to establish the reliability of the independent ratings. I conducted descriptive statistics on the ratings, disaggregating the ratings by Teaching Discipline (Special Education / General Education) and Teaching Status (Pre-service Teacher / In-service Teacher).

CHAPTER 4

RESULTS

4.1 Descriptive Statistics

I analyzed the mean and standard deviation of the item (question 12) reporting teachers' overall perceptions with respect to the percentage of instructional time students with special needs should spend in general education classrooms. Approximately 46% of pre-service general educators believed that students with special needs should spend all or most time in general education classrooms ($M= 2.70, SD= 1.0136$). Likewise, 46.1% of pre-service special educators believed that students with special needs should spend all or most of instructional time in general education classrooms ($M= 2.62, SD= 0.8967$). On the other hand, 37.6% of in-service special educators believed that students with special needs should spend all or most instructional time in general education settings ($M= 2.86, SD= 1.076$) and 31.8% of in-service general educators believed that students with special needs should spend all or most instructional time in general education settings ($M= 2.91, SD= 0.937$). No significant difference was found between general and special educators. However, there was a significant difference between in-service and pre-service teachers with respect to their beliefs about the percentage of instructional time student with disabilities should spend in inclusive settings. In-service educators were less likely to believe that students with disabilities should spend all or most of instructional time in general education settings compared to pre-service teachers.

4.1.1 Beliefs about Inclusion

I used descriptive statistics in order to understand the participants' responses to the items related to beliefs about inclusion. The findings showed that 79.2% of the participants agreed or strongly agreed that inclusion was placement in general education classrooms (item 22b). 73.5% of in-service general educators agreed that inclusion was placement, while 78.3% of in-service special educators believed that inclusion was placement in general education classroom. 78.8% of pre-service special educators and 84.1% of pre-service general educators agreed that inclusion was placement. There was no significant difference between pre-service and in-service teachers and special and general education regarding their beliefs that inclusion meant placement in a general education classroom.

Descriptive statistics showed that 92.6% of the participants believed that inclusion was specialized support within the core curriculum (item 22c). 95.2% of in-service general educators and 95% of in-service special educators agreed that inclusion was specialized support within core curriculum. 87.6% of pre-service general educators and 85.7% of pre-service special educators believed that inclusion was specialized support within core curriculum. There were significant differences between (a) general and special educators and (b) in-service and pre-service teachers in their beliefs that inclusion was specialized support. In-service teachers were more likely to believe that inclusion was specialized support than did pre-service teachers. In addition, special educators were more likely to agree that inclusion was specialized support than general educators.

For the items (13e, 14e, 15e, and 16e) related to beliefs about instructional time should be spent in general education settings, 32.9% of the participants had 4 to 9 total

scores, 36.6% had 10 to 11 total scores, and 30.5% had 12 to 16 total scores. Pre-service general educators and pre-service special educators were more likely to have higher total scores for these items compared to in-service general educators. In-service special educators had the lowest total scores for these items. The only significant difference was found in total scores of pre-service general educators and in-service special educators for these items.

With respect to beliefs about the need for a special educator in general education classroom (item 22d), 70.8% of the participants believed that a student with disability placed in general education setting would need a special educator to teach her or him. 82.8% of pre-service special educators and 75% in-service special educators agreed with a student with disability would need a special educator in an inclusive setting, whereas 69.9% of in-service and 62% of pre-service general educators agreed with this statement. There were significant differences between in-service and pre-service teachers and special and general educators with respect to their perceptions related to need for a special educator in general education settings. In-service teachers were more likely to agree that a student with disability would need a special educator compared to pre-service teachers. Additionally, special educators were more likely to believe that there was a need for a special educator in inclusive settings than did general educators.

The majority of participants (96%) believed that collaboration between special and general educators needed for successful inclusion (item 22f). All in-service special educators were agreed or strongly agreed with this statement. 98.6% of pre-service special educators believed in need of collaboration. 96.4% in-service and 92% of pre-service general educators agreed that collaboration between special and general educators

needed for successful inclusion. There was a significant difference between general and special educators regarding their beliefs about need for collaboration. Special educators were more likely to agree that inclusion needed collaboration than general educators. There was also significant difference between in-service and pre-service teachers with respect to the need for collaboration. In-service teachers were more likely to agree that collaboration between special and general educators needed for inclusion than did pre-service teachers.

The findings showed that 84.5% of the participants believed that they needed additional training in order to teach students with disabilities in inclusive settings (item 22g). 92.7% of pre-service special educators agreed that they needed additional training to be adequately prepared for inclusion of students with disabilities. 86.8% of in-service general educators and 86.7% of pre-service general educators believed that they needed additional training. Seventy-five percent of in-service educators agreed that they were in need of additional training for inclusion of students with disabilities. No significant difference was found between general and special educators regarding their need for additional training. However, there was a significant difference between in-service and pre-service teachers with respect to their beliefs about need for additional training. Pre-service teachers were more likely to state that they needed additional training than did in-service teachers.

In general, the participants had positive beliefs with regards to administrative support that would enable them to teach students with disabilities in general education settings (items 13b, 14b, 15b, and 16b). 31.6% of the participants had total score ranging between 4 to 9, 28.4% had total score of 10 or 11, and 40% had total score of 12 or more

for items related to administrative support. There was no significant difference in teacher groups' beliefs with respect to administrative support. Pre-service general educators had the lowest total score for the items related to administrative support, whereas in-service special educators had the highest total score of administrative support. In-service general educators had higher total score of administrative support than pre-service general and special educators.

The participants also had positive beliefs regarding school support for sufficient time provided them to plan the lessons to teach students with disabilities in inclusive settings (items 13c, 14c, 15c, and 16c). 21.2% of the participants had total score between 4 to 8, 36% had total score between 9 to 11, and 42.8% had total score between 12 to 16 for these items. Pre-service general educators had the lowest total score of support for time to plan lessons. There were no significant differences in total scores of these items between pre-service general educators, in-service general educators, and pre-service special educators; however, there was a significant difference in total scores of pre-service general educators and in-service special educators. In-service special educators had the highest scores of school support for time to plan the lessons. In-service general educators had lower total score for these items than did pre-service special educators. Table 4.1 shows descriptive statistics for the items used in these analyses.

4.1.2 Beliefs about Students with Disabilities and Peer Interaction

I used descriptive statistics in order to examine the participants' responses to the items related to beliefs about students with disabilities and peer interactions. With regards to assumed academic and social success of students with disabilities in general education settings (items 13d, 14d, 15d, and 16d), descriptive statistics showed that 28% of the

participants had 4 to 9 total scores, 38.7% had 10 or 11 total scores, and 33.3% had 12 to 16 total scores for these items. In-service special educators had the lowest score of assumed academic and social success of students with disabilities in general education settings compared to in-service general educators. Pre-service teachers had higher total scores related to assumed academic and social success than in-service teachers. Pre-service general educators had the highest total score of assumed academic and social success of students with disabilities placed in inclusive settings.

Table 4.1 Descriptive Statistics for the Items Related to Beliefs about Inclusion

Items	Pre-service GENED	Pre-service SPED	In-Service GENED	In-service SPED
	M (SD)	M (SD)	M (SD)	M (SD)
Inclusion: Placement in GenEd	2.94 (0.60)	2.98 (0.68)	2.94 (0.69)	2.97 (0.78)
Inclusion: Individual support in class	3.018 (0.55)	3.24 (0.58)	3.35 (0.57)	3.37 (0.64)
Inclusion: All or most of time	10.68 (2.06)	10.47 (1.78)	10.30 (2.17)	9.90 (2.47)
Need: A special educator in GenEd	2.67 (0.64)	2.93 (0.573)	2.84 (0.69)	3.05 (0.79)
Need: Collaboration	3.29 (0.664)	3.52 (0.531)	3.6 (0.561)	3.85 (0.361)
Need: Additional training	3.036 (0.612)	3.16 (0.585)	3.23 (0.738)	2.814 (0.955)
Administrative support	10.24 (2.48)	10.25 (1.88)	10.86 (2.54)	10.93 (2.69)
Time to plan instruction	10.28 (2.362)	10.76 (1.98)	10.63 (2.74)	11.16 (2.61)

Descriptive statistics showed that the participants had negative perceptions regarding students with disabilities' participation in working life (items 21a, 21b, 21c, 21d, and 21e). 26.7% of the participants had a total score of 5 to 12, 60.1% had a total score between 13 to 15, and 13.2% had a total score ranged from 16 to 20 for these items. Pre-service special educators had the highest total scores for these items related to

assumed possibility to participate in working life, whereas pre-service general educators had the lowest total scores. In-service special educators had higher total scores for assumed possibility to participation in working life than did in-service general educators.

The majority of participants (75.2%) believed that students with disabilities should be involved in all school activities with their peers without disabilities (item 22e). 81.7% of pre-service special educators agreed that students with disabilities should be involved in all school activities and 78.3% of in-service special educators agreed with this statement. 74.4% of pre-service general educators and 68.7% of in-service general educators agreed with inclusion of students with disabilities in all school activities. There was a significant difference between general and special educators regarding their beliefs about inclusion of students with disabilities in all school activities with their peers. Special educators were more likely to believe that students with disabilities should be involved in all activities than general educators. No significant difference was found between in-service and pre-service teachers with regards to their beliefs about involvement of students with disabilities in all activities with peers.

With respect to peer acceptance, 45.7% of the participants disagreed or strongly disagreed that students without disabilities would want peers with disabilities in their general education classroom (item 22h), 48.6% of the participants agreed with this statement, and only 5.8% strongly agreed with peer acceptance. 74.4% of pre-service special educators believed that students with disabilities would be accepted by peers, while 35% of in-service special educators agreed with this statement. 67.9% of pre-service general educators agreed that peers without disabilities would accept students with disabilities. 34.4% of in-service general educators believed that peers without

disabilities would want students with disabilities in their general education classrooms. There was a significant difference between pre-service and in-service educators regarding their beliefs about peer acceptance. In-service educators were more likely to have negative perceptions regarding peer acceptance compared to pre-service teachers. In addition, special educators had significantly negative perceptions about peer acceptance than did general educators. Descriptive statistics for the items used in these analyses are displayed in Table 4.2.

Table 4.2 Descriptive Statistics for the Items Related to Beliefs about Students with Disabilities and Peer Interaction

Items	Pre-service GENED	Pre-service SPED	In-Service GENED	In-service SPED
	M (SD)	M (SD)	M (SD)	M (SD)
Belief: Academic and social success	10.98 (1.913)	10.88 (1.901)	10.36 (1.98)	10.04 (2.28)
Belief: Participation in working life	13.47 (2.47)	13.98 (2.01)	13.70 (2.64)	13.87 (2.92)
Inclusion: All activities with peers	2.88 (0.753)	3.00 (0.654)	2.81 (0.706)	3.17 (0.806)
Peers Acceptance	2.68 (0.603)	2.62 (0.662)	2.42 (0.734)	2.32 (0.83)

4.1.3 Perceptions about Knowledge and Skills

I used descriptive statistics in order to examine the participants' perceptions about their knowledge and abilities related to inclusion and students with disabilities. The findings showed that the participants had positive perceptions related to their perceived abilities to teach students with disabilities in general education settings (items 13a, 14a, 15a, and 16a). 24.3% of the participants had total score between 6 to 9, 40% had total score of 10 or 11, and 35.7% had total score ranged between 12 to 16 for these items.

There was no significant mean difference between teacher groups with respect to their perceived abilities to teach students with disabilities in inclusive settings. Pre-service special educators had the highest total score with respect to perceived abilities to teach students with special needs in general education settings, whereas in-service general educators had the lowest total score for these items. Additionally, in-service special educators had lower total score compared to pre-service general educators.

In general, the participants had positive perceptions related to their knowledge in order to accommodate unique needs of students with special needs (item 22a). 61.2% of the participants agreed and 12.8% strongly agreed with this statement. 95% of in-service special educators and 85.9% of pre-service special educators agreed that they were able to accommodate unique needs of students with special needs, whereas 65.5% of pre-service general educators and 60.2% of in-service general educators agreed with this statement. General educators had significantly lower perceptions regarding their ability to accommodate unique needs of students with disabilities in inclusive settings than special educators. Additionally, a significant difference was found between in-service and pre-service teachers with respect to their perceived abilities to accommodate unique needs of students with disabilities. In-service teachers had more positive perceptions regarding their abilities to meet unique needs of students with disabilities than did pre-service teachers.

Overall, the participants had positive perceptions related to their knowledge of instructional strategies used for students with different types of disabilities (items 17a, 17b, 17c, 17d, and 17e). Twenty-one percent of the participant had total strategic knowledge score of 5 to 10, 42.8% of them had total score of 11 or 14, and 36.2% had

total score between 15 to 20. Although there was no statistically significant difference in total strategic knowledge scores of in-service and pre-service special educators, in-service special educators had higher total scores. There was no significant difference in total strategic knowledge scores of pre-service and in-service general educators; however, pre-service general educators had higher strategic knowledge scores compared to in-service general educators. There were significant differences in total strategic scores of general and special educators.

In general, the participants had positive perceptions with respect to their characteristic knowledge associated with students with disabilities (items 18a, 18b, 18c, 18d, and 18e). Eighteen percent of the participants had total characteristic knowledge score ranged between 5 to 10, 31.6% had total characteristic knowledge score between 11 to 14, and 50.4% had total characteristic knowledge score ranging from 15 to 20. In-service special educators had significantly higher characteristic knowledge score than the other teacher groups. There was no significant difference in characteristic knowledge score of pre-service and in-service general educators; however, pre-service general educators had higher characteristic knowledge score than did in-service general educators. There was a significant difference in strategic knowledge score of pre-service general and special educators.

The participants had also positive perceptions about their abilities to prepare students with disabilities for working life (items 19a, 19b, 19c, 19d, and 19e). Twenty-seven percent of the participants had total score of 5 to 11, 41.1% of them had total score ranging from 11 to 14, and 31.9% had total score of 15 or more for these items. Pre-service general educators had significantly higher scores for these items than did in-

service general educators. On the other hand, pre-service general educators' perceptions related to their abilities to prepare students with disabilities for working life were significantly lower than in-service and pre-service special educators. Although pre-service special educators had higher total score for these items than in-service special educators, the difference between these groups was not significant.

The participants had positive perceptions related to their abilities to prepare students with disabilities for independent living (items 20a, 20b, 20c, 20d, and 20e). 14.8% of the participants had total score between 5 to 10, 54.1% had total score between 11 to 14, and 31.1% had total score ranging from 15 to 20 for these items. Pre-service special educators had the highest score with respect to ability to prepare students with disabilities for independent living. There was no significant difference in the perception of pre-service and in-service special educators. Pre-service general educators had higher total score for these items than in-service general educators; however, there was no significant difference in the perceived abilities of these two groups regarding preparation for independent living. There were statistically significant differences in general and special educators' perceptions about their ability to prepare students with special needs for independent living. Table 4.3 shows descriptive statistics for the items used in these analyses.

4.2 Factor Analysis and Reliability of the Instrument

The reliability analysis for the survey instrument revealed a Cronbach's alpha coefficient of .874 for the overall survey instrument and the Guttman split-half reliability coefficient of .977 indicating a good reliability score. Additionally, a principal component analysis with varimax rotation was conducted in order to identify the patterns

emerged in the survey. Results yielded five factors (see Table 4.4) that contain 68% of variation of 18 variables. Factor 1 (Perceived Abilities & Knowledge to Support Students with Special Needs) explained 20.95% of the variation and Factor 2 (Beliefs About Inclusion and Students with Special Needs) explained 15.29% of variation. Factor 3 (Perceptions of and Needs for Inclusion) explained 13.79% of variation, Factor 4 (Administrative Support and Time) explained 10.9% of variation, and Factor 5 (Peer Acceptance) explained 6.9% of variation.

Table 4.3 Descriptive Statistics for Items Related to Teachers’ Perceptions about Knowledge and Skills

Items	Pre-service GENED	Pre-service SPED	In-Service GENED	In-service SPED
	M (SD)	M (SD)	M (SD)	M (SD)
Ability to teach SPED in GenEd	10.93 (1.73)	10.97 (1.59)	10.44 (2.08)	10.45 (2.15)
Ability to meet specific needs in class	2.65 (0.565)	2.97 (0.506)	2.66 (0.67)	3.35 (0.63)
Knowledge: Instructional strategies	12.5 (2.45)	14.05 (2.06)	11.81 (2.67)	14.9 (3.76)
Knowledge: Characteristics	12.91 (2.84)	14.99 (2.18)	12.48 (3.26)	16.01 (3.42)
Ability: Prepare for working life	12.65 (2.47)	14.23 (1.98)	11.96 (2.49)	14.14 (2.69)
Ability: Prepare for independent living	12.65 (2.514)	14.48 (1.95)	12.02 (2.35)	14.31 (3.06)

Factorial structure of the present survey data was found consistent with the previous factor analysis of the pilot study that yielded five factors accounted for 67.89% of variation. However, in the pilot study, Factor 3 was Administrative Support and Time that accounted for 10% of variation, whereas in the present study this item was found as the fourth factor. In addition, Perceptions of and Needs for Inclusion (Factor 3 in the

present study) explained more variation compared to the pilot study findings. In the pilot study, the fifth factor included the items related to (a) the need for a special educator in general education class, (b) peer interaction through involvement in all activities with peers, and (c) peer acceptance, but in the present study, Factor 5 contained only peer acceptance and the other two items appeared in the fourth factors.

Table 4.4 Factor Loadings for the Turkish version of International Survey of Inclusion Scale

Extraction Method: PCA.	1	2	3	4	5	Total
Rotation Method: Varimax	20.96%	15.30%	13.80%	10.99%	6.99%	68.03%
Knowledge: Characteristics	0.843					
Ability: Prepare for independent living	0.839					
Knowledge: Instructional strategies	0.82					
Ability: Prepare for working life	0.81					
Ability to meet specific needs in class	0.653					
Belief: Participation in working life	0.439					
Belief: Academic and social success		0.893				
Inclusion: All or most of time		0.873				
Ability to teach SPED in GenEd		0.868				
Need: Collaboration			0.794			
Inclusion: Individual support in class			0.753			
Need: Additional training			0.587			
Inclusion: Placement in GenEd			0.515			
Inclusion: All activities with peers			0.492			
Need: Special educator in GenEd			0.438			
Time to plan instruction				0.908		
Administrative support				0.906		
Peer acceptance					0.871	

4.3 Differences in Teacher Attitudes, Perceptions, and Knowledge Related to Different Types of Disabilities

A set of paired sample t-tests was performed in order to examine attitudes, perceptions, and knowledge regarding students with different types of disabilities. Overall, Turkish teachers did not significantly differ in their attitudes, perceptions, and knowledge with respect to students with EBD and SLD. All other paired sample test comparisons revealed statistically significant differences in Turkish teachers' attitudes, perceptions, and knowledge.

Specifically, a set of paired sample t tests (see Table 4.5) was performed in order to identify differences in teachers' responses to the items including descriptive vignettes of students with EBD, SID, MID, and SLD without specification of their diagnosis (items 13 to 16). Results showed that there was a statistically significant difference in teachers' beliefs about inclusion of the student with (a) EBD ($M= 13.67$, $SD= 2.5343$) and SID ($M= 11.45$, $SD= 2.9744$); $t(361)= 14.750$, $p= .000$, (b) EBD and MID ($M= 14.083$, $SD= 2.39$); $t(350)= -3.450$, $p= .001$, (c) SID and MID; $t(351)= -15.971$, $p= .000$, (d) SID and SLD ($M= 13.603$, $SD= 2.7929$); $t(351)= -11.815$, $p= .000$, and (e) MID and SLD; $t(350)= 4.499$, $p= .000$. There was no statistically significant difference in teachers' beliefs about inclusion of students with EBD and SLD; $t(348)=.385$, $p= .70$. These findings suggested that Turkish teachers were more likely to have favorable attitudes toward described student with EBD, followed by student with SLD, MID, and SID.

Table 4.5 Overall Descriptive Statistics and t-test Results for Sum Scores of Items 13 to 16

Paired Comparisons	Mean Difference	SD	df	t value	p value
EBD sum scores (item 13) / SID sum scores (item 14)	2.20442	2.8435	361	14.75	0.000
EBD sum scores (item 13) / MID sum scores (item 15)	-0.43305	2.38098	350	-3.407	0.001
EBD sum scores (item 13) / SLD sum scores (item 16)	0.05444	2.6403	348	0.385	0.7
SID sum scores (item 14) / MID sum scores (item 15)	-2.65909	3.12379	351	-15.971	0.000
SID sum scores (item 14) / SLD sum scores (item 16)	-2.14205	3.4014	351	-11.815	0.000
MID sum scores (item 15) / SLD sum scores (item 16)	0.53561	2.23051	350	4.499	0.000

When differences were examined in teachers' responses to the items related to strategic and characteristics knowledge, ability to prepare independent living, and assumptions regarding employment with regards to certain types of disabilities (items 17 to 21) paired sample t test analyses (see Table 4.6) revealed similar results. There was no significant differences between Turkish teachers' SLD scores ($M= 14.31, SD= 2.7574$) and EBD scores ($M= 14.32, SD= 2.4841$); $t(328)= -.058, p= .953$.

There were statistically significant differences in Turkish teachers' scores of (a) SLD and SID ($M= 11.32, SD= 2.8474$); $t(325)= 18.249, p= .000$, (b) SLD and MID ($M= 13.71, SD= 2.78$); $t(324)= 4.174, p= .000$, and (c) SLD and ASD ($M= 13.08, SD= 2.9513$); $t(324)= 7.760, p= .000$. Additionally, statistically significant differences were found in the teachers' scores for students with EBD and SID ($t(326)= 19.234, p= .000$),

students with EBD and MID ($t(326)= 4.740, p= .000$), and students with EBD and ASD ($t(325)= 9.421, p= .000$).

Table 4.6 Overall Descriptive Statistics and t-test Results for Sum Scores of Items 17 to 21

Paired Comparisons	Mean Difference	SD	Df	t value	p value
SLD sum scores / EBD sum scores	-0.00608	1.88543	328	-0.058	0.953
SLD sum scores / SID sum scores	2.97239	2.94083	325	18.249	0.000
SLD sum scores / MID sum scores	0.61538	2.65793	324	4.174	0.000
SLD sum scores / ASD sum scores	1.23385	2.86649	324	7.76	0.000
EBD sum scores / SID sum scores	2.98165	2.80331	326	19.234	0.000
EBD sum scores / MID sum scores	0.62691	2.3915	326	4.74	0.000
EBD sum scores / ASD sum scores	1.26687	2.4279	325	9.421	0.000
SID sum scores / MID sum scores	-2.37461	2.20789	322	-19.329	0.000
SID sum scores / ASD sum scores	-1.75542	2.61486	322	-12.065	0.000
MID sum scores / ASD sum scores	0.62229	2.31383	322	4.834	0.000

Turkish teachers had significantly lower scores for students with SID compared to their scores for students with MID ($t(322)= -19.329, p= .000$) and students with ASD ($t(322)= -12.065, p= .000$). These results suggested that Turkish teachers had the most positive perceptions about teaching students with EBD, while they had the least positive views about students with SID. I also performed paired sample t tests in order to examine whether different types of teachers (in-service/pre-service and special/general education

teachers) differ in their attitudes, perceptions, and knowledge regarding teaching students with SLD, EBD, SID, MID, and ASD.

4.3.1 Differences in Attitudes, Perceptions, and Knowledge of In-service General Educators

A set of paired sample t-tests was performed in order to determine whether significant differences existed for the items related to descriptive vignettes of EBD, SID, MID, and SLD at the predetermined .05 alpha level. Results (see Table 4.7) indicated a statistically significant difference in-service general educators' beliefs about inclusion of students with EBD ($M= 13.67, SD= 2.836$) and SID ($M= 11.11, SD= 3.237$); $t(99)= 8.405, p= .000$. There was not a statistically significant differences in inclusion scores of EBD and SLD ($M= 13.48, SD= 2.958$); $t(95)= 503, p= 0.616$. There was not a statistically significant difference in beliefs in inclusion of EBD and MID ($M= 14.10, SD= 2.521$); $t(97)= - 1.391, p= 0.167$. There was a significant difference in beliefs related to inclusion of students with SID and SLD ($t(96)= - 6.777, p= .000$) and inclusion of students with SID and MID ($t(97)= - 8.437, p= .000$). There was a statistically significant difference in in-service general educators' beliefs about inclusion of students with MID and SLD ($t(96)= 2.277, p= .025$). These findings showed that in-service general educators had the most favorable attitudes toward inclusion of the described student with MID in general education settings, followed by student with EBD, and student with SLD, whereas they had the least favorable attitudes toward inclusion of the student with SID.

Table 4.7 Descriptive Statistics and t-test Results for In-Service General Educators' Sum Scores of Items 13 to 16

Paired Comparisons	Mean Difference	SD	df	t value	p value
EBD sum scores (item 13) / SID sum scores (item 14)	2.51	2.98648	99	8.405	0.000
EBD sum scores (item 13) / MID sum scores (item 15)	-0.36735	2.61395	97	-1.391	0.167
EBD sum scores (item 13) / SLD sum scores (item 16)	0.13542	2.63826	95	0.503	0.616
SID sum scores (item 14) / MID sum scores (item 15)	-2.88776	3.38853	97	-8.437	0.000
SID sum scores (item 14) / SLD sum scores (item 16)	-2.35052	3.46723	96	-6.677	0.000
MID sum scores (item 15) / SLD sum scores (item 16)	0.54639	2.363	96	2.277	0.025

A set of paired sample *t*-tests conducted for the items related to knowledge, perceived ability to prepare for adulthood, and assumptions for participation in working life regarding students with SLD, EBD, SID, MID, and ASD. All pairwise group comparisons for in-service general educators resulted in statistically significant differences in their perceptions and knowledge of different types of disabilities (see Table 4.8).

There was significant difference in in-service general educators' sum scores of SLD ($M=13.34$, $SD= 2.844$) and sum scores of EBD ($M=13.91$, $SD=2.494$); $t(88) = -2.712$, $p= .008$. Compared to the sum scores of SID ($M= 10.13$, $SD= 2.453$), in-service general educators had higher scores for students with SLD ($t(87)= 9.781$, $p= .000$). In-service general educators had lower sum scores of MID ($M= 12.45$, $SD= 2.697$) than sum scores of SLD ($t(86)= 3.172$, $p= .002$). There was also statistically significant difference

in in-service general educators' sum scores of SLD and ASD ($M= 11.76$, $SD=2.88$); $t(88)= 4.503$, $p= .000$.

Table 4.8 Descriptive Statistics and t-test Results for In-Service General Educators' Sum Scores of Items 17 to 21

Paired Comparisons	Mean Difference	SD	Df	t value	p value
SLD sum scores / EBD sum scores	-0.57303	1.99367	88	-2.712	0.008
SLD sum scores / SID sum scores	3.17045	3.0408	87	9.781	0.000
SLD sum scores / MID sum scores	0.87356	2.56907	86	3.172	0.002
SLD sum scores / ASD sum scores	1.57303	3.29562	88	4.503	0.000
EBD sum scores / SID sum scores	3.76136	3.13304	87	11.262	0.000
EBD sum scores / MID sum scores	1.45977	2.67549	86	5.089	0.000
EBD sum scores / ASD sum scores	2.14607	2.66948	88	7.584	0.000
SID sum scores / MID sum scores	-2.31395	2.37765	85	-9.025	0.000
SID sum scores / ASD sum scores	-1.60227	3.03822	87	-4.947	0.000
MID sum scores / ASD sum scores	0.66667	2.67054	86	2.328	0.022

There were statistically significant differences in in-service general educators knowledge and perception scores for students with (a) EBD and SID; $t(87)= 11.262$, $p= .000$, (b) EBD and MID, $t(86)= 5.089$, $p= .000$, and (c) EBD and ASD; $t(88)= 7.584$, $p= .000$. There were significant differences in knowledge and perception scores for students with SID and MID ($t(85)=-9.025$, $p= .000$) and students with SID and ASD ($t(87)= -4.947$, $p= .000$). In-service general educator had higher knowledge and perception score for students with MID compared to students with ASD ($t(86)= 2.328$, $p= .02$). These

findings suggested that in-service general educator had had the highest scores for students with EBD. In-service general educator had higher knowledge and perception scores for students with SLD compared to MID, ASD, and SID.

4.3.2 Differences in Attitudes, Perceptions, and Knowledge of In-service Special Educators

Results of paired sample t-test comparisons for the items related to descriptive vignettes for inclusion of students with EBD, SID, MID, and SLD (see Table 4.9) showed that in-service special educators had statistically significant differences in their beliefs regarding inclusion of students with EBD ($M= 13.70$, $SD= 2.648$) and SID ($M= 10.92$, $SD= 2.951$); $t(73)= 8.959$, $p= .000$. There was not a statistically significant difference in beliefs related to inclusion of students with EBD and SLD ($M= 13.71$, $SD= 2.845$); $t(71)= -0.123$, $p= 0.902$.

There was not a statistically significant difference in beliefs regarding inclusion of students with EBD and MID ($M= 14.22$, $SD= 2.573$); $t(72)= -1.851$, $p= .068$. Results revealed a statistically significant differences in in-service special educators' beliefs about inclusion of students with SID and SLD ($t(69)= -7.167$, $p= .000$), inclusion of SID and MID ($t(70)= -9.711$, $p= .000$), and inclusion of students with MID and SLD ($t(70)= 2.387$, $p= .02$). Results suggested that in-service special educators were less likely to believe in the effectiveness of inclusion for the described student with SID and they were more likely to believe in effective inclusion of the described student with MID.

Table 4.9 Descriptive Statistics and t-test Results for In-Service Special Educators' Sum Scores of Items 13 to 16

Paired Comparisons	Mean Difference	SD	df	t value	p value
EBD sum scores (item 13) / SID sum scores (item 14)	2.83784	2.72496	73	8.959	0.000
EBD sum scores (item 13) / MID sum scores (item 15)	-0.63014	2.90835	72	-1.851	0.068
EBD sum scores (item 13) / SLD sum scores (item 16)	-0.04167	2.87504	71	-0.123	0.902
SID sum scores (item 14) / MID sum scores (item 15)	-3.42254	2.96967	70	-9.711	0.000
SID sum scores (item 14) / SLD sum scores (item 16)	-2.8	3.26865	69	-7.167	0.000
MID sum scores (item 15) / SLD sum scores (item 16)	0.6338	2.2376	70	2.387	0.02

A series of paired sample t-tests was conducted for in-service special educators' scores for the items related to knowledge, ability to prepare for adulthood, and assumptions for participation in working life for students with SLD, EBD, SID, MID, and autism (see Table 4.10). There was not a statistically significant difference in perceptions and knowledge of SLD ($M= 16.05$, $SD= 3.105$) and students with EBD ($M= 15.5$, $SD= 2.873$); $t(59)= 1.810$, $p= 0.07$. There was a statistically significant difference in in-service special educators perception and knowledge of students with SLD and SID ($M= 12.53$, $SD= 3.401$); $t(58)= 7.811$, $p= .000$. Additionally, there was a statistically significant difference in their perception and knowledge of students with SLD and students with MID ($M= 14.4$, $SD= 3.251$); $t(59)= 2.473$, $p= .016$.

In-service special educators significantly differed in their perceptions and knowledge of students with SLD and students with ASD ($M= 14.29$, $SD= 3.419$); $t(58)=3.868$, $p= .000$. There was also statistically significant difference between in-

service special educators' sum scores of EBD and SID; $t(58)= 7.461, p= .000$. No statistically significant difference was found in in-service special educators' scores for students with EBD and MID; $t(59)= 1.636, p= 0.107$.

Table 4.10 Descriptive Statistics and t-test Results for In-Service Special Educators' Sum Scores of Items 17 to 21

Paired Comparisons	Mean Difference	SD	df	t value	p value
SLD sum scores / EBD sum scores	0.55	2.35368	59	1.81	0.075
SLD sum scores / SID sum scores	3.55932	3.5001	58	7.811	0.000
SLD sum scores / MID sum scores	1.15	3.60238	59	2.473	0.016
SLD sum scores / ASD sum scores	1.74576	3.46705	58	3.868	0.000
EBD sum scores / SID sum scores	2.98305	3.07095	58	7.461	0.000
EBD sum scores / MID sum scores	0.6	2.84158	59	1.636	0.107
EBD sum scores / ASD sum scores	1.27119	2.51773	58	3.878	0.000
SID sum scores / MID sum scores	-2.42373	2.10257	58	-8.854	0.000
SID sum scores / ASD sum scores	-1.86207	2.59181	57	-5.472	0.000
MID sum scores / ASD sum scores	0.57627	2.30594	58	1.92	0.06

There were significant differences in in-service special educators' perceptions and knowledge of students with EBD and students with ASD ($t(58)= 3.878, p= .000$), students with SID and MID ($t(58)= - 8.854, p= .000$), and students with SID and students with ASD ($t(57)= -5.472, p= .000$). There was not a statistically significant difference in in-service special educators' perceptions and knowledge of students with MID and students with ASD ($t= 1.920, p= .06$). These findings showed that in-service special

educators had the highest knowledge and perception scores for students with SLD, followed by EBD, MID, and ASD. In-service special educators had the lowest knowledge and perception scores for students with SID.

4.3.3 Differences in Attitudes, Perceptions, and Knowledge of Pre-service General Educators

A series of paired sample t-tests was conducted in order to compare pre-service general educators' beliefs about inclusion of the described students with EBD, SID, MID, and SLD (see Table 4.11). Results revealed a statistically significant difference in pre-service general educators' beliefs regarding inclusion of students with EBD ($M= 13.67$, $SD= 2.451$) and students with SID ($M= 12.14$, $SD= 2.822$); $t(110)= 6.218$, $p= .000$. There was not a statically significant in inclusion scores of students with EBD and students with SLD ($M= 13.41$, $SD= 2.765$); $t(108)= 1.507$, $p= 0.293$. No statistically significant differences were found in inclusion scores for students with EBD and MID ($M= 13.90$, $SD= 2.408$); $t(108)= -1.349$; $p= 0.180$. There were statistically significant differences in pre-service general educators' beliefs regarding inclusion of students with SID and SLD ($t(110)= -4.175$, $p= .000$) and beliefs in inclusion of students with SID and MID ($t(109)= -6.610$, $p= .000$). There was also a statistically significant difference in inclusion scores for students with MID and SLD ($t(109)= 2.357$, $p= .02$). These findings indicated that pre-service general educators were more likely to support inclusion of described student with MID, followed by student with EBD, SLD, and they were less likely to support inclusion of student with SID.

Table 4.11 Descriptive Statistics and t-test Results for Pre-Service General Educators' Sum Scores of Items 13 to 16

Paired Comparisons	Mean Difference	SD	df	t value	p value
EBD sum scores (item 13) / SID sum scores (item 14)	1.48649	2.51853	110	6.218	0.000
EBD sum scores (item 13) / MID sum scores (item 15)	-0.23853	1.84541	108	-1.349	0.18
EBD sum scores (item 13) / SLD sum scores (item 16)	0.25688	2.53642	108	1.057	0.293
SID sum scores (item 14) / MID sum scores (item 15)	-1.79091	2.84168	109	-6.61	0.000
SID sum scores (item 14) / SLD sum scores (item 16)	-1.2973	3.27413	110	-4.175	0.000
MID sum scores (item 15) / SLD sum scores (item 16)	0.5	2.22476	109	2.357	0.02

A series of paired sample t-tests was conducted in order to determine if pre-service general educators had different knowledge and perceptions regarding different types of disabilities (see Table 4.12). There was not a statistically significant difference in their perceptions and knowledge of students with SLD ($M= 13.59$, $SD= 2.276$) and students with EBD ($M= 13.53$, $SD= 2.26$); $t(109)= 0.414$, $p= 0.679$. There was a statistically significant difference in pre-service general educators' perceptions and knowledge of students with SLD and students with SID ($M= 10.99$, $SD= 2.628$); $t(108)= 10.926$, $p= .000$. There was not a statistically significant difference in pre-service general educators' perceptions and knowledge of students with SLD and students with MID ($M= 13.30$, $SD= 2.496$); $t(108)= 1.405$, $p= 0.163$. Pre-service general educators' perceptions and knowledge of students with SLD significantly differed from students with ASD ($M= 12.70$, $SD= 2.728$); $t(108)= 4.411$, $p= .000$.

Table 4.12 Descriptive Statistics and t-test Results for Pre-Service General Educators' Sum Scores of Items 17 to 21

Paired Comparisons	Mean Difference	SD	df	t value	p value
SLD sum scores / EBD sum scores	0.05455	1.38031	109	0.414	0.679
SLD sum scores / SID sum scores	2.56881	2.45465	108	10.926	0.000
SLD sum scores / MID sum scores	0.2844	2.11297	108	1.405	0.163
SLD sum scores / ASD sum scores	0.90826	2.14968	108	4.411	0.000
EBD sum scores / SID sum scores	2.51818	2.42211	109	10.904	0.000
EBD sum scores / MID sum scores	0.25455	1.96032	109	1.362	0.176
EBD sum scores / ASD sum scores	0.85455	2.37277	109	3.777	0.000
SID sum scores / MID sum scores	-2.30275	2.30741	108	-10.419	0.000
SID sum scores / ASD sum scores	-1.69725	2.50372	108	-7.077	0.000
MID sum scores / ASD sum scores	0.6	2.32734	109	2.704	0.008

There were statistically significant differences in pre-service general educators' perceptions and knowledge of students with EBD and student with SID ($t(109)= 10.904$, $p= .000$) and students with EBD and students with ASD ($t(109)= 3.777$, $p= .000$).

However, there was not a statistically significant difference in their perceptions and knowledge of students with EBD and students with MID ($t(109)= 1.362$, $p= 0.176$).

There were statistically significant differences in pre-service general educators' perceptions and knowledge of (a) students with SID and MID ($t(108)= -10.419$, $p= .000$), (b) students with SID and students with ASD ($t(108)= -7.077$, $p= .000$), and (c) students with MID and students with ASD ($t(109)= 2.704$, $p= .008$). These results indicate that

pre-service general educators had higher scores of knowledge and perceptions for students with SLD compared to their scores for students with EBD and MID. In addition, pre-service general educators had the lowest knowledge and perception score for students with SID.

4.3.4 Differences in Attitudes, Perceptions, and Knowledge of Pre-service Special Educators

I examined differences in sum scores of pre-service special educators for the items related to descriptive vignettes of students with EBD, SID, MID, and SLD. The findings (see Table 4.13) showed that there were not statistically significant differences in inclusion scores of (a) students with EBD ($M= 13.65$, $SD= 2.143$) and SLD ($M= 13.61$, $SD= 3.061$); $t(71)= -0.870$, $p= 0.387$ and (b) students with MID ($M= 14.20$, $SD= 1.993$) and SLD ($M=13.95$, $SD= 2.576$); $t(72)= 1.961$, $p= 0.54$. There was a statistically significant difference in pre-service special educators' beliefs about inclusion of students with EBD and SID ($M= 11.38$, $SD= 2.719$); $t(76)= 6.460$, $p= .000$. There were also statistically significant differences in their beliefs about inclusion of students with EBD and MID ($t(70)= -2.388$, $p= .02$), inclusion of students with SID and SLD ($t(73)= -6.276$, $p= .000$), and inclusion of students with SID and MID ($t(72)= -8.115$, $p= .000$). These comparison results suggested that pre-service special educators were likely to believe in inclusion of describe student with MID, then inclusion of described student with SLD, followed by the student with EBD. Pre-service special educators had the lowest scores for inclusion of described student with SID.

Table 4.13 Descriptive Statistics and t-test Results for Pre-Service Special Educators' Sum Scores of Items 13 to 16

Paired Comparisons	Mean Difference	SD	df	t value	p value
EBD sum scores (item 13) / SID sum scores (item 14)	2.23377	3.03443	76	6.46	0.000
EBD sum scores (item 13) / MID sum scores (item 15)	-0.61972	2.18675	70	-2.388	0.02
EBD sum scores (item 13) / SLD sum scores (item 16)	-0.26389	2.57284	71	-0.87	0.387
SID sum scores (item 14) / MID sum scores (item 15)	-2.91781	3.07207	72	-8.115	0.000
SID sum scores (item 14) / SLD sum scores (item 16)	-2.51351	3.44524	73	-6.276	0.000
MID sum scores (item 15) / SLD sum scores (item 16)	0.47945	2.08906	72	1.961	0.054

In order to examine differences in pre-service special educators' knowledge and perceptions related to students with SLD, EBD, SID, MID, and autism, I conducted a series of paired sample t-tests. Results (see Table 4.14) showed that there were not statistically significant differences in pre-service special educators' perceptions and knowledge of (a) students with SLD ($M= 15.21, SD= 1.985$) and students with EBD ($M= 15.08, SD= 1.819$); $t(69)= 0.651, p= 0.517$, (b) students with SLD and students with MID ($M= 14.90, SD= 1.905$); $t(68)= 1.144, p= 0.257$, and (c) students with EBD and students with MID; $t(69)= 0.854, p= 0.396$.

There were statistically significant differences in pre-service special educators' perceptions and knowledge of students with SLD and SID ($M= 12.31, SD= 2.424$); $t(69)= 8.089, p= .000$ and students with SLD and students with ASD ($M= 14.38, SD= 1.911$); $t(67)= 2.719, p= .008$. Additionally, statistically significant differences were found in pre-service special educators' perceptions and knowledge of students with EBD and

students with SID ($t(69)= 9.042, p= .000$) and students with EBD and students with ASD ($t(67)= 3.686, p= .000$).

Table 4.14 Descriptive Statistics and t-test Results for Pre-Service Special

Educators' Sum Scores of Items 17 to 21

Paired Comparisons	Mean Difference	SD	df	t value	p value
SLD sum scores / EBD sum scores	0.14286	1.83592	69	0.651	0.517
SLD sum scores / SID sum scores	2.85714	2.95515	69	8.089	0.000
SLD sum scores / MID sum scores	0.34783	2.52532	68	1.144	0.257
SLD sum scores / ASD sum scores	0.86765	2.63107	67	2.719	0.008
EBD sum scores / SID sum scores	2.72857	2.52478	69	9.042	0.000
EBD sum scores / MID sum scores	0.2	1.96048	69	0.854	0.396
EBD sum scores / ASD sum scores	0.77941	1.74361	67	3.686	0.000
SID sum scores / MID sum scores	-2.52174	1.93732	68	-10.812	0.000
SID sum scores / ASD sum scores	-1.95588	2.22894	67	-7.236	0.000
MID sum scores / ASD sum scores	0.64179	1.78971	66	2.935	0.005

Results also revealed statistically significant differences in pre-service teachers' perceptions and knowledge scores with respect to students with SID and MID ($t(68)= -10.812, p= .000$) and students with SID and students with ASD ($t(67)= -7.236, p= .000$). Finally, a statistically significant difference was found in pre-service teachers' perceptions and knowledge of students with MID and students with ASD ($t(66)= 2.935, p= .005$). These findings showed that pre-service special educators had the highest

knowledge and perception score for students with SLD and they had the lowest score for students with SID.

4.4 Differences in Attitudes, Perceptions, and Knowledge of Pre-service/In-service and General/Special Educators

General Linear Model (GLM) was used in order to determine differences in attitudes, perceptions, and knowledge of different types of disabilities by Teaching Discipline (Special Education/General Education) and Teaching Status (In-service Teachers/Pre-service Teachers). Dependent variable was the sums of the raw scores for each disability category used in the previous analysis. Independent variables were Teaching Discipline and Teaching Status. For beliefs about inclusion of the students with EBD, results showed no significant differences between pre-service ($M= 13.66$, $SD= 2.3236$) and in-service teachers ($M= 13.68$, $SD= 2.7492$), $F(1,364)= .006$, $p= 0.939$ and no significant differences between general educators ($M= 13.67$, $SD= 2.6341$) and special educators ($M= 13.67$, $SD= 2.5343$), $F(1, 364)= .000$, $p= 0.989$.

For beliefs about inclusion of students with SID, results revealed no statistically significant difference between scores of special educators ($M= 11.16$, $SD= 2.84$) and general educators ($M= 11.65$, $SD= 3.0605$), $F(1,365)= 2.452$, $p= .118$. There was a statistically significant difference in SID scores of in-service teachers ($M= 11.02$, $SD= 3.12$) and pre-service teachers ($M= 11.83$, $SD= 2.7982$), $F(1,365)= 6.665$, $p= 0.01$. In-service teachers' SID mean scores were significantly lower than pre-service teachers' SID mean scores. For beliefs about inclusion of students with SLD, there were no significant differences in scores of pre-service teachers ($M= 13.62$, $SD= 2.6958$) and in-service teachers ($M= 13.57$, $SD= 2.9044$), $F(1,353)= .032$, $p= 0.857$. Results also showed

that there was no significant difference in SLD scores of special educators ($M= 13.83$, $SD= 2.7039$) and general educators ($M= 13.44$, $SD= 2.8499$), $F(1,353)= 1.683$, $p= 0.195$. Similarly, for beliefs about inclusion of students with MID, there were no significant differences in scores of pre-service teachers ($M= 14.02$, $SD= 2.2492$) and in-service teachers ($M= 14.15$, $SD= 2.5363$), $F(1,355)= .244$, $p= 0.621$. Results also revealed no significant difference in MID scores of special educators ($M= 14.20$, $SD= 2.2894$) and general educators ($M= 13.99$, $SD= 2.4582$), $F(1,355)= 0.678$, $p= 0.411$.

GLM univariate analysis of variance was also performed for the items related to knowledge, ability to prepare adulthood, and perceptions regarding participation in working life in order to examine differences in Teaching Discipline and Teaching Status. Results showed that special educators' SLD scores ($M= 15.59$, $SD= 2.5833$) were significantly higher than general educators' SLD scores ($M= 13.47$, $SD= 2.5423$), $F(1,327)= 53.931$, $p= .000$. However, there was no significant difference in SLD scores of in-service teachers ($M= 14.43$, $SD= 3.2304$) and pre-service teachers ($M= 14.22$, $SD= 2.3018$), $F(1,327)= 0.408$, $p= 0.523$. Similar results revealed for EBD sum scores. Special educators had significantly higher EBD scores ($M= 15.27$, $SD= 2.3601$) than did general educators ($M= 13.70$, $SD= 2.3681$), $F(1,328)= 34.999$, $p= .000$. There was no significant difference in EBD scores between in-service teachers ($M= 14.55$, $SD= 2.7569$) and pre-service teachers ($M= 14.13$, $SD= 2.2268$), $F(1,328)= 2.273$, $p= 0.133$.

Results indicated that general educators had significantly lower SID scores ($M= 10.55$, $SD= 2.6783$) compared to special educators' SID scores ($M= 11.98$, $SD= 3.1598$), $F(1,325)= 34.921$, $p= .000$. No significant differences were found in SID scores of in-service teachers ($M= 11.08$, $SD= 3.10942$) and SID scores of pre-service teachers ($M=$

11.5, $SD= 2.6238$), $F (1,325)= 2.107, p= 0.148$. Special educators also had significantly higher scores of MID ($M= 14.90, SD= 2.6024$) than general educators ($M= 12.92, SD= 2.6145$), $F (1,324)= 45.648, p= .000$. There was no significant difference in MID scores between pre-service teachers ($M= 13.92, SD= 2.4091$) and in-service teachers ($M= 13.44, SD= 3.1648$), $F (1,324)= 3.128, p= 0.07$. Results revealed no significant difference in ASD scores of pre-service teachers ($M= 13.34, SD= 2.5731$) and in-service teachers ($M= 12.77, SD= 3.3342$), $F (1,324)= 3.849, p= .051$. Results showed that special educators had significantly higher ASD scores ($M= 14.33, SD= 2.7010$) than general educators ($M= 12.28, SD= 2.8286$), $F (1,324)= 43.273, p= .000$.

4.5 Factors Explaining Teachers' Perceptions, Knowledge, and Skills Related to Inclusion

I conducted a discriminant function analysis (DFA) in order to determine how teacher groups (Special Educators / General Educators and Pre-service/In-service teachers) differed with respect to their response to the items used for the factor analysis. DFA yielded three discriminant functions presented in Table 4.15 demonstrating the correlation of variables with the functions. As hypothesized, perceived abilities, perceived knowledge, and time to plan instruction (Function 1), beliefs about and needs for collaboration, administrative support (Function 2) were found as having explanatory power with regards to differences in teacher groups' perceptions, knowledge, and skills. Function 1 accounted for 63.9%, Function 2 accounted for 25.1%, and Function 3 accounted for 11% of the total among groups variability.

Table 4.15 Structure Matrix Showing Correlations Between Variables and Functions

Variables	Function		
	1	2	3
Knowledge: Characteristics	.628		
Ability to meet unique needs in class	.622		
Knowledge: Instructional strategies	.510		
Ability: Prepare for independent living	.477		
Ability: Prepare for working life	.447		
Inclusion: All activities with peers	.234		
Need: A special educator in GenEd	.230		
Time to plan instruction	.169		
Inclusion: Placement in GenEd	.086		
Inclusion: Individualized support in class		-.399	
Need: Collaboration		-.377	
Peers acceptance		.352	
Belief: Academic and social success		.307	
Inclusion: All or most of time		.294	
Administrative support		-.257	
Ability to teach SPED in GenEd		.225	
Need: Additional training			.601
Belief: Participation in working life			.322

The largest canonical correlation coefficient appeared in Function 1 (.0619) indicating that the strongest relationship was found between Function 1 and group membership. Wilks' Lambda revealed significance values less than .05 for all three functions indicating that variables emerged in the functions were able to explain differences in the teacher groups. The largest lambda value (.903) was found in Function 3 suggesting less discriminatory ability of this function. The Box's M test revealed a statistically significant value of .000 and the log determinants were not equal showing that the groups differed in their covariance matrices, violating the assumption of multivariate normality.

The combined-group plot (see Figure 4.1) showed the separation of teacher groups. The group centroids were relatively close for pre-service and in-service general educators on Function 1 indicating errors of classification of these two groups were more likely to appear for this function. In addition, group centroids were closer for pre-service general and special educators on Function 2 showing that these two groups were less likely to be separated for Function 2. The group centroids were close for in-service general and special educators on Function 2 suggesting these groups were more likely to be misclassified for this function, but the group centroids for these two groups were more separated for Function 1.

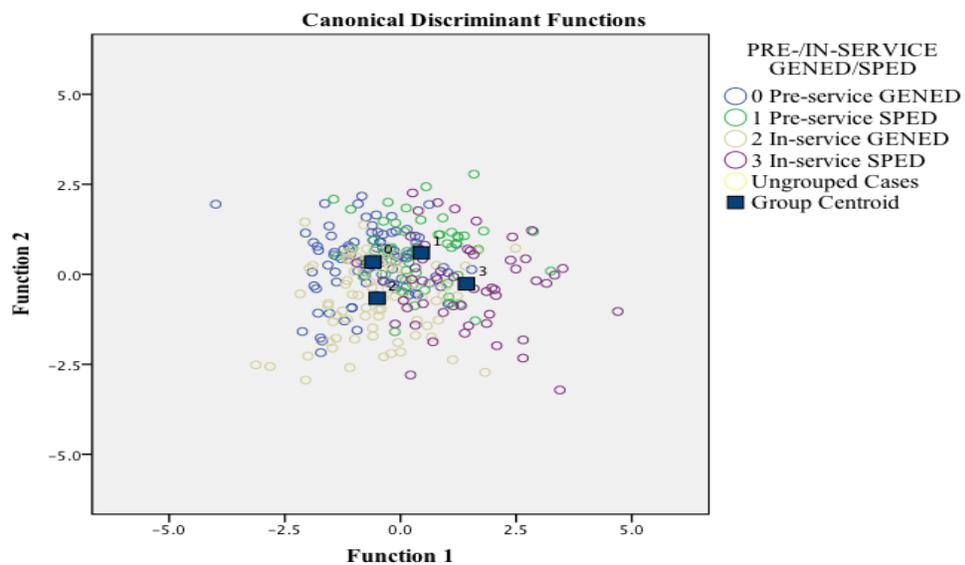


Figure 4.1 The Combined-Group Plot

The territorial map (see Figure 4.2) shows the relationships between teacher groups and discriminant functions. According to this map, some pre-service general educators were on more positive sides of Function 1 and 2 leading misclassification of them in either pre-service or in-service special educator groups. Some pre-service special

educators felt on more positive side of Function 1, more consistent with the group centroid of in-service special educators on this function. Some in-service special educators were more negative side of Function 2 resulting in misclassification of their group membership in in-service general educators. Some in-service special educators were more negative side of Function 1, which was more consistent with the group centroid of pre-service general educators on this function.

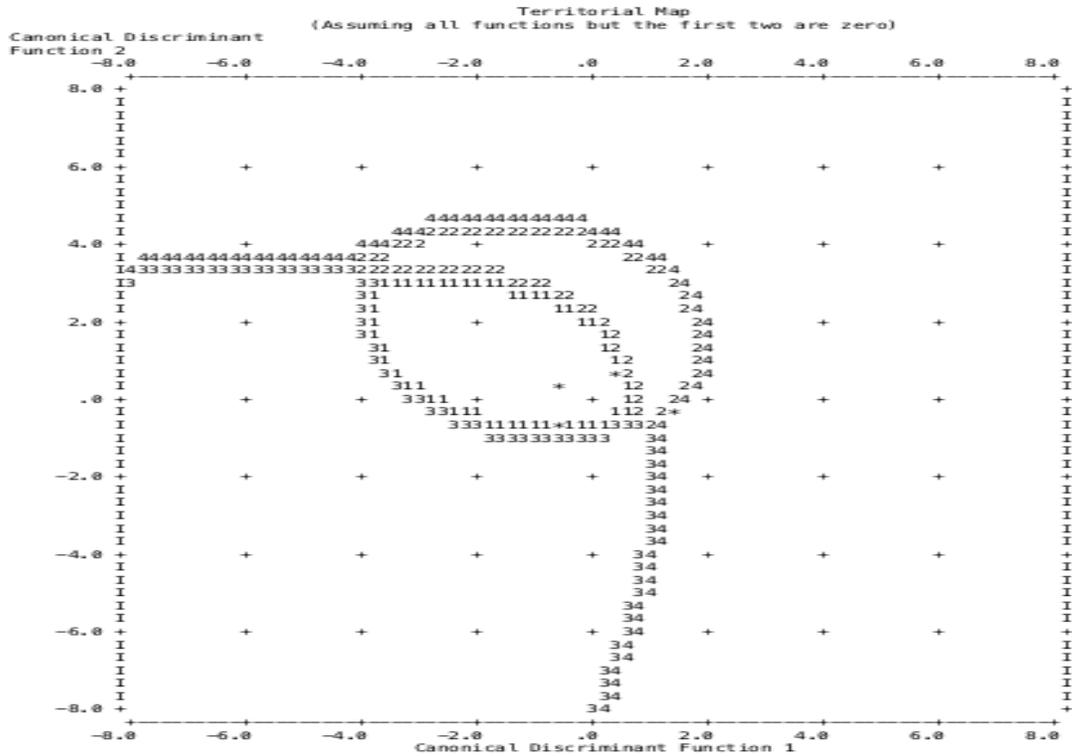


Figure 4.2 Territorial Map

Note. 1= Pre-service General Educators; 2= Pre-service Special Educators; 3= In-service General Educators; 4= In-service Special Educators.

The classification results (see Table 4.16) showed that 55.4% of group memberships were correctly predicted. 71.3% of pre-service general educators were correctly classified under this group; however, 15.8% of them were incorrectly classified as in-service general educators. 43.4% of pre-service special educators were incorrectly

classified as pre-service general educators, and only 35.8% of them were correctly classified under their group. 50% of in-service general educators were correctly classified under their group, but 34.6% of them were misclassified as pre-service general educators. 52.8% of in-service special educators were correctly classified under their own group. 20.8% of in-service special educators were incorrectly classified under pre-service special educators, 13.2% of them were incorrectly classified as pre-service general educators, and 13.2% of them were incorrectly classified as in-service general educators.

Table 4.16 Discriminant Function Analysis Classification Results

Teacher Groups	Predicted Group Membership n (%)				Percent Correct (%)
	0	1	2	3	
0	72 (71.3)	9 (8.9)	16 (15.8)	4 (4)	71.3
1	23 (43.4)	19 (35.8)	5 (9.4)	6 (11.3)	35.8
2	27 (34.6)	5 (6.4)	39 (50)	7 (9)	50
3	7 (13.2)	11 (20.8)	7 (13.2)	28 (52.8)	52.8

Note. 0= Pre-service General Educators; 1= Pre-service Special Educators; 2= In-service General Educators; 3= In-service Special Educators.

I also conducted a discriminant function analysis (DFA) in order to determine if teacher groups (Special Educators / General Educators and Pre-service/In-service teachers) with respect to their response to the items related to strategic and characteristic knowledge and their abilities to teach and accommodate students with disabilities in general education classrooms. Wilks' Lambda revealed significance values for strategic and characteristic knowledge and ability to accommodate the unique needs of students with disabilities. However, the lambda significance value was ($p=.518$) not significant for ability to teach students with disabilities in general education settings. Characteristic knowledge had the smallest lambda value indicating the greatest discriminatory ability among the other items. This analysis showed that 45.4% of group memberships were

correctly predicted by strategic and characteristic knowledge and ability to teach in general education settings. 67.9% of pre-service general educators were correctly predicted. 15.6% of pre-service general educators were misclassified as pre-service special educators, 12.8% of them were misclassified as in-service general educators, and 3.7% were misclassified as in-service special educators. Only 37.9% of pre-service special educators were correctly predicted, but 40.9% of them were incorrectly predicted as pre-service general educators, 13.6% were incorrectly classified as in-service special educators, and 7.6% of them were incorrectly classified as in-service general educators. Interestingly, 57.8% of in-service general educators were misclassified as pre-service general educators and 16.9% of them were misclassified as pre-service special educators. Only 19.3% of in-service general educators were correctly predicted by the independent variables. Remaining 6% of in-service general educators were incorrectly classified as in-service special educators. 49.1% of in-service special educators were correctly predicted. However, 21.8% of in-service special educators were incorrectly classified as pre-service special educators, 18.2% of them were misclassified under pre-service general educators, and 10.9% of them were misclassified under in-service general educators.

I wanted to confirm these findings from DFA by performing multinomial logistic regression because the assumption of multivariate normality was not met for this analysis. For multinomial logistic regression analysis, I created dummy variables for scores of strategic and characteristic knowledge and scores of ability to teach in general education settings by using quartiles of these item scores. Results of this analysis revealed the model chi-square of 151.988 with a significance value of .000 supporting a relationship between independent variables and group memberships. Cox and Snell R

square and Nagelkerke R square values showed that between 38.5% and 41.2% of variability was explained by the independent variables. Likelihood ratio tests showed that ability to teach in general education classrooms ($p = .011 < .05$), characteristic knowledge ($p = .006 < .05$), strategic knowledge ($p = .011 < .05$), and ability to accommodate unique needs ($p = .001 < .05$) were significant in distinguishing teacher groups. Overall, the classification accuracy rate (see Table 4.17) was 45.4% indicating that 54.6% of teacher groups were incorrectly predicted by the independent variables. 59.6% of pre-service general educators were correctly classified, only 18.2% of pre-service special educators were correctly classified, 44.6% of in-service general education teachers were correctly classified, and 50.9% of in-service special educators were correctly classified by the model used in this analysis. These findings suggested that these independent variables were not strong predictors of group memberships.

Table 4.17 Multinomial Logistic Regression Classification Results for Knowledge and Ability Scores

Observed Group Membership	Predicted Group Membership (n)				Percent Correct (%)
	0	1	2	3	
0	65	14	28	2	59.6
1	38	12	7	9	18.2
2	33	10	37	3	44.6
3	12	6	9	28	50.9

Note. 0= Pre-service General Educators; 1= Pre-service Special Educators; 2= In-service General Educators; 3= In-service Special Educators.

4.6 Analysis of Definition of Inclusion

A total of 381 participants responded to item 10, definition of inclusion. Of those, 57 responses did not define inclusion. Remaining 324 responses coded based upon aforementioned themes. 35.6% of participants defined inclusion as education with peers.

Although, least restrictive environment and placement of students with disabilities in general education classroom include the notion of education with peers, many definition included education with peers without addressing placement options. Thus, education with peers emerged from the responses was added as a separate subcategory of equity to the predetermined coding themes. Cohen Kappa (κ , Cohen, 1960) was used to determine inter-rater reliability. Results revealed Cohen Kappa of $\kappa = .827$ indicating a very good agreement (Landis & Koch, 1977).

Frequencies of the coding showed that 25% of Turkish teachers defined inclusion as education with peers (63.5%) in the same environment (either placement in general education or special education classrooms; 35.8%). Sixty-four percent of respondents defined inclusion as placement. 21.2% perceived inclusion as a placement in general education settings and 4.9% believed inclusion is placement in special education settings in public schools. Only 7% of respondents defined inclusion as least restrictive environment. Only few respondents (1.2%) defined inclusion as environment for social activities with peers and those responses coded as other under placement. Eight-one percent of respondents defined inclusion as equity; however, those definitions were mostly education with peers. Only 4% participants addressed participation, 12.3% perceived inclusion as belonging, 8% perceived inclusion as acceptance, 4% perceived inclusion as access to general education curriculum, 4% as access to extracurricular activities, and 7% as equal educational opportunities. 13.2% of definitions included one of the dimensions of quality in education. Only 0.9% participants perceived inclusion as accommodation and modification and only 0.3% defined inclusion as the use of effective educational practices. 12.3% of respondents defined inclusion as individualized support

and services; however, some of these responses stated that such support and services should be provided in separate settings. Only 1.2% of respondents addressed the necessity of collaboration and shared responsibility for inclusion. Total inclusion score for 40.7% of respondents was 1, for 36.4% inclusion score was 2, for 17.9% inclusion score was 3, for 3.7% inclusion score was 4, and for 1.2% inclusion score was 5.

Pre-service teachers were more likely to respond this item compared to in-service teachers. Response rate for this item was 72.1% for pre-service general educators, 72.2% for pre-service special educators, 61.2% for in-service general educators, and 61% for in-service special educators. Pre-service special educators were more likely to define inclusion based on placement (50.4%) than pre-service general educators (49.3%), in-service general educators (33.3%), and in-service special educators (37.1%). In addition, pre-service special educators (62.6%) and pre-service general educators (56%) were more likely to define inclusion as equity in education compared to in-service special educators (51.4%) and in-service general educators (48.1%). In-service special educators (13.3%) were most likely to define inclusion as quality in education. 10.4% of pre-service special educators and 9.3% of in-service general educators defined inclusion as quality in education. Only 3.7% of pre-service general educators defined inclusion as quality in education. None of pre-service general educators addressed collaboration in their definitions of inclusion, while only one pre-service special educator, one in-service general educator, and two in-service special educators mentioned this dimension of inclusion in their definitions. Pre-service general educators (54%) were more likely to define inclusion as education with peers in the same environment compared to in-service

general educators (45%), pre-service special educators (41.7%), and in-service special educators (41%).

With respect to total inclusion scores, 31% of pre-service general educators received 1, 30.1% of them received 2, 7.4% received 3, 2.9% received 4, and only 0.7% received 5. For pre-service special educators, for 24.3% of them, total inclusion score was 1, 37.3% had 2, 17.4% had 3, 2.6% had 4, and 0.9 received 5. For 30.2% of in-service general educators, total inclusion score was 1, 19.4% of them had 2, 10.1% had 3, 1.6% had 4, but none of them could receive 5. For 21.9% of in-service special educators, total inclusion score was 1, 20% received 2, 14.3% received 3, 2.9% received 4, and 1.9% of them had 5. There were a statistically significant differences in total inclusion scores between (a) pre-service special educators and in-service general educators and (b) in-service general educators and in-service special educators. In-service general educators had significantly lower inclusion scores than did pre-service and in-service special educators.

4.7 Analysis of Effective Strategies Data

I analyzed open-ended questions (items 24 to 27) assessing knowledge of educators with respect to effective strategies for teaching students with specific learning disabilities, emotional behavioral disorders, and their peers in general education classrooms. A total of 74 participants agreed to participate in the second part of survey consisting of open-ended questions; however, only 48 of them responded these questions. Eleven pre-service general educators agreed to participate, but seven responded to item 24, five responded to item 25, five responded to item 26, and only three responded to item 27. Fourteen pre-service special educators indicated that they wanted to continue to

second part, but nine of them responded to item 24 and item 25 and eight responded to item 26 and item 27. Twenty-two in-service general educators agreed to continue the second part of the survey, only thirteen responded to item 24, twelve responded to item 25, eleven responded to item 26, and nine responded to item 27. Twenty-seven in-service special educators agreed to participate in the second part of the survey, but nineteen responded to item 24, sixteen responded to item 25, and thirteen responded to item 26 and 27. The independent evaluator and I ranked the quality of responses from 0 to 2 by using the scoring tool. Results for the inter-rater reliability revealed a Cohen Kappa coefficient of $\kappa = .905$ for total strategy scores of specific learning disabilities, $\kappa = .849$ for total strategy scores of emotional behavioral disorders, and $\kappa = .877$ for overall total strategy scores suggesting high level of inter-rater agreement.

Six pre-service general educators had score of a 0 and only one could receive a 1 for item 24. Five of them who responded to item 25 received a 0. Four pre-service general educators had score of 0 and one received a 1 for item 26. Two of pre-service general educators received 0 and one of them could receive 1 for item 27. Five pre-service special educators had a 0 for item 24, three of them received 1, and one of them had 2 for this item. Six pre-service special educators had score of 0 and three of them had 1 for item 25. However, eight of these respondents received a 0 for items 26 and 27 related to strategies for students with EBD and their peers. Nine in-service general educators had score of 0 for item 24 and four could get 1. Ten in-service general educators had a 0 and only two of them could receive a 1 for item 25. Ten in-service general educators had a 0 and only one had a 1 for item 26. All nine participants who answered item 27 received a 0 for this item. Only one in-service special educator could

receive 1 for item 24, remaining 18 had score of 0 for this item. Fifteen of in-service special educators had score of 0 for item 25 and only one had score of 1. Twelve of these participants received 0 for items 26 and 27, an only one in-service special educator could receive 1 for these items.

In general, results showed that 66.7% of respondents had total strategic knowledge score of 0, 22.9% had total strategic knowledge score of 1, 8.3% had total strategic score of 2, and only one participant (2.1%) had total strategic score of 3. None of the participants could receive 2 points for each item. The Chi-Square statistics revealed no statistically significant differences in strategic knowledge scores for SLD and strategic scores for EBD. In addition, there were no significant differences in total strategic knowledge between (a) general educators and special educators and (b) pre-service teachers and in-service teachers.

For items 24 and 25, eight responses ranked as 1 suggested the use of peer-mediated instruction for the student with SLD and students without disabilities; however, such responses included only the term peer education without specification of the implementation of peer-mediated instruction identical to an effective peer-mediated strategy. Four responses ranked as 1 for items 24 and 25 suggested the use of direct instruction for the described student with SLD; however, these responses did not include description that specified implementation procedures relevant to a scientifically validated direct instruction used to teach students with learning problems. Responses ranked as 0, either described some instructional supports, some suggested collaboration with parents, some suggested the use of resource rooms, some indicated the use of extra assignments or homework for the described students, and some of the responses named several

discussion or brainstorming techniques or suggested the use of drama as an approach to teach the student with SLD. Only one response for the item 24 ranked as 2, which involved in description of systematic and direct instruction in order to improve the described student's word recognition skills and vocabulary knowledge. This participant had the highest total strategic knowledge score of 3.

For items 26 and 27, the majority of responses (91.9%) ranked as 0 that mostly suggested the use of punishment or reward in order to teach the student with EBD in general education settings. One respondent with a score of 0 indicated that described student with EBD should not be educated with peers without disabilities. Some respondents explicitly stated that they did not know how to teach such student in general education settings. Five responses ranked as 1 involved in using a reinforcement system identical to token economy; however, these responses failed to address the importance of identification of target behavior and instruction for teaching appropriate behavior. In addition, those responses did not include data collection on student's behavior. Only one respondent addresses the importance of identifying antecedent influencing the occurrence of inappropriate behavior, but the response did not attempt to describe how antecedent would be used for behavior modification. None of the responses to these items ranked as 2.

Sixteen respondents who had total SLD strategic knowledge score of 0 agreed or strongly agreed that they knew instructional strategies to teach a student with SLD (item 17), remaining eight participants with total SLD score of 0 stated that they did not know instructional strategies to teach students with SLD. Nine participants who had total SLD score of 1 agreed or strongly agreed that they knew instructional strategies for such

students, whereas three participants with total SLD score of 1 disagreed with this statement. The participant who had total SLD score of 2 agreed with this statement. Interestingly, the participant with the highest score of 3 disagreed with the item related to knowledge of instructional strategies.

The majority of respondents (n= 27) who had total EBD strategic knowledge score of 0 agreed or strongly agreed that they knew instructional strategies to teach students with EDB and only seven participants with total EBD score of 0 disagreed with this statement. The participant with total EBD score of 1 strongly agreed with this item regarding knowledge of instructional strategies and two participants who had total EBD score of 2 agreed with this item.

CHAPTER 5

DISCUSSION

This study was designed to (a) understand Turkish educators' attitudes, knowledge, and perceptions with respect to inclusive education and students with different types of disabilities, and (b) examine Turkish educators' perceived abilities to teach students with learning and behavioral limitations in general education classrooms. This study also examined whether different types of teachers differed in their beliefs and skills with regards to inclusion of students with disabilities.

5.1 Psychometric Properties of Turkish version of International Survey of Inclusion

I found that the Turkish version of the International Survey of Inclusion was both valid and reliable. The results of reliability analyses revealed Cronbach's alpha coefficient of .890 for the pilot study and .874 for the present study. In addition, the results revealed the Guttman split-half reliability coefficient of .978 for the pilot study and .977 for the present study. The results from factor analyses revealed five factors that explained 67.89% of total variance for the pilot study and 68.03% of total variance for the present study. Moreover, the findings from the cognitive interview have demonstrated that the Turkish version of the instrument was a valid. The problems identified through the cognitive interview were not related to the format or the content of the instrument. For instance, the interviewees reported that the second part of the instrument was difficult to answer; however, these difficulties were reported as the reflection of a lack of strategic knowledge in Turkey. These findings have demonstrated that the Turkish version of the instrument is a reliable and valid scale that can be used to measure Turkish educators' beliefs, knowledge, and skills related to inclusive education practices.

5.2 Turkish Educators' Perceptions, Knowledge, and Skills Regarding Inclusive Education

Results from descriptive statistics showed that overall, Turkish educators had positive attitudes toward inclusive education. In the quantitative analyses, Turkish educators were more likely to agree that inclusion meant individualized support within the core curriculum than placement. However, the results from qualitative analysis showed that, as hypothesized, Turkish educators mostly defined inclusion as placing students with disabilities in the same educational environment with their peers without disabilities. Only few participants addressed access to general education (4%), individualized support (12.3%), and accommodations and modifications (0.9%) when defining inclusion.

The findings showed that Turkish educators had slightly positive beliefs related to the percentage of instructional time students with special needs should spend in general education settings. 21.4% of the participants reported that students with disabilities should spend all of their time in separate settings. In addition, Turkish educators were most likely to support that students with moderate intellectual disabilities should spend all or most of instructional time in general education settings, followed by students with emotional behavioral disorders, students with specific learning disabilities, and students with severe intellectual disabilities.

The majority of participants agreed that successful inclusion needed collaboration between special and general education teachers. Previous studies also found that teachers perceived collaboration as one of the important factors affecting success of inclusion (Kucuker et al., 2006). Furthermore, this finding related to the need for collaboration was

consistent with the inclusive research in the U.S. indicating that teachers found collaboration as an essential component of successful inclusion (Desimone & Parmar, 2006). Nevertheless, the findings from qualitative analysis showed that only 1.2% of the participants mentioned collaboration in their definition of inclusion. In addition, Turkish teachers mostly believed that they needed additional training in order to be prepared to teach students with special needs in inclusive settings. Previous research supported this finding as suggesting that Turkish teachers appeared willing to participate in teacher trainings related to inclusive practices (Rakap & Kaczmarek, 2010). The majority of Turkish educators had positive perceptions regarding the need for a special educator in inclusive settings, but 29.1% of the participants felt that there would not be a need for special educators in inclusive settings to teach students with special needs. The findings also showed that Turkish teachers generally had positive perceptions regarding administrative and school support that would enable them to plan the lesson and teach students with special needs in inclusive settings. The findings from this study regarding perceptions about support were not consistent with the findings from Kucuker et al. (2005) as it suggested unavailability of supports needed for successful inclusion.

Turkish educators had positive responses regarding academic and social success of students with disabilities in inclusive settings, except for students with severe intellectual disabilities. Although Turkish educators mostly agreed that students with disabilities should be provided access to all school activities, the qualitative analysis showed that only 4% of them addressed the necessity of providing access to extracurricular activities and 4% addressed full participation when defining inclusion. Additionally,

45.7% of Turkish educators reported that students without disabilities would not accept their peers with special needs in their general education classrooms.

The findings showed that Turkish educators had slightly negative perceptions regarding possibility of participation in working life for students with disabilities. Specifically, 30.3% of Turkish teachers agreed that students with severe intellectual disabilities should participate in working life. Turkish educators reported positive perceptions about possibility of participation in working life for the other types of disability categories. These findings may be interpreted as the reflection of a lack of emphasis on transition planning in Turkey. In addition, current Turkish policy does not adequately address discrimination against individuals with disabilities in employment (Meral & Turnbull, 2016). Nevertheless, Turkish educators had positive perceptions regarding their abilities to prepare students with disabilities for working life and independence. This finding may not reflect realistic perceptions about educators' abilities to prepare students with special needs for adulthood since there is a lack of knowledge about transition planning in Turkey, evidenced by a lack of any policy for transitions or transition planning.

Similarly, Turkish educators had positive perceptions with respect to their abilities to meet unique needs of students with disabilities consistent with Secer (2010) who found that Turkish teachers believed that they could meet the needs of students with disabilities in general education settings. In addition, Turkish educators had positive perceptions with respect to their knowledge of instructional strategies and characteristics of different types of disability categories. Turkish teachers reported only negative perceptions for their knowledge of instructional strategies used for students with severe

intellectual disabilities. The majority of the participants believed that they knew characteristics associated with emotional behavioral disorders (79.4%) and students with specific learning disabilities (71.1%). However, previous studies examining teachers' knowledge of students with specific learning disabilities showed that Turkish teachers demonstrated a lack of knowledge related to characteristics (Dogan, 2013; Karadeniz, 2013; Yangin et al., 2016). Therefore, these findings reporting perceived knowledge and abilities of the participants should be interpreted cautiously.

5.3 Factors Explaining Turkish Educators' Perception, Knowledge, and Skills

The findings from factor analysis showed that as hypothesized, knowledge and abilities were the most explanatory factors related to teachers' perception, knowledge, and skills with respect to inclusive education. The second most important factor was found as beliefs about inclusion of students with disabilities. The third factor explaining teachers' perceptions, knowledge, and skills were related to beliefs about and needs for inclusion. The fourth factor was school and administrative support, and the last factor was peer acceptance. The findings from discriminant function analysis also showed that knowledge and abilities, beliefs about inclusion, and support had the greatest ability to predict teaching status (Pre-service / In-service) and teaching discipline (General Education / Special Education). These findings confirm previous research on inclusion emphasizing the impacts of knowledge, skills, and administrative support on teachers' perceptions related to inclusion (Avramidis & Norwich, 2002).

5.4 Turkish Educators' Perception, Knowledge, and Skills Regarding Different Types of Disabilities

In general, the findings from paired sample t-tests have suggested that without specification of a disability category, Turkish teachers were more likely to report positive perceptions regarding inclusion of students with moderate intellectual disabilities than inclusion of students with emotional behavioral disorders, specific learning disabilities, and severe intellectual disabilities. On the other hand, Turkish teachers were more likely to perceive themselves competent to teach students with emotional behavioral disorders and specific learning disabilities when the items included disability specifications. However, compared to overall findings, results have revealed some inconsistencies in perceptions and knowledge about inclusion of disability categories by teacher groups. For instance, in-service general educators had the highest scores for students with moderate intellectual disabilities when the item described some academic characteristics identical to characteristics of moderate intellectual disabilities without specification of diagnosis. The second highest scores were for emotional behavioral disorders among this group of teacher. However, in-service general education teachers had the highest scores for emotional behavioral disorders, but the second highest scores followed by specific learning disabilities when the item asked their knowledge, abilities, and assumptions related to specified disability categories. Similarly, when the items had no specification of disability category, in-service special educators had the highest scores for moderate intellectual disabilities, but their second highest scores were for specific learning disabilities and emotional behavioral disorders. When the items included disability diagnosis, this group of teachers had the highest scores for specific learning disabilities,

then emotional behavioral disorder. In addition, in-service special educators' moderate intellectual disability scores did not significantly differ from their autism scores.

The findings showed that similar to in-service general educators, pre-service general educators had the highest scores for moderate intellectual disabilities, followed by emotional behavioral disorders and specific learning disabilities when there was no specification of disability category. Unlike in-service general educators, pre-service general educators had the highest scores for specific learning disabilities, then emotional behavioral disorders when the disability categories were specified in the items. The comparisons of disability categories for pre-service special educators revealed similar results as found for in-service special educators. Pre-service special educators had the highest scores for mild intellectual disabilities for the items including descriptive vignettes without specification of disability category. This group had the highest scores for specific learning disabilities, followed by emotional behavioral disorders when the items specified disability categories. These inconsistent findings suggest that Turkish general educators may indeed have limited knowledge regarding academic and behavioral characteristics of different types of disabilities as their responses differ across the items with and without specification of disability categories.

The findings from paired sample t-tests also showed that in-service special educators had lower scores of specific learning disabilities for the items without a disability specification compared to items with specification of disability categories. Similar to pre-service special educators, in-service special educators had more positive perceptions about students with specific learning disabilities when the items specified the disability categories, whereas they had lower scores for the items without a disability

specification. Special educators were more likely to have positive perceptions about students with moderate intellectual disabilities when the items did not include the type of disability, while they had the highest score for specific learning disabilities when the items included disability specifications. These inconsistent findings may reflect a lack of knowledge about educational characteristics of students with specific learning disabilities among special educators even though they have reported positive perceptions regarding characteristic knowledge associated with specific learning disabilities. In addition, the findings from paired sample t-tests also conflicts with the research suggesting the positive impact of increased knowledge on attitudes toward inclusion of students with disabilities, as the participants in this had more positive perceptions about their knowledge and abilities with respect to some types of disabilities, while they expressed less positive beliefs regarding inclusion of students with those types of disabilities.

Paired t-test comparisons have revealed consistent results for only severe intellectual disabilities. Results showed that with or without specification, all teacher groups had the lowest scores for students with severe intellectual disabilities, and this finding is consistent with previous studies indicating students with severe intellectual disabilities are less accepted in inclusive settings compared to other disability categories (Avramidis & Norwich, 2002; Rakap & Kaczmarek, 2010). In addition, as hypothesized, autism was found as one of the disability categories Turkish teachers had the least positive attitudes toward. Previous studies support these findings as they have indicated that severity of disability has an impact on teacher attitudes toward inclusion (Avramidis & Norwich, 2002, Barned et al. 2011; Dedrick et al., 2007).

The findings related to specific learning disabilities and emotional behavioral disorders were surprising considering that Turkish schools lack the supports necessary to teach students with these two disabilities, and these categories are undersupported in teacher training programs, which generally focus on training teachers to work with students with intellectual disabilities, but not training teachers to work with students with specific learning disabilities or emotional behavioral disorders. It is possible that the Turkish teachers report positive attitudes and have positive perceptions of their abilities with respect to these students because they have limited or no experience teaching or supporting these students in inclusive settings.

5.5 Differences in Perceptions, Knowledge, And Skills Regarding Inclusion by Teacher Groups

Overall, I found that there was a positive attitude towards inclusion and towards students with disabilities across teacher groups, but there were significant differences in the perceptions by teacher groups. However, I had difficulties in discriminating between the groups based on survey responses. In other words, substantial percentages of each of the teacher groups were inaccurately classified in other groups. Furthermore, the perceptions and knowledge of the teacher groups did not necessarily align with the training those respective groups received or experienced in school experiences or with their level of teaching experience. This could be attributed to the limited types of experiences that teachers in respective groups have working with students with disabilities. Even special educators in Turkey typically work with students from low incidence disability groups, and do not work with those students in inclusive settings. Few special educators or general educators in Turkey have experience working with

students with severe learning disabilities or emotional behavioral disorders. The measured positive attitudes towards students from those respective groups across categories may reflect a positive perception towards these two types of learners that the respondents had little or no experience teaching. This potential phenomenon may explain the significant differences between general educators and special educators, while there were high rates of misclassifications in the DFA. There is a strong possibility that a substantial percentage of the respondents across the teacher groups that responded without adequate understanding of or experience with students with disabilities. In other words, the significant differences between groups could be related to the real differences between knowledgeable respondents, while the misclassifications could be related to the unknowledgeable respondents.

With respect to differences in the survey responses on specific items by teacher groups, pre-service teachers had significantly positive perceptions regarding the percentage of instructional time students with disabilities should spend in general education settings compared to in-service teachers. In addition, pre-service teachers had significantly positive perceptions with regards to peer acceptance compared to in-service teachers. Pre-service teachers were more likely to believe that they needed additional training than in-service teachers. On the other hand, in-service teachers reported significantly positive perceptions than pre-service teachers related to (a) ability to meet unique needs, (b) the need for collaboration, (c) the need for a special educator in an inclusive setting, and (e) inclusion as specialized support within core curriculum. These findings may be related to the impact of teaching experience on teachers' beliefs related to inclusion and students with disabilities.

Special educators had significantly positive perceptions than general educators with respect to (a) inclusion as a specialized support within core curriculum, (b) the need for collaboration, (c) the need for a special educator in an inclusive setting, (d) inclusion of students with disabilities in all school activities, (e) ability to meet unique needs, (f) strategic and characteristic knowledge, and (e) ability to prepare for working life and independence. Special educators had positive beliefs related to their knowledge and abilities. These positive perceptions may be explained by higher level of training related to special education and disabilities and higher level of experience working with students with special needs compared to level of training and experience among general educators. However, the findings showed that special educators had significantly negative perceptions regarding peer acceptance than did general educators. Negative beliefs regarding peer acceptance among special educators should be interpreted cautiously due Turkey's dual system in education. For instance, the special educators in this study reported that the majority of their students consisted of students with disabilities; thus, they might have limited experience with inclusion and students without disabilities. On the other hand, these negative views may reflect more realistic perceptions about peer acceptance since special educators have more awareness about the issues students with disabilities experience with.

The results from paired sample t-tests showed that Turkish general educators were more likely to accept students with emotional behavioral problems compared to special educators. These findings are not consistent with the previous findings indicating that one of the least accepted types of disability group is emotional and behavioral disorders in inclusive settings (Avramidis & Norwich, 2002; Rakap & Kaczmarek, 2010). The

positive attitudes toward such students with behavioral limitations may be due to lack of knowledge regarding educational needs of those students. The other potential reason behind positive views of student with behavioral problems among general educators may be related to current disciplinary approaches used in Turkish schools that are mostly rely on punishment or exclusion of students involving in misconduct. Another explanation of positive attitudes of general educators toward students with behavioral issues may be a result of their beliefs regarding that this category is not common in Turkey; therefore, they may believe that they would not have students with behavioral limitations. The participants recruited for the cognitive interview also supported this explanation as they suggested that inclusion of emotional behavioral category in the scale was unnecessary because of low rates of students with emotional behavioral disorders in Turkey.

The findings from General Linear Model showed that for the items using descriptive vignettes without specification of the type of disabilities, pre-service and in-service teachers did not significantly differ in their perceptions about students with emotional behavioral disorders, specific learning disabilities, and mild intellectual disabilities; however, pre-service teachers had significantly higher scores for severe intellectual disabilities compared to in-service teachers. For the items with specification of disability categories, results revealed no significant differences between pre-service and in-service teachers for any disability categories. These findings suggested that experience in teaching did not significantly impact on the Turkish educators' perceptions, knowledge, and skills regarding teaching students with different types of disabilities in inclusive settings.

Previous research has shown that special educators had higher perceptions than general educators regarding their (a) strategic and characteristic knowledge, (b) ability to meet educational needs of students with disabilities, and (c) inclusion of students with disabilities (Segall & Campbell, 2012). The results from GLM employed in this study also showed that special educators had higher perceptions with regards to their knowledge and skills related to specific types of disabilities compared to general educators. However, the findings showed that special educators participated in this study could not respond differently from general educators to the items using descriptive vignettes of students with different types of disabilities. These findings indicated that the participants with more training in special education and disabilities could not effectively identify characteristics associated with certain types of disabilities and they had less favorable attitudes toward students with academic and behavioral problems as expected.

Results from discriminant function analysis also supported these findings in-service special educators had more training in special education and experience with students with disabilities were correctly classified as in-service special educators. Additionally, results from multinomial logistic regression showed that only 50.9% of in-service special educators could be correctly classified under their groups based on their responses related to (a) their strategic and characteristic knowledge and (b) their perceived abilities to teach students with disabilities and meet their unique needs.

The results from qualitative analysis showed that total scores for definition of inclusion did not significantly differ for in-service special educators, pre-service special educators, and pre-service general educators. There was no significant difference in total scores of definition of inclusion between in-service and pre-service general educators. In-

service general educators had the lowest total scores for the definition of inclusion. Additionally, the findings from qualitative analysis demonstrated that there was no significant difference in teacher groups' responses with respect to strategy knowledge used to support students with specific learning disabilities, emotional behavioral disorders, and their peers without disabilities.

There is a fundamental problem with the inability to accurately classify higher percentages of the groups of Turkish teachers, although this finding was consistent with my predictions. Turkish teachers appear to have positive attitudes toward inclusion and toward students with disabilities despite a lack of training or experience working with these students. This represents a fundamental problem with the future implementation of inclusive practices, because a substantial percentage of general education teachers perceive themselves as equally capable and competent to teach students with disabilities as special education teachers. This is similar to the situation in the United States when inclusion was adopted as a model to be implemented despite the incapacity of the teaching field to adequately support students with disabilities in inclusive settings. This finding suggests that Turkish Universities need to adopt special education courses for general education teachers, and that the Turkish department of education will need to develop and implement in-service professional development and training if they are to avoid the mistakes and challenges faced by their U.S. counterparts.

5.6 Turkish Educators' Strategic Knowledge Regarding Students with Specific Learning Disabilities and Emotional Behavioral Disorders

The results from qualitative analysis showed that in-service special educators failed to identify effective strategies used for students with specific learning disabilities,

emotional behavioral disorders, and their peers without disabilities. Interestingly, only one response from a pre-service special educator could rank 2 for strategy related open-ended items. Responses for strategy related items related to students with emotional behavioral disorders were mostly about punishment or ignorance of behavioral issues that are not effective to promote positive behaviors. In addition, total strategy related open-ended scores mostly very low and were not consistent with the participants' perceived strategic knowledge scores obtained through the items using the Likert-type scale. The majority of Turkish educators perceived that they knew instructional strategies in order to teach students with emotional behavioral disorders (75%) and students with specific learning disabilities (69.8%). These findings regarding perceived strategic knowledge are consistent with previous research examining Turkish teachers' perceptions regarding knowledge of classroom management and competencies within the context of inclusion (Secer, 2010). However, these results are raising concerns about education of students with disabilities as they suggest Turkish educators, even experienced special educators indeed have a lack knowledge about effective strategies used to support students with learning and behavioral issues.

5.7 Limitations of the Study

There are several limitations of the present research. First, the generalizability of the findings is limited due to the sample recruited in this study that is not representative of all teachers and candidates in Turkey. However, the sample did include teachers from multiple universities and multiple regions in the country. Second, although I performed logistic regression in order to confirm the results from discriminant function analysis, these analyses should be interpreted cautiously because the assumption of multivariate

normality was violated. However, this is a common finding when using complex analytic procedures with extremely sensitive tests like Box's M. Third, the response rate for the second part of the survey was very low; therefore, there is not enough evidence to conclude that Turkish teachers have insufficient strategic knowledge used for students with specific learning disabilities and emotional behavioral disorders. The response rate for this part may be increased by making the second part of the survey mandatory, rather than optional. The other way to increase response rate may be separating the survey based on disability categories in order to shorten the length of the survey, and integrating open ended items into the survey at the beginning, middle, and end. Lastly, the e-communication in Turkey is substantially different than in the U.S. and in Europe; thus, Facebook was used for the participant recruitment. This made actual response rate difficult to determine since I was unable to monitor the degree to which participants may have received access to the survey from a recruited participant rather than from me, the researcher.

5.8 Implications for Practice

There are several important implications according to the results of this study. First, the special education law in Turkey hinge on the attitudes of Turkish education professionals. Current special education policy in Turkey suggests education of students with severe disabilities and autism in separate settings. The findings of current study show the impact of the policy on teachers' perceptions regarding inclusion of such students in general education settings as I have found that Turkish educators do not hold favorable attitudes toward inclusion of students with autism and severe intellectual disabilities. In addition, analyses of open-ended questions included some comments

indicating that students with severe learning and behavioral limitations should not be included in general education settings and should not receive an education with peers without disabilities. Additionally, some participants viewed inclusion as education of students with mild intellectual disabilities with their peers without disabilities and some of them believed that inclusive education would be only applied to students with disabilities who could adapt to general education settings. Some participants also indicated that there would not be four or five students with disabilities in a general education classroom as stated within descriptive open-ended questions. These comments are reflections of current special education policy that limits the number of students with disabilities in a general education setting. The special education policy should be reformed in the ways that promote the least restrictive environment and inclusion of students with disabilities.

Inclusive education research has clearly established the importance knowledge in order to ensure effectiveness of inclusive practices (Avramisdis, Baylis, & Burden, 2000; Avramidis & Norwich, 2002; Brown et al., 2007; Desimone & Parmar, 2006; Sari, 2007; Segall & Campbell, 2012). Furthermore, increased knowledge of disabilities and inclusive education plays a crucial role in shaping teacher' attitudes. The findings of this study showed Turkish teachers had positive perception about their knowledge and skills; however, they reflected some negative perceptions about inclusion of students with disabilities. For instance, 38.3% of the participants believed that students with disabilities should spend some of their time in general education settings, while 21.4% of them suggested a separate setting for students with special needs. In addition, some participants clearly suggested that there should be focus on improving special education schools for

students with disabilities instead of researching inclusive education because they believed that inclusive education would not be a helpful way for the development of such students.

Although the participants in this study believed that they had knowledge about instructional strategies, they demonstrated a lack of knowledge with respect to identifying effective strategies promoting improved educational outcomes for students with these disabilities in general education settings. For instance, none of the educators responded to the second part of the survey mentioned any data collection system necessary to monitor students' academic and behavioral progress and to determine the effects of an instructional strategies on educational outcomes. This finding from qualitative analysis indicates a lack of awareness related to the necessity of data collection in order to evaluate academic and behavioral outcomes. Systematic and continuous data collection has a crucial role in accurate decision-making about an instructional strategy that has potential to increase academic and behavioral outcomes. Without adequate knowledge, awareness, and preparation with respect to the data collection systems, educators will not be able to properly determine the effectiveness of the instructional strategies on students' educational outcomes. The lack of data collection system may also result in inaccurate assumptions about the students. Turkish teachers should be adequately prepared to use such data collection systems and they should rely on the data being collected from the students when making decisions about the instructional practices and the learners. In order to ensure improved educational outcomes for all learners within inclusive settings, both in-service and pre-service teacher training programs in Turkey should place greater focus on the importance of systematic data collection procedures that enable teachers monitor students' progress.

The findings from this study showed that special educators could not be predicted by their abilities and knowledge as expected. In addition, both general and special educators had more negative perceptions when complex learning and behavioral limitations of a student were described without disability specification. These results may be interpreted that perceived knowledge examined in this study reflects unrealistic beliefs. These results may also indicate ineffectiveness of teacher trainings in Turkey with regards to increasing knowledge of educators about effective instructional practices and disability. Teacher training programs in Turkey should increase educators' understanding of diverse academic and social needs associated with different types of disability categories. However, trainings on special education and disability alone do not ensure increased knowledge and adequate preparation to meet unique needs of diverse learners. Effectiveness of such trainings is an important factor in order to ensure readiness of teachers to work with diverse learners. Both in-service and pre-service teacher training programs should be restructured by focusing on pedagogical inclusive practices in order to effectively prepare educators to meet educational needs of diverse learners in general education settings. In order to improve pedagogical competency of prospective teachers and in-service teachers within the context of inclusive education, first and foremost, there is a need for greater emphasis on effective and evidence based strategies in teacher training programs. Teacher training programs also need to increase opportunities for teachers and teacher candidates to work with students with special needs in inclusive settings since professional experience with such students and inclusion is essential to increase positive perceptions about these students. Moreover, the findings of this study and previous research (Damore & Murray, 2009) showed that collaboration

between teachers is an important factor for inclusive practices; therefore, teacher preparation programs as well as administrators should foster collaboration between general and special education teachers in order to improve effectiveness of inclusive practices.

5.9 Implications for Research

The findings in this study have several implications for future research. The findings suggest the need for greater emphasis on effective instructional strategies in order to assure improved educational and behavioral outcomes of diverse learners. Future research in Turkey should focus on developing promising instructional approaches and identifying their effectiveness on educational and behavioral outcomes of students with special needs. In addition, future researchers should evaluate the quality of current teacher training programs. There is also need for research that focuses on developing systematic and effective teacher trainings in both in-service and pre-service levels in order to adequately prepare educators to work with diverse learners.

The other important limitation in Turkey is the lack of the data representing the number of students with different types of disability categories. In addition, current data on inclusion only represents the number of students with disabilities placed in general education settings in general, but there is not available data on the number of students with different types of disabilities included in general education settings. There is also a lack of data on the percentage of instructional time students with disabilities spend in inclusive setting. Future researchers should address this issue and should collect the data on students with disabilities, educational placement, and academic outcomes.

Future research should be based on surveys that are disability category specific instead of including all categories of disabilities. This will help to increase response rates and will provide a deeper understanding of educators' perceptions and knowledge about specific types of disability categories in the context of inclusive education. Particularly, in Turkey, there is a need for research on teachers' knowledge and attitudes with regards to students with specific learning disabilities, emotional behavioral disorders, and autism spectrum disorders and inclusion of such students in general education settings.

In this study, the instrument included open-ended questions related to strategic knowledge enabled me to obtain a deeper understanding related to teachers' perceived strategic knowledge. Future researchers should examine knowledge about characteristics through an instrument using both Likert type scales and open-ended questions. Observational studies are also needed in order to gather in-depth understanding related to instructional strategies within the inclusive education settings. Additionally, in this study, I was interested in examining strategic knowledge with respect to students with specific learning disabilities and emotional behavioral disorders. Future research should examine strategic knowledge about supporting students with other types of disability categories by using both Likert type scales and open-ended questions. In this study, I examined how Turkish educators defined inclusion, but I did not examine how the participants defined disability. Future studies should also examine how Turkish teachers define disability by using open-ended items. The participants in this study reported positive beliefs regarding school and administrative support enabling them to teach students with special needs in inclusive settings. However, in the present study, I did not examine the types of supports available to them. Administrative support is one of the important factors having impact

on teachers' attitudes and inclusive practices. Therefore, future research should carefully examine the types and degree of administrative supports available in Turkish schools that can help teachers to teach diverse learners in inclusive settings.

5.10 Conclusion

Inclusive education is one of the important aspects of ensuring equity and quality in education. Thus, improving inclusive education has become a world-wide concern in order to achieve the goal of providing equal educational opportunities for all. However, due to complexity in the nature of inclusive education philosophy, there have been various interpretations regarding what constitutes inclusive education across the world. Education policies in different countries have had greater contribution to these varied interpretations of inclusive education.

This study examined Turkish educators' perceptions, knowledge, and skills related to inclusive education and students with different types of disabilities. Results showed that Turkish teachers had positive perceptions regarding their competencies to teach students with special needs in general education settings. However, their perceptions with respect to inclusion of students with disabilities and students with disabilities were slightly negative. In addition, Turkish teachers' perspectives varied based on types and severity of disabilities. Results also showed that although Turkish educators had positive opinions about their strategic knowledge, they could not identify an effective strategy in order to teach students with specific learning disabilities and emotional behavioral disorders.

The impacts of special education policy on teachers' perspectives related to inclusion and students with special needs were observed throughout the data analyses.

The majority of Turkish educators defined inclusion based on placement. Although placement is one dimension of inclusive education, it requires effective means of education that can meet the needs of all learners. Nonetheless, implementation of inclusion policies requires changes in social norms and values as well as in teacher preparation and educational models. There is a potential problem in understanding the issue of inclusion from a purely policy oriented perspective. The construct of inclusion in Turkey is different from the construct in the U.S. in some ways, although the policies are relatively similar with respect to inclusion. From a social perspective, the goals of inclusion in Turkey may not align to the goals associated with access and performance that are the hallmarks of inclusive education in the U.S., and which underlie the Turkish policies. In other words, the findings from my study could be interpreted differently if improved access and performance for students with disabilities is not the socially contrived goals within Turkish society. For instance, there could be a social view that students with disabilities would be better served if they went to a separate school designed for a specific purpose associated with the type of disability, or if they had an alternative to education (e.g., vocational track).

Moreover, some Turkish teachers defined inclusion by emphasizing types and severity of disability and some of them defined inclusion on the basis of students' ability to adapt into general education settings and students without disabilities. These views related to inclusion among Turkish teachers are the reflections of the Turkish special education policy that conflicts with inclusive education philosophy. In order to change Turkish teachers' beliefs with respect to these issues, Turkish special education policy should be reformed in the ways promoting equal educational opportunities regardless of

learners' characteristics and abilities, as well as ensuring quality of education by effective means of educational approaches in order to provide all students chance to succeed.

Special education policy in Turkey should focus on ensuring equal access to general education for all learners. In addition, special education policy should promote restructuring educational system through necessary adaptations and individualized support to meet unique needs of all learners, rather expecting students to adapt into the system.

In conclusion, Turkish society is confronted with a difficult challenge with respect to inclusion of students with all disabilities. Turkey lacks accessible schools for students with a variety of disabilities; consequently, there is a potential problem with full participation and effective inclusion of students with disabilities in Turkish society. In order to become a more inclusive society, current Turkish education policy should be changed in the ways that ensure accessibility of schools for all learners and in doing so, aim to shape more positive attitudes toward diversity in Turkish society. There is also a fundamental problem with teachers who have perceptions about their pedagogical competencies, students with disabilities, and inclusion that are inconsistent with their knowledge and their training with respect to teaching students with disabilities or with teaching in inclusive settings. There is a danger that the country will move towards an inclusive model without a prepared teaching force, which will likely result in exclusions from school because students are unable to get their needs met and teachers are unable to meet the students' needs. For this reason, teacher training programs should be restructured in the ways that adequately and effectively prepare teachers to work with students with diverse educational needs in the context of inclusive education.

APPENDIX

INTERNATIONAL SURVEY OF INCLUSION

Inclusion Survey - United States of America

Thank you for agreeing to participate in a survey about your experiences working in schools, and your experiences working with students with disabilities. The survey has two parts. You can complete the first part of the survey only, or you can complete both the first part and the second part of the survey. There are minimal risks for participating, and we do not anticipate any benefits for your participation. Furthermore, there is no compensation for participating in the study. However, through this research we hope to generate knowledge about what teachers believe about inclusive education, and their practices. Your participation is strictly voluntary, and you can decide to terminate your participation at any time before submitting the survey. By completing and submitting this survey, you agree to participation in this research project.

***1. Gender**

- Female
 Male

***2. Age**

***3. What grades do you currently teach? (Check all that apply)**

- k-5
 6-8
 9-12

***4. What is your current position?**

- General Education Teacher
 Special Education Teacher
 School Psychologist
 School Counselor
 Paraprofessional
 School Administrator

***5. What is the name of the school that you currently work at (including town name)?**

Inclusion Survey - United States of America

***6. What percentage of the students you currently work with have special needs?**

- 0-10
- 11-40
- 41-60
- 61-90
- 91-100

***7. How many years of teach experience do you have?**

***8. Have you ever taught or supported students with special needs before? If you answered yes, how many years have you taught or supported students with special needs?**

- No
- Yes (Please indicate how many years have you taught students with special needs)

9. What type of school do you currently work in?

- Elementary School
- Intermediate School
- Middle School
- High School
- Vocational / Technical High School
- Public Alternative School
- Day School for Students with Special Needs
- Residential School for Students with Special Needs

Inclusion Survey - United States of America

In answering this questionnaire, please draw on all of your past and current experiences (i.e. teaching in a general education classroom, teaching as a special education teacher, teaching in a particular grade, working as a paraprofessional, working as a speech and language pathologist, your experience as a student, etc.). Please try your best to answer each question. You may encounter questions that describe teaching contexts that you are not familiar with. Please do your best to imagine the teaching context and answer the question to the best of your ability. You may encounter descriptions of students that you may not be currently teaching or descriptions of students that you may never have taught. Please do your best to imagine the student and answer the question to the best of your ability.

*** 10. 1. Define "Inclusion" in your own words.**

*** 11. Define "Disability" in your own words.**

12. Most students with disabilities should spend

- All of their time in a general education classroom
- Most of their time in a general education classroom
- Some of their time in a general education
- All of their time in a special education classroom in a general education school
- All of their time in a special education school

Inclusion Survey - United States of America

Please try your best to answer each question. You may encounter questions that describe teaching contexts that you are not familiar with. Please do your best to imagine the teaching context and answer the question to the best of your ability. You may encounter descriptions of students that you may not be currently teaching or descriptions of students that you may never have taught. Please do your best to imagine the student and answer the question to the best of your ability.

13. Respond to the statements about the following student.

A student who is verbally inappropriate, regularly gets into conflicts with peers, is sometimes physically aggressive, and is often defiant with adults in a way that impedes his ability to learn.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I would be able to teach this student in a general education classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My school provides sufficient administrative support to enable me to teach this student in a general education classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My school provides sufficient time to plan and prepare lessons to enable me to teach this student in a general education classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This student will be academically and socially successful in a general education classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This student should spend most or all of their time in a general education classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*14. Respond to the statement about the following student.

A student who has a very low IQ, who cannot master class content, who needs help following simple directions, and needs support following simple routines such as going to the bathroom.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I would be able to teach this student in a general education classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My school provides sufficient administrative support to enable me to teach this student in a general education classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My school provides sufficient time to plan and prepare lessons to enable me to teach this student in a general education classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This student will be academically and socially successful in a general education classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This student should spend most or all of their time in a general education classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Inclusion Survey - United States of America

*15. Respond to the statement about the following student.

A student of below average intelligence who has problems remembering information, struggles to learn complex information and concepts, has difficulty writing paragraphs and essays, and gets poor grades in school.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I would be able to teach this student in a general education classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My school provides sufficient administrative support to enable me to teach this student in a general education classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My school provides sufficient time to plan and prepare lessons to enable me to teach this student in a general education classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This student will be academically and socially successful in a general education classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This student should spend most or all of their time in a general education classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*16. Respond to the statement about the following student.

A student of average intelligence who always struggles with decoding and with reading comprehension, who reads about three years behind his peers, and who cannot independently read any class texts.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I would be able to teach this student in a general education classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My school provides sufficient administrative support to enable me to teach this student in a general education classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My school provides sufficient time to plan and prepare lessons to enable me to teach this student in a general education classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This student will be academically and socially successful in a general education classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This student should spend most or all of their time in a general education classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Inclusion Survey - United States of America

Please try your best to answer each question. You may encounter questions that describe teaching contexts that you are not familiar with. Please do your best to imagine the teaching context and answer the question to the best of your ability.

***17. I know and understand the instructional strategies necessary to teach a student with the following disability in a general education classroom.**

	Strongly Disagree	Disagree	Agree	Strongly Agree
Specific Learning Disability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotional Behavioral Disorder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Severe Intellectual Disability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Moderate Intellectual Disability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***18. I know and understand the characteristics associated with students with the following disability.**

	Strongly Disagree	Disagree	Agree	Strongly Agree
Specific Learning Disability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotional Behavioral Disorder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Severe Intellectual Disability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Moderate Intellectual Disability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***19. I prepare students with the following disabilities to become adults who obtain and keep a job.**

	Strongly Disagree	Disagree	Agree	Strongly Agree
Specific Learning Disability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotional Behavioral Disorder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Severe Intellectual Disability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Moderate Intellectual Disability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Inclusion Survey - United States of America

***20. I prepare students with the following disabilities to become adults who live independently.**

	Strongly Disagree	Disagree	Agree	Strongly Agree
Specific Learning Disability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotional Behavioral Disorder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Severe Intellectual Disability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Moderate Intellectual Disability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***21. All students with the following disabilities should be able to obtain and keep a job in an office at a typical company.**

	Strongly Disagree	Disagree	Agree	Strongly Agree
Specific Learning Disability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotional Behavioral Disorder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Severe Intellectual Disability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Moderate Intellectual Disability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Inclusion Survey - United States of America

Please try your best to answer each question. You may encounter questions that describe teaching contexts that you are not familiar with. Please do your best to imagine the teaching context and answer the question to the best of your ability.

*22. Respond to the following statements.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I know how to accommodate the unique needs of students with disabilities in my classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inclusion means that students with disabilities are placed into a classroom with students who do not have disabilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inclusion means that students with disabilities are supported in age-appropriate general education classes and receive necessary specialized instruction within the context of the core curriculum.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A student with a disability who is included in a general education classroom will need a special education teacher in the classroom to teach him or her.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students with disabilities should be involved in all school activities with their peers without disabilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Special education teachers and general education teachers need to collaborate in order for inclusion to be successful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I need additional training and in-services to be adequately prepared to teach students with disabilities in a general education classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students without disabilities want peers with disabilities in their general education classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***23. Thank you! You have completed part one of the survey. If you are interested, there are five more questions to answer about specific scenarios of students with special needs. If you are interested in continuing, please answer Yes, I Want to Continue. If you wish to complete the survey now, please press I'm Ready to Submit my Survey Now.**

- Yes, I Want to Continue
- I'm Ready to Submit my Survey Now

Inclusion Survey - United States of America

Imagine you are a teacher in an inclusive classroom that consists of 20 students without disabilities and 4 students with disabilities. One student has a specific learning disability and has difficulty with decoding, reading fluency, and reading comprehension. On average, the student reads about 3 years behind his peers, and is unable to independently read or comprehend the class texts.

Please answer the following two questions about this situation.

***24. List or describe one or more strategies you would use to ensure that the student with the learning disability learns the content of a lesson?**

***25. List or describe one or more strategies you would use to ensure that the students without disabilities learn the content of the lesson while attending to the needs of the student with the specific learning disability?**

Inclusion Survey - United States of America

Imagine you are a teacher in a classroom that includes 19 students without disabilities and 6 students with disabilities. One student has a behavioral disorder. She has tantrums in the classroom about three times a week. She refuses to follow directions about 30% of the time. She gets angry with her peers when working in groups and threatens her peers when she does not get her way.

Please answer the following two questions about this situation.

***26. List or describe one or more strategies that you would use to promote positive peer interactions for the girl with the behavioral disorder?**

***27. List or describe one or more strategies that you would use to manage the behavior of the students without disabilities while attending to the behavior problems of the girl with the behavioral disorder?**

Inclusion Survey - United States of America

Imagine you are a teacher in a science classroom that includes 23 students without disabilities and 3 students with disabilities. One student has a severe intellectual disability. His IQ is 69, and he is only able to read first grade sentences fluently. He has not mastered the content of the course, but he participates in class even though he doesn't understand most of the material. He especially enjoys hands on activities, although he cannot easily demonstrate that he has learned the content associated with the activities.

Respond to the following two questions about this situation.

***28. List or describe one or more strategies you would use to ensure that the student with the severe intellectual disability is learning some of the science content?**

***29. List or describe one or more strategies you would use to ensure that the students without disabilities learn the content of the lesson while attending to the needs of the student with the specific learning disability?**

Inclusion Survey - United States of America

Imagine you are a teacher in a mathematics class that includes 21 students without disabilities and 5 students with disabilities. One student has moderate intellectual disability and an IQ of 81. She has mastered basic computation skills, and can solve word problems 3 to 4 years below grade level, but is unable to master the skills or knowledge associated with the class. She gets failing grades on all of her quizzes, and gets frustrated with her inability to understand the content.

Respond to the following two questions about this situation.

***30. List or describe one or more strategies you would use to ensure that the student with the moderate intellectual disability learns a geometric concept even though she cannot independently do the mathematical computations associated with the concept?**

***31. List or describe one or more strategies you would use to ensure that the students without disabilities learn the content of the lesson while attending to the needs of the student with the moderate intellectual disability?**

32. How did you feel while taking the survey?

BIBLIOGRAPHY

- Antonak, R. F., & Larrivee, B. (October 01, 1995). Psychometric Analysis and Revision of the Opinions Relative to Mainstreaming Scale. *Exceptional Children, 62, 2*, 139-49.
- Avramidis, E., Bayliss, P., & Burden, R. (June 01, 2000). A Survey into Mainstream Teachers' Attitudes towards the Inclusion of Children with Special Educational Needs in the Ordinary School in One Local Education Authority. *Educational Psychology: an International Journal of Experimental Educational Psychology, 20, 2*, 191-211.
- Avramidis, E., & Norwich, B. (June 01, 2002). Teachers' attitudes towards integration / inclusion: a review of the literature. *European Journal of Special Needs Education, 17, 2*, 129-147.
- Barned, N. E., Knapp, N. F., & Neuharth-Pritchett, S. (2011). Knowledge and Attitudes of Early Childhood Preservice Teachers regarding the Inclusion of Children with Autism Spectrum Disorder. *Journal Of Early Childhood Teacher Education, 32(4)*, 302-321.
- Bayar, A., Özaşkın, A. G. ve Bardak, Ş. (2015). Kaynaştırma Eğitimi Ile İlgili Duygular, Tutumlar Ve Kaygılar Ölçeğinin Türkçeye Uyarlama, Geçerlik Ve Güvenirlilik Çalışması. [Turkish Adaptation, Validity and Reliability study of the Sentiments, Attitudes and Concerns about Inclusive Education Scale Revised (SACIE-R)]. *Electronic Turkish Studies, 10(3)*, 175-186.
- Bradburn, N. M. (2004). Understanding the Question-Answer Process. *Statistics Canada, 30*, 5–15.
- Brandes, J. A., & Crowson, H. M. (June 01, 2009). Predicting Dispositions Toward Inclusion of Students with Disabilities: The Role Of Conservative Ideology and Discomfort With Disability. *Social Psychology of Education: An International Journal, 12, 2*, 271-289.

- Brown, K. S., Welsh, L. A., Hill, K. H., & Cipko, J. P. (January 01, 2008). The Efficacy of Embedding Special Education Instruction in Teacher Preparation Programs in the United States. *Teaching and Teacher Education, 24*, 8, 2087-2094.
- Cook, B. G., Tankersley, M., Cook, L., & Landrum, T. J. (January 01, 2008). Evidence-Based Practices in Special Education: Some Practical Considerations. *Intervention in School and Clinic, 44*, 2, 69-75.
- Crawford, L., & Tindal, G. (July 01, 2006). Policy and Practice: Knowledge and Beliefs of Education Professionals Related to the Inclusion of Students with Disabilities in a State Assessment. *Remedial and Special Education, 27*, 4, 208-217.
- Damore, S. J., & Murray, C. (January 01, 2009). Urban Elementary School Teachers' Perspectives Regarding Collaborative Teaching Practices. *Remedial and Special Education, 30*, 4, 234-244.
- Dedrick, R. F., Marfo, K., & Harris, D. M. (2007). Experimental Analysis of Question Wording in an Instrument Measuring Teachers' Attitudes Toward Inclusive Education. *Educational & Psychological Measurement, 67*(1), 116-131.
- DeSimone, J. R., & Parmar, R. S. (May 01, 2006). Middle School Mathematics Teachers' Beliefs about Inclusion of Students with Learning Disabilities. *Learning Disabilities Research & Practice, 21*, 2, 98.
- Doğan, B. (2013). Türkçe ve Sınıf Öğretmenlerinin Okuma Güçlüğüne İlişkin Bilgileri ve Okuma Güçlüğü Olan Öğrencileri Belirleyebilme Düzeyleri. [Determining Turkish Language and Elementary Classroom Teachers' Knowledge on Dyslexia and Their Awareness of Diagnosing Students]. *Okuma Yazma Eğitimi Araştırmaları, 1*(1), 20-33.

- Dymond, S. K., Chun, E. J., Kim, R. K., & Renzaglia, A. (2013). A Validation of Elements, Methods, and Barriers to Inclusive High School Service-Learning Programs. *Remedial & Special Education, 34*(5), 293-304. doi:10.1177/0741932513479831
- Ernst, C., & Rogers, M. R. (January 01, 2009). Development of the Inclusion Attitude Scale for High School Teachers. *Journal of Applied School Psychology, 25*, 3, 305-322.
- Gokdere, M. (2012). A Comparative Study of the Attitude, Concern, and Interaction Levels of Elementary School Teachers and Teacher Candidates towards Inclusive Education. *Educational Sciences: Theory And Practice, 12*(4), 2800-2806.
- Ilkogretim ve Egitim Kanunu [Elementary Education Act] (1961). 12.1.1961 tarih ve 10705 sayili Resmi Gazete.
- Individuals with Disabilities Education Improvement Act of 2004, 20 U.S.C. § 1400 *et seq.* (2004).
- Karadeniz, M. H. (2013). Assessment Of Teachers Views On Students with The Disorder Of Dyscalculia. *Education Sciences, 8*(2), 193-208.
- Kargin, T., & Guldenoglu, B. (2016). Learning Disabilities Research and Practice in Turkey. *Learning Disabilities-A Contemporary Journal, 14*(1).
- Kaçan, G. (2004). Sınıf Öğretmenlerinin Mesleki Gelişime İlişkin İsteklilik Düzeyleri. [The Inclination Of Professional Improvement Of Teachers]. *Sosyal Bilimler Dergisi, 5*(1).
- Kucuker, S., Acarlar, F., & Kapci, E. G. (August 01, 2006). The Development and Psychometric Evaluation of a Support Scale for Pre-School Inclusion. *Early Child Development and Care, 176*, 6, 643-659.

- Loreman, T., Forlin, C., Chambers, D., Sharma, U., & Deppeler, J. (January 01, 2014). Conceptualising and measuring inclusive education. *International Perspectives on Inclusive Education*, 3, 3-17.
- McLaughlin, M. J., Krezmien, M., & Zablocki, M. (2009). Special Education in the New Millennium: Achieving Educational Equity for Students with Learning and Behavior Disabilities. In T. Scruggs, & M. Mastropieri (Eds.), *Advances in Learning and Behavior Disabilities*. (pp. 1-32). Bingley, UK: Emerald.
- Meral, B. F., & Turnbull, H. R. (2014). Analysis of Special Education Policy in Turkey and United States: Improving Turkey's Policy for Students with Intellectual Disability. *Journal of Policy and Practice in Intellectual Disabilities*, 11, 3, 165-175.
- Meral, B. F., & Turnbull, H. R. (2016). Comparison of Turkish Disability Policy, the United Nations Convention on the Rights of Persons with Disabilities, and the Core Concepts of U.S. Disability Policy. *Alter - European Journal of Disability Research*, 10, 3, 221-235.
- Milli Egitim Bakanligi [Ministry of National Education, Republic of Turkey] (2011). Milli Egitim Istatistikleri [National Education Statistics] 2010/11. 34-35. Retrieved from http://sgb.meb.gov.tr/istatistik/meb_istatistikleri_orgun_egitim_2010_2011.pdf
- Milli Egitim Bakanligi [Ministry of National Education, Republic of Turkey] (2016). Milli Egitim Istatistikleri [National Education Statistics] 2015/16. 34-35. Retrieved from http://sgb.meb.gov.tr/meb_iys_dosyalar/2016_03/18024009_meb_istatistikleri_orgun_egitim_2015_2016.pdf
- Milli Egitim Bakanligi. [Ministry of National Education, Republic of Turkey]. (1997). Ozel Egitim Hakkinda Kanun Hukmunde Kararname. [573 Decree Having Force of Law About Special Education]. 06.06.1997 tarih ve 23011 sayili Resmi Gazete.

- Milli Egitim Bakanligi [Ministry of National Education, Republic of Turkey] (2000). Ozel Egitim Hizmetleri Yonetmeligi. [The Special Education Services Regulation]. *Tebliğler Dergisi*, 2509.
- Milli Egitim Bakanligi [Ministry of National Education, Republic of Turkey] (2006). Ozel Egitim Hizmetleri Yonetmeligi. [The Special Education Services Regulation]. 31.05.2006 tarih ve 26184 sayili Resmi Gazete.
- Milli Egitim Bakanligi [Ministry of National Education, Republic of Turkey] (2012). Ozel Egitim Hizmetleri Yonetmeligi. [The Special Education Services Regulation]. 21.07.2012 tarih ve 28360 sayili Resmi Gazete.
- Muccio, L. S., Kidd, J. K., White, C. S., & Burns, M. S. (2014). Head Start Instructional Professionals' Inclusion Perceptions and Practices. *Topics in Early Childhood Special Education*, 34, 1, 40-48.
- Ozel Egitime Muhtac Cocuklar Kanunu [Children with Special Needs Act] (1983). 12.10.1983 tarih ve 18192 sayili Resmi Gazete.
- Przibilla, B., Lauterbach, A., Boshold, F., Linderkamp, F. & Krezmien, M.P. (2016). Entwicklung und Validierung eines Online-Surveys zur Erhebung von Kompetenzen und Einstellungen von Lehrkräften bezüglich der Inklusion. [Development and Validation of an Online Survey to Assess Inclusive Competence and Attitudes of Teachers]. *Empirische Sonderpädagogik*, 1, 36-53.
- Rakap, S., & Kaczmarek, L. (2010). Teachers' attitudes towards inclusion in Turkey. *European Journal Of Special Needs Education*, 25(1), 59-75. doi:10.1080/08856250903450848
- Ross-Hill, R. (2009). Teacher Attitude towards Inclusion Practices and Special Needs Students. *Journal of Research in Special Educational Needs*, 9, 3, 188-198.

- Ryan, K., Gannon-Slater, N., & Culbertson, M. J. (2012). Improving Survey Methods with Cognitive Interviews in Small- and Medium-Scale Evaluations. *American Journal of Evaluation, 33*, 3, 414-430.
- Sari, H. (2007). The Influence of an In-Service Teacher Training (INSET) Programme on Attitudes towards Inclusion by Regular Classroom Teachers Who Teach Deaf Students in Primary Schools in Turkey. *Deafness And Education International, 9*(3), 131-146.
- Schwarz, N. (March 01, 2007). Cognitive aspects of survey methodology. *Applied Cognitive Psychology, 21*, 2, 277-287.
- Scruggs, T. E., & Mastropieri, M. A. (1996). Teacher Perceptions of Mainstreaming/Inclusion, 1958-1995: A Research Synthesis. *Exceptional Children, 63*, 1, 59-74.
- Seçer, Z. (2010). An analysis of the effects of in-service teacher training on Turkish preschool teachers' attitudes towards inclusion. *International Journal Of Early Years Education, 18*(1), 43-53. doi:10.1080/09669761003693959
- Segall, M. J., & Campbell, J. M. (July 01, 2012). Factors Relating to Education Professionals' Classroom Practices For the Inclusion of Students with Autism Spectrum Disorders. *Research in Autism Spectrum Disorders, 6*, 3, 1156-1167.
- Sharma, U., Loreman, T., & Forlin, C. (January 01, 2012). Measuring teacher efficacy to implement inclusive practices. *Journal of Research in Special Educational Needs, 12*, 1, 12-21.
- Sucuoğlu, B. (2004). Türkiye'de Kaynaştırma Uygulamaları: Yayınlar/Araştırmalar. [Inclusive Practices in Turkey: Publications/Research]. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Özel Eğitim Dergisi, 5*(02).

- Suter, J. C., & Giangreco, M. F. (January 01, 2009). Numbers that count: Exploring Special Education and Paraprofessional Service Delivery in Inclusion-Oriented Schools. *The Journal of Special Education, 43*, 2, 81-93.
- Turkiye Istatistik Kurumu. [Turkish Statistical Institute]. (2002). Turkiye Ozurluler Arastirmasi. [Turkey Disability Survey]. Publication Number 291. Ankara: TSI. Retrieved from http://www.tuik.gov.tr/Kitap.do?metod=KitapDetay&KT_ID=11&KITAP_ID=14
- Turnbull, H. R. (November 01, 2005). Individuals with Disabilities Education Act Reauthorization: Accountability and Personal Responsibility. *Remedial & Special Education, 26*, 6, 320-326.
- UNESCO (2005). *Guidelines for Inclusion: Ensuring Access to Education for All*. Paris: UNESCO.
- U.S. Department of Education, National Center for Education Statistics (2015). Digest of Education Statistics, 2014, Chapter 2. Retrieved from https://nces.ed.gov/programs/digest/d15/tables/dt15_204.60.asp
- Van, O. F., & Jordens, K. (January 01, 2002). An Adaptive Connectionist Model of Cognitive Dissonance. *Personality and Social Psychology Review, 6*, 3, 204-231.
- Wilkins, T., & Nietfeld, J. L. (November 01, 2004). The Effect Of A School-Wide Inclusion Training Programme Upon Teachers' Attitudes About Inclusion. *Journal of Research in Special Educational Needs, 4*, 3, 115-121.
- Yangin, S., Yangin, N., Önder, V., & Şavlığ, A. (2016). Sınıf Öğretmeni Adaylarının Ve Öğretim Elemanlarının Çeşitli Öğrenme Güçlüklerine Yönelik Farkındalıkları. [Classroom Student Teachers And Academicians' Awareness About Of Various Learning Disabilities]. *Education Sciences, 11*(5), 243-266.

Yell, M. L. (2012). *The Law and Special Education*. Upper Saddle River: Pearson.