

GENERAL EDUCATION PRE-SERVICE TEACHERS' ATTITUDES TOWARD
INCLUSION IN EGYPT

By

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To my mother and my wife—Thank you

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GENERAL EDUCATION PRE-SERVICE TEACHERS' ATTITUDES TOWARD
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Research on pre-service teachers' perspectives toward inclusion in the Egyptian context is almost non-existent. Given this dearth of research, the purpose of this study was to examine pre-service teachers' attitudes toward including students with special needs in general education classrooms in Egypt. More specifically, this study examined the general attitudes of pre-service teachers toward inclusion and the variables that are believed to be associated with these attitudes. Investigating pre-service teachers' attitudes toward inclusion is important to understanding factors that contribute to the formation and change of these attitudes, and the extent to which teacher education makes a difference for pre-service teachers.

To examine pre-service teachers' attitudes, a cross-sectional study was designed. Sixteen-hundred and twenty five pre-service teachers, who were sophomores, juniors, and seniors studying general pre-service education, were surveyed at a single point in time. All participants were undergraduates who majored in elementary and secondary education at the Kafrelsheikh University in Egypt. The inclusive attitudes of these pre-service teachers were measured using the Pre-service Teachers' Attitudes toward Inclusion questionnaire.

Data were analyzed using a two-way between-subjects analysis of variance. Results showed that pre-service teachers held more negative than positive attitudes toward the inclusion

of students with disabilities in general education classrooms. However, pre-service teachers in this study had more negative attitudes toward the inclusion of children with mental retardation and emotional and behavioral disorders than they did toward students with other disabilities. Sophomores exhibited significantly more positive attitudes toward inclusion than both juniors and seniors while there were statistically non-significant differences between juniors and seniors. Furthermore, pre-service teachers who reported social relationships with persons who have disabilities exhibited more positive attitudes toward inclusion than pre-service teachers who did not report such relationships. The qualitative analysis of the written responses to the third part of the questionnaire revealed that pre-service teachers appeared unsupportive of the general concept of inclusion, and believed that the general education classroom was often not the most appropriate setting for students with special needs. The implications and recommendations based on these results are discussed.

CHAPTER 1 INTRODUCTION TO THE PROBLEM

Students with disabilities have been increasingly receiving special education services in general education classrooms (McLeskey & Henry, 1999; McLeskey, Henry, & Hodges, 1999). Consequently, special and general education teachers are facing the challenge of providing services in general education classrooms that were historically provided in two different educational settings. Terms like *integration*, *mainstreaming*, and, eventually, *inclusion* have been used to describe this educational movement. Inclusion is the contemporary term that refers to “the practice of educating students with moderate to severe disabilities alongside their chronological age peers without disabilities in general classrooms within their home neighborhood schools” (Alper, 2003, p. 15). The inclusion philosophy is based on the principle of equal opportunity for all people. Accordingly, in a democratic society, students with disabilities should not be denied access to public education based on their disabilities.

The success of inclusion depends on many factors, including the attitudes of educators and the quality of instruction they offer their students (Leyser & Tappendorf, 2001). More specifically, teachers’ attitudes about inclusion have been found to be a crucial factor that impacts the implementation of inclusion for children with disabilities (Bender, Vail, & Scott, 1995). For instance, it has been reported that teachers with more positive views of inclusion have more confidence in their abilities and commitment to accommodate students’ needs in inclusive settings by adapting appropriate classroom materials and related procedures (Campbell, Gilmore, & Cuskelly, 2003; Norwich, 1994). Moreover, teachers with more negative attitudes were found to have low expectations for individuals with disabilities (Wilczenski, 1993). Put simply, previously held negative attitudes about children, learning, and schooling are likely to interfere with the teachers’ support for and effective participation in inclusive settings (Brantlinger, 1996).

Given the possibility that pre-service teachers' attitudes towards teaching and learning may impact their conceptions about teaching and learning in general, researchers have examined the nature of teacher attitudes and whether they are changeable or have an enduring effect on educational practices (see Wideen, Mayer-Smith, & Moon, 1998). Wideen et al. concluded that until the impact of more rigorous teacher education programs has been fully investigated, the issue of whether attitudes are modifiable should remain an open question rather than an accepted assumption. Indeed, results of studies investigating teacher education and pre-service teachers' attitudes toward inclusion have been inconsistent (see Brownlee & Carrington, 2000; Campbell et al., 2003; Kirk, 1998; Martinez, 2003; Shade & Stewart, 2001; Tait & Purdie, 2000).

Teachers' views of the quality of their pre-service preparation could have an influence on their beliefs about their ability to instruct and manage students with learning and behavioral problems in their classrooms (Brownell & Pajares, 1999). Therefore, it has been suggested that if pre-service teachers complete their teacher education program without having developed positive views toward inclusion, this will negatively affect the level of accommodations provided to students with disabilities into general education classrooms (Tait & Purdie, 2000). However, the available data about teachers' perceptions of preparedness for inclusion indicate that teacher education programs may not have improved in preparing pre-service teachers to teach in inclusive settings (Scruggs & Mastropieri, 1996).

Although pre-service teachers come to teacher education programs with enthusiasm and beliefs in liberal education (Wideen et al., 1998), previous research indicated that, as they progress in teacher education programs, they do not feel adequately prepared to teach students with special needs in general education classrooms (Jobling & Moni, 2004; Kirk, 1998; Welch, 1996). Moreover, special education and general education pre-service teachers have been found

to hold a variety of anti-inclusion beliefs (Brantlinger, 1996; Lambe & Bones, 2006). For instance, Brantlinger (1996) identified seven anti-inclusion beliefs among undergraduate special education majors, which are summarized below:

1. Achievement at grade level is the appropriate achievement level for all students of a certain chronological age.
2. Students who achieve substantially above or below grade level are appropriately labeled as gifted or learning disabled, respectively.
3. Learning is a linear process; it matches the sequential levels of subject matter and takes place one step at a time.
4. Students who achieve below grade level will catch up if they receive individualized instruction.
5. Academic support is most suitably provided in separate settings with homogeneous groups.
6. Students and their parents make little effort to learn and do not value education, so that they do not learn readily.
7. The structures and practices of schools have little impact on student achievement or behavior.

Brantlinger (1996) further suggested that teacher education programs should thoroughly investigate and address these anti-inclusion beliefs.

Most of the previous research related to educating students with disabilities in inclusive settings was conducted in western countries. In Egypt, the Education for All (EFA) initiative created opportunities for many children to join either general education or special education state-owned schools (Ministry of Education, 2007). Historically, special education schools in Egypt provided services for students with visual impairment, hearing impairment, and mental retardation in isolated settings. The number of school-aged children with disabilities was estimated in 2006 to be approximately 2 million (this is 2.6% of the Egyptian population, which is 76.5 million according to a 2006 census). However, the educational system in Egypt is lacking accurate data about the population of school-aged students with disabilities. Moreover, since lack

of identification affects the estimated number, it can be assumed that the percentage of school-aged students with disabilities is even greater, either because they are not currently attending school in Egypt or are struggling in general education classrooms without the appropriate services.

In addition to the lack of identification tools, many parents do not send their children with special needs, especially those with severe disabilities, to schools, and educate them at home. It has been estimated that the limited capacity of schools for children with disabilities resulted in less than 1.8% of these children receiving educational services (Ministry of Education, 2007). Put simply, only a limited number of children with mild and moderate disabilities receive educational services in special education schools, while the majority of children with severe disabilities (e.g., multiple disabilities and autism) do not receive any educational services in schools.

The inclusion of students with disabilities in general education classrooms in Egypt is a fairly new trend. Non-governmental organizations, with cooperation from the Ministry of Education, worked to fully include some children with disabilities in general education classrooms as part of pilot projects in selected schools. In the 2004/2005 academic year, the number of students who were fully included did not exceed 190 students in three Egyptian governorates. In 2007, there were only 229 students with special needs enrolled in 17 self-contained special education classrooms that were opened throughout seven governorates (i.e., Cairo, Alexandria, Menoufiya, Sharqiya, Damietta, South Sinai, and Matrouh). In addition, 495 students with hearing impairment were partially included in 27 general education classrooms in two governorates (i.e., Cairo and Dagahliya). However, special education schools remain the

predominant model for educating students with special needs in Egypt (Ministry of Education, 2007).

With the large number of students with special needs who do not have access to quality education, the Ministry of Education revealed a five-year strategic plan (2007-2012) to achieve two main goals. *First*, an additional 10% of students with mild disabilities will be included in general education classrooms by 2012. These students will be distributed to the 259 districts that are located all over the country. *Second*, these students with special needs will be provided quality and equal educational services for a smooth transition into inclusive classrooms. Some of the proposed services include providing resource rooms, teacher training, curriculum modifications, and establishing a special evaluation system. For example, a professional development plan was developed to provide training for 29,280 teachers and 981 school psychologists in general education schools by 2010. It is also expected that 5,040 resource rooms will be opened to provide services for students with special needs included in general education classrooms. In addition, 25% ($n = 200$) of the special education schools are expected to be remodeled and used as resource centers to serve students with special needs included in nearby general education schools (Ministry of Education, 2007).

In an initial study related to inclusion, the Ministry of Education sought to investigate the attitudes of educational personnel (e.g., teachers, principals, school psychologists) toward inclusion at the elementary school level. The results indicated that only 11% of general education teachers and 10% of special education teachers supported the idea of including students with special needs in general education classrooms in Egyptian schools. These teachers' main concern was the lack of educational personnel who were prepared to work in inclusive settings (Kafafi,

2004). As a result, the Ministry of Education provided a training program for 488 teachers to work with students with disabilities (Gheryani, 2006).

Purpose of the Study

An inclusive philosophy and related practices are not currently part of teacher education programs designed to prepare general education pre-service teachers in Egypt. Given the Ministry of Education's plans related to inclusion, these future teachers will likely face diverse classrooms that many have not experienced in their own schooling. Based on the assumption that teachers' attitudes toward inclusion can have a significant impact on the success of educational policies, and the fact that inclusive studies and practices in the Egyptian context are almost absent, the purpose of this study is to examine pre-service teachers' attitudes toward including students with disabilities in general education classrooms in Egypt.

Research Questions

Research questions include:

1. What are the attitudes of general education pre-service teachers toward inclusion in Egypt?
2. What variables are associated with Egyptian pre-service teachers' attitudes toward inclusion (e.g., nature of the disability, contact with people with disabilities, and stage of teacher education program)?
3. What issues do pre-service teachers believe need to be addressed so that they can be effective teachers in inclusive settings?

Scope of the Study

This study was conducted within a limited scope. Therefore, there were delimitations and limitations in conducting the present study. They are described in this section.

Delimitations

This study was geographically limited to one college of education, Kafrelsheikh University, in the Northern part of Egypt. However, the vast majority of teacher education programs are

similar among colleges of education throughout the country. The participants were selected from all general education majors in the college. Thus, students' attitudes toward inclusion could be compared with respect to their areas of study. As a cross-sectional study, pre-service teachers who were sophomores, juniors, and seniors were surveyed at a single point in time.

Limitations

This study used convenience sampling. Therefore, generalizability of results may be limited due to the sampling method. Moreover, this study used a correlational cross-sectional approach, and not a longitudinal design. A longitudinal design implies studying the same group of participants over a particular period of time, while a cross-sectional design implies studying groups of participants in different age or class standing groups at the same point in time. Although in a cross-sectional design the researcher does not follow the development of each participant in the group, rich data on age change or group effects may be missed. To address this issue to some degree, results based on class standing will be compared to investigate the influence of the teacher education program as students progress in their teacher education program.

Brief Definition of Terms

An understanding of terminology that was applied in this study is necessary to the interpretation of this examination. The following section defines relevant terms as they apply to this study.

- **PRE-SERVICE TEACHER.** Pre-service teacher refers to a student who is presently enrolled in a teacher education program at the undergraduate level and who has never taught in a public or private school as a certified teacher.
- **INCLUSION.** Inclusion refers to “the practice of educating students with moderate to severe disabilities alongside their chronological age peers without disabilities in general classrooms within their home neighborhood schools” (Alper, 2003, p. 15).

- **INCLUSIVE SCHOOL.** Inclusive school refers to “a place where everyone belongs, is accepted, supports, and is supported by his or her peers and other members of the school community in the course of having his or her educational needs met” (Stainback & Stainback, 1990, p. 3).
- **INCLUSIVE PRACTICES.** Inclusive practices refer to “those that lead to the creation of supportive educational communities in which services necessary to meet the individual needs of all students are available, [including] services previously available only in specialized settings” (McGregor & Vogelsberg, 1998, p. 11).
- **INCLUSION PHILOSOPHY.** Inclusion philosophy refers to the thoughts and beliefs that pervade an educational system where general and special education students are meshing into one unified system of public education (Ryndak, Jackson, & Billingsley, 2000).
- **ATTITUDE.** Attitude refers to “affective, cognitive, and behavioral components that correspond, respectively, to one’s evaluations of, knowledge of, and predisposition to act toward the object of the attitude” (Wagner, 1969, p. 7).

Study Overview

This chapter provides an introduction, purpose of the study, research questions, and the significance of this study to inclusive education in Egypt. Chapter 2 presents a review of relevant literature, including research regarding in-service and pre-service teachers’ attitudes toward inclusion, and factors that are believed to have an impact on these attitudes. Chapter 3 contains the design and methodology of the study. The quantitative and qualitative results of the study are detailed in Chapter 4. Finally, Chapter 5 includes a summary of findings, discussion of results, implications, limitations, and recommendations for future research.

CHAPTER 2 LITERATURE REVIEW

The purpose of this chapter is to review the literature regarding pre-service and in-service teachers' attitudes toward the inclusion of students with disabilities. This review highlights research that addresses the following questions: (a) what are the attitudes of teachers and pre-service teachers toward inclusion, (b) what variables are associated with these attitudes, and (c) what issues do pre-service teachers believe need to be addressed so that they can be effective teachers in inclusive settings? Before reviewing the literature regarding attitudes toward inclusion, a brief review of the literature regarding teachers' beliefs toward teaching and learning is provided. This review is intended to provide background information regarding teacher attitudes from the general education literature, and a context for the subsequent literature review of teacher attitudes toward inclusion.

Teachers' Beliefs toward Teaching and Learning

Richardson (1996) reported that teacher attitudes received considerable attention in teaching and teacher education research between the early 1950's and the early 1970's, while teacher beliefs gained importance in research literature beginning in the 1980's. Beliefs are described as "propositions that are held to be true and are accepted as guides for assessing the future, are cited in support of decisions, or are referred to in passing judgment on the behavior of others" (Goodenough, 1963, as cited by Richardson, 1996, p. 103). However, many words that are close in meaning to "beliefs" are used in the general education literature to refer to the same concept (Pajares, 1992; Richardson, 1996).

Richardson (1996) differentiated between a belief, which is a psychological concept, and knowledge, which is a construct that implies epistemic warrant. Similarly, Pajares (1992) examined the meaning leading researchers gave to beliefs and suggested that concepts such as

attitudes, values, preconceptions, theories, and images are beliefs in disguise. The researcher asserted that “the difficulty in studying teachers’ beliefs has been caused by definitional problems, poor conceptualization, and differing understandings of beliefs and belief structures” (p. 307). Richardson (1996) took a similar position, and indicated that the difference between the two terms (i.e., beliefs and attitudes) remains somewhat unclear in the empirical literature.

Teachers’ beliefs about education include views about students, the learning process, the nature of knowledge, teachers and teaching, and the curriculum. All teachers hold beliefs about their work, their roles and responsibilities, and the subject matter they teach. These beliefs provide a strong link to classroom action and, ultimately, to students’ classroom learning (Brownell & Pajares, 1999; Peterson, Fennema, Carpenter, & Loef, 1989). Therefore, researchers have advocated for a closer examination of the relationship between teachers’ beliefs and teaching practices (Pajares, 1992; Pomeroy, 1993).

Although many researchers separate beliefs and actions for research purposes, they were aware that these constructs function together in praxis (Richardson, 1996). For example, Wallace and King (2004) asserted that teacher actions should not be considered as a separate entity from the teacher’s belief system as a whole because these actions represent one aspect of a teacher’s beliefs. Teachers give meaning to educational beliefs through their actions in the classroom (Tobin, 1993), and these actions make sense in relation to the teacher’s system of beliefs (Pajares, 1992). However, although previous studies that linked beliefs to actions contribute a great deal to our understanding of teachers’ beliefs and practice, we have limited knowledge about the details of how those beliefs inform teachers’ actions in the classroom.

Studies on pre-service teachers’ attitudes and beliefs have revealed that future teachers are optimistic, highly confident, and humanistic as they enter teacher education programs

(Richardson, 1996; Wideen et al., 1998). These results have been consistent across methodology, time, and nations (Richardson, 1996). Pre-service teachers also enter teacher education programs with strong views of teaching acquired during their previous life and schooling experiences (Brookhart & Freeman, 1992). Several studies have examined entering pre-service teachers' beliefs and their effect on learning to teach within a teacher education program (Holt-Reynolds, 1992; MacKinnon & Erickson, 1992; Ross, Johnson, & Smith, 1992). For example, Ross and colleagues (1992) investigated pre-service teachers' perspectives and learning in the PROTEACH teacher education program at the University of Florida. They found that the process of learning to teach was influenced by multiple and complex variables, including "entering perspectives, personal learning history, theoretical knowledge base, faculty mentors, cooperating teachers, peers, university supervisors, children within the classrooms, student teaching experiences, image itself, and perception of efficacy" (p. 34). Among these variables, the strongest factor that influenced how and what student teachers learned in their teacher education program was their entering perspectives on teaching and learning.

Clearly, it is important to understand pre-service and in-service teachers' attitudes and beliefs about inclusive education as part of their general views about teaching and learning. This understanding is critical given the finding that teachers' perspectives toward including students with special needs in their classrooms are essential to successful inclusion (Hasazi, Johnston, Liggett, & Schattman, 1994; Wilczenski, 1993). The next sections examine in-service and pre-service teachers' attitudes toward inclusion and the factors associated with the formation of these attitudes.

Teachers and Pre-service Teachers Attitudes toward Inclusion

The literature review regarding teachers and pre-service teachers' attitudes toward inclusion included five steps. *First*, terms related to teachers and pre-service teachers' attitudes

toward inclusion were identified using the thesaurus of ERIC descriptors. *Second*, these terms were entered in a computer search of several databases from 1995 to 2008 [Scruggs and Mastropieri (1996) reviewed previous studies from 1958 to 1995]. However, because Scruggs and Mastropieri's meta analysis was limited to the attitudes of practicing teachers in the United States, earlier studies that addressed practicing teachers and pre-service teachers' attitudes and were done within an international context were also identified. *Third*, a hand search of reference lists in articles obtained through electronic databases was conducted to find articles related to the topic that did not appear in the computer search. *Fourth*, the abstracts of all identified articles were scanned to determine relevant articles (i.e., articles that directly address the topic). *Fifth*, all pertinent papers were thoroughly read and reviewed by the researcher. In the sections that follow, the literature regarding teachers and pre-service teachers' attitudes toward inclusion and students with disabilities is discussed.

Teachers' Attitudes toward Inclusion

Teachers' attitudes toward inclusion and students with disabilities were found to be a critical factor in inclusive practices (Avramidis, Bayliss, & Burden, 2000a; Bender et al., 1995; Cook, 2002; Scruggs & Mastropieri, 1996; Ward, Center, & Bochner, 1994). However, the findings from this research have been mixed. Some researchers have found that general education teachers were not in favor of inclusion (Coates, 1989; Gersten, Walker, & Darch, 1988; Larrivee & Cook, 1979; Semmel, Abernathy, Butera, & Lesar, 1991). Similarly, in their 1996 review, Scruggs and Mastropieri found that in 10 studies, only 33% of general education teachers agreed that the general education classroom was the best social or academic placement for students with disabilities, although about two thirds of the participants supported the concept of inclusion. On the other hand, other researchers reported that teachers had more positive attitudes toward inclusion (Avramidis et al., 2000a; Villa, Thousand, Meyers, & Navin, 1996;

Ward et al., 1994; York, Vandercock, MacDonald, Heise-Neff, & Caughey, 1992). In addition, few researchers reported that teachers had uncertain or neutral attitudes (Bennett, Deluca, & Bruns, 1997; Leyser & Tappendorf, 2001).

Variables Related to Teacher Attitudes toward Inclusion

Several variables were found to be related to general education teachers' attitudes toward inclusion. These variables include (a) teachers' experience with students with disabilities, (b) nature and severity of the student's disability, (c) professional in-service training, and (d) school support services (Avramidis & Norwich, 2002; Scruggs & Mastropieri, 1996). Researchers have explored these variables in relation to teachers' attitudes toward inclusion. A brief synthesis of this research is presented below.

Many previous studies indicated that teachers with more experience working with students with disabilities had significantly more favorable attitudes toward inclusion than those with little or no experience (Avramidis et al., 2000a; Cook, Tankersley, Cook, & Landrum, 2000; Leyser, Kapperman, & Keller, 1994; Minke, Bear, Deemer, & Griffin, 1996). For example, Cook and colleagues (2000) found that teachers with seven or more years of teaching experience with students with disabilities in inclusive classrooms felt that they could potentially meet the needs of more students with disabilities in their classrooms than did teachers with fewer years of inclusive experience. It has been documented that experienced teachers provide students with disabilities in inclusive settings with more teacher praise, encouragement to do their best, opportunities to answer questions, and more carefully monitoring of their performance (Good & Brophy, 1972; Silberman, 1969, 1971, as cited in Cook et al., 2000).

However, other researchers have noted that the mere experience of contact with students with special needs might not lead to the formation of more positive attitudes toward inclusion (Center & Ward, 1987; Stephens & Braun, 1980). For example, Stephens and Braun (1980)

reported a non-significant correlation between contact with students with disabilities and teachers' attitudes toward inclusion. In contrast, some studies reported that teachers with more experience hold more negative attitudes toward inclusion (Forlin, 1995; Forlin, Douglas, & Hattie, 1996). For example, Forlin (1995) found that the most experienced educators (i.e., teachers with more than 11 years of teaching experience) reported the lowest level of acceptance for inclusion of children with physical and intellectual disabilities. Moreover, the highest level of acceptance was found among teachers with less than six years of teaching experience. Given these inconsistent findings, it seems that the nature of the inclusion experience (e.g., whether it was pleasant or not) is what determines the impact on attitudes.

Moreover, the nature and severity of the disability appears to be related to the teachers' willingness to accommodate students with disabilities in general education classrooms (Rainforth, 2000; Scruggs & Mastropieri, 1996). In their meta-analysis, Scruggs and Mastropieri (1996) noted that the highest level of support was given to the inclusion of students with mild disabilities who require the least amount of modification in curriculum and instruction. The researchers indicated that the severity level of student disability and the amount of additional teacher responsibility required were the two factors that seemed to influence teachers' perspectives toward inclusion. For about one third of the sample, these two factors appeared to be related to the belief that including students with special needs would have a negative effect on the general education classroom.

Students with mild disabilities (e.g., students with learning disabilities) have been portrayed as not being significantly different from students without distinguished disabilities (Wang, Reynolds, & Walberg, 1988) and, therefore, were more likely to be welcomed in the inclusive classrooms. Conversely, children with intellectual disabilities and students with

emotional and behavioral problems have typically been rated less positively in relation to attitudes about inclusion (Soodak, Podell, & Lehman, 1998; Stoiber, Gettinger, & Goetz, 1998). In general, teachers believe that students with the most challenging behavior require additional teacher responsibility and they are difficult to support.

Because of the changes that inclusion demands in classrooms, some researchers have attributed teachers' negative responses toward inclusion to the teachers' lack of positive experience with well-designed inclusive programs (McLeskey, Waldron, So, Swanson, & Loveland, 2001; Semmel et al., 1991; Vaughn, Schumm, Jallad, Slusher, & Saumell, 1996). For example, given that most of the prior research was conducted with teachers who were not teaching in inclusive programs, McLeskey and colleagues (2001) sought to compare the perspectives of teachers who were at the time of the investigation not working in inclusive settings with those who were working in well designed inclusion programs. The results indicated that teachers in well designed inclusive programs had significantly more positive perspectives toward inclusion compared to teachers who lacked this experience.

In-service training for teachers also was found to influence teachers' attitudes toward inclusion. Research indicated that teachers who had training to teach students with disabilities exhibited more positive attitudes toward inclusion compared to their counterparts who had not trained (Beh-Pajoo, 1992; Center & Ward, 1987; Dickens-Smith, 1995). For example, Dickens-Smith (1995) studied the attitudes of 200 general and special educators toward inclusion of all students, regardless of the disability. Participants in her study were given a 12-item attitude survey before and after their participation in professional development. The results indicated that both groups of teachers exhibited more positive attitudes toward inclusion after the in-service

training than they did before. In this study, general education teachers showed more positive attitude change compared to their counterparts in special education groups.

Not only teacher related (e.g., experience of contact and training) and student related (e.g., severity of the disability) variables contribute to the positive or negative attitudes toward inclusion, but also school variables have been found to be related to teachers' attitudes toward inclusion. In Australia, Center and Ward (1987) indicated that teachers who were anxious about including students with disabilities in their general education classrooms exhibited lack of confidence in their instructional skills and the quality of support services available at the classroom and school levels. Similarly, Scruggs and Mastropieri (1996) reported that teachers believed that sufficient resources were not available to support inclusion efforts, although more teachers agreed they were provided physical support than agreed they had adequate human support.

Insufficient classroom time available for teachers in inclusive classrooms was another concern for teachers. Scruggs and Mastropieri (1996) indicated that only about one quarter of the teachers believed that they had sufficient classroom time for inclusion efforts. Similarly, although Downing, Eichinger, and Williams (1997) found generally positive perspectives toward inclusion, they also indicated that teachers were concerned about the classroom time required to support students with special needs that might limit their ability to provide an appropriate education for general education students in the inclusive classroom.

Clearly, these concerns raise questions about the competences and skills needed by teachers to teach effectively in inclusive classrooms. They also raise issues about pre-service preparation in teacher education programs and how these programs affect pre-service teachers'

perspectives toward inclusion. The next section highlights research about the general attitudes of pre-service teachers toward inclusion and variables related to the formation of these attitudes.

Pre-service Teachers Attitudes toward Inclusion

Understanding the attitudes of teachers and pre-service teachers is crucial in order to improve their teaching practices and professional preparation (Pajares, 1992). Therefore, many researchers have investigated the attitudes of pre-service teachers toward inclusion and the variables associated with the formation of these attitudes. These investigations suggest that the majority of pre-service teachers support the concept of inclusion and believe in the benefits of inclusion for all students (Avramidis et al., 2000b; Lambe & Bones, 2006; Martinez, 2003; Romi & Leyser, 2006; Yellin et al., 2003).

However, this line of research has revealed that pre-service teachers have concerns regarding whether all students will benefit from inclusive settings (Andrews & Clementson, 1997). Students with behavioral disorders, mental retardation, and multiple disabilities were seen as causing more concern and stress to pre-service teachers than students with other disabilities (Avramidis, Bayliss, & Burden, 2000b; Cook, 2002; Hastings & Oakford, 2003; Reber, Marshak, Glor-Scheib, & Noll, 1995) while students with mild disabilities (e.g., students with learning disabilities) were the most welcomed group in the inclusive classrooms by pre-service teachers (Cook, 2002). Moreover, research has indicated that teachers have concerns about teacher education programs and their effectiveness to prepare teachers to teach in inclusive classrooms (Lombard, Miller, & Hazelkorn, 1998; Scruggs & Mastropieri, 1996; Wishart & Manning, 1996). These concerns and other variables related to pre-service teachers' attitudes toward inclusion are discussed in the section that follows.

Variables Related to Pre-service Teachers' Attitudes toward Inclusion

The available literature suggests that pre-service teachers' attitudes toward students with disabilities might be influenced by a number of variables. These variables include contact experience with people with disabilities, nature and severity of the disability, and preparation in teacher education programs. These variables will be discussed in light of the previous literature about pre-service teachers' attitudes toward inclusion.

Contact experience with people with disabilities

Researchers have examined the effect of providing pre-service teachers with different forms of contact with people with special needs in an educational context. For example, Brownlee and Carrington (2000) sought to answer the following question: Can pre-service teachers' attitudes towards disability change by providing them with sustained contact with a person who has a disability? Eleven pre-service student teachers in the third year of a four-year course leading to a Bachelor of Education at a large metropolitan university in Australia participated in the study. All of the participants were female and had very little exposure to special needs topics but would be required to develop inclusive classroom practices. The group had to study a core unit in educational psychology. Each week students were engaged in a one-hour lecture followed by a two-hour tutorial session with an assistant teacher (Sara) who had a physical disability. For collecting data, an in-depth interviewing technique was used with a semi-structured format. Eleven students were interviewed prior to meeting Sara (interview 1) and eight of them were interviewed again at the end of the semester (interview 2).

The results of this investigation indicated that pre-service teachers' perceptions of the teaching assistant were positively affected by their interaction with her. The students reported that the interaction with Sara (a) was generally a positive experience for them, (b) provided them with first-hand knowledge of disabilities, and (c) helped them to develop more knowledge about

people with disabilities. Furthermore, when asked to reflect on the current teacher education program and its effectiveness in preparing them, they reported that not enough information related to disabilities was included in the course. Moreover, they believed that more practical experiences with people with disabilities would have helped them in their future career as teachers.

Other researchers sought to create a simulated inclusive environment to provide training for pre-service teachers. The purpose of this “apprenticeship model” was to prepare pre-service teachers to meet the diverse needs of all children. In United Kingdom, Bishop and Jones (2002) conducted a small-scale research project using structured workshop activities with children with complex and profound learning disabilities. The project sought to explore the attitudes and perceptions of a group of pre-service teachers before and after participating in a series of eight workshops.

Before the workshops began, seminars and tutorial sessions were held to discuss philosophical, pedagogical, and personal issues relating to the inclusion curriculum. The workshops were held in a classroom at the university that was managed by school and university staff in collaboration with the school. The authors described the plan for the workshop as follows:

Students [pre-service teachers] were asked to plan a short activity related to their specialism, and they were encouraged to do this in small groups. They were supported in this preparation by university staff. Children chose which activities they would like to do using symbols and pictures. The atmosphere in the workshop was very relaxed and supportive with plenty of pre-prepared “backup” activities so students could move the children on if they felt they needed to (p. 61).

Pre-service teachers were interviewed before and after these workshops. The analysis of the interviews revealed that the apprenticeship model of teaching and learning throughout these workshops was effective in this context. Pre-service teachers’ attitudes were positively changed

toward these children; furthermore, the pre-service teachers expressed their willingness to participate in further discussions. The authors suggest that further development of the described approach will benefit pre-service teachers.

Hastings, Hewes, Lock, and Witting (1996) sought to study the impact of contact with students with disabilities on pre-service teachers' perceptions of children with severe learning difficulties. One hundred female pre-service teachers participated in the study after registering for courses aimed at training teachers to work with young students. Of the 100 participants, 27 had a high level of previous contact with children with severe learning difficulties (SLD), and 73 had little or no experience (less than once every 3 month) with these children. Pre-service teachers were divided into two groups, one group (45 students) had completed a 9-week special education course and the other group (55 students) was to complete the course later. The course provided general information about children with SLD, physical disabilities, and other disabilities.

The study participants had experience with students with disabilities in mainstream school settings throughout their practicum experience. To measure their perceptions of children with SLD, participants were asked to complete a questionnaire. The questionnaire consisted of four main sections: (a) attitudes towards disabled persons scale, (b) student attributions, (c) students' intentions to interact with a fictional child with SLD, and (d) students' feelings toward the existence of a child with SLD in their class. The researchers reported that the special education course had a slight positive, but not significant, impact on the perceptions of students who had completed the course compared to those who had not completed it yet. Furthermore, previous experience was found to have a strong effect on the way that the pre-service teachers viewed

students with SLD. Pre-service teachers who had a greater level of experience with children with SLD were generally more positive than those with little or no experience.

Additionally, some research has revealed that pre-service teachers who are familiar with inclusive settings and were themselves members of inclusive classrooms may have more positive attitudes toward inclusion. Sharma, Forlin, Loreman, and Earle (2006) conducted a multi-national comparative study to explore pre-service teachers' attitudes towards inclusion. The authors surveyed 1,060 pre-service teachers from four countries; Australia, Canada, Hong Kong, and Singapore regarding their attitudes toward inclusion prior to their involvement in courses about inclusive education. A four-part questionnaire was used to collect data. These parts were: (a) demographic information, (b) Attitudes Towards Inclusive Education scale (Wilczenski, 1992), (c) Interaction with Disabled Persons scale (Gething, 1994), and (d) Concerns about Inclusive Education scale (Sharma & Desai, 2002). The questionnaire was administered during the first week of the course on teaching students with special needs. The response rate was about 95%.

The results of this study indicated that pre-service teachers had generally positive attitudes toward inclusion and people with disabilities. However, pre-service teachers who reported having previous contact with people with disabilities had more positive attitudes toward inclusion than their counterparts. In addition, pre-service teachers from Western and Western-style institutions (Australia and Canada) had significantly more positive attitudes toward students with disabilities than their Eastern counterparts (Hong Kong and Singapore). A possible explanation is that inclusive education has been adopted in Australia and Canada for over two decades prior to conducting this study and pre-service teachers from these countries may have received their education in inclusive classrooms, compared to pre-service teachers from Hong

Kong and Singapore where inclusion is a relatively new phenomenon. This prior experience with people with disabilities in inclusive classrooms might have a positive impact on Australian and Canadian pre-service teachers' attitudes toward inclusion.

Yellin et al. (2003) sought to evaluate the impact of a field-based experience on undergraduate pre-service teachers in elementary education. Fifty-five students joined an elementary methods course that was taught in two formats: a traditional format in the college campus and a field-based format in a school site. The students on-site observed elementary teachers 3 days a week, worked with students with disabilities, and attended content area lectures on-site. By the end of the semester, pre-service teachers had spent 300 hours in the school prior to student teaching. An attitude questionnaire regarding pre-service teachers' perspective regarding the integration of students with disabilities was administered with two sections (control group) in the college campus and the third section (experimental group) in the school site.

This investigation indicated that there were statistically non-significant differences between the study groups. Pre-service teachers held positive attitudes toward students with disabilities regardless of whether they were in the college campus or in a field-based setting. Attitudes toward practices of inclusion or students with disabilities in general were not improved among on-site pre-service teachers compared to their counterparts on the college campus. The researchers concluded that the attitude change may not happen as a result of the mere exposure to students with special needs. One limitation of this study that might have contributed to these results was that pre-service teachers' involvement was primarily observation, with a limited amount of small group participation. Moreover, the time period of the intervention, one semester, might not have been sufficient to result in a significant change in attitude.

In conclusion, most research has revealed that pre-service teachers who reported or were provided with contact with people with disabilities showed more favorable attitudes toward inclusion and people with special needs in general. This contact has proven effective whether it happens sometime before an intervention (Hastings et al., 1996; Sharma et al., 2006) or is part of the intervention (Bishop & Jones, 2002; Brownlee & Carrington, 2000). However, it is important to note that mere contact with students with disabilities may not be associated with the formation of more favorable attitudes. Moreover, the way the contact is structured seems to have an impact on the change of attitudes. For example, pre-service teachers who participated in structured contacts with people with disabilities in teacher education programs reported more favorable attitudes (see Bishop & Jones, 2002; Brownlee & Carrington, 2000).

Nature and severity of the disability

Teachers' willingness to teach students with special needs, consistent with their support for inclusion, appears to be related to the severity of the disability. Previous studies have indicated that in general, teachers are not supportive of the inclusion of students with behavioral disorders, mental retardation, and multiple disabilities (Cook, 2002). The highest level of support is for students with mild disabilities who require the least amount of modification in curriculum and instruction (Scruggs & Mastropieri, 1996). The next studies investigated whether pre-service teachers' attitudes are influenced by the level of disability they were asked to accommodate within their classroom.

Avramidis and colleagues (2000b) investigated pre-service teachers' attitudes towards inclusion in general, their emotional reaction when dealing with children with special needs, and the effect of institutional and personal variables on their attitudes. The study sample consisted of 135 pre-service teachers who were studying at a university school of education in the UK. A questionnaire consisting of four components (i.e., cognitive, affective, conative, and perceptions

of possessed skills) was used to measure the participants' attitudes toward the general concept of inclusion. This multi-component questionnaire was administered during supervised lecture times at the end of the semester.

The researchers concluded that pre-service teachers appeared to hold positive attitudes toward the overall concept of inclusion. However, students with emotional and behavioral difficulties (EBD) were seen as causing more concern and stress when compared to other students with special needs. The authors recommended that pre-service teachers should be exposed to comprehensive training in classroom management to meet the needs of students with EBD. Moreover, early exposure to students with special needs through field experience in inclusive classrooms was strongly recommended for pre-service teachers.

Similarly, Hastings and Oakford (2003) explored pre-service teachers' attitudes toward the inclusion of students with emotional and behavioral problems as well as students with intellectual disabilities. The participants were 93 university students who were being trained to work with either children of 4-11 years of age or with children and adolescents 11-19. Of the participants, 31 had previous experience working with students with special needs, and 27 had had social contact with people with special needs. A two-section questionnaire was used in the study; the first section was designed to collect demographic information about participants and their experience with people with special needs. The second section was a scale designed for this study called the Impact of Inclusion Questionnaire (IIQ). It was developed to allow comparisons between different student teacher groups and consisted of 24 items. Two versions of the questionnaire were randomly distributed to the participants. One version urged respondents to focus on intellectual disabilities while the second invited them to consider children with emotional and/or behavioral problems in inclusive settings.

The results of the study indicated that pre-service teachers' attitudes measured by the IIQ were influenced by the nature of the disability of children who are included. Children with intellectual disabilities were more acceptable than children with behavioral and emotional problems. Pre-service teachers reported significantly more negative attitudes toward including students with EBD. The researchers concluded that the success of an inclusion program does not depend solely on the teachers' attitudes. For example, supports and appropriate resources were seen as important elements in a successful inclusion program.

Cook (2002) examined the effects of a teacher preparation program on pre-service general educators' attitudes and self-reported weaknesses and strengths related to inclusion. The author sought to analyze pre-service teachers' attitudes by disability type because students with disabilities were frequently seen as a homogenous group. One hundred and eighty-one pre-service teachers participated in the study. Participants were from a large Midwestern university that infused special education content into four seminar courses. However, the author reported that there was no systematic procedure to ensure that special education content was covered by instructors and there was no requirement for the pre-service teachers to work with students with special needs in an inclusive environment. Most of these pre-service teachers were assigned to inclusive classes by chance. For collecting data, pre-service teachers in 16 seminar classes completed a slightly modified version of the Opinions Relative to Integration of Students with Disabilities (ORI) scale (Antonak & Larrivee, 1995). In addition, 136 participants provided written comments on their main strengths and weaknesses regarding teaching students with special needs. To ensure uniformity, instructions were scripted and participants were asked to read short definitions of disability categories (e.g., mental retardation, learning disability, EBD).

After analyzing the quantitative and qualitative data, the author reported that participants were in favor of inclusion and believed that it is beneficial for students with EBD, mental retardation, learning disabilities, and multiple disabilities. However, pre-service teachers pointed out that general education classrooms might not be the best settings for all students with disabilities, especially those with severe disabilities. The main effect of disability category was statistically significant for three ORI factors of attitudes toward inclusion (i.e., perceived ability to teach students with disabilities, integrated classroom management, and special versus integrated general education). Students with learning disabilities received significantly higher ratings than students with other disabilities. Moreover, there were statistically non-significant differences between pre-service teachers as a function of class standing for three ORI factors (i.e., integrated classroom management, benefits of inclusion, and special versus integrated general education). Pre-service teachers indicated that general educators may not be able to accommodate students with disabilities in their classrooms as they might face classroom management problems.

In summary, although pre-service teachers were found to have positive attitudes toward students with disabilities, they were concerned about the nature and severity of the students' disabilities. Students with EBD were seen as the most problematic group in relation to inclusion. They were associated with more concern and stress compared to other students (Avramidis et al., 2000b), while students with intellectual disabilities were more acceptable in relation to inclusion (Hastings & Oakford, 2003). In addition, pre-service teachers believed that general education classrooms might not be the best settings for students with EBD, mental retardation, or multiple disabilities (Cook, 2002). These findings suggest that general education pre-service teachers may

need extensive training to meet the needs of students with more severe disabilities in inclusive settings.

Teacher education programs

Because positive attitudes toward inclusion among pre-service teachers appear to be a necessary factor for successful inclusion, teacher education program faculty have become increasingly concerned with preparing general education pre-service teachers to teach students with disabilities in inclusive settings (Bullough, 1995; Hutchinson & Martin, 1999). These programs have adopted many reforms to impact positively the attitudes and the instructional skills of future teachers. The majority of these programs have examined the impact of special education courses on the attitudes of general education pre-service teachers towards inclusion of students with disabilities in general education classrooms (Carroll, Forlin, & Jobling, 2003; Shade & Stewart, 2001). In some programs, these courses were accompanied by field-based experiences in inclusive settings (Campbell et al., 2003; Jung, 2007). In general, results of studies investigating the impact of coursework and/or field experiences have found that pre-service teachers have positive attitudes toward the general philosophy of inclusive education, especially in their early years in teacher education programs.

Several studies in general and special education have reported that pre-service teachers' preparation has been characterized by a lack of effectiveness to meet the challenge of inclusive education. Lombard, Miller, and Hazelkorn (1998) conducted a study in 45 states in the U.S. to explore the attitudes of teachers regarding the inclusion of students with disabilities. The researchers reported that in general, teachers did not feel prepared to meet the needs of students with disabilities, had received little or no in-service training regarding inclusive practices, and had not participated in developing Individual Education Programs for students with disabilities.

Similarly, in Northern Ireland and Scotland, 231 teacher trainees were surveyed, and almost all believed that their preparation did not enable them to meet the demands of inclusive education (Wishart & Manning, 1996). In essence, although many pre-service and in-service teachers believe that general education classrooms are the best setting for students with disabilities, they report they are inadequately prepared to teach students with special needs in inclusive settings (Sprague & Pennell, 2000; Vaughn, 1999). In light of these findings, Reber and colleagues (1995) suggested that pre-service teachers' knowledge and perspectives towards inclusion should be examined as they prepare to teach students with disabilities in inclusive settings. Indeed, little research has been directed at redesigning teacher education programs to influence the attitudes of pre-service teachers toward students with special needs (Carroll et al., 2003).

Campbell and colleagues (2003) questioned whether a university course aimed at raising awareness of one disability (Down syndrome) could lead to changes in student teachers' knowledge and attitudes towards this disability and disabilities in general. Two hundred seventy-four pre-service education students at an Australian university participated in the study. A questionnaire was used to investigate the future teachers' knowledge and attitudes toward students with Down syndrome as well as their knowledge of the syndrome. In addition, the Interaction with Disabled Person (IDP) scale (Gething & Wheeler, 1992) was used to measure their attitudes toward disability in general. Pre-service teachers were assessed before and after formal instruction for a core unit on Human Development and Education. The unit included considerable focus on inclusive education and individual differences. Furthermore, students were required to do fieldwork by interviewing two members of the community and writing a fieldwork report. The instruction was provided for three hours a week during the 13-week semester.

The researchers reported that by the end of the semester, further improvement in knowledge of the nature of Down syndrome was achieved and the student teachers' stereotypical views regarding children with Down syndrome were considerably reduced. With regard to the inclusion of children with Down syndrome, the results revealed a statistically significant difference between students' total score at the beginning and end of the semester related to the educational, social, and emotional benefits of inclusion for the child with Down syndrome. Moreover, students' attitudes towards disability in general had changed to show significantly less discomfort, uncertainty, fear, and vulnerability.

In an investigation of the impact of teacher training in special education on the attitudes of Australian pre-service general educators towards people with disabilities, Carroll et al. (2003) surveyed 220 pre-service teachers at two universities before and after their participation in a 10-week special education course. The course consisted of a one-hour lecture and a two-hour tutorial per week and was divided into four modules (a) contextual framework of special education, (b) individuals first, (c) inclusion as an educational practice, and (d) classroom practice for individuals with special needs. Data were collected using a modified version of the Interaction with People with Disabilities (IPD) scale (Forlin, Jobling, & Carroll, 2001). The scale consisted of 20 items that require respondents to rank their level of discomfort when communicating with a person with a disability using a 5-point scale. The authors reported that some strategies were used to overcome pre-service teachers' personal feelings of discomfort. These strategies included small group tutorials, interacting with young adults and adults with disabilities, a selection of videos on people with different disabilities in inclusive settings, and an extended 3-week practicum working with students in inclusive settings.

The results indicated that pre-service teachers, once they had completed the course, felt less ignorant and were more sure regarding how to behave toward persons with disabilities. They also demonstrated a greater focus on the person rather than the disability. Moreover, given the limited experience that pre-service teachers had in this study, the authors concluded that participation in these courses can help pre-service teachers' to develop knowledge and improve attitudes toward individuals with special needs. Ultimately, common coursework, practical experience, collaboration, development of skills in behavior management, and construction of effective learning experiences were seen as essential elements when designing courses to influence pre-service teachers' attitudes toward children with disabilities.

Andrews and Clementson (1997) sought to determine if active learning strategies and the use of literature regarding disabilities in a compulsory introduction to education and special education course had an effect upon prospective teachers' attitudes toward inclusion. Throughout a university course, 67 pre-service teachers engaged in active learning through participation in different activities such as simulation, role-playing, problem solving, and open-ended discussions. In addition, field trips to area facilities providing services to children, adolescents, and adults with disabilities were taken throughout the semester. Students selected literature regarding disabilities and suggestions were offered for classroom use. The authors administered a modified version of a questionnaire prepared by Moisis (1994) to collect data prior to the pre-service teachers' involvement in the course activities and again at the end of the course.

By the end of the semester, post-questionnaire results were significantly different from the pre-questionnaire, and indicated that pre-service teachers were more favorable about inclusion but had some doubts if all students would benefit. The authors concluded that effective teaching methodology is essential in fostering positive attitudes toward students with disabilities.

Moreover, training programs should allow pre-service teachers to become personally involved with course content.

While the majority of attitude studies were conducted with general education pre-service teachers, Shade and Stewart (2001) sought to assess the attitudes of special education and general education pre-service teachers toward students with disabilities. Seventy-two special education and 122 general education pre-service teachers enrolled in a special education course for a 30-hour period. The course consisted of lectures, small group discussions, audiovisual presentations, role-play, and attitudinal empathy building and tolerance activities/simulations. An inventory that was designed to assess pre-service teachers' overall attitudes toward the inclusion of students with disabilities and their confidence to work with these students in the general education setting was administered before and after the course. The results indicated that the total test gain scores were statistically significant for both general education and special education majors. The researchers concluded that a single course can positively change pre-service teachers' attitudes towards the inclusion of students with mild disabilities.

While a considerable shift in pre-service teachers' attitudes was found throughout previous studies, other studies did not report significant changes in pre-service teachers' attitudes toward inclusion after completion of a university course. In the U.S., Martinez (2003) sought to assess the effectiveness of an introductory special education course on student teachers' attitudes toward inclusion, their sense of teaching efficacy, and their knowledge about adapting instruction for children with disabilities. The study participants were 23 graduate students who were all post-baccalaureate/Master's certification general education teachers and teacher candidates enrolled in an early childhood education program at a large, urban university in the Southwest. A course titled "Adapting Instruction for Children with Disabilities" was developed that included

four core activities: (a) reading and discussion, (b) field-based experiences, (c) assignments in adapting instruction and developing accommodations for individual students, and (d) classmate interviews. The author used a questionnaire that measured Opinions Relative to the Integration (ORI) of students with disabilities (Antonak & Larrivee, 1995), as well as a Teachers' Sense of Efficacy Scale (TSES) (Tschannen-Moran & Woolfolk Hoy, 2001). The second data-collection strategy was a semi-structured interview that was adapted from Brownlee and Carrington (2000) and lasted approximately 40 minutes with each pre-service teacher.

The results of the questionnaires revealed that the special education course did not have a statistically significant positive effect on the pre-service teachers' attitudes toward inclusion or their perceptions of teaching competence. However, review of post-course interview narratives revealed generally positive effects of the course on attitudes toward inclusion as well as the pre-service teachers' sense of competence to be effective in inclusive settings. Furthermore, the interview narratives indicated that the majority of pre-service teachers became aware of the role of instructional adaptation and making recommendations for students with disabilities.

Correspondingly, most pre-service teachers reported high teaching efficacy through the recognition of the role of general educators in inclusive environments. An important finding in this study was that most participants indicated the importance of initiating significant changes in general education classroom procedures as a prerequisite for successful inclusion.

Tait and Purdie (2000) investigated 1,626 general education pre-service teachers' attitudes towards people with disabilities at a large Australian university. Participants were either in the final semester of their fourth year of study or enrolled in a one-year postgraduate diploma in education. There were no mandatory courses related to students with special needs offered to pre-service teachers. However, in the final semester of their fourth year of study, students

attended several lectures and tutorials about students with disabilities. To collect data, the authors administered the 20-item Interaction with Disabled Persons (IDP) scale (Gething, 1994). The questionnaire was developed to measure levels of discomfort with people with disabilities. Data were collected twice, at the beginning of the academic year from all pre-service teachers and at the conclusion of the postgraduate students' coursework in November of the same year.

The authors analyzed IDP questionnaire results and reported that desirable and undesirable emotions experienced by individuals interacting with people with disabilities could be assessed using this scale. The results indicated there were two statistically significant differences (sympathy and embarrassment) between the beginning and the end of course scores for the postgraduate students. However, the authors reported the magnitude of these differences was minimal as indicated by an *eta squared* of less than .02. They concluded that the one-year general teacher training course was ineffective in influencing students' attitudes in a positive way. Moreover, the authors were not sure whether a longer teacher training program would lead to positive results and recommended that further research is needed to address this issue.

It is noticeable that participants in the last two studies (Martinez, 2003; Tait & Purdie, 2000) were either at the graduate level or seniors in their last semester of their studies. Recently, Jung (2007) reported similar results after comparing 57 pre-service teachers who were about to graduate and 68 first-year students enrolled in a course entitled "Introduction to Teaching in a Diverse Society." Pre-service teachers who had majored in early childhood and intervention specialists were required to take four special education related courses before their student teaching. Each special education course required at least 10 hours of field-based experience in inclusive classrooms and resource rooms. The researcher used the Opinion Relative to Integration (ORI) questionnaire (Antonak & Larrivee, 1995) with both groups of participants.

The four factors (i.e., benefits of inclusion, inclusive classroom management, ability to teach students with disabilities, and special vs. inclusive classroom) of the questionnaire were used to compare the responses of both groups of pre-service teachers.

The results indicated that there were statistically non-significant differences between first year and last year pre-service teachers on 3 of the 4 factors. On the fourth factor (i.e., special vs. inclusive classroom), first year pre-service teachers rated themselves significantly higher than pre-service teachers. However, first year pre-service teachers also rated themselves higher than senior pre-service teachers on the other three factors, but the results were not statistically significant.

In summary, three of the reviewed studies (Andrews & Clementson, 1997; Campbell et al., 2003; Shade & Stewart, 2001) reported statistically significant differences between pre-service teachers' scores at the beginning and end of the university courses aimed at influencing their knowledge and attitudes toward inclusion. Pre-service teachers' attitudes became more positive for both general and special education majors (Shade & Stewart, 2001). They also felt less discomfort and uncertainty (Campbell et al., 2003). However, some pre-service teachers had doubts about the general education teachers' ability to provide accommodation for children with disabilities in their classrooms (Andrews & Clementson, 1997). These doubts may have emerged as a result of some provided activities. For example, the field trip to area facilities, where students with disabilities live in isolation, may have caused pre-service teachers to wonder about the skills that general educators possess and their ability to serve these children and adolescents in general education classrooms.

In the other three studies (Jung, 2007; Martinez, 2003; Tait & Purdie, 2000), according to questionnaire results, training courses did not have significant positive effects on pre-service

teachers' attitudes. However, Martinez reported that post-course interviews indicated improvement in the students' attitudes as well as their awareness of the role of general educators and instructional adaptations for students with disabilities. Participants in these studies were graduate students in two different countries, U.S. and Australia, with a large difference related to the sample size used in each study. The results of these studies indicated that there was a trend toward reporting more stable attitudes toward inclusion of students with disabilities as pre-service teachers progress in their teacher education programs. Moreover, pre-service teachers reported more favorable attitudes in their early years of professional preparation prior to being involved in practical experiences with students with disabilities.

Most of the reviewed research was done with general education pre-service teachers who may or may not be familiar with the classification of disabilities for students with special needs. The studies did not report whether participants were familiar with the classifications of students with disabilities reported in the questionnaires. In one study (Cook, 2002), participants were asked to read short definitions of disability categories. In general, one course in special education may not be enough for general education majors to grasp all the classifications and characteristics of special education students. Thus, many of the participants may have responded to questionnaires without having enough information related to the students they are expected to serve in their classrooms.

Finally, Thompson, Diamond, McWilliam, Snyder, and Snyder (2005) indicated that the vast majority of recently published research reports do not even mention reliability of the measures used in the empirical studies and the reliability of the data actually being analyzed. This is true of most of the studies that were reviewed above. These studies adopted survey designs without reporting score reliability coefficients for the surveys. However, when some of

these studies reported the score reliability coefficients, they did that without explicit and reasonable justifications regarding the sample compositions and the standard deviations of both the prior and current studies. This suggests that caution should be exercised in interpreting the results of these investigations (Thompson et al., 2005).

Conclusion

Positive and negative messages could be drawn from this review. On the positive side, pre-service teachers' attitudes may not be stable and rigid by the time they reach college, as some researchers concluded (see Pajares, 1992). In most studies, pre-service teachers were open to change their previously held views about inclusion or people with disabilities. For instance, facilitating contact with people with disabilities had a positive influence on their attitudes (Brownlee & Carrington, 2000; Hastings et al., 1996). Furthermore, these attitudes were positively influenced by (a) using structured workshop activities (Bishop & Jones, 2002), (b) providing contact with people with severe disabilities (Brownlee & Carrington, 2000), (c) raising students' awareness of one type of disabilities (Campbell et al., 2003), and (d) adapting instructional techniques like simulation, role playing, problem solving, and open-ended discussions (Andrews & Clementson, 1997).

On the negative side, some studies reported that teacher education programs had little or no influence on pre-service teachers' attitudes about inclusion. Indeed, different features of these programs have produced similar results regardless of whether the intervention was a university course (Hastings et al., 1996; Tait & Purdie, 2000), a course combined with field-based experience (Martinez, 2003), or a solely field-based experience (Yellin et al., 2003). In addition, pre-service teachers did not welcome students with more challenging disabilities (e.g., students with EBD and students with mental retardation) in inclusive settings (Avramidis et al., 2000b; Cook, 2002; Hastings & Oakford, 2003). The researchers attributed this finding to the pre-

service teachers' lack of classroom management skills and recommended that training is important for them to accept and accommodate these students in general education classrooms.

Studies conducted with in-service teachers indicate that teachers' attitudes may be influenced by the level of disability they are asked to accommodate within their classrooms. It has been documented that teachers' willingness to teach students with disabilities, consistent with their support for inclusion, appears to be related to the severity and type of the disability (Scruggs & Mastropieri, 1996). For example, children with intellectual disabilities or emotional and behavioral problems are typically rated less positively by teachers (Soodak et al., 1998).

As this review of the literature has shown, in the area of inclusion, the attitudes of pre-service teachers are not well understood. The majority of general education pre-service teachers who participated in the previously reviewed studies have had few prior experiences working with students with disabilities in inclusive settings. Therefore, it has been documented that many of these pre-service teachers in their early teacher education training had not yet developed clear perspectives about teaching in inclusive settings (Lambe & Bones, 2006). However, the findings indicated that pre-service teachers might be open to change their previously held attitudes. It seems that the prior experiences with people with disabilities and the structure of teacher education programs are the most important factors that determine pre-service teachers' attitudes toward inclusion.

CHAPTER 3 RESEARCH DESIGN

Setting

This study was conducted in an Egyptian public university in the middle of the Nile delta in the Northern part of Egypt. Like most other universities of Egypt, the Kafrelsheikh University derives its name from the city of its location. This university was a branch of Tanta University until April, 2006 when it was separated and became an independent university. The university consists of eight colleges and serves about 30,000 students, most of whom live in the middle of the Nile delta. The College of Education is one of the first colleges that was established in the university about 30 years ago. This college offers teacher education programs for students majoring in elementary education, secondary education, and early childhood education at undergraduate and graduate levels. Furthermore, it provides teacher education for pre-service and in-service teachers majoring in special education, but only at the graduate level. Students enroll in different areas of specialization such as, languages (i.e., Arabic, English, French), history, geography, and science.

Participants

Surveys were distributed to 1,658 undergraduate (sophomores, juniors, and seniors) students studying general pre-service education in the College of Education at the Kafrelsheikh University in Egypt. The vast majority of pre-service teachers (99%) who attended the classes in which data were collected chose to participate. Cases with missing data (about 1%) were not considered. This resulted in a total of 1,625 (98%) complete surveys that were included in the analysis.

All pre-service teachers were enrolled in the fall semester of the 2008/2009 academic year. Students were enrolled in a Bachelor of Education degree (four year course), and were studying

either elementary or secondary education. These participants were predominantly female (88.12%). All participants were between the ages of 19 and 21 years. More than a quarter (28.86%) of these students reported contact with people with disabilities at the social level (outside the context of the formal educational system). Table 3-1 provides a description of the demographic characteristics of the participants.

Pre-service teachers apply to the undergraduate teacher education programs in the College of Education after graduating from high school. They receive preparation to teach students in general education from kindergarten to high school. In the elementary education program, graduates are expected to teach students from first grade to sixth grade. These six years of formal education are called the first stage of basic education. Secondary education (also called general education) graduates are expected to teach at the second stage of basic education (i.e., seventh grade to ninth grade), and at the high school level (i.e., tenth grade to twelfth grade). Graduates of the early childhood program are expected to teach children between the ages of 4 and 5 in pre-kindergarten and kindergarten.

Sophomores in this study are second year pre-service teachers who have completed two semesters of coursework in the College of Education. Throughout the freshman year, pre-service teachers in the elementary education program enroll in six general education courses in addition to courses in their majors in Arts or Sciences. Among the courses sophomores took prior to participating in this study were teaching profession and teacher's roles, child psychology, teaching strategies for classroom teachers, and general health and the child's health. In the secondary education program, pre-service teachers studied only two introductory courses in principles of education and principles of psychology.

Pre-service teachers at the beginning of their junior year have completed four semesters of coursework in the college. In addition to courses in the content area, elementary education pre-service teachers, in the sophomore year, complete five courses in elementary education curriculum, methods of teaching, individual differences, elementary education philosophy, and environmental studies. In addition to courses in the content area, pre-service teachers in the secondary education program complete only three courses in principles of teaching, history of education, and developmental psychology. Pre-service teachers in both elementary and secondary education programs begin their student teaching experience in the junior year. During this year, pre-service teachers are present at their placement one day per week in the fall and spring, and two weeks daily in the spring.

At the beginning of their senior year, pre-service teachers in elementary and secondary education programs have completed six semesters of coursework with one year of field-based experience in general education classrooms. In addition, during their junior year, pre-service teachers in the elementary education program complete courses in educational psychology, education and societal issues, elementary education problems and development, and micro-teaching. In the secondary education program, pre-service teachers complete courses in foundations of education, history of education, methods of teaching, educational psychology, educational problems, and instructional technology.

Instrumentation

Participants completed the Pre-service Teachers' Attitudes towards Inclusion questionnaire. This questionnaire is a self-designed instrument consisting of items drawn from measures of beliefs and attitudes toward inclusion used in previous studies (Antonak & Larrivee, 1995; McHatton & McCray, 2007; McLeskey et al., 2001; Stoiber et al., 1998). The instrument consists of three parts; demographic information, 33 statements which respondents rank on a 5-

point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree), and a set of questions that require written responses about pre-service teachers' perspectives towards inclusion. For the second part of the instrument, although all items are mixed together, scoring of 13 items (i.e., 5, 7, 10, 12, 13, 14, 16, 17, 19, 21, 23, 25, and 26) is reversed so that a higher total score for the questionnaire reflects positive pre-service teacher attitudes towards inclusion (see Appendix A). The items in this part of the instrument focus on how pre-service teachers conceptualize: a) benefits of inclusion, b) inclusive classroom management, c) ability to teach students with disabilities, d) special versus inclusive general education placements (Antonak & Larrivee, 1995; McLeskey et al., 2001; Stoiber et al., 1998), and e) perspectives towards teaching students with specific types of disabilities (McHatton & McCray, 2007). Additionally, many of the questions in the third part of the instrument were derived from Scruggs and Mastropieri's (1996) meta-analysis of teacher perceptions regarding inclusion. The three parts of the instrument take approximately 25 minutes to complete.

Development of the Pre-service Teachers' Attitudes toward Inclusion scale.

Reviewing previous literature and measures of beliefs and attitudes toward the inclusion of students with disabilities in general education classrooms revealed a variety of instruments that were used to examine teachers and pre-service teachers' attitudes across studies. Most of these instruments assessed attitudes using a Likert scale in which participants ranked the items on a 5-point or 6-point scale. In most studies, practicing teachers in inclusive or non-inclusive settings were asked to complete these questionnaires. Results were reported as correlated with teachers and pre-service teachers' experience with students with disabilities, gender, teacher education preparation, training, support services, and type and severity of the student's disability (see Campbell et al., 2003; Cook, 2002; McLeskey et al., 2001). The attitude instruments were used

with teachers (McLeskey et al., 2001), pre-service teachers (Antonak & Larrivee, 1995; McHatton & McCray, 2007), and parents and practitioners (Stoiber et al., 1998).

Although measures were used in the previous literature, a new instrument was needed for two reasons. *First*, the previous instruments were developed and applied in educational and social contexts that were different from the context of this study. Thus, it was difficult to adapt only one of these instruments and use it with different participants in a different setting. *Second*, although the design of this research is mostly quantitative, qualitative data were also needed to give pre-service teachers the opportunity to elaborate on their perspectives toward inclusion. Consequently, questions that enable participants to provide responses were needed in addition to the previously developed Likert scales.

Several steps were taken to develop the instrument. First, the literature addressing pre-service and inservice teachers' attitudes toward inclusion was reviewed to determine the major issues of concern regarding inclusive programs (e.g., Avramidis & Norwich, 2002; Scruggs & Mastropieri, 1996). Second, position papers regarding inclusion were reviewed (see Hannah, 1988; Kavale & Forness, 2000). Third, four questionnaires on teachers and pre-service teachers' attitudes toward inclusion (i.e., Antonak & Larrivee, 1995; McHatton & McCray, 2007; McLeskey et al., 2001; Stoiber et al., 1998) were reviewed (see Table 3-2), and used to develop the second part of the instrument. In this part, the first 28 items pertained to pre-service teachers' general attitudes toward inclusion while the last five items pertained to attitudes toward specific types of disabilities (i.e., learning disabilities, emotional and behavioral disorders, hearing impairment, visual impairment, and mental retardation). Fourth, most of the questions that require written responses were derived from Scruggs and Mastropieri's (1996) conclusions in their meta-analysis. Fifth, to avoid bias, both positive and negative wording was used for the

questionnaire items (part 2), and the sequence of items was randomly determined. Sixth, the instrument packet was translated into Arabic language by the author, and the translation was then reviewed by professional translators who had previous experience in translation for research purposes. Seventh, after translation, the instrument items were initially reviewed by experts in special education to ensure clarity and coverage of relevant content (content validity). Eighth, some items were added, deleted, or rephrased according to the recommendations of the experts. Ninth, the instrument was piloted with a group of Egyptian pre-service teachers (Table 3-2).

Pilot Study

The purpose of this pilot study was to investigate the validity and reliability of the developed questionnaire, and to secure feedback from participants to make modifications to the instrument. Permission to conduct this study was requested from the Institutional Review Board at the University of Florida. Following approval, arrangements were made with an instructor at the participating university to administer the instrument. Ninety-two undergraduate students were invited to participate in this study. Participants were all seniors in the Psychology program at the College of Education in Kafrelsheikh University, Egypt. This pilot study was conducted at the end of the fall semester of the academic year 2007/2008, and all students were expected to graduate at the end of the spring semester of this academic year. Twenty-two of the returned questionnaires were incomplete, and were excluded from the analysis. Table 3-3 represents the demographic characteristics of the participants who responded fully to the instrument.

Most participants (93%) were between the ages of 19 and 22 years. Other participants, except one participant who did not report age, were between 23 and 24 years of age. The vast majority (90%) of the students were female. Only (21.4%) of participants reported a previous experience interacting with people with special needs outside the educational setting (e.g., family

members, friends, neighbors). Only one student reported teaching students with special needs during her field-based training.

The instrument was distributed by the researcher and the class instructor 35 minutes before the end of the class time. The voluntary and anonymous nature of the students' participation was explained. Moreover, confidentiality in collecting and analyzing data was reassured. The consent form was distributed with the instrument and collected with students' signatures. The students took approximately 25 minutes to complete the instrument, which was then collected by the researcher.

The reliability of the instrument was determined by using two indices: split-half reliability and Cronbach's alpha. The split-half reliability was calculated by applying the Spearman-Brown correction to the correlation between the total scores of two randomly split halves of the questionnaire. This resulted in a mean split-half reliability of .87. Similar internal consistency was found using Cronbach's alpha (.87).

Based on this pilot study, some items were eliminated and/or modified in the second part of the questionnaire. For example, one item was eliminated because all participants provided the same answer on the 5-point Likert scale. Other items that reflected some disability classifications were also eliminated because some students did not recognize these classifications and, consequently, did not respond to these items. The most common classifications were maintained in the instrument. In the third part of the questionnaire, two questions were modified based on participant feedback to ensure clarity and accuracy.

Procedure

An approval from the Institutional Review Board at the University of Florida (see Appendix B) to conduct this study was secured. Moreover, the researcher received approval from the instructors at Kafrelsheikh University for a 45-minute session with pre-service teachers to

describe the purpose of the study, obtain consent, and administer the questionnaire. The Pre-service Teachers' Attitudes toward Inclusion questionnaire was administered during scheduled lecture sessions of undergraduate courses at different times and locations. Sophomores, juniors, and seniors from the two educational programs (i.e., elementary and secondary) and different majors (e.g., Arabic language, English language, social studies, and science) participated in the study. The study was based on a sample of convenience from one university because this could increase participation and result in a large sample. These participants were informed that their participation would be voluntary and their responses to the questionnaire would be anonymous. Because the fall semester starts in the middle of September, the administration of the instrument took place between October and November 2008. The data collection was conducted by the researcher and cooperating instructors at the participating university. Completed questionnaires were collected after approximately 25 minutes.

Data Analysis

To answer the *first and second research questions* (i.e., what are the attitudes of general education pre-service teachers toward inclusion in Egypt? What variables are associated with Egyptian pre-service teachers' attitudes toward inclusion?), the following statistical procedures were used to analyze responses on the first and second parts of the questionnaire:

1. Descriptive statistics were used to compare demographic characteristics of pre-service teachers that participated in the study.
2. A two-way between-subjects analysis of variance (ANOVA) was used to test for the interaction between the two grouping variables; class standing, with three levels (sophomore, junior, and senior), and educational program, with two levels (elementary and secondary).
3. A *t*-test procedure was used to test the differences in pre-service teachers' attitudes as a function of educational program (elementary and secondary) and gender (male and female).

To answer the *third question* (i.e., what issues do pre-service teachers believe need to be addressed so that they can be effective teachers in inclusive settings?), qualitative analysis was

conducted with the third part of the questionnaire. Of the 1,625 pre-service teachers that returned complete surveys, 100 (6.2%) surveys that provided the most detailed written comments were chosen for the qualitative analysis. The constant comparative method (Glaser & Strauss, 1967) was used for data analysis without seeking to build substantive theory. In this method, a particular incident was compared with another incident in the same set of data or in another set. As a result of this comparison, categories that describe pre-service teachers' perspectives toward inclusion were determined. Data that fit into specific categories were physically grouped into that category to allow for analysis and interpretation of the data (Bogdan & Biklen, 1998).

Table 3-1. Demographic characteristics of participants.

Characteristics	All Participants (<i>n</i> = 1625)			
	<i>N</i>	Percentage of Sample	<i>M</i>	<i>SD</i>
Class Standing				
Sophomore	561	34.52	92.53	17.20
Junior	521	32.06	85.63	20.21
Senior	543	33.42	83.65	18.54
Educational Program				
Elementary	758	46.65	85.38	19.24
Secondary	867	53.35	89.08	18.69
Gender				
Female	1432	88.12	86.71	18.81
Male	193	11.88	92.18	20.04
Social Contact with People with Disabilities				
Contact	469	28.86	89.81	19.56
No Contact	1156	71.14	86.36	18.74

Table 3-2. Instruments used to measure pre-service teachers' attitudes toward inclusion

Author(s)/ Year	Instrument Title	Number of Items & Scoring	Sample Characteristics						Score Reliability Coefficient
			Number	Age in Years	Ed Level	Gender	Race/ Ethnicity	Area of Study	
Antonak & Larrivee (1995)	<i>Opinions Related to Integration of Students with Disabilities (ORI) Scale</i>	25 items; 6-point Likert- type scale (-3 "I disagree very much" to +3 "I agree very much")	376 Undergraduates and inservice professionals	Md = 21	Md = 15 years	79% females	90% white	16% special education 84% general education	Split-half = 0.82; Cronbach's alpha = 0.88
McHatton & McCray (2007)	<i>Perceptions toward Inclusion Survey</i>	22 items; 5-point Likert scale (strongly agree to strongly disagree)	161 undergraduates; elementary education ($n =$ 128) and secondary education ($n =$ 33)	from 18 to 25 (n = 123) and > 25 (n = 38)	Undergrad uates	87% females	N/A	elementary and secondary education majors	Cronbach's alpha = 0.91

Table 3-2. Continued

Author(s)/ Year	Instrument Title	Number of Items & Scoring	Sample Characteristics						Score Reliability Coefficient
			Number	Age in Years	Ed Level	Gender	Race/ Ethnicity	Area of Study	
McLeskey, Waldron, So, Swanson, & Loveland (2001)	<i>Inclusive School Program (ISP) Survey</i>	30 items; 5-point Likert scale (strongly agree to strongly disagree)	162 inservice teachers from 6 schools; 78 in inclusive schools and 84 in non- inclusive schools	N/A	Md = 18.31 (inclusive); Md = 16.3 (non- inclusive)	15% inclusive; 12% non- inclusive males	100% White	14% (inclusive); 8% (non- inclusive) special education and the reminders were general education	Split-half = 0.94; Cronbach's alpha = 0.94
Stoiber, Gettinger, & Goetz (1998)	<i>My Thinking About Inclusion (MTAI) Scale</i>	28 items; 5-point Likert scale (strongly accept to strongly reject)	415 parents (150 parents of children with disabilities & 260 parents of typically- developing children); 128 early childhood practitioners	N/A	Parents: 68% some college; 32% high school diploma or less. Practitioners: 16% less than 5 yrs, 27% had 5-9 yrs; 16% had 10-14 yrs, & 41% over 15 yrs	N/A	Parents: 52% white; 33% African- American; 15% others Practitioners : N/A	Parents: N/A Practitioners: 39 special educators, 35 general educators; 35 para- professional; 19 support service personnel	Cronbach's alpha = 0.91

Table 3-3. Demographic characteristics of participants (pilot study)

Characteristic	N	Percentage of Sample (%)
Gender		
Female	63	90
Male	7	10
Age*		
19-20 years	48	68.6
21-22 years	17	24.3
23-24 years	4	5.7
Social contact		
No contact	55	78.6
Contact	15	21.4

* One participant did not report age.

CHAPTER 4 RESULTS

This study explored Egyptian pre-service teachers' attitudes toward the inclusion of students with special needs in general education classrooms and variables associated with these attitudes (e.g., nature of the disability, contact with people with disabilities, and class standing of their teacher education program). Furthermore, the study explored issues that pre-service teachers believed needed to be addressed for them to be successful teachers in inclusive classrooms. This chapter is divided by quantitative and qualitative results and each section is structured around the research questions that were addressed.

Quantitative Results

Preliminary Analyses

Descriptive statistics indicated that all means and standard deviations (Table 3-1) appeared reasonable. Skewness and kurtosis were divided by their standard errors and appear non-problematic. The skewness statistic was -0.08 and the kurtosis statistic was -0.46. Since none of these ratios exceeded 2.0, a reasonably normal distribution is assumed. Furthermore, to determine the reliability of the scale, internal consistency analysis was conducted. The analysis revealed that Cronbach's alpha for the Pre-service Teachers' Attitudes toward Inclusion Scale was .89. The individual items and their total correlation with the scale are reported in Table 4-1. However, when a factor analysis was conducted, the items appeared to be unidimensional.

Quantitative Research Questions and Findings

To examine the attitudes of pre-service teachers toward inclusion and the factors associated with these attitudes, two questions were posed and subsequently investigated using quantitative methods. The following section reviews findings related to the research question: What are the attitudes of Egyptian pre-service teachers toward inclusion in Egypt?

Descriptive statistics were used to analyze the data collected from the first two parts of the instrument (Appendix A). Because higher scores on the 5-point Likert scale represented a more positive disposition, the results indicated that, on average, pre-service teachers tended to have more negative than positive attitudes toward inclusion of students with special needs ($M = 2.65$, $SD = 0.58$). The 95% confidence interval around the mean was 2.62-2.68.

The descriptive statistics also indicated that pre-service teachers expressed more negative attitudes toward the inclusion of children with mental retardation ($M = 1.89$, $SD = 1.14$) than they did toward other disabilities, including students with emotional and behavioral disorders ($M = 2.67$, $SD = 1.35$). In addition, pre-service teachers rated the inclusion of students with learning disabilities ($M = 3.33$, $SD = 1.36$) more favorably than students with other disabilities. Mean scores for participants, subdivided by the special needs they were asked to consider are displayed in Table 4-2.

To investigate the factors that might be related to the pre-service teachers' attitudes toward inclusion, the following research question was posed: What variables are associated with the Egyptian pre-service teachers' attitudes toward inclusion?

The impact of the demographic variables believed to be associated with pre-service teachers' attitudes toward inclusion was examined by using a two-way between-subjects analysis of variance (ANOVA). The between-subjects factors were class standing, with three levels (sophomore, junior, and senior), and educational program, with two levels (elementary and secondary). Means and standard deviations for these main effect groups are detailed in Table 3-1. At the alpha level of .05, the ANOVA results demonstrate that a significant main effect was found for class standing, $F(2, 1619) = 29.90$, $p < 0.01$. Moreover, the main effect for the educational program was also significant, $F(1, 1619) = 5.50$, $p < 0.01$. A significant interaction

between class standing and educational program, $F(2, 1619) = 3.23, p < 0.05$, also was found. These results are detailed in Table 4-3.

Follow-up tests were conducted to evaluate pairwise differences among the means using Scheffe post-hoc test. The results indicate that there were significant differences between the means for the sophomore group and both junior and senior groups. Pre-service teachers' ratings differed as a function of class standing. More specifically, sophomores exhibited significantly more positive attitude scores toward inclusion than juniors ($p < 0.01$) and seniors ($p < 0.01$). However, the difference between the means for the junior group and the senior group was not significant ($p < 0.22$). These results are presented in Table 4-4.

The interaction between class standing and the educational program is illustrated in Figure 4-1. The means for the elementary and secondary majors at the sophomore level were 91.80 and 92.88, respectively; the means for the elementary and secondary majors at the junior level were 85.61 and 85.66, respectively; the means for the elementary and secondary majors at the senior level were 80.99 and 86.52, respectively.

Scheffe post-hoc analyses suggested non-significant mean difference between elementary and secondary majors at the sophomore level ($p < 0.99$). Similarly, non-significant mean difference was found between elementary and secondary groups at the junior level ($p < 1.00$). In contrast, however, participants in the elementary and secondary groups at the senior level were significantly dissimilar in their attitudes toward inclusion ($p < 0.04$). More specifically, senior level participants in the secondary education group exhibited more favorable attitudes toward inclusion than participants at the senior level in the elementary education group.

The t -test procedure revealed that elementary ($M = 85.38, SD = 19.24$) and secondary ($M = 89.08, SD = 18.69$) majors were significantly different in their attitudes toward teaching students

with disabilities in their classrooms, $t(1623) = 3.92, p = 0.001$. To illustrate, while the total score for both elementary and secondary groups indicated more negative than positive attitudes, pre-service teachers who majored in secondary education were significantly more positive than pre-service teachers who majored in elementary education.

Another t -test revealed that participants were significantly different in their attitudes toward accommodating students with disabilities in general education classrooms, as a function of gender, $t(1623) = 3.75, p = 0.001$. Both groups' (i.e., male and female) mean attitude scores indicated that male participants ($M = 92.18, SD = 20.04$) exhibited a more favorable preference toward including students with disabilities than female participants ($M = 86.71, SD = 18.82$). Significant differences also were found regarding participants' experiences which were unrelated to teaching or teacher training, $t(1623) = 3.32, p = 0.001$. More specifically, pre-service teachers who had social experiences with individuals with disabilities ($M = 89.81, SD = 19.56$) exhibited more favorable attitudes toward including students with disabilities in general education classrooms than their counterparts ($M = 86.36, SD = 18.74$) with no such experiences.

Qualitative Results

Of the 1,625 pre-service teachers that returned surveys, 100 (6.2%) surveys that provided the most detailed comments were chosen for the qualitative analysis. Data analysis was conducted for the third portion of the survey, which consisted of seven qualitative questions (e.g., Do you support the concept of including students with special needs in general education classrooms? Why?). In this section, pre-service teachers reported on the issues they believed needed to be addressed to be effective inclusive teachers. The following section reports the findings from the qualitative data analysis. Specifically, themes that emerged from pre-service teachers' perspectives about inclusion will be described.

To analyze the views pre-service teachers' articulated related to the inclusion of students with special needs in general education classrooms, one question was posed. The following section reviews findings related to the following research question: What issues do pre-service teachers believe need to be addressed so that they can be effective teachers in inclusive settings? Seven themes emerged from responses to this question (see Table 4-5). The themes are described below and participant responses are highlighted.

Support for Inclusion Concept

At first glance, reading these pre-service teachers' comments about inclusion would promptly reinforce the view that inclusion is a top-down decision in the Egyptian context. The majority of pre-service teachers (56.6%) did not believe in the general concept of inclusion. They answered "no" when asked whether they supported the idea of including students with special needs in the general education classrooms. Moreover, most of the 705 (43.4%) pre-service teachers who answered "yes" to this question approved of inclusion only under certain conditions.

Pre-service teachers who were not in favor of inclusive education made a range of comments about the possible negative impact of inclusion. Their comments reflect a wide range of reasons which support these perspectives. For instance, many participants offered that they did not favor inclusive education because of: (a) challenges associated with teaching students with special needs in general education classrooms, (b) negative impacts on the academic level of general education students, and (c) psychological and emotional harm for students with special needs.

Some of the pre-service teachers believed that inclusion could cause harm to either students with special needs or students in general education. One pre-service teacher stated:

Inclusion will have a negative effect on children with and without disabilities. It will make it difficult for both groups to be served properly in the inclusive classroom. Moreover, inclusion may result in not only an academic failure but also may have a harmful psychological and emotional impact, especially on students with special needs.

Another pre-service teacher described the way she thought about inclusion:

I am also concerned about general education students, especially those who are talented with high academic achievement records. They may not tolerate the existence of the students with special needs in their classrooms. Moreover, the interaction between both groups may affect the emotional development of the students with special needs. They will always compare themselves with their peers in general education. The results could be frustrating.

Other pre-service teachers expressed concerns about teaching students with special needs.

They reported the belief that students with special needs were “special” and they did not know how to teach them with other students in the classroom. One pre-service teacher wrote:

Students with special needs demand special treatment that is different from the treatment of general education students. Therefore, it will be difficult for teachers to bring all these students together and teach them in one classroom. Both types of students will not benefit from this type of education.

Perhaps the previous perspective is a result of the way that pre-service teachers view the needs of students with special needs. They may believe that the needs of these students would be too difficult to be addressed in settings different from special education schools and classrooms.

Another pre-service teacher commented:

Many of the students with special needs have difficulties in attention, concentration, and understanding compared to their peers in general education. They need a type of education that is different from the education of students in general education. Therefore, it will be more appropriate to place them in special education classrooms for better educational care. In these [special education] classrooms, instructional strategies that are suitable for them should be used.

In contrast, pre-service teachers who believed in the general concept of inclusion (43.4%) seemed to embrace more progressive perspectives toward inclusion. In most cases, they had gone beyond the classroom situation to express their interests in human rights, equity, stereotype removal, and student with special needs’ social satisfaction. One pre-service teacher commented:

They [students with special needs] are human beings like everyone else except they look different in some aspects. They should be given every opportunity to be with their counterparts in the same educational setting. Inclusion will have a positive influence on their spirit and they will not feel neglected anymore. It will send a message about how our society cares about those people with special needs.

Another pre-service teacher elaborated on this expected positive influence:

I support inclusion because it will make students with special needs feel confident in their abilities. A sense of equity will be developed among those students. This sentiment will help them to work on their own problems and solve them. They will feel stronger in the face of life's difficulties.

Many other comments stressed the importance of the social interaction in the lives of students with special needs. This "healthy" interaction for people with disabilities may result in feelings of satisfaction. A student teacher stated:

I do support this concept [Inclusion] because bringing all students together to be taught in one classroom will promote social interaction among them. Everyone will try to communicate with one another to create the spirit of the group. Students with special needs will be part of this process and they will work hard to establish a healthy relationship with their peers. This will deprive them from social isolation and eliminate the feelings of embarrassment and loneliness.

While many of these pre-service teachers believed in the general concept of inclusion, they still voiced concerns about the level of the disability, school resources, and teacher preparation and training:

Although I am in favor of inclusion, this has to be implemented under two conditions. First, the student's disability has to be at the acceptable level [mild or moderate] so that the teacher and other students will be able to deal with him/her in the general education classroom. Second, pre-service preparation and in-service training is a must to get the benefits of inclusion. Otherwise, a harmful effect for the students with disabilities could be the result.

In summary, most of pre-service teachers in this study did not support a broad and general view of inclusion. They shared a strong belief that including students with special needs in general education classrooms may not benefit students with and without disabilities. These pre-service teachers raised concerns about the potential negative impact related to the academic

needs of students without disabilities. They were also worried about the psychological and emotional impact of the inclusion of the students with special needs. Moreover, most participants doubted their abilities to teach these “special” students in their classrooms. Thus, they preferred special education settings to better accommodate students with special needs.

A much smaller number of pre-service teachers supported the concept of inclusion and believed general education settings were best for students with special needs. Many of these pre-service teachers embraced concepts of human rights and equity. Thus, they advocated for equal opportunities for all children in one educational setting. Moreover, from an educational perspective, they believed that inclusion would promote social interaction and effective communication between students with and without special needs. However, many of these pre-service teachers voiced concerns about the Egyptian educational system’s ability to support inclusive opportunities.

Teaching in Inclusive Classrooms

When pre-service teachers were asked if they would be willing to teach students with disabilities in their future classrooms, 49% of them answered “no,” and 51% answered “yes.” However, most of those who answered “yes” were willing to accommodate students with disabilities in their classrooms under certain conditions. For those who were not in favor of teaching in inclusive classrooms, a range of reasons were cited. For example, many offered that they were not in favor of inclusive classrooms because of their lack of preparation in their teacher education program or stated that the type of students’ disabilities were reasons for not supporting inclusive opportunities for children with special needs. A pre-service teacher wrote:

It will be difficult for me to deal with both types of students [with and without disabilities] in one classroom. This will create chaos in the educational process and I will be distracted between both groups. Those students need special treatment and teaching strategies that go beyond my abilities. I am not prepared to do that.

Indeed, most of these pre-service teachers, who were not in favor of teaching in inclusive settings, recommended a special education setting for students with disabilities. They believed that special education teachers would do a better job when teaching the students with special needs. One pre-service teacher said:

I am a junior and, to this day, I did not hear about inclusion or any type of setting related to it. Because I did not get the training necessary to do this job, I prefer not to be part of this and leave it to someone who is specialized in this field. In my opinion, students with special needs deserve teachers with specific characteristics who can use specific strategies to teach them.

Another pre-service teacher worried about “neglecting” students with disabilities in her classroom. She believed that a special curriculum should be prepared and introduced to students with disabilities in their separate classrooms:

I do not want to teach in an inclusive classroom. I will be worried about neglecting those students with special needs while taking care of those who are typically developed. We have separate classrooms for those who are gifted and talented, why don't we teach students with special needs in separate classrooms where there is a special curriculum for them?

A few of those who expressed their willingness to teach in inclusive settings were in favor of doing this unconditionally. They wanted to give students with disabilities a chance to function in a normal environment. One pre-service teacher commented:

I do not mind teaching them in my classroom. I need to help them to develop creative abilities and participate fully in normal life activities without feelings of fear or embarrassment. They need to be introduced to other students in the classroom so that they will have the choice to participate, accept, or reject without relying on the authority of others.

One pre-service teacher believed that students with disabilities were normal students. She reported that they only need teachers who care about them and help them to succeed. She stated:

I believe that those students [with special needs] are normal people. General education teachers should work to fill these students' lives with pleasure and the spirit of achievement. If we worked seriously to achieve this goal, inclusion may succeed.

The vast majority of pre-service teachers who were willing to accommodate students with special needs articulated specific conditions for which they would provide such accommodations. Many stated that they needed training and proper preparation related to inclusive practices. A pre-service teacher wrote:

I want to teach students with special needs in my classroom. However, this has to be after being involved in an intensive training about inclusion. Our teacher education program does not provide us with strategies that are mandatory to work in such environments. Without this type of training, I will not be ready to do this job.

Training was not the only issue raised by pre-service teachers. They were also concerned about different types of disabilities and were willing to accommodate specific children with disabilities in their classrooms. Students' with more intensive disabilities were seen as difficult to teach. One pre-service teacher commented:

The students' disability is also important. For example, it will be difficult to teach students with hearing and visual impairments as well as students with mental retardation in the same classroom with general education students. Moreover, students with emotional and behavioral disorders could be a challenge I am not ready to face.

In summary, about half of the participants (49%), including many of those who were not in favor of inclusion, expressed their willingness to teach students with special needs in their classrooms. Indeed, as evidenced by written comments, pre-service teachers were concerned about the level of preparation they were offered in their teacher education program and the training available to in-service teachers after graduation. They were also willing to accommodate certain types of students with special needs. Specifically, they reported being more comfortable teaching students considered to have mild or moderate disabilities (e.g., those with learning or physical disabilities). They were less accepting of students with more severe disabilities (e.g., those with vision, hearing, or cognitive impairments). However, some of these pre-service teachers were unconditionally welcoming to the idea of having students with disabilities in their classrooms. They had much empathy toward people with disabilities and believed in their

creative abilities. To develop supports for these students, pre-service teachers suggested that students with disabilities are in need of teachers who believe in them and their abilities.

The other half of pre-service teachers (51%) were not in favor of teaching in inclusive classrooms simply because they did not know how to instruct students with and without disabilities in one environment. Their teacher education programs did not offer courses related to inclusive practices or offer general information regarding students with disabilities. Therefore, many of the pre-service teachers advocated for separate classrooms and special curriculum to be taught in such classrooms. In their views, pre-service teachers did not have the proper preparation or the classroom management skills to accommodate students with special needs in their classrooms.

Who Benefits from Inclusive Education?

When asked whether all students (with and without special needs) may benefit from inclusion, the majority of the participants (68.2%) answered “no,” and 31.8% answered “yes.” Numerous pre-service teachers who were not in favor of inclusion raised doubts about the educational benefits for students with and without disabilities. Most comments reflected the possible harmful effect of inclusive practices on students with disabilities and students without disabilities. One pre-service teacher described the situation in the following way:

Inclusion will not benefit students with special needs but will lead to feelings of anger and embarrassment among them. They will also miss an opportunity to get a special education that is suitable for them. Likewise, general education students will look at inclusion as a waste of time. If more time and interest are given to students with special needs, which is expected, other students will not be satisfied with that. The result could be an uncomfortable classroom climate that leads to the failure of the learning process.

Many pre-service teachers believed that general education students may lose a great deal of the teacher’s attention and energy in the inclusive classroom, resulting in a negative influence on

their academic achievement. The fear of the “uncomfortable classroom climate” is reflected in many other pre-service teachers’ comments. One pre-service teacher offered:

Inclusion may not be in the best interest of both groups [students with and without disabilities]. For those without disabilities, inclusion could create a state of extreme confusion and disorder in the classroom, especially with the existence of students with behavioral problems. On the other hand, students with disabilities might feel inferior when they compare themselves to other students in the classroom.

Most pre-service teachers who believed that inclusion would benefit both groups of students did not elaborate on their opinions, especially when it came to the benefits of students in general education. The few who did respond stressed that the “experiences” general education students would acquire in inclusive classrooms would be beneficial for their social lives. One pre-service teacher commented:

The inclusive classroom will positively affect the morale and spirit of the students with special needs. They will feel that they are not neglected or abandoned by their own society. On the other hand, typically developed students will acquire experiences in dealing with these students and will see their abilities rather than disabilities. They are then expected to learn how to interact successfully with them outside of the school gates.

Throughout the comments, it was noted that a considerable number of participants believed that only students with special needs would benefit academically, emotionally, and socially from inclusive opportunities. Students in general education were seen as victims to the inclusion process. A pre-service teacher wrote:

Students with disabilities benefit from inclusion because it will give them access to interaction with other students in general education which could help them to develop academically and emotionally. This is way better than isolation in their special education schools. However, a negative impact on the academic level of general education students is expected. They may feel bored as a result of the slow learning process in their inclusive classroom.

In summary, the majority of pre-service teachers had doubts about the benefits of inclusion for all students. In their perspectives, students with and without disabilities would be negatively affected by inclusive policies and practice. They feared that the academic levels of students in

general education would be compromised and deteriorate because the teacher's attention would be drawn toward students with special needs. Similarly, pre-service teachers reported that students with special needs would be occupied by feelings of anger and embarrassment and would lose their "special" education in their schools. However, many other pre-service teachers believed that only students with special needs would benefit from inclusive education. These pre-service teachers offered that students with special needs would benefit because their social and academic skills would be boosted as a result of their placement in a general education setting. Rather than gaining experiences with and dealing with students who have special needs, most pre-service teachers viewed students in general education as the victims of inclusion.

The Effect of Students with Disabilities

When pre-service teachers were asked whether students with disabilities may have a negative effect on the classroom environment, most of them (67.4%) answered "yes," and the rest (32.6%) answered "no." The pre-service teachers' comments reflected worries about the disorder that could be created as a result of having students with certain types of disabilities in general education classrooms. For example, some pre-service teachers were concerned about the classroom climate with the inclusion of children who have emotional and behavioral disorders.

One pre-service teacher commented:

Students with behavioral disorders might create problems for other students in the classroom. Their uncontrolled behaviors and actions are expected to erupt from time to time during classroom activities. This will demand more attention and effort from teachers while causing too much distraction to other students. In sum, the classroom time will be wasted due to these behavioral problems.

Not only students with behavioral problems were unwelcomed by these pre-service teachers, but also students with other disabilities were represented in their comments. Some pre-service teachers had doubts about the benefits of inclusion for students with mental retardation and hearing and visual impairments. One pre-service teacher wrote:

Some students with mental retardation are difficult to control. Other students with visual or hearing impairments may not be fully aware of what is going on in the classroom. This casts too much doubt about whether we will be able to achieve these students' educational goals.

Pre-service teachers were also concerned about the academic progress of the general education students if inclusion were to be adopted. Indeed, some of these future teachers stated that the whole educational system could be affected as a result. A pre-service teacher wrote:

This [inclusion] might affect the academic level of students without disabilities. The progress of general education students will be affected and the goals of the curriculum may not be fulfilled. Moreover, the learning process will be slow, especially with the existence of students with learning disabilities in the classroom, so that we may need a longer academic year. This may affect the whole educational system.

However, many of those who believed students with special needs would negatively affect the general education classroom provided some strategies which might improve the quality of inclusive classrooms. Teachers' contributions were seen as the most important factors related to successful inclusion. One pre-service teacher believed that the teacher's role was crucial in addressing and solving the issues that could emerge in inclusive settings and stated:

At the beginning, the existence of students with special needs might create some confusion to students in general education. However, this confusion may not last long, especially if teachers were able to take control of the classroom and help students through the adaptation process. The best way that teachers could model for the general education children is to treat all students equally and show their love and interest to everyone in the classroom. Teachers play a pivotal role in the inclusive classrooms.

Pre-service teachers believed that teachers' management skills would contribute to the success of inclusion and bring all students together. Moreover, general education students' attitudes and behavior toward students with special needs were also considered crucial factors in the inclusive classroom. One pre-service teacher stated:

We should also seek the opinions of general education students and prepare them for inclusion. The negative effect that might be caused by the students with special needs could simply be a reaction to the general education students' behavior and attitudes toward those students. However, many of the general education students are expected to welcome

students with special needs and cooperate with them. The classroom environment will determine the nature of the relationship between all students.

Slightly less than one third of the participants (32.6%) did not foresee a negative effect on the classroom environment as a result of the inclusion of students with disabilities. They believed that an atmosphere of cooperation and support would emerge as a result. One pre-service teacher commented:

I do not think that students with special needs will have a negative effect on the classroom. Those students will feel that they have become an integral part of this society and will work as hard as they can to maintain this. On the other hand, students in general education will sympathize and cooperate with them as peers. From an educational perspective, this is very important to both groups of students.

Other pre-service teachers were interested in the abilities of students with special needs. They believed that teachers tend to focus on what students with special needs can not do rather than what they can contribute to the classroom and the wider society. A pre-service teacher commented:

Numerous students with special needs have creative abilities that most people do not know. These abilities may vividly emerge as a result of placing them in natural settings with their peers in general education. I do not expect a negative effect on the classroom. In contrast, those students may have a very positive effect on other students.

In summary, most participants believed that students with special needs may create problems in the general education classrooms. More specifically, students with behavioral problems were seen as the most challenging to include and were expected to cause too much disturbance in the general education classroom. Moreover, pre-service teachers had doubts about the academic benefits of inclusion for students with other disabilities (i.e., mental retardation and hearing and visual impairments) and students without disabilities. However, teachers' roles were seen as the most important when dealing with these problems.

In contrast, less than one third of participants (32.6%) reported mutual positive impact on students with and without disabilities as a result of inclusion. Pre-service teachers offered that

feelings of sympathy and support were expected to spread between general education students which would result in more productive cooperation between children with and without disabilities. It was hypothesized that this healthy interaction could promote the creative abilities of students with special needs.

Teachers' Training and Pre-service Preparation

When asked whether pre-service teachers believed that general education teachers had sufficient expertise/training to teach in inclusive settings, 1487 (91.5%) pre-service teachers answered “no,” and only 138 (8.5%) answered “yes.” Throughout the written comments, the majority of participants were not satisfied with the level of training general educators had related to teaching in inclusive classrooms. They believed that general education teachers lacked skills, experience, and training that would be necessary to teach in inclusive settings. Pre-service teachers reported that they were prepared to work only with students in general education. A pre-service teacher who was a senior wrote:

I do not think that general education teachers are ready to teach students with special needs in their classrooms. Those students need well prepared teachers who have the expertise and the preparation related to inclusion. In the inclusive settings, students' needs are different and vary according to their abilities and disabilities. Special strategies are needed in these settings and teachers in general education do not have enough expertise to do that.

Because of the lack of training and expertise, pre-service teachers believed that a special education teacher might perform better when teaching students with special needs. The previous experience with these students and proper training were considered crucial factors as evidenced by almost all pre-service teachers' responses. One pre-service teacher wrote:

Students with special needs will be in these classrooms. You can not use the same strategies that have proven effective with students in general education to teach them. They need special education teachers who have the expertise, training, and previous experience needed to do this job.

The expertise and training for teachers were considered a major reason for many pre-service teachers' anti-inclusion beliefs. When asked: Do you believe that general education teachers have sufficient expertise/training to teach in inclusive settings?, one pre-service teacher stated:

This is an important question because inherent in the answer might be the reason for me objecting inclusion. It is a good idea but we can not do it in light of the current educational system. We need lots of resources, training, and professional development for teachers to get the desired results.

Moreover, when participants were asked about their feelings of preparedness to teach students with special needs in their classrooms, 1384 (85.2%) stated that they did not feel prepared to teach students with special needs in their classroom. Only 241 (14.8%) were willing to teach students with disabilities after participating in extensive training. Throughout the comments, the majority of pre-service teachers were not satisfied with the level of preparation they had related to curriculum and instruction in inclusive classrooms. Indeed, all pre-service teachers reported no participation in any courses related to inclusion. Moreover, their teaching placements were only in general education classrooms. A pre-service teacher commented:

I am not ready to teach in inclusive classrooms because I do not have any previous experience with students with disabilities. My teacher education program did not provide me with knowledge about these students, their skills, abilities, and/or disabilities. Although I am emotionally prepared to teach those students, my preparation does not make me a qualified candidate to do this job.

All pre-service teachers' comments reflected concerns about their preparation versus the preparation of special education teachers. They believed that only teachers who had the proper preparation and training should teach students with special needs. One pre-service teacher offered:

Teaching students with special needs demands special skills which I do not have at all. Special education candidates who specifically prepared to teach those students might have these skills because of their preparation. If I have to do this [teach in inclusive settings], I need an intensive training before walking in these classrooms.

Although the majority of participants were not in favor of teaching in inclusive classrooms, numerous pre-service teachers expressed their willingness to teach in these classrooms only after receiving the proper preparation and training. A pre-service teacher who was a junior wrote:

I did not get the preparation necessary to teach in these classrooms. However, if our teacher education program is developed to provide us with the teaching skills needed for inclusion, I might be ready to teach students with special needs in my classroom.

Some pre-service teachers reported having some knowledge about students with special needs throughout their studies in the College of Education. However, they saw this knowledge as insufficient and still did not feel prepared to teach in inclusive classrooms. One pre-service teacher stated:

I have taken some classes in educational psychology that just so happened to provide me with some knowledge about the psychological and emotional development of students with special needs. However, these were only theoretical case reports without any practical applications in real teaching situations. I need more than that...I need real experience.

Even those participants who reported having a desire to work with students with disabilities pleaded for more training and experience. A pre-service teacher stated:

I feel that I will be ready to teach students with special needs because I love them and I have much sympathy towards them. However, I need enough training and experience to be able to teach them along with their peers in general education.

Another pre-service teacher proposed a reform for the teacher education program to address the needs of pre-service teachers who are willing to teach in inclusive classrooms. She suggested:

I think that teacher educators should work to develop and teach courses about inclusion and, in general, teaching in diverse classrooms. This diversity is almost absent from our program. We don't even know how to teach students with learning disabilities. It is not an easy mission and I am afraid of failure that no one could cure.

In summary, numerous pre-service teachers expressed concerns about lack of training and expertise that general education teachers' have to teach in inclusive classrooms. They believed that current general education teachers, who graduated from similar teacher education programs,

are not ready to work with students with special needs. They reported having neither the experience nor the training needed to do this job. In many cases, this lack of expertise/training was considered the major reason for espousing anti-inclusion beliefs.

Similarly, most participants reported feelings of unpreparedness to teach in inclusive settings. Pre-service teachers reported that their teacher education programs did not provide them with courses about teaching students with disabilities either in inclusive classrooms or in isolated settings. Therefore, the majority of pre-service teachers recommended that only teachers with special education preparation could teach students with disabilities. However, many pre-service teachers were willing to teach in inclusive classrooms if enough preparation was offered to them. They suggested a reform for their teacher education program to meet the current changes in inclusion policy. They advocated for more information about strategies for teaching in more diverse classrooms.

School Resources

When pre-service teachers were asked whether Egyptian schools had sufficient resources to accommodate students with special needs, 94.1% answered “no,” and only 96 students (5.9%) answered “yes.” Indeed, most pre-service teachers recognized that schools were lacking appropriate resources to accommodate students with special needs. They indicated that schools have a very tight budget and even the school personnel were lacking the appropriate preparation. One pre-service teacher stated:

I do not believe that our schools are ready, financially and scientifically, for inclusion. I do not know how a student with a physical disability, for example, will have access to these schools. Moreover, the school personnel are not prepared to provide services for students with special needs. Most of those personnel look at those students as retarded people and, consequently, have no right to learn like others. It is not just the equipment that we really need.

Moreover, some of pre-service teachers indicated that teacher preparation is easier said than done, considering the teacher shortage and the increasing number of students in general education classrooms. A pre-service teacher commented:

It is obvious that general education classrooms are overloaded in terms of student numbers. These increasing numbers of students puts too much pressure on general education teachers. Consequently, teachers do not have the time, or even the energy, to participate in professional development related to inclusion. And no one can blame them.

Some other comments focused on school personnel and their abilities to study schools' needs and hire educators who are ready to teach in inclusive environments. A pre-service teacher suggested:

Egyptian schools need resources, experiences, and enough studies before adopting inclusion. To make sure that inclusion works, we need educators who have the ability to make a real change inside the classrooms. Those educators should have the will and the ability to influence general education students' perspectives toward students with special needs.

Although the majority of participants believed that Egyptian schools were not ready to provide services for students with special needs, many of them proposed ideas to deal with the current situation. They indicated that reforming the general education schooling system to make it ready for inclusive practices was a must. Some aspects of this reform are reflected in the following comment:

I do not think that schools have enough resources necessary to set the stage for inclusion. However, students in general education should be prepared to deal with those "newcomers" and training should be provided to teachers and school administrators regarding accommodations that should be established for them. In addition, proper equipments like hearing and visual aids should be available for those who need them.

However, a few pre-service teachers who were in favor of inclusion stood firmly to their opinions and recommended inclusion even with the lack of resources. One pre-service teacher wrote:

Inclusion is not adopted on a large scale yet. Thus, schools are lacking resources for it. However, I believe that these schools will be ready if inclusion policy is adopted and

pushed by policy makers. It is only a matter of time and training and resources will be available.

In summary, participants believed that Egyptian schools do not have the resources needed to put inclusive policy and practices in place. Pre-service teacher reported that these schools were lacking the financial and human resources to adopt inclusion. Unprepared school personnel, overloaded classes, and lack of proper equipment were considered major barriers that would prove problematic for inclusive education to happen in Egypt. However, a few pre-service teachers believed that the availability of resources would be a matter of time and it was simply because inclusion was not adopted on a wide scale yet.

Table 4-1. Questionnaire's items and their correlation with the scale (alpha = .89).

Items	Item-Total Correlation
1. Students with special needs should be given every opportunity to function in the general classroom where possible.	0.58
2. The inclusion of students with special needs can be beneficial for students without disabilities.	0.57
3. Inclusion promotes social independence among students with special needs.	0.32
4. The nature of the study in general classroom classrooms will promote the academic growth of the students with special needs.	0.55
5. The study skills of students with special needs are inadequate for success in the general education classroom.	0.36
6. Inclusion promotes understanding and acceptance of individual differences between students without disabilities and students with special needs.	0.53
7. Students without disabilities will likely avoid interacting with students with special needs in the inclusive classrooms.	0.33
8. Inclusion promotes self-esteem among children with special needs.	0.47
9. Students with special needs lose the stigma of being "different" or "failures" when placed in the general education classrooms.	0.46
10. Isolation in a special classroom has beneficial effect on the social and emotional development of the students with special needs.	0.46
11. General-classroom teachers have sufficient training to teach students with special needs.	0.27
12. Students with special needs are likely to create confusion in the general education classroom.	0.47
13. Teaching students with special needs is better done by special rather than general classroom teachers.	0.43
14. The behavior of students with special needs will set a bad example for other students in the classroom.	0.45

Table 4-1. Continued.

Items	Item-Total Correlation
15. Students with disabilities will not waste the general-classroom teacher's time.	0.50
16. It is likely that the students with special needs will exhibit behavior problems in a general education classroom.	0.34
17. Increased freedom in the general classroom creates too much confusion for the student with a special need.	0.33
18. Students with special needs will make an adequate attempt to complete their assignments in general education classrooms.	0.42
19. The extra attention students with special needs require will be to the detriment of the other students in the classroom.	0.53
20. General-classroom teachers have the primary responsibility to teach students with special needs in their classrooms.	0.34
21. Inclusion will likely have a negative effect on the emotional development of the students with special needs.	0.46
22. General-classroom teachers have the appropriate capability to work with students with special needs.	0.37
23. Inclusion of students with special needs will necessitate extensive retraining of general classroom teachers.	0.15
24. Students with special needs can be best served in general education classrooms.	0.61
25. It is difficult to maintain order in classrooms that contain a mix of students with and without special needs.	0.54
26. Inclusion of students with special needs will require significant changes in general education classroom procedures.	0.26
27. The behavior of the students with special needs does not require more attention from the teacher than the behavior of students without special needs.	0.26

Table 4-1. Continued

Items	Item-Total Correlation
28. The student with a special need will probably develop academic skills more rapidly in a general education classroom than in a special education classroom.	0.56
In my view, most students with the following special needs can be educated in general education classrooms:	
29. Learning disabilities	0.29
30. Emotional and behavioral disorders	0.23
31. Hearing impairments	0.39
32. Visual impairments	0.39
33. Mental retardation	0.27

Table 4-2. Pre-service teachers' mean scores and standard deviations subdivided by special needs category.

Category	M	SD
Learning disabilities	3.33	1.36
Emotional and behavioral disorders	2.67	1.35
Hearing impairments	2.75	1.34
Visual impairments	2.79	1.37
Mental retardation	1.89	1.14

Table 4-3. Between-subjects (2 x 3) analysis of variance source table.

Source	SS	Df	MS	F
Class Standing	20689.28	2	10344.64	29.90**
Educational Program	1902.90	1	1902.90	5.50**
Class Standing * Educational program	2238.10	2	1119.05	3.23**
Error	560179.77	1619	346.00	
Corrected Total	588473.25	1624		

** significant at alpha = .05 level

Table 4-4. Scheffe comparison for class standing.

Comparisons	Mean Difference	Std. Error	95% CI	
			Lower Bound	Upper Bound
Sophomore vs. Junior	6.90**	1.13	4.13	9.67
Sophomore vs. Senior	8.87**	1.12	6.13	11.62
Junior vs. Senior	1.97	1.14	-0.82	4.77

** significant at alpha = .05 level

Table 4-5. Themes and codes of pre-service teachers' perspectives toward issues related to inclusion.

Supportive of Inclusion	Not Supportive of Inclusion
Support for Inclusion Concept	
<ul style="list-style-type: none"> • Equal rights • Removal of stereotypes • Social interaction/satisfaction of students with disabilities 	<ul style="list-style-type: none"> • Challenges of teaching in inclusive setting • Academic, psychological, and emotional impact of students with special needs • Better service provided in special education classroom
Teaching in inclusive classrooms	
<ul style="list-style-type: none"> • Beliefs in general in teacher's role • Empathy and support for students 	<ul style="list-style-type: none"> • Lack of preparation • Beliefs in separate settings • Issues with specific disabilities (e.g., mental retardation)
Benefits of inclusion	
<ul style="list-style-type: none"> • Interaction with peers • Social preparation for life • Integration into society 	<ul style="list-style-type: none"> • Uncomfortable classroom climate • Time consuming • Negative impact on academic achievement
Effect of students with special needs	
<ul style="list-style-type: none"> • Sympathy and cooperation from general education students • Others see their abilities rather than disabilities 	<ul style="list-style-type: none"> • Behavioral problems • Academic problems • Use too much teacher time • Negative attitudes of general education students
Pre-service preparation and teachers' training	
<ul style="list-style-type: none"> • Have some critical knowledge about students with special needs • Even without training, they are supportive and willing to help 	<ul style="list-style-type: none"> • Their preparation only for students in general education • No courses about inclusion • No teacher training in inclusive settings • Special education majors are more prepared
School resources	
<ul style="list-style-type: none"> • Will be available if inclusion policy is adopted by policy makers 	<ul style="list-style-type: none"> • Lack of equipment • Unprepared personnel • Class sizes too large

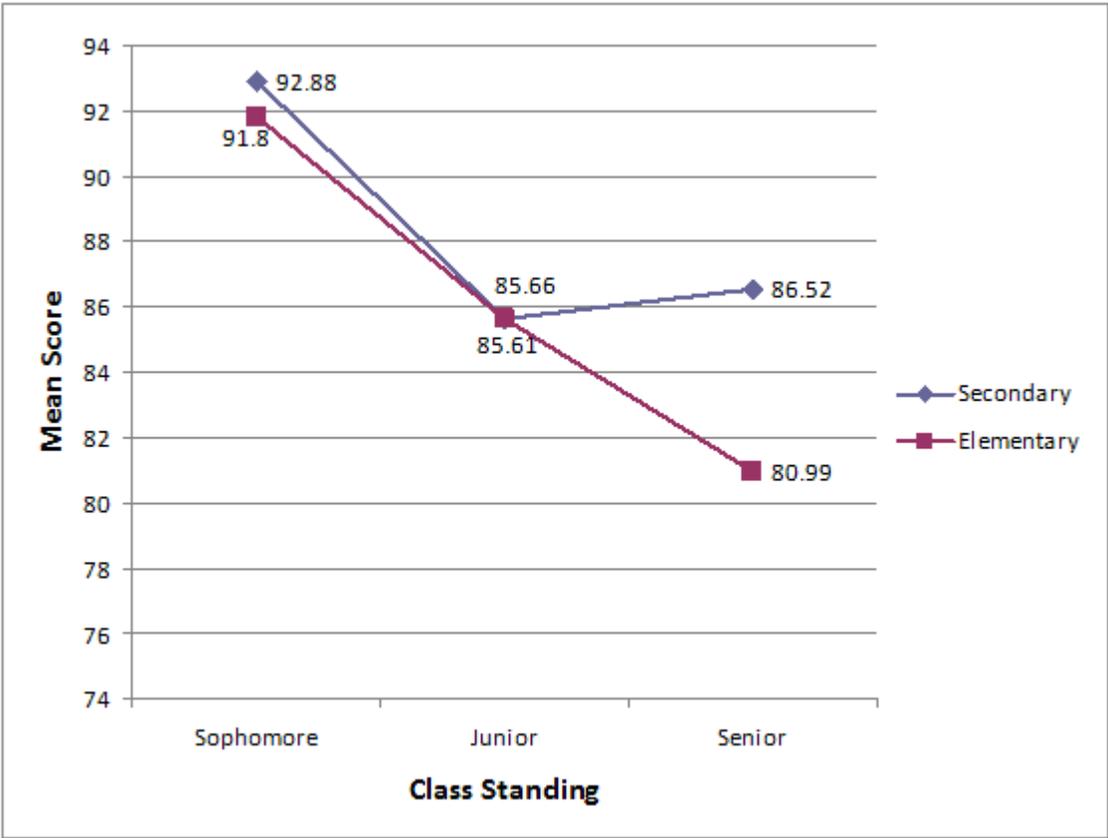


Figure 4-1. Mean scores of the secondary and elementary majors at the three class standing levels.

CHAPTER 5 DISCUSSION AND IMPLICATIONS

The purpose of this chapter is to relate the findings detailed in the previous chapter to existing literature and describe how such findings extend the current literature base related to attitudes toward inclusive education. Moreover, implications for teacher educators, policy makers, and school-based personnel concerning general education teacher preparation related to inclusive educational practices will be offered. In addition, study limitations and suggestions for future research will be noted.

Discussion

This investigation examined Egyptian pre-service general educators' attitudes toward the inclusion of students with special needs in general education classrooms. Results indicated that pre-service teachers in Egypt expressed more negative than positive attitudes toward the inclusion of students with special needs in general education settings. Another important finding is that pre-service teachers reported more negative attitudes toward the inclusion of children with mental retardation than they did toward other disabilities (e.g., hearing and visual impairments). Although students with emotional and behavioral disorders were rated more favorably than students with mental retardation, the pre-service teachers' written responses reflected many concerns regarding the inclusion of students with emotional and behavioral disorders. Furthermore, students with learning disabilities were rated more favorably than students with other disabilities.

Another important finding was that second year pre-service teachers (sophomores) at the College of Education exhibited significantly more positive attitudes toward inclusion than both third year pre-service teachers (juniors) and fourth year pre-service teachers (seniors). Not surprisingly, there were statistically non-significant differences between juniors and seniors.

Similarly, there were statistically non-significant differences between elementary and secondary majors who were sophomores and juniors respectively. However, the group of secondary education majors who were seniors expressed more positive attitudes toward inclusion than the group of elementary education majors.

Other variables were examined, such as gender differences and previous contact with people with disabilities. The findings indicated that male participants had more positive attitudes toward inclusion than female participants. Furthermore, pre-service teachers who reported social relationships with persons who have disabilities exhibited more positive attitudes toward inclusion than pre-service teachers who did not report such relationships.

Throughout the written responses, pre-service teachers appeared unsupportive of the general concept of inclusion; that is, general education classrooms were not considered the most appropriate setting for students with special needs. Although about half of the participants expressed their willingness to accommodate students with special needs in their classrooms, concerns regarding teacher education preparation, in-service training, and students with specific special needs (e.g., mental retardation and emotional and behavior disorders) were raised. Moreover, when asked about who would benefit from inclusion, most pre-service teachers stated that students with and without disabilities would be harmed by inclusive practices. More specifically, a chaotic atmosphere was expected to spread in the inclusive classrooms where students with the most challenging behaviors were included. Furthermore, it was anticipated that the academic level of the students without disabilities would be negatively impacted by having students with special needs included in the general education classroom.

In addition, pre-service teachers raised issues related to their preparation, in-service teachers' training, and adequate support services available in inclusive schools. They indicated

that their teacher education program did not offer any type of preparation (e.g., coursework or field-based experiences) related to inclusion. They also noted that their teacher education program did not include preparation related to instructing students with disabilities in more restrictive settings. Likewise, pre-service teachers believed that in-service teachers who graduated from similar programs and taught only in general education classrooms, did not have the expertise or the proper training to teach in inclusive settings. Furthermore, the Egyptian schools were seen by the vast majority of participants as lacking appropriate materials, equipment, and readiness of school personnel to work with specialists to provide support services to students with special needs. The next section discusses these results in terms of previous research related to pre-service teachers' attitudes toward inclusion.

Pre-service Teachers' General Attitudes toward Inclusion

Findings from this study indicated that pre-service teachers in Egypt have negative attitudes toward inclusion of students with special needs. Although previous research found a nonsystematic relationship between teachers' attitudes and geographical area of the teachers surveyed (Scruggs & Mastropieri, 1996), these findings are consistent with those of other studies conducted in the Arab countries. For example, Alghazo, Dodeen, and Algaryouti (2003) found that pre-service teachers, in general, had negative attitudes toward persons with disabilities in both Jordan and the United Arab Emirates (UAE). In another study, general education teachers in the UAE were found to have negative attitudes toward inclusion (Alghazo & Gaad, 2004). Similarly, Palestinian Arab teachers reported negative attitudes toward inclusion of students with disabilities at both in-service (Gumpel & Awartani, 2003; Lifshitz, Glaubman, & Issawi, 2004) and pre-service (Romi & Leyser, 2006) levels. It is notable that Arab people in Egypt, Jordan, Palestine, and UAE share many cultural aspects (e.g., language, habits, and religion).

It is important to note that the cross-cultural literature supports the notion that practicing teachers and pre-service teachers differ in their dispositions toward inclusion, specifically in terms of the structure of their educational systems in general and special education. In their cross-cultural study, Leyser and colleagues (1994) found differences in the attitudes toward inclusion between teachers of countries located on different continents (e.g., United States, Germany, Ghana, and Taiwan). In this study, teachers from Asia and Africa exhibited less positive attitudes. The authors reasoned that this was due to the limited number of training opportunities for teachers to work in inclusive settings and the limited opportunities for inclusion in these countries. In the United States and Germany, teachers expressed the most positive attitudes. This might be attributed to the fact that inclusion is more widely practiced in the United States as compared to countries in Asia and Africa. However, in Germany most of the students with special needs were educated in segregated settings since inclusion was only being tried on an experimental level. Similarly, Sharma et al. (2006) concluded that pre-service teachers from Western and Western-style institutions (i.e., Australia and Canada) had more positive attitudes toward students with disabilities than their Eastern counterparts (i.e., Hong Kong and Singapore). On practically every measure utilized, Canadian pre-service teachers were the most positive about inclusion. The authors surmised that the Canadian participants themselves might have received their education in inclusive classrooms. This would be in contrast to Hong Kong and Singapore, where inclusion is a relatively new phenomenon.

One reason for the negative attitudes of Egyptian pre-service teachers in this study could be that they had not been informed that students with special needs would be included in general education classrooms and that, as general educators, they would be responsible for teaching these students in their classrooms. Because expanding inclusive services is a relatively new

governmental policy and the public schools are the major providers of the educational services in Egypt, the vast majority of pre-service teachers have not had the opportunity to be involved with discussions or debates about inclusive education for students with disabilities. Moreover, many teacher educators and researchers also may not have heard about the changes that have been made at the Ministry of Education level because of the notable disconnect between educational institutions in Egypt. This is reflected in the lack of research in the area of inclusion and the absence of inclusive strategies in pre-service teachers' textbooks.

Historically, students in general education and special education in Egypt have been taught in separate schools by teachers whose preparation was dissimilar. Recently, some students with special needs were moved to be educated in self-contained classrooms in general education schools. Although it might be possible that pre-service teachers in this study continued to show strong attachment to the traditional system with which they are most familiar, the previous literature indicated that positive changes might have happened in pre-service teachers' attitudes toward inclusion if they were offered coursework (Andrews & Clementson, 1997; Wilczenski, 1993) and field experiences (Rademacher et al., 1998; Reber et al., 1995) in inclusive settings. Pre-service teachers in this study neither had the experience of contact with students with special needs through their education prior to their enrollment in the college nor were they offered proper preparation to implement inclusion in their future classrooms. Thus, these negative attitudes could be due to limited or nonexistent preparation for pre-service teachers to acquire inclusion competencies.

Findings from this study also indicated that pre-service teachers were concerned about the inclusion of students with specific types of special needs. Participants rated the inclusion of students with mental retardation less favorably than students with other disabilities. Students

with emotional and behavioral disorder and students with hearing and visual impairments were also rated less favorably than students with learning disabilities. This is hardly surprising because teachers have been consistently opposed to the inclusion of difficult to teach students in their classrooms (Alghazo & Gaad, 2004; Avramidis et al., 2000b; Meijer, 1998). It is offered that the severity level of students with disabilities who are included appeared to determine teachers' level of support for inclusion (Scruggs & Mastropieri, 1996). These findings support research by Shotel and colleagues (1972), reviewed by Scruggs and Mastropieri, which demonstrated that only 28.9% of the teachers were in favor of the inclusion of students with emotional disturbance, and only 22.8% supported the inclusion of students labeled as educable mentally retarded. However, 71.9% of the teachers supported the inclusion of students with learning disabilities.

In this study, the mean scores for participants indicated that pre-service teachers were only positive toward the inclusion of students with learning disabilities. In the Egyptian context, this could be partially because most of these students are not identified in the classrooms. The educational system is lacking the proper standardized assessment tools that provide an accurate identification for students with learning disabilities. Pre-service teachers in this study might have gone through their pre-college education without identifying a single student that was labeled with a learning disability. Therefore, most of them might think that students with learning disabilities are those students who struggle academically and could be making progress after regular teaching in general education classrooms. This explanation is also supported by Wang and colleagues (1988) who demonstrated that students with mild disabilities, such as learning disabilities, have been presented as not being significantly dissimilar to students without identified disabilities. However, some research has shown that once general education teachers

have gained experience teaching students with learning disabilities in their classrooms; their support for inclusion has declined (Soodak et al., 1998; Wilczenski, 1993).

Finally, these findings support provisions based on tolerance theory (Gerber, 1988) and affirm the previous research results that teachers are more inclined to accept the inclusion of students with mild disabilities than students with more severe intellectual and emotional and behavioral disabilities (Cook, 2002; Forlin, 1995; Ward et al., 1994). This specific tolerance might be based on a common belief that students with mild disabilities require less modification of curriculum and instruction (Scruggs & Mastropieri, 1996). These findings have been previously supported in the literature with pre-service teachers. Specifically, Cook (2002) found that pre-service teachers exhibited more positive attitudes regarding the inclusion of students with learning disabilities as compared to students with behavior disorders, mental retardation, and multiple disabilities. Similarly, Avramidis et al. (2000b) found that pre-service teachers reported more concern and stress related to students with emotional and behavioral disorders as compared to students with other types of disabilities.

Variables Related to Pre-service Teachers' Attitudes

Several variables related to pre-service teachers' attitudes toward inclusion were identified in this study. There are two categories of these variables: (a) variables associated with pre-service education (i.e., class standing and educational program), and (b) variables associated with pre-service teachers' characteristics (i.e., contact experience and gender differences). These variables will be discussed in the following sections.

Class standing

In this study, pre-service teachers who were sophomores exhibited more positive attitudes toward inclusion than juniors and seniors. It is unlikely that these attitudes toward inclusive education were influenced by the participants' teacher education program because sophomore

pre-service teachers in Egypt have completed only introductory courses in psychology and foundations of education and have had no field-based experiences at the point of data collection. This finding is consistent with findings reported in other studies. For instance, Jung (2007) found that first-year pre-service teachers exhibited more positive attitudes toward inclusion than pre-service teachers who were ahead in the teacher education program and had completed at least 10-hours of field experience in inclusive settings. Similarly, Lambe and Bones (2006) offered that pre-service teachers, at the start of their pre-service training, had positive attitudes toward inclusion. These researchers concluded that this early stage of teacher education preparation was the most effective time to foster positive attitudes about inclusive education by providing appropriate training.

It seems that the positive attitudes of pre-service teachers who were early in their teacher education programs reflect the optimism associated with the entering beliefs of pre-service teachers (Pajares, 1992). Moreover, several research teams have found that pre-service teachers have a well-developed set of personal beliefs about school, teaching, and learning before entering their teacher education programs and these beliefs are constructed on the basis of culture and personal experience (Anderson et al., 1995; Joram & Gabriele, 1998; Lonka, Joram, & Bryson, 1996; Tatto, 1998). Joram and Gabriele (1998) indicated that these intuitive beliefs might be considered more or less difficult to change based on the feedback that pre-service teachers receive from the environment related to their beliefs. These findings concur with the findings from the present research given that pre-service teachers were not given feedback or provided first-hand knowledge related to inclusive education in their teacher education program. By the time the questionnaire was administered, pre-service teachers who were juniors already had started their practicum experiences in their appointed general education schools. It is

probable that, as they progressed in their educational program from the sophomore to the junior level with more educational courses and field-based placements, pre-service teachers were exposed to the challenges that face the education system in Egypt in general. Thus, their attitudes toward inclusion might have been negatively influenced by their frustration related to the lack of readiness of the educational system to support students with special needs in general education settings.

Educational program

The differences between pre-service teachers who were elementary and secondary majors and were sophomores and juniors were statistically non-significant in this study. Sophomore pre-service teachers from both majors were more positive about inclusive education, while junior pre-service teachers held more negative attitudes. In addition, senior pre-service teachers who were secondary majors exhibited significantly more positive attitudes toward inclusion than their counterparts who were elementary majors. These findings support existing research with in-service teachers regarding the grade level taught and teachers' attitudes toward inclusion. For example, in their cross-cultural study in six nations, Leyser and colleagues (1994) reported that, across all nations, secondary school teachers, including junior high teachers, displayed significantly more positive attitudes toward inclusion than did elementary school teachers. However, other studies indicated that elementary school teachers reported more positive perspectives toward inclusion as compared to their secondary counterparts (Savage & Wienke, 1989; Stephens & Braun, 1980). Some research has shown that, at the practical level, elementary teachers may be more likely to make adaptations for students with learning disabilities through planning individual assignments, alternative materials, and individualized assessments than were secondary teachers (Schumm & Vaughn, 1991). In other studies (see Hannah, 1988 for a review), there was no difference between elementary, junior, and senior high school teachers'

attitudes about the inclusion of students with special needs. Therefore, because the results of research on the relationship between the educational program and attitudes toward inclusion are inconsistent, it is possible that other factors related to the structure of teacher education programs have contributed to these findings. More research is needed to thoroughly investigate these factors and their relationships to attitudes.

Experience of contact

This study provides evidence regarding the effect of contact with people with disabilities on pre-service teachers' attitudes toward inclusion. Pre-service teachers who reported having contact with people with disabilities at the social level exhibited more positive attitudes toward inclusion than their counterparts who did not reported such relationships. Previous studies demonstrated that pre-service teachers with professional and/or personal contact with people with special needs were more positive in their perspectives toward inclusion (Bishop & Jones, 2002; Brownlee & Carrington, 2000; Eichinger, Rizzo, & Sirotnik, 1991; Hastings et al., 1996; Sharma et al., 2006). For example, at the educational level, pre-service teachers reported that the interaction with an assistant teacher who had a more apparent and severe disability (cerebral palsy) was generally a positive experience for pre-service teachers, provided them with first-hand knowledge of disabilities, and helped them to develop more knowledge about people with disabilities (Brownlee & Carrington, 2000). However, other researchers reported that pre-service teacher's experience with persons with special needs was not an important factor that determined attitudes toward inclusion (Hastings & Oakford, 2003).

Results from research conducted with practicing teachers working in inclusive settings indicated that general educators held favorable attitudes about inclusion after having direct, sustained contact with students with special needs (see Giangreco, Dennis, Cloninger, Edelman, & Schattman, 1993; Minke et al., 1996; McLeskey et al., 2001; Waldron, McLeskey, &

Pacciano, 1999). According to Leyser et al. (1994), overall teachers' contact and interactions with people with special needs appears to promote positive attitudes toward inclusion. However, in most of the pre-service teachers' studies, insufficient control was provided regarding the quality of the contact between participants and people with disabilities. Therefore, it would be erroneous to conclude that there is a consistent or predictable relationship between experience of contact with people who have disabilities and pre-service teachers' attitudes toward inclusion. Hannah (1988) stated that, "It may be that teachers who manifest positive attitudes are those who have had pleasant interactions with individuals who are disabled. Conversely, those teachers with more negative attitudes may have been involved in interactions that were perceived as unpleasant" (p. 163). To understand the impact of the contact on the attitudes fully, more research is needed.

Gender differences

In this study, male pre-service teachers had more favorable attitudes toward inclusion than female pre-service teachers. Findings from other studies of both pre-service and in-service teachers have shown that female pre-service teachers had more positive attitudes toward inclusion than males (Alghazo & Gaad, 2004; Avramidis et al., 2000b; Eichinger et al., 1991; Tait & Purdie, 2000). However, other researchers (Beh-Pajoooh, 1992; Berryman, 1989; Leyser et al., 1994; Stephens & Braun, 1980) did not report any gender differences that were related to attitudes. As the evidence appears inconsistent, it seems reasonable not to presume that either males or females hold more positive views about people with disabilities or inclusion. When evidence of gender differences exists, such findings might be ascribed to the influence of other variables, such as experience of contact or information (see Hannah, 1988).

Pre-service Teachers Concerns about Inclusion

Pre-service teachers raised many issues related to inclusive education. Many of these issues previously have been discussed at the in-service teacher level (Scruggs & Mastropieri, 1996). The following section discusses Egyptian pre-service teachers' perspectives toward issues related to (a) support for the inclusion concept, (b) willingness to teach students with special needs, (c) benefits of inclusive education, (d) the possible effect of students with special needs on the general education classroom environment, (e) pre-service teachers' preparation and in-service training, and (f) availability of school resources related to inclusion.

Support for the inclusion concept

The majority of pre-service teachers in this study (56.6%) did not agree with the general concept of inclusion. They believed that students with and without disabilities would be negatively impacted by inclusive practices. Pre-service teachers believed students with special needs would be harmed emotionally and psychologically while students without special needs would be harmed academically. This finding supports results from another study conducted with in-service teachers in the Egyptian context. Kafafi (2004) found that only 46% of general education teachers who participated in the study (136 in total) supported the concept of inclusion. Conversely, Scruggs and Mastropieri (1996) reported, in their meta-analysis, that two thirds of the teachers surveyed (10,560 in total) in the United States agreed with the general concept of inclusion but a smaller majority was willing to implement inclusive practices in their classrooms. However, their responses varied according to students' disability status.

Similarly, Lambe and Bones (2006) found that many pre-service teachers claimed to support inclusion. However, these pre-service teachers expressed concerns about lack of appropriate preparation, available resources, and coping with the increasing number of students with disabilities. Moreover, the researchers indicated that a substantial number of pre-service

teachers, despite claiming to support inclusion, believed in the importance of maintaining separate settings based on the students' academic performance. Indeed, similar concerns were raised by pre-service teachers in the present study. This could partially be because the inclusion debate had just been initiated in Egypt and most of the pre-service teachers were confused and might be stressed about whether inclusion would work or not. As stated earlier, the first time the majority of pre-service teachers heard about such a policy when the attitude questionnaire was administered.

Teaching in inclusive classrooms

Although most pre-service teachers were not in favor of inclusion in this study, slightly more than half of them expressed their willingness to teach students with disabilities in their classrooms. However, this support was not without concerns. Pre-service preparation, in-service training, and types of students with special needs were the leading concerns that pre-service teachers expressed. As evidenced by their comments, Egyptian pre-service teachers expressed the need for extensive preparation and in-service training. They also were unsure about the general educator's abilities to teach students with specific types of disabilities, such as students with emotional and behavioral problems and students with mental retardation. These findings were supported by many previous studies (Center & Ward, 1987; Scruggs & Mastropieri, 1996).

It has been reported that general educators' attitudes toward inclusion reflect the lack of confidence in their own instructional and classroom management skills (Center & Ward, 1987). In their study, Center and Ward found that teachers believed that they did not have the necessary preparation to teach students with disabilities and lacked opportunities to collaborate with special education teachers. Scruggs and Mastropieri (1996) concluded that the variability in support for inclusion seemed to emerge as a result of the disability severity levels of students with special needs in inclusive settings. These researchers found that teachers' willingness to teach students

with special needs covaried with the amount of extra teacher responsibility necessary to teach these students. Thus, the highest level of support was given to students with special needs who required the least amount of modification in curriculum and instruction. In the Egyptian context, this perspective is understandable given that teaching in inclusive classrooms requires specific preparation that was not provided to pre-service teachers who participated in this study.

Researchers who studied pre-service teachers' attitudes toward the inclusion of students with different types of disabilities have reported similar results (see Avramidis et al., 2000b; Cook, 2002; Hastings & Oakford, 2003).

Benefits of inclusive education

Consistent with their views toward the concept of inclusion, the majority of pre-service teachers (68.2%) believed that students with and without special needs might not benefit from inclusive settings. Pre-service teachers feared that feelings of anger and embarrassment might spread among students with special needs and a "state of extreme confusion and disorder" could become the norm in the inclusive classroom. This finding is supported by Andrews and Clementson's (1997) study with pre-service teachers. These researchers found that pre-service teachers were generally more favorable about inclusion, but had some doubts if all students would benefit. Moreover, these future teachers expressed doubts about the ability of many general education teachers to provide the necessary support for students with disabilities. Researchers recommended that effective teaching methodology is essential in fostering positive attitudes.

Other pre-service teachers in this study believed that students with special needs would benefit academically, socially, and emotionally from inclusion. Prior literature indicated that most teachers seem to agree with the notion that all students should benefit from inclusion; however, these teachers also seem to disagree that the general education classroom is the only

setting for children with special needs or that inclusive practices might provide academic or social benefits as compared to special education classrooms (Scruggs & Mastropieri, 1996; Zigmond & Baker, 1996). Additional research reported that students with special needs were treated much like general education students and that these students did not receive adaptations or differentiated instruction (McIntosh, Vaughn, Schumm, Haager, & Lee, 1993) because many students perceived these adaptations unfavorably (Vaughn, Schumm, & Kouzekanani, 1993) or the adaptations were viewed by teachers as not feasible (Schumm & Vaughn, 1991). Most pre-service teachers in this study were unsure about the adaptations needed for students with disabilities in inclusive classrooms. There were no indications that pre-service teachers have the preparation needed for providing the necessary accommodations for students with disabilities in their future classrooms.

Effect of students with special needs

Pre-service teachers were asked about possible negative classroom effects due to inclusion. About two thirds of the respondents agreed that students with special needs might create problems for teachers and general education students. These results support findings from previous research with pre-service teachers who expressed concerns about the inclusion of certain types of students with disabilities (see Avramidis et al., 2000b; Hastings & Oakford, 2003). For example, Romi and Leyser (2006) found that although pre-service teachers supported inclusion and believed in the benefits of inclusion for all students, they expressed concerns about behavior problems and management issues in inclusive settings. It is important to note that teachers in this study also supported segregated placements for students with certain types of special needs. Scruggs and Mastropieri (1996) reported that a substantial number of teachers believed that students with special needs could create problems for them. These teachers suggested “significant changes” in the classrooms to accommodate students with disabilities.

However, many of the teachers were not necessarily willing to make such changes in curriculum and instruction. Therefore, considering the recent trend toward providing inclusive services in Egyptian schools, pre-service teachers should be provided with preparation in behavior management and curriculum adaptation to meet the needs of diverse students in the inclusive classrooms.

About one third of Egyptian pre-service teachers indicated mutual psychological and academic benefits for students with and without disabilities. However, numerous pre-service teachers were concerned about general education students and their reactions to inclusion, and some of these future teachers considered general education students “the true victims of inclusion.” They recommended that the opinions of students in general education classrooms be sought before implementing inclusive practices. Previous research addressing perspectives of peers toward students with special needs has indicated that although students without disabilities showed more tolerance with increased contact with their peers with special needs (Esposito & Reed, 1986), general education students paid no particular attention to their counterparts with special education needs in the classroom (Lovitt, Plavins, & Cushing, 1999). Moreover, students with special needs, especially those with atypical behavior, were less accepted by their peers and they, themselves, did not appear to engender peer acceptance (Cook & Semmel, 1999). Although inclusion in Egypt still at the experimental level, it would be insightful to study how students with and without disabilities accept each other in the inclusive classroom. This would be an important study because teaching strategies that utilize peer assistance are integral part of the inclusive settings.

Pre-service preparation and in-service training

Although there is evidence that positive attitudes about inclusion correlate with feelings of being well prepared (Bender et al., 1995; Gemmell-Crosby & Hanzlik, 1994), all pre-service

teachers in this study stated that their preparation program had done “nothing” to prepare them for inclusion. Regardless of their class standing or educational program, the vast majority of participants (85.2%) reported a lack of confidence and unpreparedness to teach in inclusive classrooms. This is hardly surprising given that the structure of their general education program did not include a single course about exceptional learners in general or inclusive education in particular. Previous literature has documented the positive effect of special education coursework in relation to pre-service teachers’ perspectives toward inclusion and increased awareness of techniques for successful inclusive practices (Carroll et al., 2003; Scruggs & Mastropieri, 1996; Shade & Stewart, 2001; Shippen, Crites, Houchins, Ramsey, & Simon, 2005).

Shippen and colleagues (2005) found that information provided in the “Survey of Exceptionality” course concerning the nature and needs of students with disabilities had a greater calming effect on the general education pre-service teachers as compared to their counterparts (i.e., special education teachers, or teachers receiving a dual certification in general and special education). These researchers concluded that “If general education teachers are less anxious about including students with disabilities, inclusion is more likely to be successful” (p. 97). Similarly, Shade and Stewart (2001) examined the effect of an introductory course in special education on general and special education pre-service teachers’ attitudes toward inclusion. They found that the course positively changed the attitudes of both future general and special educators.

It has been reported that not only were most of the university-based courses effective in enhancing the knowledge level and the attitudes of pre-service teachers toward inclusion, but the field-based experiences also influenced these attitudes. Previous literature indicated that students who engaged in guided practicum experiences expressed more positive attitudes toward

inclusion (Reber et al., 1995). Campbell and colleagues (2003) found that pre-service teachers exhibited more positive attitudes toward inclusion of children with Down syndrome and children with disabilities, in general, following a university course and field work experience which offered an in-depth investigation of one area of disability (e.g., Down syndrome). The researchers indicated that pre-service teachers showed greater “coping skills” when interacting with people with disabilities through the field work experience. In sum, it appears that pre-service teachers who have more information about and experience with students with specific disabilities are more willing to teach these students in their classrooms.

However, other investigations did not report statistically significant positive changes in pre-service teachers’ attitudes following university courses regardless of whether or not these courses were accompanied by field-based experiences. For example, although Tait and Purdie (2000) found a higher level of sympathy among pre-service teachers who had daily contact with people with special needs, a one-year general teacher training course was ineffective in influencing pre-service teachers’ attitudes in a positive way. Similarly, Kirk (1998) reported no increase in general education pre-service teachers’ positive attitudes toward working with students with disabilities after completion of a special education course. It is important to note that this course included 15-hours of field work with students with disabilities. However, the researcher reported that pre-service teachers became more aware and more realistic about the following: (a) the career path they had selected, (b) different student learning styles, and (c) instructional adaptations and extra time and support that would be required of them. Given these conflicting results, it could be concluded that while pre-service preparation seems to have a favorable impact on pre-service teachers’ attitudes, additional research is needed to isolate the critical elements in teacher education programs that contribute to the positive attitudes.

Similarly, numerous pre-service teachers in this study (91.5%) believed that in-service general education teachers did not have sufficient expertise to teach in inclusive classrooms. This could be because pre-service teachers were aware that neither the school system nor pre-service preparation in Egypt implements programs designed to enhance teachers' abilities to teach students with special needs in general education classrooms. However, there is evidence that such training makes a positive difference (Leyser et al., 1994; Waldron & McLeskey, 1998).

In a well designed project, Waldron and McLeskey (1998) worked collaboratively with a local school system to develop a system of service delivery for the education of students with mild disabilities titled Inclusive School Program (ISP). The researchers found that school improvement plans shared several common elements across the three schools that participated in the project. These elements included positive cooperation between general and special education teachers, closing separate classes for students with mental retardation and learning disabilities, and using instructional assistants to support students with special needs in general education classrooms. Moreover, when compared to students provided with services in a resource room, students in the ISP made more progress in reading and similar progress in math. In a follow up study, the researchers indicated that these changes were maintained over a number of years after the departure of the researchers (McLeskey & Waldron, 2002), and resulted in improved teacher attitudes toward inclusion (McLeskey et al., 2001).

In summary, even though many Egyptian pre-service teachers expressed a willingness to teach students with special needs in their classrooms, they did not necessarily feel prepared to teach in inclusive settings. Pre- and in-service training was seen as an important factor in improving their attitudes and feelings of preparedness to teach in inclusive settings. Participants in this study considered their current level of training as inadequate simply because they did not

know how to help students with special needs in general education classroom. Perhaps the most discouraging finding was that not a single participant mentioned curricular adaptations or instructional techniques as a reason for being willing to teach students with special needs. Pre-service teachers who expressed their willingness to teach students with special needs in their classrooms attributed their disposition to personal characteristics and experiences unrelated to their preparation in the teacher education program.

School resources for inclusion

Pre-service teachers considered the absence of appropriate materials and equipment and well-trained school personnel in general education schools as barriers to successful inclusion. Even those pre-service teachers who strongly supported inclusion indicated that knowing what to do was important, but not sufficient. Pre-service teachers in this study were very critical of the services provided for typical children in general education settings and therefore, were concerned about services for students with special needs in general education settings. Although previous research has documented the relationship between teachers' commitment to inclusion, beliefs about their success in inclusive settings, and the personnel support they receive (Brownell & Pajares, 1999; Kruger, Struzziero, & Vacca, 1995; Smith & Smith, 2000), teachers believed that insufficient resources were available to support inclusion (Scruggs & Mastropieri, 1996). Moreover, the evidence suggests that teachers might be willing to accept students with disabilities in their classrooms if class size was controlled. Scruggs and Mastropieri reported that general educators believed that reducing class size to fewer than 20 students would facilitate inclusion efforts. In the present study, participants believed that Egyptian public schools were "overloaded" in terms of class size and, consequently, it would be challenging to implement inclusion in such classrooms. The findings from this study suggest that support services are

crucial to the way that prospective teachers view inclusion as successful or unsuccessful in practice.

Implications

Findings that Egyptian pre-service general education teachers exhibited negative attitudes toward inclusion for students with special needs, especially students with mental retardation, behavioral problems, and hearing and visual impairments, suggest that these students may not receive appropriate educational services and may encounter unfavorable learning conditions in future inclusive settings. Pre-service teachers in this study indicated that a significant factor that contributes to this resistance is their lack of information and skills related to inclusive education. More specifically, these prospective teachers reported that they lack the knowledge and skills needed to make adaptations (e.g., modifications and accommodations) to curriculum and instruction to meet the needs of students with disabilities. Furthermore, the structure of their teacher education program does not include courses or field experiences related to educating students with special needs in general education classrooms. This strongly suggests that teacher educators across Egypt need to develop inclusive teacher education programs that prepare pre-service teachers with the necessary knowledge and skills to address the needs of students with special needs.

When developing teacher education programs, it is important that teacher educators be aware that the previous literature was inconsistent regarding the effectiveness of the coursework in influencing pre-service teachers' attitudes. An overview course in special education may not be sufficient to prepare general educators to teach in inclusive settings. Likewise, infusing special education content through general education courses also may not be effective in addressing the instructional issues necessary for effective inclusive practices (Cook, 2002). Thus, when creating the inclusive teacher education programs it is important to thoroughly investigate

the knowledge, experience, and attitudes of training providers, the quality of the training materials, and the training method to effectively influence pre-service teachers' attitudes and skills related to inclusion.

Field placement schools also need to be examined prior to pre-service teachers' placements to make sure that they are prepared to scaffold the first-hand inclusive experiences for pre-service teachers. This examination should focus on the attitudes of school personnel, cooperating teachers, and general education students' toward people with disabilities in general and inclusion in particular. Moreover, investigating school resources related to inclusion is also crucial for pre-service training to be successful. Teacher educators may participate in this process by asking pre-service teachers to investigate possible resources available in schools for students with disabilities and report findings to their instructors. This procedure may strengthen pre-service teachers' knowledge of resources available in schools and engage them in practical experiences related to inclusion. Findings from this study indicate that the availability of these resources and making good use of them contributes to the way that pre-service teachers perceive inclusion as a successful or unsuccessful practice.

A second concern voiced by pre-service teachers related to the lack of readiness of schools in Egypt to address inclusion. This concern is well founded, in that local schools in Egypt have just begun to develop inclusive programs. This finding suggests that it would be highly useful to develop model inclusive programs in local schools throughout Egypt. These schools could serve as a model for pre-service teachers to observe as they study inclusive education in their teacher education programs. Furthermore, these model programs would be useful as sites where teachers and administrators from other schools that are planning to develop an inclusive program can observe and learn how inclusion works, at least in one school setting.

One finding of this study was the apparent positive effect of the experience of contact with people with special needs on pre-service teachers' attitudes toward inclusion. However, the majority of participants did not report having such contact at the social level. These types of experiences may improve attitudes toward persons with disabilities in general and inclusion in particular. However, it is important to note that there is some inconsistency in the professional literature regarding the effectiveness of contact with persons with special needs and improved attitudes (see Bishop & Jones, 2002; Brownlee & Carrington, 2000; Hastings & Oakford, 2003; Kirk, 1998; Leyser et al., 1994). What the research reveals is that positive experiences with persons with disabilities are more likely to result in improved attitudes (see Hannah, 1988), and this seems to have been the case with the pre-service teachers who participated in this investigation.

Some researchers have provided models for contact experiences at the pre-service preparation level that have resulted in improved attitudes (e.g., Bishop & Jones, 2002; Brownlee & Carrington, 2000). Pre-service teacher education students could be provided experiences where they have contact with students with disabilities through an "apprenticeship model" in which pre-service teachers and teacher educators work collaboratively in university-based workshops to help students with special needs who participate fully in these sessions (Bishop & Jones, 2002). Other opportunities to interact with persons with disabilities could be used for pre-service teachers as they are available. For example, in one investigation, pre-service teachers who interacted with a teaching assistant who had a severe disability generally had a positive experience and were provided with the first-hand knowledge of disabilities (Brownlee & Carrington, 2000).

Limitations and Recommendations for Future Research

There are several limitations that should be addressed in the present study. Given these limitations, results should be interpreted with caution. However, these limitations may provide insight for future research efforts. One of these limitations is that the present study investigated the attitudes of a selected group of pre-service teachers in a public university located in the northern part of Egypt. Although the study utilized a relatively large sample size of 1,625 pre-service teachers, it is important to note that all participants were drawn from a single college in a single university. Therefore, generalizability of results may be limited due to the sampling method. Thus, one of the questions that should be raised in future research is to what extent do the attitudes of the pre-service teachers who participated in this study regarding inclusion compare to the attitudes of pre-service teachers in other teacher education programs in different regions. Similar studies should be conducted in other areas of Egypt.

Another limitation is that self-reported data by pre-service teachers may have limited validity, so that results should be interpreted with caution. Although self-reports are accurate sources of information because of the apparent relationship between beliefs and actions, classroom observation was seen as the best first-level approximation that researchers can rely on (Kennedy, 1999) to measure teacher quality. Observing pre-service teachers' behaviors and reactions to students with disabilities in inclusive settings may provide a better understanding of their attitudes toward inclusion and students with disabilities. For example, Brantlinger (1996) indicated that observing the discourse of pre-service teachers during their field experience revealed that these prospective teachers held identified anti-inclusion beliefs which were not previously apparent. Future investigations should extend beyond self-reports in addressing the perspectives of pre-service teachers toward inclusion and people with special needs in general.

Pre-service teachers who participated in this study were general educators with no preparation in special education at the theoretical or practical levels. These pre-service teachers did not receive interventions to adapt instruction for diverse students in inclusive classrooms. Therefore, a comparison between the attitudes of pre-service teachers in general education and their counterparts in special education would be informative. This comparison would inform us regarding whether the extent to which the structure of the teacher education programs of these pre-service teachers may be responsible for the formation of attitudes toward inclusion. Moreover, if the attitudes are similar between both groups of pre-service teachers, it might be possible that cultural considerations stand behind these attitudes. If the attitudes are different, it would be important to investigate the factors contributing to these differences among pre-service teachers.

Inclusion is not widely adopted in the Egyptian educational system and is still at the experimental level. However, pre-service teachers in this study pleaded for the knowledge and experience related to students with special needs and expressed their willingness to teach in inclusive settings if extensive opportunities for training were provided. Future research might investigate the effect of different types of training on pre-service teachers' attitudes toward inclusion and teacher efficacy. What type of training is more beneficial? What would pre-service teachers contribute to this training? What would they take out of it? What changes were made in their teaching styles as a result? In sum, the attitudes of pre-service teachers in Egypt should be subject to further investigations.

APPENDIX A
PRE-SERVICE TEACHERS' ATTITUDES TOWARD INCLUSION SCALE

Part 1: Participant Information Sheet

Name: _____

Age: _____

Gender: _____

College/University: _____

Major: _____

Do you teach in your practicum? _____

Do you work with students with special needs? _____

Do you have previous or current contact with persons with disabilities (e.g., family members, friends, neighbors)? _____

General Directions: In the following pages you will find statements of ideas and attitudes about inclusion of students with special needs in general education classrooms. There are many different opinions about this subject and I would like to know your personal opinion. There is no right or wrong answers and people agree with some of these statements and disagree with others. Please, circle the number to the right of each statement that best describe your agreement or disagreement with the statement

Part 2: Pre-service Teachers' Attitudes toward Inclusion Scale

Items	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Students with special needs should be given every opportunity to function in the general classroom where possible.	5	4	3	2	1
2. The inclusion of students with special needs can be beneficial for students without disabilities.	5	4	3	2	1
3. Inclusion promotes social independence among students with special needs.	5	4	3	2	1
4. The nature of the study in general classroom classrooms will promote the academic growth of the students with special needs.	5	4	3	2	1
5. The study skills of students with special needs are inadequate for success in the general education classroom.	5	4	3	2	1
6. Inclusion promotes understanding and acceptance of individual differences between students without disabilities and students with special needs.	5	4	3	2	1
7. Students without disabilities will likely avoid interacting with students with special needs in the inclusive classrooms.	5	4	3	2	1
8. Inclusion promotes self-esteem among children with special needs.	5	4	3	2	1
9. Students with special needs lose the stigma of being "different" or "failures" when placed in the general education classrooms.	5	4	3	2	1

Pre-service Teachers' Attitudes toward Inclusion Scale. Continued.

Items	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
10. Isolation in a special classroom has beneficial effect on the social and emotional development of the students with special needs.	5	4	3	2	1
11. General-classroom teachers have sufficient training to teach students with special needs.	5	4	3	2	1
12. Students with special needs are likely to create confusion in the general education classroom.	5	4	3	2	1
13. Teaching students with special needs is better done by special rather than general classroom teachers.	5	4	3	2	1
14. The behavior of students with special needs will set a bad example for other students in the classroom.	5	4	3	2	1
15. Students with disabilities will not waste the general-classroom teacher's time.	5	4	3	2	1
16. It is likely that the students with special needs will exhibit behavior problems in a general education classroom.	5	4	3	2	1
17. Increased freedom in the general classroom creates too much confusion for the student with a special need.	5	4	3	2	1
18. Students with special needs will make an adequate attempt to complete their assignments in general education classrooms.	5	4	3	2	1

Pre-service Teachers' Attitudes toward Inclusion Scale. Continued

Items	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The extra attention students with special needs require will be to the detriment of the other students in the classroom.	5	4	3	2	1
19. General-classroom teachers have the primary responsibility to teach students with special needs in their classrooms.	5	4	3	2	1
20. Inclusion will likely have a negative effect on the emotional development of the students with special needs.	5	4	3	2	1
21. General-classroom teachers have the appropriate capability to work with students with special needs.	5	4	3	2	1
22. Inclusion of students with special needs will necessitate extensive retraining of general classroom teachers.	5	4	3	2	1
23. Students with special needs can be best served in general education classrooms.	5	4	3	2	1
24. It is difficult to maintain order in classrooms that contain a mix of students with and without special needs.	5	4	3	2	1
25. Inclusion of students with special needs will require significant changes in general education classroom procedures.	5	4	3	2	1
26. The behavior of the students with special needs does not require more attention from the teacher than the behavior of students without special needs.	5	4	3	2	1

Pre-service Teachers' Attitudes toward Inclusion Scale. Continued

Items	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
27. The student with a special need will probably develop academic skills more rapidly in a general education classroom than in a special education classroom.	5	4	3	2	1

In my view, most students with the following special needs can be educated in general education classrooms:

28. Learning disabilities	5	4	3	2	1
29. Emotional and behavioral disorders	5	4	3	2	1
30. Hearing impairments	5	4	3	2	1
31. Visual impairments	5	4	3	2	1
32. Mental retardation	5	4	3	2	1

Part 3: Questions That Require Written Responses

- 1- Do you support the concept of including students with special needs in general education classrooms? Why?

- 2- As a general education future teacher, are you willing to teach students with special needs in your classroom? Why?

- 3- Do you think that students, with and without special needs, benefit from inclusion? Why?

- 4- Do you think that students with special needs may have a negative effect on the classroom environment? Why?

- 5- Do you think that general education teachers have sufficient expertise/training for inclusion? Explain.

- 6- Do you think that general education schools have sufficient resources for Inclusion? Explain.

- 7- Do you feel prepared to teach students with special needs in your classroom? Why?

Pre-service Teachers' Attitudes toward Inclusion Scale (Arabic)

الجزء الأول: بيانات المشارك

الاسم:-----

السن:-----

النوع:-----

الكلية/ الجامعة:-----

التخصص:-----

هل درّست في فصول التربية العملية؟-----

هل درّست التلاميذ من ذوي الاحتياجات الخاصة؟-----

هل لديك خبرة سابقة أو حالية في التعامل مع أفراد من ذوي الاحتياجات الخاصة (أفراد من العائلة، أصدقاء، جيران، ...)؟-----

توجيهات عامة: في الصفحات التالية سوف تجد عبارات تمثل أفكاراً واتجاهات تتعلق بعملية دمج التلاميذ من ذوي الاحتياجات الخاصة في فصول التعليم العام . إن الدمج تدور حوله آراء مختلفة ويسعدني معرفة رأيك الشخصي حول هذا الموضوع . جدير بالذكر أنه لا توجد إجابات صحيحة وأخرى خطأً والناس قد تتفق وقد تختلف حول هذه العبارات . من فضلك ضع دائرة حول رقم من الأرقام الموجودة بجوار كل عبارة بما يعكس مدى موافقتك أو عدم موافقتك لهذه العبارة .

الجزء الثاني: استبيان حول اتجاهات طلاب كلية التربية نحو الدمج

العبارة	أوافق تماماً	أوافق	لا أوافق لي	لا أوافق تماماً	
1. يجب أن يعطى التلاميذ ذوو الاحتياجات الخاصة كل الفرص الممكنة للدراسة في فصول التعليم العام.	5	4	3	2	1
2. دمج التلاميذ ذوي الاحتياجات الخاصة قد يكون مفيداً للتلاميذ العاديين.	5	4	3	2	1
3. الدمج يعزز الاستقلال الاجتماعي بين التلاميذ ذوي الاحتياجات الخاصة.	5	4	3	2	1
4. إن طبيعة الدراسة في فصول التعليم العام سوف تعزز النمو الأكاديمي للتلاميذ ذوي الاحتياجات الخاصة.	5	4	3	2	1
5. المهارات الدراسية للتلاميذ ذوي الاحتياجات الخاصة ليست كافية للنجاح في فصول التعليم العام.	5	4	3	2	1
6. يعزز الدمج فرص الفهم وقبول الاختلافات بين التلاميذ العاديين وذوي الاحتياجات الخاصة.	5	4	3	2	1
7. من المحتمل أن يتجنب التلاميذ العاديون التفاعل مع زملائهم من ذوي الاحتياجات الخاصة في فصول الدمج.	5	4	3	2	1
8. يعزز الدمج شعور الاعتزاز بالذات بين التلاميذ ذوي الاحتياجات الخاصة.	5	4	3	2	1
9. لن يوصف التلاميذ ذوو الاحتياجات الخاصة بأنهم "فاشلون" أو "مختلفون" عند وضعهم في فصول التعليم العام.	5	4	3	2	1
10. عزل التلاميذ ذوي الاحتياجات الخاصة في فصول التربية الخاصة له تأثير مفيد على النمو الاجتماعي والانفعالي لهم.	5	4	3	2	1
11. معلمو التعليم العام لديهم التدريب اللازم لتدريس التلاميذ ذوي الاحتياجات الخاصة.	5	4	3	2	1

أوافق تماماً	أوافق	لا أوافق تماماً	لا أوافق	لا أرى لي	العبارة	
1	2	3	4	5	من المحتمل أن يسبب التلاميذ ذوو الاحتياجات الخاصة اضطراباً في فصول التعليم العام.	12.
1	2	3	4	5	من الأفضل أن يُدرّس التلاميذ ذوو الاحتياجات بواسطة م علمي التربية الخاصة بدلاً من م علمي التعليم العام.	13.
1	2	3	4	5	إن سلوك التلاميذ ذوي الاحتياجات الخاصة قد يكون مثلاً سيئاً لزملائهم من العاديين .	14.
1	2	3	4	5	لن يكون التلاميذ ذوو الاحتياجات الخاصة سبباً في ضياع وقت معلم الفصل.	15.
1	2	3	4	5	من المحتمل أن يظهر التلاميذ ذوو الاحتياجات الخاصة مشكلات سلوكية في فصول التعليم العام.	16.
1	2	3	4	5	قد تسبب أجواء الحرية الزائدة في فصول التعليم العام اضطراباً شديداً للتلاميذ ذوي الاحتياجات الخاصة.	17.
1	2	3	4	5	سوف يبذل التلاميذ ذوو الاحتياجات الخاصة محاولات جادة لإنجاز واجباتهم الدراسية عند دراستهم في فصول التعليم العام.	18.
1	2	3	4	5	إن الانتباه الزائد الذي يتطلبه التلاميذ ذوو الاحتياجات الخاصة من جانب المعلم سوف يكون على حساب التلاميذ العاديين في فصول الدمج.	19.
1	2	3	4	5	معلموا التعليم العام هم المسؤولون، بالدرجة الأولى، عن تدريس التلاميذ ذوي الاحتياجات الخاصة في فصولهم بالتعليم العام.	20.

العبارة	أوافق تماماً	أوافق	لا أوافق تماماً	لا أوافق تماماً	لا أوافق تماماً
21. من المحتمل أن يكون للدمج تأثير سلبي على النمو الانفعالي للتلاميذ ذوي الاحتياجات الخاصة.	5	4	3	2	1
22. معلمو التعليم العام لديهم القدرة الكافية للتعامل مع التلاميذ ذوي الاحتياجات الخاصة.	5	4	3	2	1
23. سوف يتطلب دمج التلاميذ ذوي الاحتياجات الخاصة تدريباً مكثفاً لم علمي التعليم العام.	5	4	3	2	1
24. من الممكن أن يتلقى التلاميذ ذوو الاحتياجات الخاصة خدمات أفضل في فصول التعليم العام.	5	4	3	2	1
25. من الصعب الحفاظ على النظام في فصول التعليم العام التي بها تلاميذ من ذوي الاحتياجات الخاصة.	5	4	3	2	1
26. إن دمج التلاميذ ذوي الاحتياجات الخاصة سوف يتطلب إحداث تغييرات كثيرة في فصول التعليم العام.	5	4	3	2	1
27. إن سلوك التلاميذ ذوي الاحتياجات الخاصة لا يتطلب من المعلم انتباهاً أكثر مما يتطلبه التلاميذ العاديون.	5	4	3	2	1
28. من المحتمل أن تنمو المهارات الدراسية للتلاميذ ذوي الاحتياجات الخاصة بسرعة أكبر في فصول التعليم العام منها في فصول التربية الخاصة.	5	4	3	2	1
29. صعوبات التعلم	5	4	3	2	1

من وجهة نظري، فإن التلاميذ من ذوي الاحتياجات الخاصة التالية يمكن أن يتلقوا تعليمهم في فصول العاديين:

أوافق تماماً	لا أوافق تماماً	لا أوافق	لا رأي لي	أوافق	أوافق تماماً	العبارة
1	2	3	4	5	30.	اضطرابات انفعالية وسلوكية
1	2	3	4	5	31.	إعاقات سمعية
1	2	3	4	5	32.	إعاقات بصرية
1	2	3	4	5	33.	تخلف عقلي

6- هل تعتقد أن مدارس التعليم العام لديها المصادر الكافية لتطبيق عملية الدمج الآن؟ وضح ذلك.

7- هل تشعر بأنك معدّ لتدريس التلاميذ ذوي الاحتياجات الخاصة في فصلك؟ لماذا؟

APPENDIX B
INFORMED CONSENT

Informed Consent

Please read this consent document carefully before you decide to participate in this study.

Dear Pre-service Teachers,

I am a doctoral student in the Department of Special Education at the University of Florida conducting a study to examine pre-service teachers' attitudes toward including students with special needs in general education classrooms in Egypt. I am particularly interested in understanding what pre-service teachers believe regarding inclusion and how this may affect their performance as future teachers who will teach in inclusive settings. The significance of this understanding are more crucial today because our schools are moving from providing services in isolated and self-contained settings to inclusive settings. There are no direct benefits to you for participating in the study. However, the implications of this study may inform teacher education program development to meet the renewed educational demands of our country.

In this study, a survey will be conducted with you that takes approximately 20-25 minutes. The survey will focus on how pre-service teachers conceptualize: a) benefits of inclusion, b) inclusive classroom management, c) ability to teach students with disabilities, and d) special versus inclusive general education. The survey uses a six-point Likert Scale, as well as a set of open-ended questions.

Your identity will be kept confidential to the extent provided by law. Your information will be assigned a code number. The list connecting your name to this number will be kept in a locked file in my faculty supervisor's office. When the study is completed and the data have been analyzed, the list will be destroyed. Your name will not be used in any report.

There will be no risks for your participation in this study. However, results from this study may aid in the understanding of pre-service teachers' perceptions of inclusive settings as well as identifying some factors related to the formation of these perceptions.

Your participation is strictly voluntary, and you are free to withdraw from this study at any time without consequence. You do not have to answer any questions you do not want to answer. There will be no compensation for your participation in the study. If you have any questions about this study, please feel free to contact me: Fathi ElAshry, Department of Special Education, G315 Norman Hall, (352) 392-0701 (ext: 262). You may also contact my supervisor: Dr. James McLeskey, Department of Special Education, G315 Norman Hall, (352) 392-0701(ext: 278). Questions or concerns about research participants' rights may be directed to the UFIRB Office, Box 112250, Gainesville, FL 32611-2250; phone (352)392-0433.

I have read the procedure described above. I voluntarily agree to participate in the procedure and I have received a copy of this description.

Participant: _____ Date: _____

Principal Investigator: _____ Date: _____

Informed Consent (Arabic)

موافقة صريحة

من فضلك اقرأ هذه الموافقة بعناية قبل أن تقرر المشاركة في هذه الدراسة .

عزيزي الطالب :

أنا طالب دكتوراة في قسم التربية الخاصة بجامعة فلوريدا بالولايات المتحدة أقوم بإجراء دراسة لتحديد اتجاهات طلاب كلية التربية نحو دمج التلاميذ ذوي الاحتياجات الخاصة في فصول العاديين بالتعليم العام في مصر. إن اهتمامي ينصب بصفة خاصة على فهم اتجاهات طلاب كلية التربية نحو عملية الدمج والتأثير المتوقع لذلك على أدائهم في فصول تجمع بين التلاميذ العاديين وذوي الاحتياجات الخاصة . إن أهمية هذا الفهم تتزايد اليوم في ظل اتجاه مدارسنا نحو تقديم خدمات تعليمية لكل من العاديين وذوي الاحتياجات الخاصة معاً في فصول التعليم العام. إضافة إلى ذلك فإن لهذا الفهم أهميته فيما يتعلق بتطوير برامج إعداد المعلم لتلائم المتطلبات التعليمية المتجددة. جدير بالذكر أنه لا توجد فوائد مباشرة سوف تعود عليك نتيجة اشتراكك في هذه الدراسة .

إن ملء استفتاء تتراوح مدته بين 20-25 دقيقة يعد جزءاً أساسياً في هذه الدراسة. إن هذا الاستفتاء يركز على كيفية إدراك طلاب كلية التربية لثلاثة أمور :

- أ- فوائد عملية الدمج .
- ب- إدارة فصول الدمج .
- ج- القدرة على تدريس التلاميذ ذوي الاحتياجات الخاصة .
- د- التدريس في مدارس التربية الخاصة مقابل التدريس في فصول الدمج .

جدير بالذكر أن هذا الاستفتاء يستخدم مقياس ليكرت ذا الاختيارات الستة إضافة إلى عدد من الأسئلة مفتوحة النهاية؛ هذه الأسئلة تتطلب استجابة كتابية.

إن خصوصيتك سوف تظل محفوظة طبقاً لأحكام القانون المتبع في هذا الشأن كما أن بياناتك سوف تسجل تحت رقم معين على أن تحفظ قائمة الأرقام والأسماء في ملف مغلق سوف يودع في مكتب مشرفي بالجامعة إلى حين اكتمال الدراسة وتحليل البيانات مما يعني أن اسمك لن يستخدم بأي حال من الأحوال .

إن اشتراكك لا ينطوي على أية مخاطرة بل على العكس من ذلك فإن نتائج هذه الدراسة قد تساعد في فهم اتجاهات معلمي المستقبل نحو عملية الدمج إضافة إلى تحديد بعض العوامل المرتبطة بتكوين هذه الاتجاهات .

إن اشتراكك في هذه الدراسة هو عملية تطوعية مع الاحتفاظ بحقك في الانسحاب في أي وقت تشاء دون عاقبة تُذكر كما أنك لست مضطراً للإجابة عن أي سؤال لا تريد الإجابة عنه . أخيراً فإنه لا يوجد عائد مادي مقابل اشتراكك. إذا كان لديك أية أسئلة يمكنك الاتصال بي في أي وقت تشاء :

Fathi ElAshry, Department of Special Education, G315 Norman Hall, Gainesville, FL 32611. Phone Number: 1-352-392-0701 (ext: 262).

كما يمكنك أيضاً الاتصال بمشرفي :

Dr. James McLeskey, Department of Special Education, G315 Norman Hall, Gainesville, FL 32611. Phone Number: 1-352-392-0701 (ext: 278).

إن أية أسئلة تتعلق بحقوق المشاركين في البحث يمكن توجيهها إلى :

UFIRB Office, Box 112250, Gainesville, FL 32611-2250; phone (352)392-0433.

لقد قرأت الإجراء المذكور عاليه وأوافق متطوعاً على الاشتراك في الاستفتاء وقد تسلمت نسخة من هذا الوصف.

المشارك: _____ التاريخ: _____

الباحث المسئول: _____ التاريخ: _____

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BIOGRAPHICAL SKETCH

Fathi Rezk El-Ashry was born on April 3, 1970, in Kafr El-Sheikh, Egypt. After graduating from El-Shaheed Reyad High School in 1989, Fathi attended college at the Tanta University, Kafr El-Sheikh campus, receiving a Bachelor of Arts and Education in Arabic language in 1993 and was awarded the first rank in the College of Education. Realizing his interest in teaching and educational research, Fathi immediately entered a Special Diploma in Education at the Tanta University. At the same time, he began his teaching career in the rural community of Dosoq district at Kafr El-sheikh governorate, where he worked as an Arabic language teacher in the middle school.

Two years later, Fathi assumed the position of research assistant in the College of Education in Kafr El-Sheikh city. While pursuing a master's degree in education in 1997, Fathi assumed the position of teaching assistant at the College of Education. Later, he worked at the United Arab Emirates University as an Arabic language lecturer and received his master's in education degree in 2001. In 2003, Fathi began the pursuit of a doctorate in curriculum and instruction at the Tanta University, Kafr El-sheikh campus. During his doctoral program, Fathi was awarded a governmental mission to continue his research in the United States and, therefore, he was admitted to the Florida State University as a research fellow in 2005. While at the Florida State University, Fathi was awarded the Ford Foundation Fellowship to pursue his doctorate in special education at the University of Florida. He was admitted to the University of Florida as a doctoral student in 2006.

While at the Florida State University, Fathi participated in a research project in cooperation with faculty members from the Reading and Language Arts program. As a result, Fathi coauthored an article about the assessment and instruction of an Arabic-speaking child in a U.S. school that was published in *The Reading Teacher* journal in 2007. During his doctoral program,

Fathi presented his research in different international conferences in the United States and Europe. His research interests include inclusive education, special education pre-service teacher preparation, and reading disabilities.