

THE CONTRIBUTION OF EDUCATION TO THE SPECIAL EDUCATION QUALIFICATIONS AND NEEDS OF TEACHER CANDIDATES

Marilena Z. LEANA-TAŞÇILAR*

ABSTRACT

An overview of special education literature indicates that teacher training about exceptional students has vital importance. The aim of this study is to investigate the contribution of an informational undergraduate course to the opinions toward special education qualifications and needs of all teacher candidates of education faculty. A pretest-posttest quasi - experiment non-equivalent group design was used in the research. In addition a qualitative interview method was used with 5 teacher candidates. The experimental group consisted of teacher candidates from eleven different undergraduate programs (n=420) and the control group from two different undergraduate programs one from education faculty and the other from faculty of arts (psychology department) (n=107). Special Education Qualification and Need Analysis questionnaire developed by Izci (2005) was used to collect the data. The questionnaire was administered before and after the training. Informational course includes knowledge about special education, exceptional students' features and inclusion. Findings indicated that the course has affected the opinions of teacher candidates about their qualifications and needs. At the end of the study, it was found that in the experimental group 9 of 11 teaching fields had shown significant difference between the pre and posttest results in .05 level. Also there was significantly difference between experimental and control groups in .001 level. In addition, the semi-structured interviews were also emphasized the need for special education training to teacher candidates.

Key words: *Special Education, Inclusion, Qualification and Needs of Teacher Candidates*

EĞİTİMİN ÖĞRETMEN ADAYLARININ ÖZEL EĞİTİM HAKKINDAKİ YETERLİKLERİNE VE İHTİYAÇLARINA ETKİSİ

ÖZ

Özel eğitim literatürü incelendiğinde, sıra dışı öğrencilerin eğitiminde öğretmenlerinin çok önemli bir rolü olduğu görülmektedir. Bu araştırmanın amacı, eğitim fakültesinde okuyan tüm öğretmen adaylarına uygulanan bilgi

* İstanbul University, Hasan Ali Yücel Faculty of Education, Special Education Department, Gifted Teacher Training Program mleana@istanbul.edu.tr

temelli eğitim programının özel eğitim konusundaki yeterliklerine ve görüşlerine etkisini ortaya koymaktır. Yarı deneysel, denk olmayan kontrol gruplu yöntem benimsenmiştir. Ek olarak 5 öğretmen adayı ile derinlemesine görüşme yöntemiyle veriler toplanmıştır. Deney grubu, 11 farklı bölümdeki öğretmen adayından oluşmaktadır (n=420), kontrol grubu ise bir tanesi eğitim fakültesinde diğeri ise fen-edebiyat fakültesinde okuyan (psikoloji öğrencileri) iki ayrı bölümün öğrencilerinden oluşmaktadır (n=107). Veriler İzci (2005) tarafından geliştirilen Özel Eğitim Yeterlik ve İhtiyaç Analizi ölçeği kullanılarak toplanmıştır. Ölçek eğitim programından önce ve sonra uygulanmıştır. Bilgiye dayalı eğitim programında, özel eğitim, özel eğitime muhtaç öğrencilerin özellikleri ve kaynaştırma ile ilgili bilgilendirme yapılmıştır. Bulgular, eğitim programının öğretmen adaylarının özel eğitim yeterliklerini etkilediğini göstermektedir. Araştırmanın sonuçları 11 öğretmen adayı grubundan 9 tanesinin özel eğitim ile ilgili yeterliliklerinin $p<.05$ düzeyinde anlamlı farklar olduğunu ortaya koymaktadır. Ayrıca, deney ve kontrol grupları arasında $p<.001$ düzeyinde anlamlı farklılık saptanmıştır. Yarı yapılandırılmış görüşme sonuçları, öğretmen adaylarının özel eğitim konusunda bilgilendirilmelerinin önemini destekler niteliktedir.

Anahtar Kelimeler: *Özel Eğitim, Kaynaştırma, Öğretmen Adaylarının Yeterlikleri ve İhtiyaçları*

Introduction

Teachers represent the most fundamental components of special education and inclusion. It is teachers who are mainly responsible for individualized education programs, who ensure that students included within the scope of special education are admitted into the classroom, and who monitor the development of special education students. In Turkey, faculties produce nearly 1200 teachers of special education per year. Nevertheless, they meet exceptional students not in the classroom but in rehabilitation centers. In addition, there are a greater number of teachers who are expected to meet inclusion students in the traditional school environment. Considering this, the Council of Higher Education stipulated that students at faculties of education, regardless of their departments, have to take the course in special education as of 2010.

The fact that the course in special education has been made obligatory for all students of teaching is significant for a country with almost 4 million exceptional students (0-18 years old) (Ure, 2012). At the First Council of Disabled People held in Turkey in 1999, it was declared that only 3% of the whole population of exceptional students could benefit from special education (The

Ministry of National Education, 1999). Hopefully, enabling teachers of varying disciplines to become more conscious in this respect will raise the public awareness and yield an increase in the percentage.

In their research on the synthesis of 10 other studies, Scruggs and Mastropieri (1996) made an attempt to identify how knowledgeable classroom teachers were about special education and inclusion and how much they had been trained in this respect. To do so, they analyzed the opinions of people in nine US states between 1975 and 1994. Only 847 of the 2900 participants (29%) stated that classroom teachers were satisfactorily knowledgeable about special education and qualified for inclusion. Similarly, only 91 of the 355 teachers of special education (22.8%) noted that classroom teachers were competent in the matter. More recently, Izci (2005) worked with 132 prospective classroom teachers in Turkey and demonstrated that they lacked basic knowledge about and qualifications for special education and inclusion. The author recommended that undergraduate students should take the special education course for at least two terms.

Although there are countless studies on the needs of exceptional students and the type of education they should be provided with, no research has been found on how prospective teachers should be trained and, thus, enabled to meet the requirements of exceptional students. Considering the gap in the literature, the purpose of the present study is to identify the qualifications and requirements of prospective teachers of various departments concerning special education, and to present an undergraduate curriculum in accordance with these qualifications and requirements.

Literature Review

The rationale behind inclusion has long been discussed. Scholars have contemplated how exceptional students can be educated in the best way possible (Goldstein, Moss and Jordan, 1972; Gottlieb, 1991; Gresham, 1982; Johnson, 1961). Some have maintained that exceptional students can benefit more from a school that provides special education (Gottlieb, 1991; Gresham, 1982; 1991) while others have advocated that they should be educated along with their peers (Giangreco and Putnam, 1988; Smith, Polloway, Patton and Dowdy, 1995; Wilcox and Sailor, 1980). The traditional educational environment is preferred over special schools not only because they

eliminate segregation but also they provide a number of opportunities (communication with peers, improving relationships with friends, identification of strengths and weaknesses and learning how to cope with them) (Lewis and Doorlag, 1987; Stainback and Stainback, 1992).

After similar philosophical discussions in Turkey, a decision was made to implement inclusion in 1983 (Sucuoglu, 2004). According to the Turkey Disability Study, 12.29% of the population was comprised of people with special needs in 2002 (TUIK, 2009). The study also revealed that 4.15% of disabled people were 0 to 9 years old while another 4.63% of them were 10 to 19 years old. As stated by Sart, Ala, Yazlik and Yilmaz (2004), a project was launched in the 1992/1993 Academic Year to improve the quality of inclusion practices in Turkey. Within the scope of the project, 88 schools from 12 provinces were identified as pilot schools, where inclusion was administrated for preschool, primary school and secondary school students. Apart from these promising studies, another study conducted by the General Directorate for Special Education and Counseling, the Ministry of National Education, in 2010 found that the number of exceptional students was 80.000 in the 2009/2010 Academic Year.

Most studies on special education and inclusion are focused on the social development of exceptional students (Colak, 2009), their social communication skills (Baysal, 1989), linguistic developments (Granit, 1990), behavioral problems (Kavanoz, 1999), senses of self (Bal and Avci, 1999; Gulec and Metin, 2000), reading-comprehension skills (Deretarla, 2000), academic accomplishments (Tiras, 2000) and problems caused by their special needs (Gurboga, 2003). Other studies have investigated the necessity of support services (Kircaali-Iftar, 1997; Batu, 2000) and the attitudes of administrators and teachers towards exceptional students and inclusion (Pinar-Sazak and Yikmis, 2004). According to Sucuoglu (2004), some experts report a positive effect on the way administrators and teachers view special education and inclusion as a result of informatory meetings with them (Kayaoglu, 1999; Sahbaz, 1997; Yikmis, Sahbaz and Peker, 1997, 1998).

Elliot and McKenney (1998) argue that the attitude of a particular school to special education and inclusion depends on the attitudes of those who work for the school. Special education and inclusion are

handicapped in a school where most workers have developed a negative attitude towards them. Classroom teachers, especially when they are hosting an inclusion student, are responsible for the classroom climate and any possible behavioral problems (Walker and Lamon, 1987). It is teachers who are mainly accountable for addressing the needs of students in the classroom, establishing a positive climate among students and ensuring that inclusion students are accepted in the classroom, school, and even society (Avci, 1998). Nevertheless, many studies have reported the unfortunate finding that teachers are little knowledgeable about and qualified for the issue and, therefore, exhibit a negative attitude towards exceptional students (Barton, 1992; Batu, Kircaali-Iftar and Uzuner, 2004; Diken, 1998; Familia-Garcia, 2001; Sargin, 2002).

In their study, a qualitative one, Vaughn, Schumm, Jallad, Slusher and Saumell (1994) conducted focus-group interviews with teachers of several disciplines (n=73; special education teachers, primary school classroom teachers, gifted education teachers). The findings suggested that having an exceptional student in the classroom was the most significant reason for resigning. Furthermore, it was emphasized that not knowing how to treat exceptional students caused teachers to develop concerns about all their students including inclusion students. The participants complained that administrators were indifferent and that the latter frequently asked the former to carry out bureaucratic paperwork. They added that most administrators had a negative opinion of inclusion. Another qualitative study was conducted by Batu, Kircaali-Iftar and Uzuner (2004) with similar results. The researchers carried out face-to-face interviews with 20 classroom teachers working for a technical high school that contained exceptional students, too. What challenged the participants most about inclusion was the fact that each student had different needs because of their individual dissimilarities. The teachers emphasized their lack of knowledge about exceptional students and called for in-service trainings by the Ministry of National Education.

It is commonly emphasized in the literature that teachers should be trained in this respect before they graduate from their faculties. Therefore, the purpose of the present study is to identify the expectations and requirements of prospective teachers, studying in any department of teaching, concerning special education and to test

the efficiency of the curriculum designed for enhancing their qualifications. In other words, the present study is an attempt to test the hypothesis that “informatory special education program enhances the qualifications of prospective teachers studying in any department of teaching”.

Method

An attempt to identify the effect of “special education”, a course included in the undergraduate curriculum for prospective teachers, on their expectations of and requirements for special education, the present study was based on the pretest-posttest nonequivalent groups, an experimental one. Besides, interviews were conducted with the participants, a technique commonly used in qualitative studies as a data collection instrument, for the purpose was to reveal the qualifications and requirements of prospective teachers concerning special education and to analyze the effects of “special education” in detail through a holistic approach.

Participants

The participants of the study were comprised of 451 prospective teachers and 76 prospective psychologists who studied in Istanbul University during the Academic Year 2011-2012. The experimental group consisted of a total of 420 students from departments of science teaching, math teaching, Turkish language teaching, special education, psychological counseling and guidance, primary school teaching, English language teaching, computer teaching, teaching religion and ethics, social sciences teaching and French language teaching. Students of these departments had to take the course “special education” as part of their undergraduate education. On the other hand, the control group contained a total of 107 students- 41 students from the department of German language teaching, the department in which the course “special education” was not compulsory, and 76 students from the department of psychology, closely intertwined with special education but not requiring its students to take the course “special education”.

Materials and Procedure

The Special Education Qualification and Needs Analysis Scale: The groups’ expectations and requirements concerning special education were identified through “the Special Education Qualification and Needs Analysis”, which had been developed by Izci (2005). The 5-

point Likert-type rating was adopted for the scale, with the following alternatives: “Partly”, “Slightly”, “Never”, “Strongly” and “No Idea”. The scale contained a total of 20 items. It had a KMO value of 0.780. Whereas the Barlett’s test yielded a value of 2287,238, the scale had a Cronbach’s alpha of 0.78. All these figures suggest that the items have a satisfactory construct validity and reliability (Izci, 2005). In this study the Cronbach's alpha of the questionnaire was 0.76.

Special Education Classes in the Experimental Group: Throughout the study, the experimental group was subject to a total of 35 hours of teaching (two and half hours per week for 14 weeks) during the 2011/2012 Academic Year. While most classes were covered via presentations, some were taught in a practical way through video displays. An expert taught the classes for three weeks. The courses in the remaining weeks were covered by two instructors (one of them being the researcher). The contents of the classes were composed on the basis of the collection of six textbooks on Introduction to Special Education (Baykoc, 2011; Baykoc, 2010; Ataman, 2005; Diken, 2010; Cavkaytar and Diken, 2005; Sak, 2010). The subjects were as follows:

1. Introduction to the Education of Exceptional Students
2. Individualized Education Programs
3. Supporting Special Education
4. Early Intervention Education
5. Family Support in Special Education
6. Transitions in Special Education
7. Mental Disabled children and their Education
8. Speech Disorders and their Education
9. Learning Disabled children and their Education
10. Behavioral Disorders and their Education
11. Physical Disabled children and their Education
12. Visually/Hearing-Impaired children and their Education
13. Children with Attention deficit hyperactivity disorder and their Education
14. Gifted Children and their Education

Procedure

At the beginning of the Fall Term of the 2011/2012 Academic Year, the Special Education Qualification and Needs Analysis Scale was

implemented on the participants who studied at the Hasan Ali Yucel Faculty of Education, Istanbul University, and had to take the course in “Special Education” as well as the students of German language teaching who did not have to take the course (n=500). Furthermore, the first and fourth grade students of psychology at the faculty of literature were subject to the scale (n=100). However, some prospective teachers did not take the posttest, which caused the data to be collected on 527 participants. Following the classes, semi-structured interviews were conducted with five of the prospective teachers so that their views of special education could be analyzed in a more detailed way.

Results

Table 1 presents the distribution of the participants in the experimental group (n=420) and the control group (n=107) by their departments and gender.

Table 1: The Frequency Distribution of the Experimental and Control Groups by Gender

Group	Discipline	Gender				Total	
		Male		Female		n	f
		n	f	n	f		
Experimental Group	Science TTP	9	2.2	27	6.5	36	8.6
	Math TTP	15	3.6	18	4.3	35	7.9
	Turkish LTTP	23	5.5	30	7.2	53	12.7
	Special Educ.	10	2.4	26	6.2	36	8.6
	PC &G	14	3.3	31	7.4	45	10.8
	Primary TTP	16	3.8	22	5.3	38	9.1
	Eng. LTTP	12	2.9	41	9.8	53	12.7
	French LTTP	4	1.0	14	3.3	18	4.3
	CIT	19	4.5	10	2.4	29	6.9
	Religion & Ethics TTP	19	4.5	33	7.9	52	12.4
Control Group	Social S. TTP	11	2.6	14	3.3	25	6.0
	German LTTP	13	12.1	18	16.8	31	29.0
	Psychology	14	2.7	62	11.8	76	14.5

Note: TTP= Teacher Training Program, LTTP= Language Teacher Training Program, PC & G= Psychological Counseling and Guidance, CIT= Computer and Instructional Technologies

The participants of the experimental group were male and female by 36.4% and 63.6% respectively. On the other hand, 25.2% of the students in the control group were male whereas the remaining 74.8% were female (Table 1).

The students studying at the departments in the experimental group were taught the course in special education in varying grades. To put it more clearly, students of Special Education, Psychological Counseling and Guidance, and Computer and Instructional Technologies were taught the course in special education in the first, second and third grades respectively. The remaining departments covered the course in the fourth grade.

The Kolgomorov-Smirnov normality test was conducted on the experimental and control groups in order to assess the efficiency of the special education curriculum implemented. The test findings indicated that the groups did not exhibit a normal distribution ($z=1.529$, $p<0.000$). Therefore, it was not possible to carry out detailed analyses of the efficiency of the curriculum. Instead, the difference between the groups in their mean scores on the pretest and posttest (the Special Education Qualification and Needs Analysis Scale) was investigated to see whether the experimental group had a significantly higher score than the control group.

Table 2: The Mean Scores of the Control and Experimental Groups on the Special Education Qualification and Needs Analysis Scale and Standard Deviations

N = 527	Pretest		Posttest	
	\bar{X}	S	\bar{X}	S
Experimental Group	55.25	10.16	49.79	8.80
Control Group	57.32	11.53	57.83	12.96

While the mean scores of the experimental group on the pretest (55.26; 10.16) dropped when compared to those on the posttest (49.79; 8.80), the control group did not experience a difference in their mean scores on the tests (Table 2). Tables 3 and 4 present the findings of the Wilcoxon Signed Mark Test conducted to assess the significance of the difference in the mean scores.

Table 3: The Results of the Wilcoxon Signed Rank Test Conducted to Assess the Significance of the Difference between the Mean Scores of the Control Group on the Pretest and Posttest Concerning the Special Education Qualification and Needs Analysis Scale (SEQNAS)

Score	Ranking	N	M.A.		z	p
SEQNAS	Negative Ranking	54	45.07	2326,00		
Posttest Score	Positive Ranking	40	53.48	2139,00	-,353	,724
SEQNAS	Equal	13				
Pretest Score	Total	107				

There was not a significant difference between the mean scores of the control group on the pretest and posttest concerning the Special Education Qualification and Needs Analysis Scale ($p > 0.724$) (Table 3). The reason for this is that the students of German language teaching and of psychology, who were included in the control group, had not received training in special education that would enable them to have certain knowledge about it.

Table 4: The Results of the Wilcoxon Signed Rank Test Conducted to Assess the Significance of the Difference between the Mean Scores of the Experimental Group on the Pretest and Posttest Concerning the Special Education Qualification and Needs Analysis Scale

Score	Ranking	N	M.A.		z	p
SEQNAS	Negative Ranking	265	223.12	59126,00		
Posttest Score	Positive Ranking	138	161.45	22280,00	-7.876	,000
SEQNAS	Equal	15				
Pretest Score	Total	418				

There was a significant difference between the mean scores of the experimental group on the pretest and posttest concerning the Special Education Qualification and Needs Analysis Scale ($p < 0.001$) (Table 4), with the difference being in favor of the posttest. In other words, the qualifications of the prospective teachers included in the

experimental group for special education experienced a significant improvement at the end of the classes.

The comparison of the scores of the prospective teachers of varying disciplines in the experimental group on the pretest and posttest yielded the following finding: the students of math teaching ($z=-2.451$), Turkish language teaching ($z=-2.035$), special education ($z=-2.105$), primary school teaching ($z=-2.069$), English language teaching ($z=-2.642$), computer and instructional technologies ($z=-2.211$) had an improvement significant at the level of $p<0.05$. Whereas the students of science teaching ($z=-3.355$) had an improvement significant at the level of $p<0.01$, the students of psychological counseling and guidance ($z=-3.915$) and French language teaching ($z=-3.622$) significantly improved their scores at the level of $p<0.001$. Even though the students of religion and ethics and social science experienced a difference in their mean scores on the pretest and posttest, the difference was not significant enough. Part of the reason for this might be the fact that the students of social science teaching had a low attendance rate on the posttest ($n=25$). As for the students of religion and ethics, they might generally be of the opinion that special education could not benefit different individuals and, thus, could have been unsatisfactorily interested in the issue.

Furthermore, an analysis was conducted of the pretest and posttest percentages of the items included in the Special Education Qualification and Needs Analysis Scale implemented on the experimental group. According to the findings, 5% of the prospective teachers “partly” believed that special education was attached proper importance in Turkey while the percentage rose to 95% in the posttest. Whereas 72% of the participants had “no idea” about the proportion of inclusion students to the total population in a classroom, the percentage decreased to 27% in the posttest. In the pretest, nearly one-third (34%) of the participants “slightly” believed in the efficiency of the inclusion program in Turkey while the percentage increased to 65% in the posttest.

In order to reveal the participants’ view of their qualifications for special education, they were asked whether their knowledge about and skills in inclusion would be satisfactory for the process of education with these students. Whereas 34% of them replied that their knowledge and skills were “partially satisfactory” in the pretest, 65% of them thought so in the posttest. Although 62% of the

participants had “no idea” about the factors in differences in the behaviors of exceptional students, the percentage dropped to 37% in the posttest. When asked whether they knew how to treat students with stuttering, hyperactivity, learning disabilities etc. in their classroom, 80% of the participants had “no idea” in the pretest whereas the percentage decreased to 20% in the posttest. In the pretest, 35% of the students “strongly” disagreed with the idea that activities in accordance with the curriculum proposed by counselors would be sufficient for the education towards exceptional students while the percentage rose to 65% in the posttest.

As for the participants’ opinions on their expectations of special education, 65% of them argued that their disciplines had “nothing” to do with special education. Even so, 27% of the participants “strongly” agreed in the pretest with the idea that the course in special education should be compulsory for all departments of teaching as well as primary school teaching whereas the percentage increased to 72% in the posttest. In addition, 37% of the participants “strongly agreed” with the statement that their deficiencies in knowledge about and skills in special education could be overcome through in-service training programs while the percentage rose to 62% in the posttest.

More than half the prospective teachers in the experimental group (53%) maintained that the course in special education should be covered at least for two terms during their undergraduate programs.

Out of the participants in the experimental group, five were asked certain questions as to their views of special education. They included:

1. What did you think about the amount of interest in special education in Turkey before the training? What do you think about it now?
2. What were your opinions on your competencies in the issue before the training? What are your opinions now?
3. As a prospective teacher, what do you think about the effects of these classes on you?

The first question attempted to reveal any potential change after the training in the way the prospective teachers considered the amount of interest in special education in Turkey. The second one was intended to identify the prospective teachers’ opinions on their competencies

in special education. The last question was asked to find out the effects of the classes.

All of the five prospective teachers interviewed reported thinking before the classes that nothing was being about special education in Turkey. After the classes, however, they learned that the Ministry of National Education had a separate body to deal with the issue, that Individualized Education Programs were designed, that the process needed to be carried out by a team, that a particular procedure was followed for including something/somebody within the scope of special education, and that one could consult Counseling and Research Centers as well as counselors in schools. Even so, they maintained that all these actions were still not sufficient.

“Before the classes, I did not know that such students in Turkey went to the hospital to be diagnosed, nor did I have any idea about particular plans for the issue or Individualized Education Programs. After the classes, however, I learned that something was being done in Turkey, such as special schools for such students. More importantly, now I know that I should and can do something to help such people as an individual, let alone as a teacher. Even guidance itself is significant. We can make contributions even as an individual. My father works for a kindergarten, which generally has students with a high socioeconomic background. Yet even there, a woman with an intellectually gifted child admits that she does not know what to do. People are afraid, afraid of autistic or mentally retarded children, etc. Their living spaces are not arranged in accordance with their needs. But now we are more aware.”

All the prospective teachers agreed that they did not have any competency in the issue before the classes. They admitted their lack of idea about special education even though they were final grade students of French language teaching and about to start teaching within a few months.

“Before the classes, we even discussed the name of the course and what the scope might be. I only had some second-hand ideas. Now I am worried but happy. I learned something about special education at least for a term, which made me more aware. I did not use to know

what to do when faced with such a problem. Yet what makes me worried is that I took the course only for a term. I wish we had covered the issue for a longer period like formation courses, for special education is a different course from class management in that the former has also effects on one's own development."

The prospective teachers reported that the course had raised their awareness of special education.

"In similar cases, we won't be desperate; we will know what to do, which makes me really happy. If I encounter such a problem, I will be more rigorous. I won't offend such students in the presence of their friends. I will try to make others more conscious about these students and do my best to get them accepted in the classroom. But when I find myself insufficient, I will consult counselors and special educationalists. As for their parents, I will make sure that they are trained and directed in a proper way."

They noted that the course was very influential even if they preferred not to be a teacher in the future.

"The course enabled us to embrace these citizens, to support them and to gain a new perspective not only at the school level but also at the public level."

"To me, it was a useful course that I can benefit from both in my teaching life and real life."

"The course made contributions to my private life and personality, too. Now I attempt to identify the underlying reasons behind one's behaviors without judging them. In this respect, it had a positive effect not only on my teaching life but also my private life and relationships."

During the interviews, the prospective teachers also stated that the course should absolutely be compulsory for students of all departments of teaching.

Discussion

The present paper is an analysis of the effects of a 14-week training on prospective teachers' qualifications and requirements concerning special education. The findings confirm that lack of training in the

issue might result in insufficient interest in special education in Turkey. However the teacher candidates think that the number of the special education students for inclusion it is not appropriate for the class population. According to the prospective teachers, lack of knowledge would cause inclusion students not to be trained in a satisfactorily efficient manner. The findings suggest that informing prospective teachers about special education could lead to an increase in their knowledge about and qualifications for it. The training resulted in an improvement in the participants' awareness of education for exceptional students, their behaviors and the right way of treating them.

“When I saw an exceptional student on a bus, I used to be afraid and keep away from him/her. Now I am more knowledgeable and aware about such people. I have started warning and informing those people who exhibit negative reactions to exceptional students. Although I do not find myself fully competent in special education, at least I know whom to consult to get help and what path to follow.”

In addition to realizing that the course was essential, the prospective teachers also emphasized that it should be covered at least for two terms. Furthermore, they stated that they must participate in in-service training in special education even after starting to teach. The great majority of the prospective teachers believed that the course was vital to everyone planning to be a teacher. The findings will hopefully raise researchers' and practitioners' awareness of the fact that informatory training in special education and inclusion should be compulsory.

The results of the pretest on the amount of importance attached to special education in Turkey are in consistent with those of Izci (2005). In his/her study, the participants, who were prospective classroom teachers, stressed that little attention was paid to special education in Turkey. However, the present study suggests that one of the most significant reasons for this is lack of knowledge about and awareness of special education. The finding is supported by those of Olgetree, Atkinson and Lillian (1982), and Barto (1992).

Like the study by Izci (2005), the present study found that the proportion of exceptional students to the overall classroom population was not appropriate, which leads to disruptions in the

course of general education. Despite legal regulations in theory, it is, unfortunately, common in practice to find more than two inclusion students in one single classroom.

Gözün and Yıkmış (2005) reported findings similar to the ones revealed by the present study. In their experimental study, the researchers discovered that a 15-hour informatory training in special education had a positive influence on the attitudes of the prospective teachers to special education and inclusion. The present study has improved previous studies in many respects. To begin with, a more comprehensive sample was chosen and prospective teachers from 11 departments were provided with training. Moreover, the length of the course was 35 hours, which ensured that the subjects could be covered in a more detailed way.

The findings of the present study have a number of effects, both in theory and practice. Firstly, the training led to a change in the way the prospective teachers viewed special education and inclusion. Almost all the participants, regardless of their discipline, noted that the training was sufficient for general information, but they needed much more training in practice. In particular, the prospective science teachers and prospective social sciences teachers emphasized that undergraduate education was not sufficient. All the participants in the experimental group maintained that in-service training was a must. All these findings suggest that prospective teachers should be provided with practical training as well as theoretical informatory programs. Secondly, the participants reported that the training in special education had a positive impact on the teaching techniques they used and teaching skills they had, which made it easier for them to cope with issues concerning special education and inclusion.

The limitations of the study should not be overlooked, though. Firstly, all the participants in the sample studied at the same university. Although the control group consisted of students from different faculties, it seems necessary to work with students from different universities, too. Another limitation is that even though the number of participants in the sample was high, they only provided their opinions on the issue.

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