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Identification of Interpersonal Problem Solving Skills of Students in The Special Education Department

Özel Eğitim Öğretmenliği Bölümü Öğrencilerinin Kişilerarası Problem Çözme Becerileri

Sibel Ersel KAYMAKAMOĞLU, Lefke Avrupa Üniversitesi, skaymakamoglu@eul.edu.tr

ABSTRACT. This study investigated the perceptions of the 221 Special Education Department students about interpersonal problem solving skills. It also investigated whether there were any significant differences in the perceptions of the participants about their interpersonal problem solving skills in relation to gender, age and year class. For this investigation, "Problem Solving Inventory" which was designed by Heppner and Peterson (1982) and later adapted to Turkish by Şahin, Şahin and Heppner (1993) was used. The Problem Solving Inventory had six subdimensions: 'hasty approach', 'thinking approach', 'reversed approach', 'evaluative approach', 'self confident approach' and 'planning approach'. The findings of the study revealed that in general, the participant students were adequate in their perceptions regarding their interpersonal problem solving skills. It was also found that the perceptions of the participant female and male students did not significantly differ in all the sub-dimensions. The findings indicated that the participants' perceptions differed only for "thinking approach" and "evaluative approach". The findings of the study revealed that the participant students significantly differed in their perceptions about problem solving skills in relation to age for four sub-dimensions:"thinking approach", "reversed approach", "evaluative approach" and "self-confident approach". Yet, no significance was found in their perceptions regarding year class. The participants' perceptions indicated that they prefered to use "thinking approach", "planned approach", "hasty approach" and "evaluative approach", respectively while they felt less competent in using "reserved approach" and "self confident approach" in problem solving.
Keywords. Problem Solving, Special Education, Age, Gender, Year Class.

ÖZ. Bu araştırma Özel Eğitim Öğretmenliği Bölümü'nde okuyan 221 öğrencinin kişilerarası problem çözme becerileriyle ilgili algılarını belirlemeyi amaçlamaktadır. Araştırma, katılımcıların kişilerarası problem çözme becerilerinin cinsiyete, yaşa ve sınıflarına göre anlamlı farklılık gösterip göstermediğini de belirlemeyi hedeflemektedir. Bu amaçla,1982 yılında Heppner ve Peterson tarafından geliştirilen ve daha sonra 1993 yılında Şahin, Şahin ve Heppner tarafından Türkçe'ye çevirilen "Problem Çözme Envanteri" bu araştırmada veri toplama aracı olarak kullanılmıştır. Problem Çözme Envanteri'nin altı tane alt boyutu bulunmaktadır: 'Aceleci Yaklaşım', 'Düşünen Yaklaşım', 'Kaçıngan Yaklaşım', 'Değerlendirici Yaklaşım', 'Kendine Güvenli Yaklaşım' ve 'Planlı Yaklaşım'. Araştırma bulguları öğrencilerin kisilerarası problem çözme becerileriyle ilgili algılarının orta düzeyde olduğunu göstermiştir. Bayan ve erkek öğrencilerin algılarının sadece iki altboyutla ('Düşünen Yaklaşım' ve 'Değerlendirici Yaklaşım') ilgili olarak anlamlı farkılık gösterdiği saptanmıştır. Buna ek olarak, öğrencilerin algıları yaşa göre de dört altboyutta ('Düşünen Yaklaşım', 'Kaçıngan Yaklaşım', 'Değerlendirici Yaklaşım', 'Kendine Güvenli Yaklaşım') anlamlı farklılık göstermiştir. Fakat, katılımcıların algılarında okudukları sınıfa göre herhangi bir algı farklılığı saptanmamıştır. Öğrencilerin kişilerarası problem çözme becerileri hakkındaki algılarına ilişkin bulgular, sırasıyla 'düşünen yaklaşım', 'kaçıngan yaklaşım', 'aceleci yaklaşım' ve 'değerlendirici yaklaşım'ın en çok tercih edilen problem çözme beceri alt gurupları olduğunu gösterirken, öğrencilerin 'kaçıngan yaklaşım' ve 'kendine güvenli yaklaşım'da kendilerini yeterli bulmadıklarını göstermiştir.
Anahtar Sözcükler. Problem Çözme, Özel Eğitim, Yaş, Cinsiyet, Sınıf**.**

ÖZET

Amaç ve Önem: Bu çalışma Özel Eğitim Öğretmenliği Bölümü'nde eğitim gören 221 öğrencinin kişilerarası problem çözme becerilerine ilişkin algılarını araştırmayı hedeflemiştir. Aynı zamanda bu çalışmada katılımcıların kişilerarası problem çözme becerilerine yönelik algılarında cinsiyet, yaş ve sınıflarını göre anlamlı bir farklılık gösterip göstermedikleri de araştırılmıştır.

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Yöntem: Bu çalışmada Özel Eğitim Öğretmenliği Bölümü'nde eğitim gören 221 öğrenci yer almıştır. Çalışmada veri toplama aracı olarak Heppner and Peterson (1982) tarafından geliştirilen ve daha sonra Şahin, Şahin and Heppner (1993) tarafından Türkçe'ye uyarlanan "Problem Çözme Envanteri" kullanılmıştır. Problem Çözme Envanteri'nin altı alt boyutu bulunmaktadır: 'Aceleci Yaklaşım', 'Düşünen Yaklaşım', 'Kaçıngan Yaklaşım', 'Değerlendirici Yaklaşım', 'Kendine Güvenli Yaklaşım' ve 'Planlı Yaklaşım'.

Bulgular: Araştırma bulguları öğrencilerin kisilerarası problem çözme becerileriyle ilgili algılarının orta düzeyde olduğunu göstermiştir. Bayan ve erkek öğrencilerin algılarının sadece iki altboyutla ('Düşünen Yaklaşım' ve 'Değerlendirici Yaklaşım') ilgili olarak anlamlı farkılık gösterdiği saptanmıştır. Buna ek olarak, öğrencilerin algıları yaşa göre de dört altboyutta ('Düşünen Yaklaşım', 'Kaçıngan Yaklaşım', 'Değerlendirici Yaklaşım', 'Kendine Güvenli Yaklaşım') anlamlı farklılık göstermiştir. Fakat, katılımcıların algılarında öğrenim gördükleri sınıfa göre herhangi bir algı farklılığı saptanmamıştır. Öğrencilerin kişilerarası problem çözme becerileriyle ilgili algılarına ilişkin bulgular, sırasıyla 'düşünen yaklaşım', 'kaçıngan yaklaşım', 'aceleci yaklaşım' ve 'değerlendirici yaklaşım'ın en çok tercih edilen problem çözme beceri alt gurupları olduğunu gösterirken, öğrencilerin 'kaçıngan yaklaşım' ve 'kendine güvenli yaklaşım'da kendilerini yeterli bulmadıklarını göstermiştir.

Tartışma ve Sonuç: Araştırmanın bulguları daha önce gerçekleştirilmiş kişilerarası problem çözme becerilerinin araştırıldığı çalışmaların bulgularıyla benzerlik göstermiştir. Örneğin, Erdamar ve Alpan (2013) tarafından gerçekleştirilen çalışmada bu çalışmanın bulgularında da olduğu gibi 'değerlendirici yaklaşım' ve 'planlı yaklaşım'ın en çok tercih edilen kişilerarası problem çözme becerileri olduğu saptanmıştır. Fakat, Erdamar and Alpan'nın araştırma bulguları arasında bu çalışmanın bulgularından farklı olarak 'kaçıngan yaklaşım'ın katılımcılar tarafından en çok kendilerini yeterli hissettikleri kişilerarası problem çözme becerisi olarak algılandığı vurgulanırken bu çalışmada 'kaçıngan yaklaşım' katılımcıların kendilerini en yetersiz algıladıkları kişilerarası problem çözme becerisi olarak saptanmıştır. Bu farklılığın araştırmanın gerçekleştirildiği bağlam, ortam ve katılımcıların geçmiş deneyimleri ile ilgili olabileceği düşünülebilir.

INTRODUCTION

Problem solving skill is one the most essential skills of individuals that needs to be possessed and developed. In daily life people face with many situations that they need to device solutions to. They either depend on their previous experiences to solve the problem at hand or find out new solutions for it. Problem solving is a kind of skill that can be gained with experience. The more people face with situations in which it is inevitable to produce solutions, the better they get in problem solving.

Nowadays, the demand of employers is in the way to hire workers who possess problem solving skills. Current studies also are in line with the call for need to teach and develop problem skills in learners. Anderson & Gantz (2013) idendified problem solving skill as one the skill requirement of the 50% of the high-growth, high-wage positions after reviewing 14.6 million job postings in the USA. With the increasing demand in work places to get skilled workers with complex qualities such as problem solving, the new perspectives in teaching and learning have been adopted to meet these needs. For example, fostering learner autonomy in learning and teaching process is one example that serve to this purpose.

Problem Solving Skills

The concept of 'problem solving' has been defined as a complex task in which a goal is offered to the problem solver yet the means for achieving it are not apparent (Lesh & Zawojewsky, 2007; Schoenfeld, 2011). For Frey et al. (2000) problem solving has been regarded as one of the social emotional efficiency while Korkut (2002) defined problem solving as a complex process which involve affective, behavioristic as well as cognitive skills.

Some researchers identified some steps that need to be followed for efficient problem solving. For example, according to Kuzgun (1992) identifying the problem correctly is the first step. Then, there is a need for collecting the relevant information to the problem. Identifying the possible options for the solution of the problem follows that. Choosing the most suitable option for the solution and applying it to the situation is the last step.

Similarly, there are some other researchers who explained problem solving process in eight steps. For instance, Elias and Weissberg (2000) identified the steps as follows:

1. Being aware of the others and self awareness of an individual
2. Defining the problem
3. Identifying and choosing the goal
4. Forming alternative solutions
5. Revising possible solutions
6. Choosing the best solution
7. Forming an action plan and checking the obstacles for the last time
8. Being aware of what happened and using this knowledge to solve the problems in the future.

Problem solving skills are believed to be learnt starting from childhood and continues to be developed at school (Miller and Nunn, 2003). It is likely that while individuals can develop their own problem solving skills with experience, these skills can also be taught and developed. There are many studies showing that efficient problem solving skills can be taught (e.g. Baker & Shaw,1987; Farrel et al., 2001).

Investigating problem solving skills has attracted many researchers and thus has been the focus of many research studies for many years. Some studies focused their attention on exploring problem solving skills of learners while some other studies were more focused on the relationship of learners' problem solving skills and another phenomenon. For example, Korkut (2002) investigated the problem solving skills of 394 high school students while Mertoğlu & Öztuna (2004) investigated the possible relationship between problem solving ability and technology use of 128 pre-service elementary science teachers. Similarly, Erdamar & Alpan (2013) examined the epistemological beliefs and problem solving skills of preservice teachers during teaching practice.

Some other studies aimed to present findings regarding problem solving skills and pychological aspects such as worry, emotional needs and locus of control of learners. For example, Barahmand (2010) conducted a study to determine the predominant worries of college students and their problem solving abilities. Soslau (2016) also carried out an investigation on student teachers' emotional needs and dichotomous problem solving while Yalçın et al. (2010) investigated the determination of the perceptions of the problem skills and the levels of locus of control of high school students.

Investigating problem solving skills through problem-based instruction has been another line of research on problem solving skills. For instance, Ranade & Corrales (2013) carried out a study about problem solving through problem-based learning. Similarly, Bostic et al. (2016) conducted a study on problem solving by adopting a problem-solving based instructional approach. Simone (2008) also examined the impact of problem-based learning on prospective teachers' problem solving abilities. Kale & Whitehouse (2012) examined preservice teachers' problem solving skills through the use of an online video case study.

An example comparative study on problem solving skills of preservice teachers from two different cultures was carried out by Şahin (2009) who compared the opinions of 55 Turkish pre-school teachers and 53 Flemish pre-school teachers about interpersonal problem solving skills. Literature on the studies about problem solving skills also showed that some researchers tried to

explore the factors that can influence problem solving process while some others focused their attention on exploring how problem solving skills can be improved. For example, Callister (2009) investigated the role of schemata for teaching complex problem solving skills while Martz et al. (2017) carried out an investigation to help learners learn problem solving and creativity techniques.

The importance of developing problem solving skills of learners in contemporary classrooms where learners are in the center of the learning process cannot be underestimated. In such learning environments, learners are expected to construct their knowledge with the help of the teacher. In this respect, a teacher acts as a guide, supporter, helper, participant and feedback provider when needed. With this move from traditional role to a more constructivist, learners are helped to gain more complex ways of thinking rather than simply understanding and memorising the given information. Thinking in higher levels require learners to apply their knowledge to novel situations, analyze, synthesize and evaluate the situations. Learners' critical thinking and problem solving skills are also boosted in such learning environment. In other words, in line with the practices of teachers who adopt contemporary teacher roles, traditional roles for learners are not accepted in such learning environments. Learners are trained to be equipped with effective problem solving skills.

Teacher education programmes should not be an exception to this. In these programmes student teachers should be given opportunities to work with problems and develop effective strategies to solve them in order to improve their problem solving skills because 'Excellent decision-making, problem solving, and adaptive practices are three foundational skill sets required of any effective teacher' (Soslau 2012, cited in Soslau, 2016). It is widely accepted that education systems are responsible for equipping individuals with the socially required behaviors that are appropriate for contemporary development and needs. In these systems, teachers as the agents who are responsible for equipping individuals with these qualities, are one of the most important elements. In this respect, the success of an education system is closely related to quality teacher education (Saracaloğlu,1992). The basic function of education is preparing individuals for life. In this vein, it also aims to equip individuals with problem solving skills (Serin, 2001).

Particularly, in the teacher education programmes for special education teachers, there is a special need for helping students become effective problem solvers since their job is more demanding than mainstream teachers. Lavian (2015) emphasized that

> "Special education teachers work under more difficult, more intense, and more demanding conditions than mainstream teachers. Relations betwen teachers, pupils, and parents are more complex than in mainstream education due to the intensity, intimacy, vulnarability, and commitment involved....Special education is complex because it involves multiple roles and tasks and because teachers have to tackle diverse problems simultaneously" (p.103).

Bearing in mind the importance of possessing and developing effective problem solving skills for the students studying special education, this study aimed to investigate the perceptions of the students studying in the Department of Special Education regarding their interpersonal problem solving skills. It is worth to note that, there is scarcity of research on the problem solving skills of particularly, students studying in Special Education so the researcher believed that such an exploration has the potential of drawing a clearer picture of the situation in the education faculties in this respect. It is surprising that the studies investigating problem solving have been carried out with individuals who need special education (Marschark & Everhart, 2013 ; Cote et al., 2010; Kasik et al., 2017) but not with the teacher candidates who are responsible to help these individuals. In addition, there has not been a research study investigating the perceptions of the students studying in the Department of Special Education in Turkish Cypriot context regarding interpersonal problem solving skills. Therefore, this study is believed to yield evidence to understand the perceptions of the students studying in the Department of Special Education regarding problem solving skills. Such an understanding can help teacher educators guide and support their students to develop effective problem solving strategies for becoming qualified teachers. This study also has the potential to provide information for program developers and teacher educators to shape the nature of teacher education not only in Turkish Cypriot context but also in other Special Education teacher education contexts.

METHOD

This study investigated the perceptions of the students studying in the Department of Special Education about their interpersonal problem solving skills. It also explored the participant students' perceptions about their interpersonal problem solving skills in relation to gender, age and year class.

In order to carry out this study, the following research questions were designed:

1) What are the perceptions of the Special Education Department students about their interpersonal problem solving skills?
2) Are there any gender-related differences in the participant students' perceptions about their interpersonal problem solving skills?
3) Are there any age-related difference in the participant students' perceptions about their interpersonal problem solving skills?
4) Are there any year class-related differences in the participant students' perceptions about their interpersonal problem solving skills?

Research Design

In this investigation, the researcher employed quantitative means of investigation to explore the perceptions of the participant students about their interpersonal problem solving skills.

The Participants

The target population of the study was all the students studying in the Department of Special Education in the European University of Lefke. All the students studying in the Departments of Special Education in North Cyprus composed the general population. 221 first year, second year, third year and fourth year students studying in the Department of Special Education Teacher Education European University of Lefke in Northern Cyprus were the participants of this study. The participants were selected according to convenience sampling strategy. The selected participants' oral and written informed consent for voluntary participation was sought. As it can be seen from Table 1 below, of 221 participants, 97 female learners which constituted the % 43.9 and 124 male learners which constituted % 56.1 of the total participants took part in this investigation. As it is illustrated in Table 2 below, the participants were in five different age categories as 17-18, 19-20, 21-23, 24-26, and above. In each category, 13 (% 5.9), 80 (% 36.2), 83 (% 37.6), 31 (% 14) and 14 (% 6.3) participant students took place, respectively. As it is shown in Table 3 below,there were 51 first year (% 23.1), 69 second year (% 31.2), 38 third year (% 17.2) and 63 fourth year (% 28.5) students who participated in this investigation.

Table 1. *Number and the Percentage of the Participants According to Gender*

Gender	n	%
Female	97	43.9
Male	124	56.1
Total	221	100

As it can be seen from Table 1 above, the number of the male participants was higher than the number of the female participants in the study.

Table 2. *Number and the Percentage of the Participants According to Age*

Age	n	%
17-18	13	5.9
19-20	80	36.2
21-23	83	37.6
24-26	31	14.0
Above	14	6.3
Total	221	100

As it is shown in Table 2 above, the distribution of the participants in 5 different age categories differs. The first age category was 17-18 years while the second was 19-20 years, the third was 21-23 years, the fourth was 24-26 years and the fifth category was above 26 years. The table showed that in this study, the majority of the participants were in 21-23 (83 learners) and 19-21 (80 learners) age categories. Following that, there were 31 participants in the age category of 24-26, 14 learners were above 26 and the age category 17-18 contained the least number of the participants with 13 participants.

Table 3. *Number and the Percentage of the Participants According to Year of Class*

Year of Class	n	%
Year 1	51	23.1
Year 2	69	31.2
Year 3	38	17.2
Year 4	63	28.5
Total	100	100

As it can be seen from Table 3 above, there were 51 participants in year 1, 69 participants in year 2, 38 participants in year 3 and 63 participants in year 4. Most of the participants of the study were 69 second year students composing 31.2 % of the participants followed by 63 fourth year students with 28.5 % of the participants. Then, 51 first year students constituting 23.1 % followed and the least number of the participants were 38 third year students with 28.5 % of the participants.

Data Collection Instrument

For the purpose of collecting data about the perceptions of the participant students studying in the Department of Special Education about their interpersonal problem solving skills a questionnaire was used. After getting the needed permission for administering the questionnaire from the authorities, the researcher collected the data during the lesson hours by liasing with the lecturers to find the most convenient time for each class. The questionnaire was administered by the researcher and all the needed explanations were made by the researcher during the data collection process to get the most valid and reliable data from the participants.The instrument was "Problem Solving Inventory" which was designed by Heppner and Peterson (1982) and later adapted to Turkish by Şahin, Şahin and Heppner (1993) was used. It consisted of 35 items. The participants responded to the questionnaire items according to 6-point Likert Scale. The scores ranged from 32 to 192. The higher the participants scored in the questionnaire showed that the worse they perceived their interpersonal problem solving skills. For the scoring procedure, items 9, 22 and 29 were not scored and items 1,2,3,4,11,13,14, 15, 17, 21, 25, 26, 30 and 34 were inversely scored.

The Interpersonal Problem Solving Inventory had six sub-dimentions: 'hasty', 'thinking', 'reversed', 'evaluative', 'self confident' and 'planning'. High overall scores from the questionnaire was the indication of feelings of inadequacy whereas low overall score indicated feelings of adequacy. The score limits of the sub-dimensions are: 9-54 'hasty approach', 5-30 'thinking approach', 4-24 'reversed approach', 3-18 'evaluative approach' 6-36 'self- confident approach' and 4-24 'planned approach'.

In the questionnaire the following items were categorised according to the six sub-dimensions as items 13, 14, 15, 17, 21, 25, 26, 30, 32 for "hasty approach", 18, 20, 31, 33, 35 for "thinking approach", 1, 2, 3, 4 for "reversed approach", 6, 7, 8 for "evaluative approach", 5, 23, 24, 27, 28, 34 for "self- confident approach" and 10, 12, 16, 19 for "planned approach" (Savaşır & Şahin, 1997).

In this study, the Cronbach Alpha score of the whole questionnaire was calculated as .86. The Cronbach Alpha values of the sub-dimensions of the scale were as follows: .70 for "hasty approach", .79 for "thinking approach", .84 for "evaluative approach", .64 for "self- confident approach" and . 71 for "planned approach".

Data Analysis

The collected data was statistically analyzed. For the purpose of statistical analysis, SPSS 21 (Statistical Package for Social Sciences) was utilized. To find out whether there were any significant differences between the female and male participant students' perceptions about their interpersonal problem solving skills, the data was subjected to a "t" test. In order to find out whether there were any significant differences among the participant students' perceptions about their interpersonal problem solving skills regarding different age categories, a one-way ANOVA test was employed. To explore whether first year, second year, third year and fourth year participant students differed in thir perceptions about their interpersonal problem solving skills, the collected data was subjected to a one-way ANOVA test. In this study, the significance level of the findings is taken as .05.

FINDINGS AND DISCUSSION

In this part, descriptive and inferential statistics of the study will be presented. The statistical findings of the study about the perceptions of the participants regarding their interpersonal problem solving skills in relation to gender, age and year class will be given, respectively.

Perceptions about Interpersonal Problem Solving Skills in Relation to Gender

Table 4 below, shows the results of the "t" test which was utilized to test the differences, if any, between the male and female participants' perceptions regarding their interpersonal problem solving skills.

Table 4: *The Participants' Perceptions about the "Interpersonal Problem Solving Sub-dimensions" by the Variable "Gender" (Independent Samples "t" Test)*

	Gender	n	X	Sd	t-value	P
Hasty Approach	Female	97	31.7835	8.29687	.661	.509
	Male	124	31.0403	8.28202		
Thinking Approach	Female	97	12.2680	4.48961	-2.502	.013*
	Male	124	13.8145	4.61417		
Reversed Approach	Female	97	16.0309	5.83355	1.319	.189
	Male	124	14.9677	6.03235		
Evaluative Approach	Female	97	6.4433	3.73321	-2.070	.040*
	Male	124	7.5081	3.84136		
Self-confident Approach	Female	97	15.2371	5.67115	-1.234	.218
	Male	124	16.1774	5.57878		
Planned Approach	Female	97	9.3918	4.65823	-1.306	.193
	Male	124	10.2016	4.51011		

*The significance level was $p < 0.05$.

As it can be seen, from Table 4, above, the "t" test results showed significant differences in the perceptions of the female and male participants only for two sub-dimension categories: "thinking approach" and "evaluative approach". The female and male participants' perceptions significantly differed regarding "thinking approach" ($p=0.013 < 0.05$). This finding showed that the male participants' perceptions about their 'thinking approach' were higher compared to the female participants with the mean scores of 13.81 and 12.27, respectively. In addition, the findings revealed that the male and female participants significantly differed in their perceptions in relation to "evaluative approach" ($p=0.040 < 0.05$). This indicated that the mean scores of the male participants' perceptions for 'evaluative approach' were higher with the mean score of 13.81 than the mean scores of the female participants (12.27). This indicated that the female students were more positive in their perceptions about "thinking approach" and "evaluative approach" categories of interpersonal problem solving skills than the male participants.

Perceptions about Interpersonal Problem Solving Skills in Relation to Age

Table 5 below, shows the perceptions of the participant students about interpersonal problem solving skills in relation to different age categories.

Table 5: *Descriptives for Participants' Perceptions about Interpersonal Problem Solving Skills Regarding Different Age Categories*

Age	n	x	sd.
17-18	13	113.00	15.08
19-20	80	98.66	13.61
21-23	83	107.69	24.43
24-26	31	100.87	16.47
Above	14	110.86	23.45
Total	221	103.98	19.89

As it can be seen from Table 5 above, the perceptions of the participants about interpersonal problem solving skills in all age categories were adequate with the average mean score of 103.4. In general, the participants' perceptions were neither good nor bad about interpersonal problem solving skills in relation to age. The perceptions of the participants in the age category 17-18 were with the highest average mean score of 113 which was followed by the participants' perceptions who were above 26 with the average mean score of 110.86. The participants who were in the age category of 21-23 were with the average mean score of 107.69 which was followed by the participants who were in the age category of 24-26 with the average mean score of 100.87. The participants in the age category 19-20 showed the lowest mean score regarding their perceptions about interpersonal problem solving skills with the mean score of 98.66. This might mean that the students in 19-20 age category were the most positive in their perceptions compared to the other age categories. The least positive students in their perceptions were the students in the age category 17-18.

Table 6 below, shows the results of the ANOVA test which was administered to test the differences between the participants' age and their perceptions regarding interpersonal problem solving skills, if any.

As it is demonstrated in Table 6 below, the ANOVA test results indicated that there were significant differences only in four sub-dimension categories: "thinking approach" ($p=.003 < 0.05$), "reversed approach" ($p=.022 < 0.05$) "evaluative approach" ($p=.020 < 0.05$) and "self-confident approach" ($p=.026 < 0.05$) regarding age. The findings revealed that the students in 19-20 age category felt themselves more competent compared to the other age groups regarding 'thinking approach' and 'self-confident approach'. The students in the age category17-18 felt themselves less competent in 'thinking approach' than the students in other age categories. The students who were above 26 felt themselves less competent in 'self-confident approach' compared to the other age categories. The students who were in 24-26 and above felt themselves more competent enough in 'reserved approach' and 'evaluative approach', respectively. These differences might have been as a result of the individuals' life experiences, personalities and the contextual influences on their learning.

Table 6. *ANOVA Test for Interpersonal Problem Solving Sub-dimensions and Age*

Interpersonal Problem Solving Sub-dimensions	Age Categories	n	x	sd	F	P
Hasty Approach	17-18	13	32.6923	9.35757	.547	.701
	19-20	80	31.2500	7.63155		
	21-23	83	30.9277	8.45185		
	24-26	31	31.0323	8.40827		
	Above	14	34.1429	9.97579		
	Total	221	31.3665	8.27793		
Thinking Approach	17-18	13	15.7692	4.34269	4.182	.003*
	19-20	80	11.6750	3.48514		
	21-23	83	14.0602	5.05180		
	24-26	31	13.0645	4.58938		
	Above	14	13.7143	5.79693		
	Total	221	13.1357	4.61417		
Reversed Approach	17-18	13	16.3077	5.69187	2.938	.022*
	19-20	80	14.8750	5.89223		
	21-23	83	15.3614	6.25198		
	24-26	31	14.4839	5.48860		
	Above	14	20.3571	3.52152		
	Total	221	15.4344	5.95601		
Evaluative Approach	17-18	13	8.9231	4.29072	2.996	.020*
	19-20	80	6.3000	3.20364		
	21-23	83	7.8193	4.24880		
	24-26	31	6.6774	3.48700		
	Above	14	5.7143	3.60403		
	Total	221	7.0407	3.82256		
Self-confident Approach	17-18	13	17.0000	5.73004	2.814	.026*
	19-20	80	14.5000	4.39505		
	21-23	83	16.9880	6.46471		
	24-26	31	14.5806	4.52235		
	Above	14	17.2143	7.11638		
	Total	221	15.7647	5.62614		
Planned Approach	17-18	13	11.0000	5.08265	2.159	.075
	19-20	80	8.7750	3.43096		
	21-23	83	10.6386	5.32957		
	24-26	31	10.3548	4.31701		
	Above	14	9.0714	4.92192		
	Total	221	9.8462	4.58296		

*The significance level was $p < 0.05$.

Perceptions about Interpersonal Problem Solving Skills in Relation to Year Class

Table 7 below, shows the descriptives of the perceptions of the participants regarding interpersonal problem solving skills in relation to different year class categories. The average mean score of the participants' perceptions was 103.98 which indicated that all the participants' perceptions were adequate, neither good nor bad regarding interpersonal problem solving skills in relation to year in which they were in.

Table 7: *Descriptives for Participants' Perceptions about Interpersonal Problem Solving Skills Regarding Different Year Class Categories*

Year Class	n	x	sd.
Year 1	51	103.18	14.45
Year 2	69	101.00	19.99
Year 3	38	101.92	23.47
Year 4	63	109.13	20.70
Total	221	103.98	19.89

As it can be seen from Table 7 above, the average mean score of the participants' perceptions was 103.98 which indicated that all the participants' perceptions were adequate, neither good nor bad regarding interpersonal problem solving skills in relation to year class in which they were in. The average mean score of the participants in year four was with the mean score of 109.13 to be the highest compared to the other three years. Following that the perceptions of the first year students were with the average mean score of 103.18. The perceptions of the third year participants were with the average mean score of 101.93 while the average mean score of the second year partcipants was 101 with the lowest average mean score of all. This might mean that the particpant students in their second year held the most positive perceptions about the interpersonal problem solving skills with the mean score of 101, followed by third year students with the mean sore of 101.92, first year students with the mean score of 103.8 and fourth year students holding the least positive perception with the mean score of 109.13.

Table 8 below, shows the results of the ANOVA test which was administered to test the differences between the participants' year class and their perceptions regarding interpersonal problem solving skills, if any.

As it can be seen from Table 8 below, the findings of the study did not reveal any significant results regarding the ANOVA test for the participant students' perceptions about interpersonal problem solving skills in relation to year class they were in. In other words, first year, second year, third year and fourth year students did not differ in their perceptions about interpersonal problem solving skills.

As it can be seen from Table 9 below, the participant students' perceptions were led by "thinking approach" and followed by "planned approach", "hasty approach" and "evaluative approach", respectively. The participant students' perceptions indicated that they were less competent in "reserved approach" followed by "self confident approach". These findings indicated that the participant students were really cautious in their interpersonal problem solving skills since they mostly adopted "thinking approach". It also seems that the second prefered approach was "planned approach" when solving problems. Following that the findings indicated that participant students follow "hasty approach". In other words, they do not give enough time to themselves to solve the problem they face. They also mostly prefered "evaluative approach" in problem solving after the first three approaches. On the other hand, the findings revealed that the participants did not perceive themselves competent enough in the two approaches which were "reserved approach" and "self-confident approach". It seems that the participant students did not find themselves confident enough to solve the problems they face.

DISCUSSION

In general, the findings of the study revealed that the participant female and male students' perceptions differed only for "thinking approach" and "evaluative approach". Female participants felt themselves more competent in interpersonal problem solving skills by following "thinking approach" and "evaluative approach" compared to the male participants. This finding is in line with the findings of the research study conducted by Serin (2001) who also found that the female participants felt themselves more competent in the problem solving skills compared to the males yet in his study the significance was reported for "hasty approach" and "reversed approach". Similarly, in a study conducted by Serin and Derin (2008) it was found that the female participants felt themselves more competent in their perceptions regarding problem solving skills compared to the male participants.In general, the findings of this study revealed that gender was not a significant factor for all the sub-dimensions of the problerm solving skills except two. In this vein,the findings of this study support the findings of Çam (1997), Güven and Akyüz (2001) and Heppner, Reeder and Larson (1983) who also did not find gender as a significant factor for the perceptions of the participants regarding interpersonal problem solving skills. However, an experimental research study conducted with kindergarden students by Dinçer (1995) showed significant results about problem solving skills regarding gender. This difference might have been due to the nature and age of the research study participants.

Table 8. *ANOVA Test for Interpersonal Problem Solving Sub-dimensions and Year Class*

Interpersonal Problem Solving Sub-dimensions	Year Class	n	x	sd	F	P
Hasty Approach	Year 1	51	31.6471	8.09895	.031	.993
	Year 2	69	31.2899	8.41760		
	Year 3	38	31.4211	8.62627		
	Year 4	63	31.1905	8.24789		
	Total	221	31.3665	8.27793		
Thinking Approach	Year 1	51	13.0588	3.94670	1.721	.164
	Year 2	69	12.3623	4.55996		
	Year 3	38	12.9474	5.25021		
	Year 4	63	14.1587	4.68769		
	Total	221	13.1357	4.61417		
Reversed Approach	Year 1	51	14.4314	6.06714	1.183	.317
	Year 2	69	15.0580	5.69025		
	Year 3	38	15.8947	6.07071		
	Year 4	63	16.3810	6.05467		
	Total	221	15.4344	5.95601		
Evaluative Approach	Year 1	51	7.1176	3.84524	1.698	.168
	Year 2	69	6.5362	3.59567		
	Year 3	38	6.4737	3.63717		
	Year 4	63	7.8730	4.08179		
	Total	221	7.0407	3.82256		
Self-confident Approach	Year 1	51	15.3922	4.51255	.886	.449
	Year 2	69	15.4783	5.12379		
	Year 3	38	15.1842	6.28536		
	Year 4	63	16.7302	6.49369		
	Total	221	15.7647	5.62614		
Planned Approach	Year 1	51	9.7451	4.02414	1.453	.228
	Year 2	69	9.1594	4.07512		
	Year 3	38	9.6579	4.90602		
	Year 4	63	10.7937	5.23684		
	Total	221	9.8462	4.58296		

Table 9. *Means and Standard Deviations of Sub-dimension Values of the Interpersonal Problem Solving Inventory*

Sub-dimensions of Interpersonal Problem Solving Skills	n	x	sd
Hasty Approach	221	3.61	1.59
Thinking Approach	221	2.33	1.40
Reserved Approach	221	18.53	4.61
Evaluative Approach	221	6.71	3.69
Self- confident Approach	221	16.29	1.47
Planned Approach	221	2.37	1.43

The findings of the study also showed that the participant students' perceptions showed significant differences about interpersonal problem solving skills in relation to age in four sub-dimesions: "thinking approach", "reserved approach", "evaluative approach" and "self-confident approach". The findings revealed that the students in 19-20 age category felt themselves more competent compared to the other age groups regarding 'thinking approach' and 'self-confident approach'. The students in the age category17-18 felt themselves less competent in 'thinking approach' than the students in other age categories. The students who were above 26 felt themselves less competent in 'self-confident approach' compared to the other age categories. The students who were in 24-26 and above felt themselves more competent enough in 'reserved approach' and 'evaluative approach', respectively. The findings showed that the older participants felt themselves more competent in 'reserved approach' and 'evaluative approach'. This might have been as aresult of the life experiences of the students that they have become more reserved in their thinking and evaluative. The students in the age group 19-20 who felt themselves more competent in 'thinking approach' and 'self-confident approach' might have been the influence of the tasks and learning experiences that they might have had lately that caused them feel more competent in those two sub-dimensions.

The findings of the study revealed that the participants' perspectives about the interpersonal problem solving skills regarding year of class did not show any significant results. In other words, it seems that interpersonal problem skills of the participant students were not related to year of class the students were studying in. This finding is in line with the research study conducted by Serin (2001) with 743 students studying in teacher education program. He found that the year of class the students were studying in was not a significant factor influencing the participants' perceptions about interpersonal problem solving skills. Similarly, in a study carried out by Güven and Akyüz (2001) and in Taylan's study (1990) with university students, it was found that year of class was not a significant factor regarding the participants' perceptions for problem solving skills. On the other hand, in some other research studies with primary school students revealed that year of class was an important factor that created significance in the students' perceptions regarding interpersonal problem solving skills (Yıldızlar, 1999; Altun, 1995; Aşkar & Erden, 1986). This might have been related to other things such as individual differences and learner characteristics. It might have also been due to the learners' learning experiences. Some learners might have had some training in problem solving skills with the help of the tasks and the activities they were engaged into by their teachers some time in their educational lives.

IMPLICATIONS AND LIMITATIONS

Although the findings of this study revealed important findings regarding the students' perceptions about their interpersonal problem solving skills, they are restricted to its context where the study was carried out. This study was carried out in only one university. However, repeating the study in other contexts as well might provide a better picture of the issue. There is also a need for carrying out interviews and observations to see what actually happens in practice in relation to interpersonal problem solving skills. Therefore, carrying out qualitative

investigation besides quantitative would yield more valuable data about the interpersonal problem solving skills.

CONCLUSIONS

To sum up, the findings of this study revealed that in general the overall perceptions of the participant students were adequate regarding their interpersonal problem solving skills in relation to gender, age and year class. Female and male participants differed in their perceptions only in two sub-dimensions: 'thinking approach' and 'evaluative approach'. The findings also revealed that there were significant differences in the participants' perceptions about their interpersonal problem solving skills in realtion to age for four sub-dimensions: 'thinking approach', 'reserved approach', 'evaluative approach' and 'self-confident approach'. Yet, no significance was found in their perceptions in relation to year class. The findings about the sub-dimensions of the scale indicated that the participants felt more competent in using "thinking approach", "planned approach", "hasty approach" and "evaluative approach" when solving interpersonal problems, respectively. Yet, their perceptions indicated that the participant students considered themselves less competent in using "reserved approach" and "self-confident approach" in their interpersonal problem solving skills. In other words, they perceived themselves inadequate in using "reserved approach" and "self-confident approach" in problem solving skills.

In the light of these findings, it is suggested that there is a need for teacher training programmes to be redesigned in such a way that they can nurture the problem solving skills of the students before they graduate from the programmes. Particularly, for the students studying in the Departments of Special Education, possesing effective problem solving skill is a must. In this vein, it is of paramount importance to equip these students with effective problem solving strategies during the teacher education program and thus help them feel themselves competent enough for these skills before graduating from their departments. Indeed, the need for teacher trainers to help the tranees gain self confidence in decision making and problem solving should not be underestimated since these two skills are the most essential qualities for being good teachers.

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