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INVESTIGATING PROSPECTIVE TEACHERS' SATISFACTION WITH SOCIAL SERVICES AND FACILITIES IN TURKISH UNIVERSITIES

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Introduction

One of the important indicators of quality in higher education is student satisfaction. Student satisfaction is important because it directly contributes to student success, motivation and retention. This is apparent in several research studies done with college students (Corazzini & Wilson, 1977; Elliot & Shin, 2002; Student Life Studies, 1999). Corazzini and Wilson (1977) revealed that the students tended to change major, seek assistance at counseling service, drop out and express dissatisfaction with the university in other ways when their needs (such as instructional, academic and social) are not met by the university. In order to ensure retention of the students in the university, the best way is to satisfy their needs and expectations, and also to provide an agreement between students' needs and various aspects of university environment (Banning & Kaiser, 1974) such as academic environment, social services and so on. Thus, satisfaction, as a concept, can be basically identified as person's attitude toward an object, issue and events and can be ensured by meeting the needs and expectations of that person (in our context, teacher candidate).

Assuring quality in teacher education in universities is a continuous effort that can be influenced by many factors. One of the factors contributing to this quality is regarded as satisfaction of teacher candidates. When considering one of the most important missions of pre-service teacher education, which is fostering students' growth and development as healthy and highly motivated individuals for their teaching profession, student satisfaction within the university culture / campuses should be ensured because

Abstract. *The purpose the study was to investigate the satisfaction level of prospective chemistry teachers with social services and facilities offered by their department and faculty, and also explore the effects of gender and university on the student satisfaction. 101 last year students in the chemistry teaching major in four different universities in Turkey participated in the study. The instrument, Prospective Science Teacher Satisfaction Questionnaire (PSTSQ) was used for data collection. PSTSQ consists of seven sub-themes on a five point Likert type scale. Pilot testing of the instrument indicated that Cronbach alpha (a) was 0.887. The findings revealed that prospective chemistry teachers expressed average level of satisfaction with social services and facilities provided by their faculties and departments. Furthermore, statistical analysis showed that there was no effect of gender on the satisfaction with social services and facilities, but the university enrolled strongly contributed to students' satisfaction.*

Key words: *prospective chemistry teacher, satisfaction, social services and facilities.*

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satisfaction highly correlated with motivation (Elliot & Shin, 2002) which is related to academic achievement (Barrett, 1999). One method of appraising the degree of quality of student services, facilities and programs which are parts of campus environment is to assess student awareness, usage and satisfaction by frequently administering student surveys.

There are several factors explored in the literature that associate with student satisfaction emerged from both campus environment and student characteristics. During the process of preparing and training students towards their professional life, it is necessary to pay extra attention to teaching contents, educational and instructional applications, classroom settings, and supplying students' needs by their educational institutions in university campuses, where they spend most of their time during their university education (Karagozoglu, 1996). In this respect, education is not a concept that only covers instructors, students, and a sequence of subjects to be learnt and targets to be achieved, but it is a complex system covering educational settings like buildings, classes, laboratories, programs, methods, teaching aids, evaluation and rewarding systems, psychological assistance services, economical support systems, and many other systems like these (Ozguven, 1997). Sunar (1986) claimed that in higher education, non-educational services supplied by faculties like accommodation, catering, economical support, health, culture, sports, etc. which directly affects students' satisfactions would increase fruitfulness of such educational institutions. As far as background variables are concerned, *gender* and *GPA* (Karemera, et al., 2003; Unbach & Porter, 2002), and *university enrolled* (Erdoğan & Uşak, 2007; Erdoğan & Uşak, 2006; Erdoğan & Uşak, 2004; Erdoğan et al., 2004) have also shaped and contributed to student satisfaction.

For improving the productivity of education and for making the students achieve expected learning outcomes, designing proper learning environment and introducing social services and/or facilities are as much important as educational and instructional activities supplied by the university. University years for undergraduate students are periods during which such youngsters gain professional formation, produce and carry out beneficial scientific projects for their society together with develop and orientate their personality, and form their ideals (Küçükkömürler, 2000). During this period, managements and arrangements done by their faculties and departments within the campus environment to orientate students' experiences will increase student satisfactions (Ashworth and Harley, 1994).

Some of the main social services facilities offered by faculties and departments which are likely to influence student satisfactions (Ashworth & Harley, 1994; Patti et al., 1993; Sunar, 1986) are as follows;

1. Transportation services offered by university or the municipality,
2. Medical supports,
3. Guidance (social and psychological)
4. Sportive opportunities,
5. Library service,
6. Security,
7. Cafeteria/Catering,
8. Computer clusters and the quality of the computer machines,
9. Internet
10. Social activities organized by the faculty to improve students' motivation,
11. Cultural programs.
12. Housing and accommodation (university apartment, dormitory...etc)

Together with the activities which provide students with opportunities to spend their spare times effectively and efficiently, supporting students' social activities and supplying their social necessities which would influence their achievements and the institution's productivity is crucially important. Despite this importance, there is limited number of studies addressing to students' satisfaction and opinions with social services and facilities. A need emerged from the literature directed us to carry out this research study. Therefore, this study focuses on determination of current situation in providing prospective teachers' social necessities and their satisfaction levels with social services and facilities offered by their department and faculty.



The Purpose of the Study

The purpose of this study was to investigate the satisfaction level of prospective chemistry teachers with social services and facilities offered by their department and faculty in four universities in Turkey. Along with this, whether their gender and the university that they enrolled contributed to their satisfaction with social services and facilities was also investigated in the study.

Methodology of Research*Participants*

101 (49 males, 53 females) fifth-year students in chemistry teaching major in four different universities in Turkey participated in the study. The participants were selected based on their own voluntariness from Dokuz Eylül University, Gazi University, Middle East Technical University (METU) and Karadeniz Technical University (KATU). Initially, 191 questionnaires were distributed, but only 101 of them were returned. The return rate is 59%. Most of the students' ages fell between 20 and 22. Most of the students' cumulative GPA ranged from 2.00 to 3.00 out of 4.00. Demographic characteristics of the participants are summarized in Table 1.

Table 1. Demographical characteristics of the sample.

	Number of participant	(%)
University		
METU	13	12.9
Dokuz Eylül University	23	22.8
Gazi University	32	31.7
KATU	33	32.7
Gender		
Male	49	48.5
Female	52	51.5
Age groups		
20-22	60	59.4
23-25	40	39.6
26 and above	1	1
GPA		
1,50 – 1,99	5	5
2,00 – 2,49	38	37.6
2,50 – 2,99	24	23.8
3,00 – 3,49	23	22.8
3,50 – 4,00	6	5.9
Unknown	5	5

Data Collection Instrument

Prepared by Erdoğan and Uşak (2004), Prospective Science Teachers Satisfaction Questionnaire (acronym as PSTSQ) prepared for determining student satisfaction in science major in faculty of edu-



cation (e.g. science education, chemistry teaching, physics teaching, biology teaching) was used for collecting data from the participants. This questionnaire was prepared based on an extensive review of professional literature on student satisfaction (Carilli, 2000; Community College, 2003; Cypress College, 2001; Elliott & Shin, 2002; Hom, 2000; Howard Community College, 2000; Fujita-Starck, & Thomson, 1994; Kelly, 1994; Knight, 1994; Northern Nevada College, 1995; Patti et al., 1993; Pell & Jarvis, 2003; Walker-Marshall & Hudson, 1999). The item pool was firstly developed and then the items that most related to Turkish case was drawn from the pool based upon an expert view. PSTSQ consisted of two parts. First part was designed to determine participants' some background information such as gender, name of the university, G.P.A. and age. The second part was designed to determine students' satisfaction with their overall department and faculty. This part included 82 closed-ended items on a five-point Likert-type (1- strongly disagree referring to strongly dissatisfied and 5-strongly agree referring to strongly satisfied). By taking the literature reviewed in the consideration, the items were categorized under seven main headings, called here as theme, which were (1) General Satisfaction with 10 items, (2) Administration with 12 items, (3) Curriculum / Program with 12 items, (4) Academic Staff with 13 items, (5) Social Facilities with 13 items, (6) Skills Promoted by Courses with 8 items and (7) Laboratory and its Facilities with 14 items.

The questionnaire was validated by taking expert opinions during preparations. After piloting the instrument with 100 last-year prospective science teachers, the reliability analysis was run and Cronbach's alpha (α) reliability coefficient of the instrument was found 0.887. This indicates that the internal consistency of the items in the instrument is high. Separate reliability analyses were performed for each of seven themes. Cronbach's alpha (α) reliability coefficient of each sort of items in the questionnaire is presented in Table 2.

Table 2. Reliability of each theme in the PSTSQ.

Themes in the questionnaire	Cronbach's alpha (α)
General Satisfaction (10 items)	0.71
Administration (12 items)	0.78
Curriculum (12 items)	0.81
Academic Staff (13 items),	0.88
Social Facilities (13 items)	0.83
Skills promoted by courses (8 items)	0.83
Laboratory and its Facilities (14 items)	0.89
Total	0.887

For the present study, one of the themes of PSTSQ, which is Social Facilities including 13 items, was used, analyzed and reported.

Data Collection and Analysis

Data was collected from the participants in 2004-2005 academic year. Initial sample (N=191) of the study constituted all the five year students in chemistry teaching in these selected four universities. The PSTSQ were distributed to this initial sample, but only 101 students completed and returned it. The reason of this was that the ones not responded were not willing to participate in the study

Data obtained through PSTSQ from the participants were subjected to statistical analysis by making use of SPSS (version 11.0). After performing the data cleaning process (such as detecting missing responses and replacing with mean), descriptive analysis (average, SD and frequency) was firstly run to determine the students' overall satisfaction. And then, to find out whether there was significant mean



difference between male and female students in terms of satisfactions with social services and facilities, independent t-test was performed. Furthermore, to explore whether there were significant mean differences among the students in different universities, one-way-ANOVA was conducted.

Results of Research

Means and standard deviations of the items in the selected theme regarding as determining prospective chemistry teachers' satisfactions with social services and facilities offered by their department and faculties are summarized in Table 3.

Table 3. Means and Standard Deviations of the items in "Social Facilities".

Items in the Theme of Social Facilities	Mean (\bar{X})	Standard Deviation (SD)
Computer clusters	2,98	1,41
Quality of computers	3,04	1,38
Library services	3,08	1,39
Ease of finding related material in the library	3,09	1,53
Transportation opportunities from/to the faculty/department	3,66	1,31
Silent study area offerings	3,25	1,22
Guidance services	2,96	1,16
Security	3,32	1,22
Cultural program organizations	3,01	1,26
Social activities organized by the department	2,78	1,19
Social activities organized by the faculty	2,79	1,12
Cafeteria/Catering services	3,34	1,32
Sportive opportunities	2,72	1,27

As observed in Table 3, mean values of each item in this selected theme varied between 3.66 and 2.77. This result basically suggests that students' overall satisfaction with social services and facilities is around medium level ($\bar{X} = 3.07$). That is, students expressed moderate level of satisfaction with social services and facilities. Examining each items in the above table, it is clear to say that their satisfaction with the items, each addressing to *sportive opportunities* (e.g. organizing sportive activities, providing sport centers and areas within the campus) ($\bar{X} = 2.72$), *social activities* (e.g. concert, trip, cinema) organized by their department ($\bar{X} = 2.78$) and by their faculty ($\bar{X} = 2.79$), *guiding services* that provides the students with psychological counseling, and *orientation* ($\bar{X} = 2.96$), and *computer services* (e.g. number of the computers, and computer labs) ($\bar{X} = 2.98$) were below average. Their satisfaction with these items tended to be toward dissatisfaction. On the other hand, they were more satisfied with *silent study areas* ($\bar{X} = 3.25$), *security services* ($\bar{X} = 3.32$), *cafeteria and/or catering services* ($\bar{X} = 3.34$), and *transportation services* from and to faculty and/or department ($\bar{X} = 3.66$). Their satisfaction with these items tended to be toward satisfaction.

In general manner, it seems that participants' satisfaction level were lower on sportive opportunities, social activities organized by the departments and the faculties, guiding services and computer services; and moderate on cultural programs organized by their faculties, the quality of computers, library services, and ease of finding related materials in the library. On the other hand, their satisfaction levels were just above the moderate level on transportation opportunities, silent study area offerings, cafeteria/catering services and security. That is to say that they were not totally happy with the social facilities offered by their departments and faculties, but there was a tendency towards satisfaction.

The result of independent t-test that was performed to determine whether there was a significant



mean difference between male ($n=52$) and female ($n=49$) prospective chemistry teachers' satisfaction levels with social services and facilities was not significant [$t(99) = 1.116, p=0.246$]. This result refers that there was no significant mean difference between male and female students with regard to their overall satisfaction with social services and facilities. Put another way, gender, as a factor, did not contribute to the satisfaction with social services and facilities. On the other hand, the result of one-way ANOVA, performed to explore whether there were significant mean differences among students in four different universities in terms of satisfaction with social services and facilities, was significant [$F(3, 97) = 71.15, p<0.001, \eta^2 = .688$]. This result indicated that students' satisfaction with social services and facilities was significantly contributed by the university that they enrolled. The strength of relationship between students' overall satisfaction with social services and facilities and the university enrolled, as assessed by η^2 , was strong, with the university factor accounting for 68.8 % of the variance of dependent variable.

Table 4. Post hoc analysis results among universities.

Universities	Mean (\bar{X})	1	2	3
METU (1)	53.00			
Gazi Univ. (2)	51.87	-		
Dokuz Eylül Univ. (3)	27.43	*	*	
KATU (4)	31.64	*	*	-

(*) An asterix = showing the significance difference on 0.05 significant level.

(-) Dash = showing non-significant differences between pairs of means on 0.05 significant level

After obtaining significant result, in order to examine pairwise differences among universities, post hoc analysis with Dunnett's C procedure was run. Since the variances among the four groups were not homogeneous, Dunnett's C test that assumes un-equal variances among the groups was chosen for post-hoc (Green and Salkind, 2005). The results of these pair-wise differences, the means and standard deviations for each university are reported in the Table 4.

It is apparent in Table 4 that there was no significant mean difference between METU and Gazi University, and Dokuz Eylül University and KATU. On the other hand, the other pairwise differences were significant. Related to these significant differences, it can be claimed that satisfaction levels of prospective chemistry teachers on social facilities in METU ($\bar{X} = 53.00$) and in Gazi University ($\bar{X} = 51.87$) were significantly different from those of in Dokuz Eylül ($\bar{X} = 28.12$) and in KATU ($\bar{X} = 31.64$).

Total score for the theme was ranged from maximum 65 to minimum 13. Considering these range, it can be interpreted that last year prospective chemistry teachers in METU and in Gazi University expressed high level of satisfaction; on the other hand, those in Dokuz Eylül and KATU expressed satisfaction below the average, and even it can be judged that as dissatisfaction. This study only focused upon this theme aiming to investigate prospective chemistry teachers' satisfaction with social services and facilities in their universities. Other themes will be a topic of further research papers.

Discussion and recommendations

In this study, we tried to investigate the satisfaction level of prospective chemistry teachers in four Turkish universities with social services and facilities offered by their educational faculties and departments. Existing literature in Turkey indicated that there are few studies investigating students' satisfaction, e.g. with their department (Erdoğan & Uşak, 2007), with curriculum and/or program (Erdoğan & Uşak, 2006), with academic department – administration academic staff (Erdoğan & Uşak, 2004), and with science laboratory and laboratory services (Erdoğan et al. 2004). Therefore, this study will be one of the few studies on students' satisfaction, and will be one of the first studies regarding as the social



services and facilities offered by their departments and faculties in Turkey. From this perspective, the results of this study can be used by the universities or the system of higher education planners in Turkey, or somewhere else in the world to identify areas for strategic improvements.

On the other hand, student satisfaction is a very significant topic observed in professional world literature. Feldman and Newcomb (1969) performed a comprehensive review of student satisfaction researches conducted prior to the 1960s. This included huge body of research and served possible factors and dimensions affecting student satisfaction. Douglas, Douglas and Barnes (2006) investigated general satisfaction of 864 UK university students. They found that most important aspects of a university's service offerings, indicated by UK students, were regarded as the core service – the lecture. Sohail and Shaikh (2004) conducted a research with 310 Saudi male university students to investigate students' perception of service quality. Their findings indicated that students' concept of service quality was significantly correlated with physical environment, layout, lighting, classrooms, appearance of buildings, grounds and overall cleanness. Another research done by Sohail and Saeed (2003) with 201 university students in Malaysia pointed out that students' dissatisfactions were basically about teaching methods used, availability of the lecturer for consultation after class time and insufficient specialization of lecturers.

Overall results of the study indicated that there was a moderate level of satisfaction, since the mean values ranged from 2.77 to 3.66, as seen in Table 4. When considering 65 was the maximum and 13 was the minimum scores could have been taken by the respondents, and also investigating the table it is easily judged a moderate level of satisfaction on this theme. Hence, in some aspects there was a tendency towards satisfaction, and also in some other aspects there was a tendency towards dissatisfaction.

At the beginning part of Community College of Rhode Island Research Report on Noel Levitz Students Satisfaction Inventory Survey (2003), students are viewed as consumers who have a choice about whether to invest in education and where to enroll and also students are seen as individuals who have definite expectations about what they want from their campus experiences. It is concluded that satisfaction with university occurs when an expectation is met or satisfied by an institution. Related to this issue Elliott and Shin (2002) stated that student satisfaction have a positive impact on student motivation, student retention, recruiting efforts and fundraising. As a result, they concluded, universities have exhibited their commitment to student satisfaction through mission statements, goal/objectives, marketing strategies, and promotional themes. Therefore, recently, higher education is placing greater emphasis on meeting the expectations and needs of students (Cheng & Tam 1997, as cited in Elliott & Shin, 2002). To satisfy what students need and expect from the university, universities should re-engineer their organizations and adapt themselves to student needs. This effort allows them to develop a system for continuously monitoring how effectively they meet or exceed student needs (Elliott & Shin, 2002). Through these efforts, universities can attract higher quality students and ensure students' retention in their campuses. May be that's why successful universities invest now to retain students, rather than invest later to attract new students (Elliott & Shin, 2002).

Students during their undergraduate study of education spend most of their time in university campuses. Underlying factors which make them healthy and happy in their campus life are directly related to their satisfactions with the social services and facilities offered them by their universities/faculties and departments. Moreover, as Sunar (1986) expressed, non-educational services supplied by faculties like accommodation, catering, economical support, health, culture, sports, etc. which directly affect students' satisfactions would increase fruitfulness of such educational institutions. Therefore, educational faculties, as in this study context, chemistry teacher training departments should pay some extra attention and be more careful about social facilities that they offered to their students, in order to make their students more satisfied and happy.

Related to gender effects on satisfaction, as a result of independent t-test conducted in this study, it was found that there was no statistically significant mean difference between male and female student with regard to overall satisfaction with social services and facilities. Our results are contrary to claim of Umbach and Porter (2002). While they were discussing the results of some studies, they claimed that female students reflect lower satisfaction than males do. The claim was also supported by the findings of Bell (1994) and Carilli (2000). On the other hand, few Turkish studies indicated a parallel conclusion with our results in respect to gender effects on satisfaction (Erdoğan & Uşak, 2007; Erdoğan & Uşak,



2006; Erdoğan et al 2004; Erdoğan & Uşak, 2004). In all four studies, they claimed that there were no significant differences between male female students' satisfaction levels.

The other issue investigated in this study is comparison of student satisfaction in different universities. Apart from above studies done in Turkey, we could find a limited number of studies (e.g. Onkol et al., 2005) performed on student satisfaction in Turkey. In the international level, researchers generally preferred to investigate student satisfaction in one university. Although there are some studies investigating the student satisfaction in more than one university with a wide survey (National Student Satisfaction Report, 1997; Walker-Marshall and Hudson, 1999), as far as we found, there are very few studies comparing the results among universities in Turkey. In four of the studies conducted in Turkey, statistically significant difference among universities with respect to students satisfaction with their department (Erdoğan & Uşak, 2007), with curriculum and/or program (Erdoğan & Uşak, 2006), on academic department – administration academic staff (Erdoğan & Uşak, 2004) and with science laboratory and its facilities (Erdoğan et al., 2004) were reported to be identified. A parallel result was observed in this study, as a result of ANOVA conducted. The university enrolled was found to have strong impact on prospective teachers' satisfaction with social services and facilities. Follow up-test (post hoc test) results indicated that satisfaction levels of students in METU and Gazi University were relatively more than of those in Dokuz Eylül University and KATU. This might be explained in two ways; either different university provides the students with different social opportunities or the quality of the social services and facilities provided for the students differs according to the university.

In a study conducted by Walker-Marshall and Hudson (1999), it was discussed the relationship between academic success and student satisfaction. It was stated that students who had a better preparation during pre-university period and had reached their target by gaining a place in their wanted universities became academically more successful and at the same time more satisfied with their universities. They commented that it is not known whether more successful students owe their academic success to their higher levels of satisfaction or vice versa. However in the study it was clearly shown a relationship between satisfaction with university and academic preparation and success in the university. If we discussed our satisfaction results from this perspective, may be METU and Gazi universities attracted more academically successful students than Dokuz Eylül University and KATU, and therefore, they were more satisfied. It was evidenced with the results of research studies that GPA is a very important predictor of college performance (Karemera et al, 2003), thus of satisfaction (Unbach & Porter, 2002). The other view may be that because of their satisfaction they were more successful. The reason of this issue cannot be decided as a result of this study.

Due to accessibility problem of all chemistry teacher training programs in Turkey, this study was limited to four big educational faculties with 101 respondents. Another limitation of this study is that this study was conducted with only to fifth year prospective chemistry teachers. In other words, they were mature students. Walker-Marshall and Hudson (1999) stated in their study that maturation or length of time spend in college may play a role in satisfaction. They found out that juniors and seniors were slightly less satisfied than freshmen and sophomores. We do not know in advance what would be the results, if we had taken younger students as participants for this study. There is a need further studies to gain data from wider range of ages and from different universities to generalize the results of this study. Moreover, the scope of this study was exploratory in nature, not explanatory; therefore, deep information about why the respondents were satisfied or dissatisfied with social services and facilities offered by their faculties and departments was not elicited in this study. To reach this aim, further qualitative studies are needed.

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