

The Measurement of Expectations and Perceptions of Science Faculty Students

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Abstract

A survey is conducted in order to identify the expectations from Anadolu University, Science Faculty students. Both the expectations and perceptions are asked to the same students. They answered the questions based on their own personal expectations from their faculty and department. The students are asked to evaluate their departments and university about both physical conditions and education quality.

The data obtained from the survey are evaluated using a statistical software and the results are interpreted. It is concluded that the students are pleasant about the physical conditions and the education quality.

Key words: EduQual, Expectation, Perception, Education evaluation, Education quality.

1. Introduction

The 'SERVQUAL' is the most extensively used service quality measurement instrument because of easiness to use, possession of simple structure and capability of generalization. Since quality of service largely depends on the human behavior, the quality dimensions of the measuring instrument differ in different service settings. Therefore, 'SERVQUAL' dimensions are modified in order to suit the particular service settings. Sometimes number of dimensions is changed or items under each dimension are modified to suit the particular application. In education sector, intangibility and lack of physical evidence of service persists. The perceptions of service quality in this sector have complex composition making it difficult to analyze. The TES has different classes of stakeholders with different backgrounds and varied behavioral patterns.

Recently, several methods are proposed in order to measure higher education quality. What is quality for education? Quality for whom? Answering those questions is important (Tsiligiris, 2011). Service quality management calls for the alignment of customer expectations with customer perceptions. In other words, service providers should do what they are promise to do. Service quality can be measured by comparing the expectations and perceptions using statistical methods. This method is called ServQual and firstly proposed by Parasuraman (Parasuraman, et al., 1991).

When education is thought as a part of service sector, student will be the customer. The service quality will be evaluated taking into account the expectations of the students. EduQual method can be defined as the measuring and comparing the expectations and perceptions of higher education students.

Different models can be used in order to construct questionnaire forms. The most common of those is Hofstede model. This model is constructed of 5 dimensions; collectiveness, Collectiveness, Uncertainty Avoidance, Masculinity, Power Distance, Long-Term Orientation (Hofstede, 2002).

In this study, firstly defining the EduQual method is planned. Then preparing the questionnaire form based on Hofstede model in order to apply this method, applying this questionnaire to a large sample from Anadolu University, Science Faculty students.

2. Data Collection

A questionnaire is prepared containing eighteen items compiled from various sources related to the education quality. Data were collected from the 300 students of Anadolu University Faculty of Science. The questionnaire was prepared as follows:

1 – Education Quality

- ▶ Teacher
- ▶ Sources
- ▶ Consultants
- ▶ Trusting teachers
- ▶ Objectiveness
- ▶ Attainability

2 – Physical Environment

- ▶ Technology
- ▶ Classrooms
- ▶ Labs

3 – Services

- ▶ Library
- ▶ Sport facilities
- ▶ Health service
- ▶ Student office

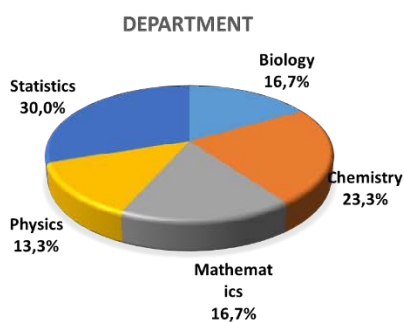
4 – Social Life

- ▶ Cafes
- ▶ Canteens
- ▶ Cultural events
- ▶ Shopping markets
- ▶ Sightseeing

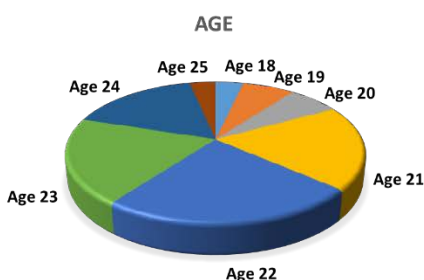
The students are mostly from Statistics Department. The department distribution of the students is given in Table 1. The mean age for 300 students is 21.97.

Table 1: The Distribution of the Departments

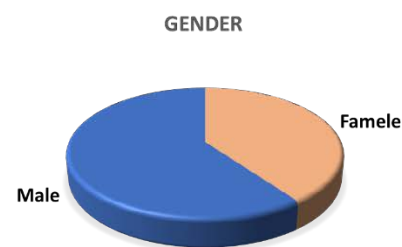
Department	Frequency	Percent
Biology	50	16.7
Chemistry	70	23.3
Mathematics	50	16.7
Physics	40	13.3
Statistics	90	30.0



Most of participated students were students of statistic department.



Most of the participants are 22 years old.



%40 of participators were female and %60 of participators were male.

3. Test Results

Paired-sample t-test is used to analyze paired scores, specifically, we want to see if there is difference between paired scores.

The Hypothesis for first question (adequacy of teachers)

H_0 : There is not any difference between students' expectations and perceptions about adequacy of teachers.

H_1 : There is a difference between students' expectations and perceptions about adequacy of teachers.

The summary of Paired-sample t-test for the survey with 18 items is given in Table 2. The numerical results of the paired sample t test results are given in Table 3 and Table 4.

Table 2: Items of the Survey

Pairs	Items
Pair E1-P1	Being satisfied with the teachers
Pair E2-P2	Being satisfied with the lessons
Pair E3-P3	Being satisfied with the advisors
Pair E4-P4	Pleased about teachers' checking the exams objectively
Pair E5-P5	Communication with the teachers properly
Pair E6-P6	Trust the teachers
Pair E7-P7	Using the advanced technologies
Pair E8-P8	Having good equipments in the classes
Pair E9-P9	Having advanced laboratory conditions in the university
Pair E10-P10	Having a rich library in the university
Pair E11-P11	Good sports facilities in the university
Pair E12-P12	Good health services in the university
Pair E13-P13	Good guidance services in the university
Pair E14-P14	Number of cafes in the university
Pair E15-P15	Number of canteens in the university
Pair E16-P16	Good cultural facilities in the university
Pair E17-P17	Number of markets in the university
Pair E18-P18	Good sightseeing on campus

Table 3: Descriptive Statistics for Paired Groups

Departments	Mean	Std. Deviation	Std. Error
Pair E1-P1	4.233-2.300	1.104-1.022	0.202-0.187
Pair E2-P2	4.400-2.570	0.814-1.040	0.149-0.189
Pair E3-P3	4.400-2.333	0.855-1.006	0.156-0.184
Pair E4-P4	4.333-2.567	0.994-1.165	0.181-0.213
Pair E5-P5	4.300-2.433	0.988-1.165	0.180-0.213
Pair E6-P6	4.100-2.567	0.959-1.223	0.175-0.223
Pair E7-P7	4.467-2.567	0.730-1.074	0.133-0.196
Pair E8-P8	4.433-2.767	0.679-0.935	0.124-0.171
Pair E9-P9	4.367-2.567	0.809-1.194	0.148-0.218
Pair E10-P10	4.333-3.067	1.028-1.229	0.188-0.225
Pair E11-P11	4.067-2.400	1.285-0.770	0.235-0.141
Pair E12-P12	4.100-2.967	1.029-0.928	0.188-0.169
Pair E13-P13	4.533-2.367	0.730-1.066	0.133-0.195
Pair E14-P14	4.133-3.100	1.167-0.959	0.213-0.175
Pair E15-P15	4.333-2.967	0.661-1.159	0.121-0.212
Pair E16-P16	3.867-2.967	1.383-1.245	0.253-0.227
Pair E17-P17	3.267-3.133	1.596-1.137	0.291-0.208
Pair E18-P18	3.567-2.833	1.431-1.177	0.261-0.215

Table 4: Paired Sample t Test Results

		Paired Differences						
		Mean Difference	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	Sig. (2-tailed)
					Lower	Upper		
Pair 1	e1 - p1	1,93333	1,55216	,28338	1,35375	2,51292	6,822	,000
Pair 2	e2 - p2	1,83333	1,20583	,22015	1,38307	2,28360	8,328	,000
Pair 3	e3 - p3	2,16667	1,34121	,24487	1,66585	2,66748	8,848	,000
Pair 4	e4 - p4	1,76667	1,52414	,27827	1,19755	2,33579	6,349	,000
Pair 5	e5 - p5	1,86667	1,47936	,27009	1,31426	2,41907	6,911	,000
Pair 6	e6 - p6	1,53333	1,54771	,28257	,95541	2,11126	5,426	,000
Pair 7	e7 - p7	1,93333	1,55216	,28338	1,35375	2,51292	6,822	,000
Pair 8	e8 - p8	1,66667	1,15470	,21082	1,23549	2,09784	7,906	,000
Pair 9	e9 - p9	1,80000	1,39951	,25551	1,27742	2,32258	7,045	,000
Pair 10	e10 - p10	1,26667	1,63861	,29917	,65480	1,87854	4,234	,000
Pair 11	e11 - p11	1,66667	1,34762	,24604	1,16346	2,16988	6,774	,000
Pair 12	e12 - p12	1,13333	1,52527	,27847	,56379	1,70288	4,070	,000
Pair 13	e13 - p13	2,16667	1,28877	,23530	1,68543	2,64790	9,208	,000
Pair 14	e14 - p14	1,03333	1,47352	,26903	,48311	1,58356	3,841	,001
Pair 15	e15 - p15	1,36667	1,58622	,28960	,77436	1,95897	4,719	,000
Pair 16	e16 - p16	,90000	1,98876	,36310	,15738	1,64262	2,479	,019
Pair 17	e17 - p17	,13333	2,11291	,38576	-,65564	,92231	,346	,732
Pair 18	e18 - p18	,73333	2,09981	,38337	-,05075	1,51741	1,913	,066

Results

As a part of EduQual method, a survey is conducted to Science Faculty students. It can be concluded that, the expectations and the perceptions are different for the students but they are the same for the consultancy services, the physical conditions and the facilities.

For all items, expectations are greater than perceptions and except for 16th, 17th and 18th items, all of them are significant.

So the faculty has good perceptions in terms of its cultural events shopping markets and sightseeing facilities.

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