



# Students' Satisfaction and Its Determinants: The Case of Two Eastern Ethiopian Universities: Comparative Analysis of Jigjiga University and Dire Dawa University

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## Abstract

The ever increasing size of students at Colleges and Universities in Ethiopia also reflect that they are entering colleges with more diverse cultural characteristics and needs than ever before. The purpose of this study was to see the determinants and level of satisfaction of Dire Dawa University and Jigjiga University students attending their regular higher education programme of three years in the common Colleges of Social Sciences and Humanities, Business and Economics and Natural and Computational Sciences. Three departments were randomly selected by using Simple random sampling method from each college namely Geography, Political Science, Psychology, Economics, Management, Accounting, Management, Statistics, Biology and Chemistry respectively. A total of 346 participants and 6 FGDs' members (n=36) were used from regular students of undergraduate programme (2016/2017) in Dire Dawa (n=189) and Jigjiga University (n=157). FGDs and questionnaires were both developed by adapted from the standardized students' satisfaction measures (SSI) used earlier and similar studies by the researcher based on the purpose of the pilot tested with 22 participants for the questionnaire and 8 participants for the FGDs. Computation of mean, standard deviation, percentages, frequencies, one way ANOVA and T-test were used to analyze the collected data through SPSS version 20.

Findings generally indicated that variables; Institutional Effectiveness, Academic Support, Advice and Counselling, Effectiveness, and Admission, Enrolments and Admission, Enrollment and Registration effectiveness had significantly affected the students' satisfaction in both universities. The independent samples t-test showed that there had been no significant differences between the two universities in their perceived relation between their expectation and their actual college experience. Finally, it was suggested that teachers, students and administrative bodies in educational organizations need to have proper information about students' satisfaction work towards increasing it and allow students to enjoy their expectation to be successful in their higher institution education and their satisfaction was less too.

**Keywords:** Students satisfaction; Students' expectation; Students' experiences; T-test; ANOVA

## Introduction

The concept of students' satisfaction has become very prevalent in most of higher education institutions since a couple of decades according to [1]. The consideration of student opinions and attitudes is a modern-day necessity as institutions of higher education are challenged by a climate of decreased funding, demands for public accountability, and increased competition for student enrollments. On the other hand, in many countries including Ethiopia, it has become culture to rank colleges and universities in the measure of which the student satisfaction along with other attributes is included. In Ethiopia, the rapid expansion of public and private colleges and Universities, the implementation of cost-sharing system, the significant increases in private college education costs, combined with demographic shifts in the population necessitates to think differently about the role of student satisfaction for future success and survival. The satisfaction level of students is determined by the extent of the gap between the service performance as perceived by the customer and what the customer expects [2]. The new business process (BPR) and (BSC) program, which are currently the basic guiding principles of Universities, place an important emphasis on increasing students' satisfaction. Accordingly, the BPR Training and Coaching Material, 2007 the dominant force in the seller-customer relationship has shift from seller to customer; a mass market no information. Moreover, as it can be deduced from Ethiopian Higher Institution Proclamation No. 650/2009, articles 23, 37

and 41, ensuring the customer (student) satisfaction is so critical to the University's responsibility. Moreover, it is obvious that all Universities in the country, including both Dire Dawa and Jigjiga, have targeted maximum customer (students') satisfaction. Henceforth, the researcher had identified the major core areas in terms of the vision of the university and answered the question of whether students in Dire Dawa University and Jigjiga University were satisfied with the institutional services they get (enrollment and registration processes, instructors' mastery level of subject matter knowledge and Pedagogical Skills capacity, Instructional and Evaluation processes, Co-curricular Activities, Academic and Administrative Support services, Participation in Decision Making, the major determinants of students' satisfaction in both Universities and whether the students' satisfaction vary (significantly) across study years,

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colleges, and departments in each universities. The general objective of the study was to investigate the level of students' satisfaction and its correlates in Dire Dawa University and Jigjiga University.

## Students Satisfaction and Its Measurement

In the sense of education, student satisfaction refers to the favorability of a student's subjective evaluations of the various outcomes and experiences associated with education [3]. Like any other business, a university is becoming a centre of a highly competitive environment.

According to [4], scientific and empirical research studies on student satisfaction are often based on specific models and instruments developed by the authors. However, most higher education institutions prefer to use their own domestic instruments to assess student satisfaction in general or student satisfaction with particular aspects of the college experience of their interest. Nevertheless, it is more advantageous to customize the instruments to the mission and goals of the institution. From this perspective, satisfaction with college occurs when an expectation is met or exceeded by an institution. The SSI was developed to assess the following 12 dimensions: Academic advising Effectiveness, Campus Climate, Campus Support Services, Concern for the individual, Instructional Effectiveness, Admissions and Financial aid effectiveness, Registration effectiveness, Responsiveness to diverse populations, Safety and Security, Service Excellence, Student Centeredness, and campus life. A unique feature of the SOS instrument is that it assesses the importance assigned by students to each aspect of the academic experience and evaluates the students' satisfaction. ServQual is one of the models of students' satisfaction tested by Browne et al. They analyzed the ServQual model using regression analysis in a study that included ServQual dimensions as well as curricular dimensions.

## Service consumer and product consumer

Educational services and business organization services are different in that the former is characterized the services that are elusive, varied, inseparable from the person delivering it, unpredictable, fragile, and the customer (student) participates in the process whereas the later is characterized by concrete, reproducible items, etc. [5-10]. Moreover, the below diagram can further illustrate the comparison of the perception and satisfaction of quality of service consumers and product consumers.

- Students consume educational services whereas others consume industry goods/items or products.
- Higher Education Institutions are process oriented aimed at transformation of students' behavior while industries are output oriented aimed at production of quality items.
- The process in Higher Education Institutions involve customization of the learning experiences to students needs to increase their satisfaction where the later involve standardization of outputs to increase the satisfaction of the consumers.
- The quality in Higher Education Institutions services is perceived in terms of their degree to meet or exceed the expectation of the students ("fitness to purpose") whereas the quality in outputs of industries is perceived from the extent of the standardization to be perfect and constant quality with low price.

## Theoretical framework

The theoretical framework of this study was based on SSI concept to measure the relative gap between pre-expectation and the perceived

performance satisfaction of students from of Dire Dawa University and Jigjiga University. From this perspective, satisfaction with college occurs when an expectation is met or exceeded by an institution.

$$\text{Satisfaction} = \text{Experience} \geq \text{Expectation}$$

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## The context of the research area

The research was specifically limited to the three common colleges of both Universities named as College of Business and Economics, College of Natural and Computational Science, College of Social Sciences and Humanities. These Universities and colleges were selected and needed to be compared due to the following reasons;

- Satisfaction is relative and needs to be comparatively evaluated in order to convey more meaning full message.
- The nature of the study is comparative in which the two Universities are likely comparable as they both are young institutions established together in nearly the same year, found in the same cluster in which they share similar curriculum, found in nearly the same culture, society and religion in which they are the same category as they are Similar in various aspects .
- It's research extra-benefit (worthy studying) to compare a result of a research for two in the same category.
- Dire Dawa University is speculated to have satisfied students more than others relatively- not statistically tested and supported with evidence.
- Helps to analyze difference (if any) in students' satisfaction other factors remaining constant.
- Used as spring board to create collaboration in research environment.
- Moreover, the comparison can be used as the way to lead to a mutual support system of fund on the research.

## Data Analysis

### Population, sample and sampling techniques

The target population of this study was regular Students of the colleges of Business and Economics, Natural and Computational Science and Social Science and Humanities. The researcher selected these colleges because they are common to both Universities and study years. The common departments included Accounting, Management, and Economics from CBE, Biology, Statistics, Chemistry from CNCS and Geography and Environmental Studies (GeES), Political Science and International Relations (PSIR) and Psychology. The total population of the study was 3694 (Dire Dawa University total 2022; M=1265, F=757; Jigjiga University total 1672; M=1048, F=624) [11-15].The following table shows the figure of the total participants of the study (Figure 1).

### Sample size determination

Determining the appropriate sample size required is basically dependent on available resources and level of precision required. Our sample size (number of students) was calculated using the Cochran's (1977) sample size calculation formula:

$$\eta_0 = \frac{(z\alpha)^2}{d^2} p(1-p)$$

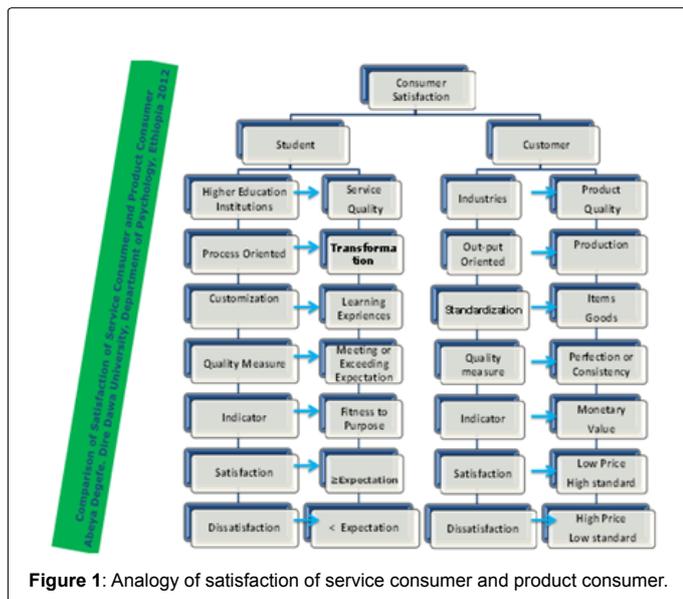


Figure 1: Analogy of satisfaction of service consumer and product consumer.

Where:-

n=The required total sample size of students

N=The total number of number of students in both university (3694)

Z=The standard normal cumulative distribution that corresponds to the 5 percent level of confidence (Z=1.96)

P=The success of probability (proportion of respondents who are satisfied with their universities)

d=The level of precision (sampling error)

For this study, p=0.05, was used to get maximum number of samples (representatives) for our studies. The sampling error (d) is the difference between the parameter to be estimated and the corresponding statistic computed from the sample. In this study a value of sampling error is 0.055 at 5 percent significance level was used. Therefore, the possible sample size estimated for this study was:

$$n_0 = \frac{(z_{0.05/2})^2 \times (1-0.05) \times 0.05}{0.055^2} = \frac{(1.96)^2 \times 0.05 \times 0.05}{(0.055)^2} \approx 315$$

To determine the sample size for general population use the total number of students in both universities. Adding 10% contingency for expected non-response rate, the final sample size estimated is:

$$n = 315 + 0.1(315) \sim 346$$

Therefore, the final sample size selected for this study was 346 students from both Universities. The sample was proportional allocated to both universities [16-20].

From the Table 1, one can understand that more than 80 % of students of the respondents don't know the vision and mission of their Universities. However, relatively more DDU students (38%) than JJU students (22%) know their University's vision and mission.

From the above Table 2, one can understand that there is no significant difference between the two Universities in their expectation level of attributes of satisfaction except for perceived importance of instructional effectiveness and perceived importance of program

relevance to job market.

From the above Table 3, the grand mean score of DDU is greater than the grand mean score of JJU students. These show DDU students have higher expectation than JJU students in Instructional Effectiveness and the grand mean score of JJU is greater than the grand mean score of DDU students, this indicates JJU students have higher expectation than DDU students in Curriculum Relevance to Job Market. Moreover, we can also recognize that students of DDU departments of Biology, Statistics, Chemistry and PSIR have higher expectation for Instructional Effectiveness than their respective departments in JJU. Furthermore depicted that that students of JJU departments of Management, Biology, PSIR, Geography, and Psychology have higher expectation for Curriculum Relevance to Job Market than their respective departments in DDU.

According to both Tables 4 and 5, both the t-test and ANOVA test results showed that there is significant difference between both universities on the satisfaction level except for three attributes; Academic Support, Advice and Counseling, Instructional effectiveness and Admission, Enrollment and Registration [21-24].

### The gap between respondents' expectation and their experience

This section deals with whether the university experience has met the expectation of the students.

From the Table 6, the mean scores of DDU university respondents was relatively greater than mean score of JJU university respondents which shows that both universities had less experience than their expectation.

The Table 7 of Independent Samples t-test shows that there had been no significant differences between the two universities in their perceived relation between their expectation and their actual college experience.

### The extent to which the university experience has met the satisfaction of the respondents

This section deals with the analysis of the degree to which the experience the students had affected their satisfaction. As can be seen from Table 8, the majority of the students reported that they were not satisfied with their experience in the University (47.4%). Comparatively, DDU students were bit better satisfied than JJU students (22%>14%).

Table 9 shows that there was significant difference (F (1, 345); P<0.05=6.893) between both universities in overall satisfaction with the experience they had in the university. This means respondents were different in their satisfaction with college experiences so far.

Table 10 shows that there was no significant difference (F (1, 345); P<0.05=0.769) among departments in overall satisfaction with the experience they had in the university. This means respondents were not different in their satisfaction with their college experiences, department wise.

### Relationship between experience and satisfaction

Stratum sample in university	Population (Nh)	Sample (Nh)
Dire Dawa University	2022	189
Jigjiga University	1672	157
Total	3694	346

Table 1: Sample size.

I know University's Vision and Mission		DDU		JJU	
		Yes	No	Yes	No
CBE	First Year	18	26	6	21
	Second Year	10	20	5	15
	Third Year	12	10	5	11
CNCS	First Year	9	21	5	20
	Second Year	4	13	3	15
	Third Year	7	8	6	8
CSSH	First Year	5	7	2	16
	Second Year	4	2	1	9
	Third Year	3	10	1	8
	Total	72	117	34	123
	Percentage	38	62	22	78

Table 2: Respondents' knowledge of their University's vision and mission.

Attributes of Expectation	T-test for Equality of Means					Difference
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	
Instructional Effectiveness	2.534	344	0.012	0.10525	0.04154	Significant
Academic support, advice and counseling effectiveness	1.828	344	0.068	0.08408	0.046	Not significant
Assessment and evaluation effectiveness	1.754	344	0.08	0.04998	0.02849	Not significant
Facility, infrastructure and resource Quality	-0.333	344	0.739	-0.01351	0.04057	Significant
Curriculum/ Programme relevance to job market	-2.34	344	0.02	-0.07613	0.03254	Significant
Leadership and management effectiveness	-1.635	344	0.103	-0.06231	0.03812	Not significant
Support service quality	0.542	344	0.588	0.01608	0.02965	Not significant
Admission, enrollment and registration effectiveness	1.82	344	0.07	0.04577	0.02515	Not significant
The Availability of various co-curricular activities	1.148	344	0.252	0.05018	0.04372	Not Significant

Table 3: T-test for the expectation level for the attributes of satisfaction by University.

Attributes of Expectation	T-test for Equality of Means					Difference
	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	
Instructional effectiveness	3.169	343	0.002	0.30556	0.09643	Significant
Academic support, advice and counseling effectiveness	2.374	344	0.018	0.22667	0.09548	Significant
Assessment and evaluation effectiveness	0.738	344	0.461	0.07438	0.10075	Not Significant
Facility, infrastructure and resource quality	0.976	344	0.33	0.07717	0.07907	Not Significant
Curriculum/ programme relevance to job market	-0.025	344	0.98	-0.00233	0.09169	Not Significant
Leadership and management effectiveness	0.462	344	0.644	0.04442	0.09612	Not Significant
Support service quality	1.779	344	0.076	0.16641	0.09353	Not Significant
Admission, enrollment and registration effectiveness	2.942	344	0.003	0.2694	0.09158	Significant
The Availability of various co-curricular activities	-0.526	344	0.599	-0.04287	0.08155	Not Significant

Table 4: T-test for the satisfaction level of students by University.

The following section deals with the relationship between Students' College Experience in terms of what they expected and how they were satisfied. Accordingly the following correlation table reveals that there is positive relationship between the two variables.

According to Table 11, there is positive relationship between the extent to which the college experience met the expectation of the respondents and their satisfaction level.

### Relationship between expectation and satisfaction

The following deals with the relationship between Students' Expectations and their actual satisfaction. Accordingly, the correlation table revealed that there is positive relationship between the two variables.

Table 12 explained that there was no significant difference between students' expectation level and their satisfaction level by department in both Universities. Hence, the students were significantly less satisfied than they expected.

Table 13 showed that there was significant difference between

		Sum of Squares	df	Mean Square	F	Sig.	Difference
Perceived Satisfaction on Academic Support and Advice	Between Groups	7.979	1	7.979	10.04	0.002	Significant
	Within Groups	272.583	343	0.795			
	Total	280.562	344				
Perceived Satisfaction on Instructional Effectiveness	Between Groups	4.406	1	4.406	5.636	0.018	Significant
	Within Groups	268.958	344	0.782			
	Total	273.364	345				
Perceived satisfaction on Assessment and Evaluation Effectiveness	Between Groups	0.474	1	0.474	0.545	0.461	Not Significant
	Within Groups	299.482	344	0.871			
	Total	299.957	345				
Perceived Satisfaction on Facilities, Infrastructure and Resources Quality	Between Groups	0.511	1	0.511	0.953	0.330	Not Significant
	Within Groups	184.449	344	0.536			
	Total	184.960	345				
Perceived Satisfaction on Curriculum Relevance to Job	Between Groups	0.000	1	0.000	0.001	0.980	Not Significant
	Within Groups	248.002	344	0.721			
	Total	248.003	345				
Perceived Satisfaction on Leadership and Management Effectiveness	Between Groups	0.169	1	0.169	0.214	0.644	Not Significant
	Within Groups	272.571	344	0.792			
	Total	272.740	345				
Perceived Satisfaction on Support Service Quality	Between Groups	2.375	1	2.375	3.166	0.076	Not Significant
	Within Groups	258.064	344	0.750			
	Total	260.439	345				
Perceived Satisfaction on Admission, Enrollment and Registration	Between Groups	6.224	1	6.224			Significant
	Within Groups	247.417	344	0.719			
	Total	253.642	345				
Perceived Satisfaction on Availability of Various Co-Curricular Activities	Between Groups	0.158	1	0.158	0.570	0.599	Not Significant
	Within Groups	196.201	344	0.570			
	Total	196.358	345				

Table 5: One way ANOVA result for satisfaction level by University.

Mean Score on How far the University Experience met the expectation of the Students								
University	Mean		N		Std. Deviation		Minimum	Maximum
	DDU	JJU	DDU	JJU	DDU	JJU		
CBE	1.5104	1.5238	96	63	0.71074	0.73741	1	3
CNCS	1.5484	1.4386	62	57	0.69371	0.68184	1	3
CSSH	1.7419	1.5946	31	37	0.72882	0.7979	1	3
Total	1.5608	1.5096	189	157	0.70917	0.73045	1	3

Table 6: The extent to which the university experience met respondents' expectation.

	t-test for Equality of Means						
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval	
						Lower	Upper
Did the University Experience met the expectation of the Students	0.661	344	0.509	0.05129	.07763	-0.10140	0.20398

Table 7: Independent t-test for expectation vs experience by University.

Expectation of students and their satisfaction level within University.

## Conclusion

The main aim of this study was to investigate the level of students' satisfaction and its correlates in Eastern part of Ethiopian University

(Dire Dawa and Jigjiga University) using Primary collected data. Both Descriptive and Inferential statistical analyses were employed to examine factors affecting the level of students' satisfaction. This study was based on a dataset of students' satisfaction and their determinants in the case of Eastern Ethiopian universities (Dire Dawa and Jigjiga)

To what extent did your experience met your Expectation?	DDU		JJU		Total	
	Frequency	Percent (%)	Frequency	Percent (%)	Frequency	Percent (%)
Not Satisfied	76	22	88	25.4	164	47.4
Uncertain	37	10.7	21	6.1	58	16.76
Satisfied	76	22	48	13.9	124	35.84
Total	189	54.6	157	45.4	346	100

Table 8: Frequency and percentage of the degree to respondents were satisfied with their experience by University.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.567	1	5.567	6.893	0.009
Within Groups	277.809	344	0.808		
Total	283.376	345			

Table 9: Summary of ANOVA on overall satisfaction with University experience, University wise

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.078	8	0.635	0.769	0.631
Within Groups	278.298	337	0.826		
Total	283.376	345			

Table 10: Summary of ANOVA overall satisfaction with University experience, Department wise

Correlations			
		Experience Meeting Expectation	Satisfaction with Experience
Experience Meeting Expectation	Pearson Correlation	1	.372**
	Sig. (2-tailed)		0
	N	346	346
Satisfaction with Experience	Pearson Correlation	.372**	1
	Sig. (2-tailed)	0	
	N	346	346

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table 11: The correlation between degree of experience meeting expectation and satisfaction level

Correlations			
		Average Expectation	Average Satisfaction
Average Expectation	Pearson Correlation	1	0.2
	Sig. (2-tailed)		0.71
	N	346	345
Average Satisfaction	Pearson Correlation	0.2	1
	Sig. (2-tailed)	0.71	
	N	345	345

Table 12: Correlation between students' expectation and satisfaction by department.

	Paired Differences		T	Df	Sig. (2-tailed)
	Mean	Std. Deviation			
Average Expectation -Average Satisfaction	1.26441	.46424	50.589	344	.000

Table 13: Paired samples T-test for expectation and satisfaction within University.

with an aim of investigate the level of students' satisfaction and its correlates. Out of the total 346 in both university, about (163) 47.11% of the students (respondents) were Female and (183) 52.89% were male.

From the study one can understand that more than 80% of students didn't know the vision and mission of their Universities. However, relatively more DDU students (38%) than JJU students (22%) know

their University's vision and mission when DDU compared with JJU.

The students in DDU had significantly higher expectation than JJU students in Instructional Effectiveness and students. Students in JJU had significantly higher expectation than DDU students in Curriculum relevance to job market. The result of the study showed that there is significant difference in the satisfaction attributes (variables) of

instructional effectiveness, academic support, advice and counseling effectiveness and admission, enrollment, and registration process effectiveness. This indicates the variables are significantly affect the students' satisfaction in both universities. The independent samples t-test shows that there had been no significant differences between the two universities in their perceived relation between their expectation and their actual college experience.

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