ASSESSING STUDENTS LEVEL OF SATISFACTION ON VIRTUAL LEARNING AT ADMASS UNIVERSITY, MEGENAGNA CAMPUS, ADDIS ABABA

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ABSTRACT

The General Objective is to explore the overall satisfaction levels of students on virtual learning at Admass university megenagna campus. In the context of higher education, the Admass University was become a major legendary center of private Higher Education, in a short period, respected by Ethiopian private universities that start alternative media of teaching for the sake of students from the covid 19 pandemics. Subsequently, Students Level of Satisfaction with Virtual Learning did not assess till now. Accordingly, this study attempted to assess the level of satisfaction and the influence factors virtual learning systems success and placed them in a holistic model in the context of admas university students that would enable them to sustainably implement the system. The Delone and McLean (1992, 2003) model, adopted to develop the study model. Several different types of virtual learning students were participated in the study and were employing random sampling. Using random sampling the questioner for Data (n=286) students were gathered via email and telegram. The study used quantitative research methods takes place in two consecutive study phases and analysis encompass descriptive analysis, reliability analysis, correlation and parameter estimation regression analysis. Structural Equation modeling using SPSS to test the model was employed. The quantitative data the study identified five independent variables that determine virtual learning satisfaction: service quality, systems quality, information quality, internet access and electronics device use. The study findings along with its model validation test results show that the model has a predictive power to measure virtual learning satisfaction. The result indicates that some independent variables system quality, service quality, information quality, internet accessibility and the electronic device used have a significant impact and hypothetical relationship on student satisfaction. Data analysis indicated a higher level of satisfaction with the proposed methodology. These results suggest that the presented methodology, which was based on project-based learning in an authentic context that offers opportunities for students to experience virtual learning, was more effective than traditional teaching.

1. INTRODUCTION

Virtual learning is defined as learning that can functionally and effectively occur in the absence of traditional class room environments (Simonson & Schlosser, 2006). At its heart virtual learning is about the learning that takes place outside of the school, or bringing what is outside of the school into the school. So, we are thinking about the online environment as a way of connecting students who may be located physically in a school with their learning that is somewhere else. The Distance Education Initiative Internet is the largest most powerful computer network in the world. This new medium has opened up a whole new world of communication. It has proved to be an invaluable tool for the free flow of information (Huges, K. 1994).

The Distance Education Initiative Internet is the largest most powerful computer network in the world. This new medium has opened up a whole new world of communication. It has proved to be an invaluable tool for the free flow of information (Huges, K. 1994). Organizations that declare it as a policy goal and plan accordingly with milestones and short and long-term goals in implementing tend to have more success than those that implement e-learning ad hoc or on a department-by-department basis (Nichols, 2008). The 21st century has brought about a massive change in the world of education. Gone are those days when teaching was limited only within the confines of a classroom. The internet has brought about a paradigm shift in the fundamental way in which learning is done. It has taken learning beyond the hallowed walls of the universities and into the palms of everyone. Distance learning has undergone drastic changes in recent decades concerning both technology and teaching-learning methods. Students have sought distance learning, which is defined as collaborative learning, whether computer-based or not, that offers synchronous and/or asynchronous tools and is characterized by the physical distance between students and teachers (Kelly, 2011). The high rate of absenteeism in the courses led us to offer virtual classrooms to better meet the expectations of students who may have geographical constraints. Universities are increasingly turning to online or blended formats to teach required courses. Although offering university courses online provides several benefits both to students, who can take courses even from remote locations with the flexibility of studying according to

their schedules and to universities, which can serve more students without having to physically house the courses, online education also brings its own set of challenges. In particular, online learning often results in significantly higher student attrition than face-to-face education (Kauffman, H., 2015).

Among the major contributing factors for the addressing of education is lack of funding for infrastructure, way life of people separated and innovation. As a higher amount of money is spent on infrastructure, staff training, etc., organizations seek to take maximum benefit from online learning which requires an understanding of the factors that drive the adoption, continuation intention, and learning outcome of users on online learning platforms. Therefore, the primary focus of research remains on how to retain online learning users, and increase the efficiency of online learning. To address education throughout the world and individuals that delivering from one source internet-based distance education has vital role technology-based approach potentially can address few groups of students who have access to the internet and private technology equipment like Computer, tablet, smartphone to access internet-based resources on the web or social media. The traditional model of broad-based teaching and research, with large campuses and bureaucratic structure, is unsustainable. Unless universities are transformed an avalanche will sweep the systems away (Barber et al., 2013). The newest generation of undergraduate and postgraduate students is coming to university not only with experience using social networking media such as Twitter and Facebook but also with prior experience using online course software such as Black Board or Moodle (Edmunson, 2007).

Due to safety measures as a result of COVID-19, online learning has become a useful and practical tool for curriculum delivery worldwide (ahemed, et al 2020), (Taha, et al, 2020). Several advantages of online learning for learners have been reported in the literature, including easy accessibility to knowledge, proper content delivery, content standardization, personalized instruction, self-pacing, interactivity and increased convenience (Ellaway and Masters, 2008). During the COVID-19 pandemic, online learning has helped universities keep their doors open for students during lockdown to decrease the spread of the disease (ahemed, et al 2020), (Taha, et al, 2020). Although online learning is the only available solution during the COVID-19 pandemic, student's satisfaction is crucial for a successful and effective learning process. Student satisfaction is related to the value of the learning experiences (Thurmond et al, 2002). The

definition of satisfaction in online learning is complex and multidimensional and includes many factors, such as communication, student participation in online discussions, flexibility, workload, technology support, instructor pedagogical skills, and feedback (Öztürk, et al. 2020), (Wei and Chou, 2020). The whole educational system from elementary to tertiary level has been collapsed during the lockdown period of the novel coronavirus disease 2019 (COVID-19) across the globe including Ethiopia.

Therefore, virtual learning in Ethiopia is an essential way of addressing education. This survey assesses student's level of students satisfaction on virtual learning using with Being a special form of information systems, e-learning systems success depends on various contextual factors which vary across different countries depending on the types of users, culture, technology, available infrastructure and cost of e-learning implementations (Tossy and Msanjila 2017; Lwoga, E. 2014). Develop a holistic model taking the case of admas university megenagna campus that would help them to sustainably implement virtual learning systems. The study forwarded relevant theoretical and practical contributions. However, the virtual learning system of admas University is designed to provide services for students when the Ethiopian government reclaimed to closed all schools due to covid 19. But the preliminary investigation of Students Level of Satisfaction with virtual learning has not been assessed at Admass University. Thus, This Research investigated the satisfaction level of students on virtual learning delivering from admass university Megenagna campus in line with the context of our country and the universities by identifying factors that contribute towards virtual learning systems satisfaction based on different perspectives and develop a new model.

2. LITERATURE REVIEW

2.1 Conceptual Model/Frameworks

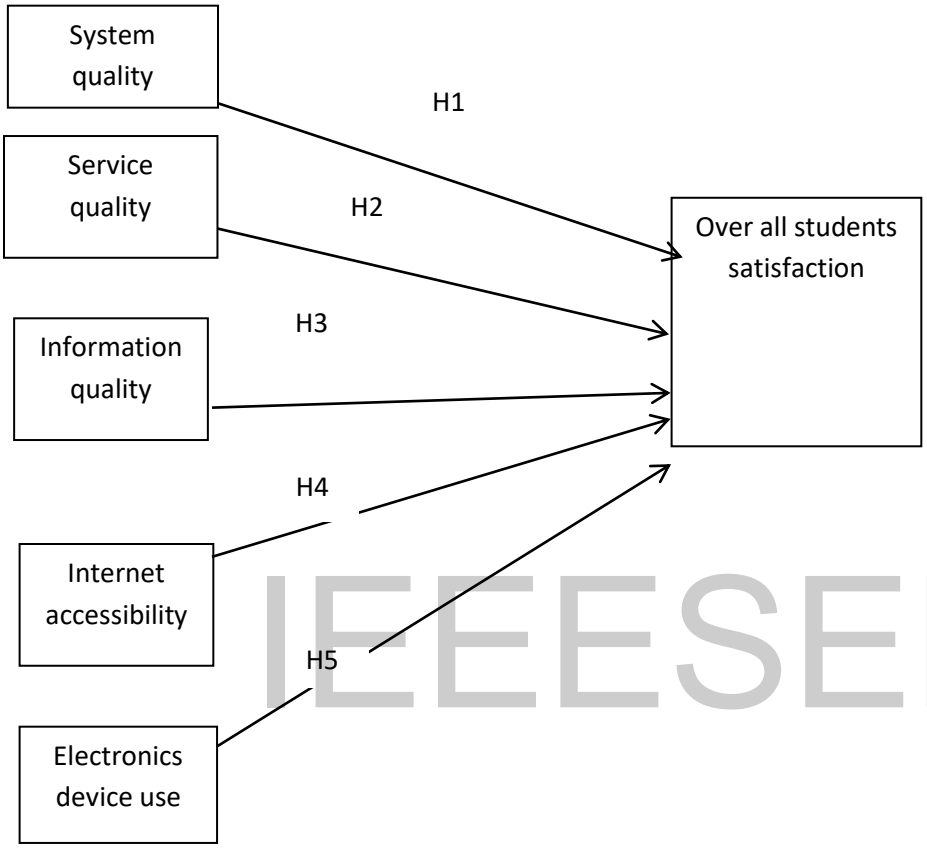
Many researchers have identified important variables dealing with e-Learning. Among them, the technology acceptance model, course design, flexibility, and the expectation and confirmation model have partially contributed to understanding e-Learning success. Student satisfaction is the subjective perceptions, on students' part, of how well a learning environment supports academic success (Lo, C. 2010). Strong student satisfaction implies that appropriately challenging instructional methods are serving to trigger students' thinking and learning. Important elements

in student satisfaction are likely to concern the role of the instructor and the students; these elements may be central to student learning. The present study explored some of these elements, to begin identifying the ones most helpful for ensuring students' academic success (Winberg & Hedman, 2008). (Brownson and Harriman, 2000) argued that students in distance learning do just or even better than face-to-face classroom students. Besides, (Johnson et al. 2000) made a comparative research study and did not find any significant difference in the effectiveness of online learning versus face-to-face course learning for students.

Some studies found that students who participated in online collaborative tasks expressed higher levels of satisfaction with their learning process compared to students who didn't participate in online collaborative learning (Jung et al., 2002). By considering the responses of students who participated in online learning courses, it is possible to better understand the reasons why students are often dissatisfied with their virtual learning experience. Answering this condition, continuous evaluation becomes an important aspect in virtual learning, especially in distance education that most of the course delivery is conducted online.

This research is designed as causal research which tries to investigate the influence of the independent variables on the dependent variable based on the theory that has been formed. This research was conducted based on previous research by (Sun et al. 2008) and (Eom et al. 2008). This research aims to investigate factors that impact student satisfaction in an online learning environment. Based on the literature review and previous research, this research adopts four factors that are predicted will impact student satisfaction; those are service quality, system quality, information quality, internet accessibility, electronic device used for virtual learning, and user satisfaction. To attain the research objective, the hypotheses proposed as follows. . The adoption of virtual learning technology is a complicated process of establishing and developing an integrated information technology system. With the advancement of information and communication technology, virtual learning will be a very promising learning method in the future. No matter how well the implementation of virtual learning, student satisfaction becomes the main focus that should be considered. Design of virtual learning, course structure, and the flexibility of time become key to the success of virtual learning that can take participants to achieve their competencies.

FIGURE 1 CONCEPTUAL MODEL OF STUDENTS OVERALL SATISFACTION



H1: System quality will be positively related to the student's satisfaction.

H2: Service Quality positively influences student's satisfaction

H3: Information quality will be positively related to the student's satisfaction.

H4: Internet accessibility will positively influence student's satisfaction;

H5: electronic device using will be positively related to the student's satisfaction

3. RESEARCH METHODOLOGY

3.1. Research Design

The study is descriptive and aims to measured level student's satisfaction on virtual learning at megenagna campus who attends their class on virtual learning in the period of a crisis and pandemics of Covid-19. The determinant factor for student's satisfaction on virtual learning was also identified. The construct of user satisfaction has been examined in different ways. Some studies have defined user satisfaction on a single-item scale, but this approach leaves many questions as to reliability; thus, the general trend has been to measure user satisfaction on a multiple-item scale (Lee et al., 2009). The satisfaction level of students and benefit analysis was conducted to understand influence factor of system quality, service quality, information quality, internet accessibility, and electronics device use associated with satisfaction of students. (Yin, R. 2003) defines a research design as a logical plan for getting from here to there, where here may be defined as the initial set of research questions to be answered, and there is some set of conclusions (answers) about these questions. Some of its advantages include the ability of its descriptions to be used to indirectly test theory or model behaviors that cannot be studied using any other means (Creswell, 1998).

Several experts in the field of educational research were asked to assess various aspects. These were: clarity of both instructions and purpose of the questionnaire, structure and relevance of the proposed elements (dimensions and items), accuracy of questions, the overall rating and the possibility of adding or removing any element. The final version of the survey incorporated the changes and improvements that were made according to the comments and suggestions of those experts. Thus, the final version consists of 30 questions about the following six dimensions. A questionnaire was constructed; measuring the six core constructs of service quality (SRQ), system quality (SMQ), information quality (INQ), internet accessibility(INA), electronics device use(EDU), and User satisfaction (USS). The constructs were measured by 30 statements. The students were asked to rate their level of agreement to each statement on a five-point Likert scale ("I highly dissatisfied" to "I highly satisfied"). The three core variables constructs from E-

learning Success Model (DeLone & McLean, 2003) were hypothesized to influence students' level of satisfaction on virtual learning and students' level of satisfaction with a service quality (SRQ), system quality (SMQ) and information quality (INQ) positive and negative way. Furthermore, the newly added internet accessibility and electronics device use would have influence students level of satisfaction.

3.2. Research Approach

The survey is a widely used quantitative research which will enable an individual to get the required current data (Creswell, 2003). Quantitative research method relies on quantitative measures that use numerical data (Strangor, 2011). Among the many data collection tools, this study has applied the questionnaire method as the main tool to collect all the relevant data from the reference population.

3.3. Data Type and Data Source

The research was conducted for half of a year, from January/2021 to July/2021. A primary data survey was conducted with 286 students enrolled in admass university megenagna campus students who attend their class on virtual. The questionnaire is also considered appropriate because it enables the respondent's students to complete it at a given time. The major attraction of using the questionnaire is the ability to collect large amounts of data in a relatively short time (Kothari, 2004). An online program named "questioner and Selection Techniques" was designed and offered by email, telegram and other social media to the students. A questionnaire was constructed; measuring the six cores constructs of students satisfaction evaluation on virtual learning, system quality (SMQ), service quality (SRQ), information quality (INQ), internet accessibility (INA), and electronics device use (EDU).

The Survey questionnaire contained 30 questions (as annexed in appendix the questioner consist three sections which were measured by a combination of nominal, ordinal and scales. In the first Section, demographic information was collected with closed-ended questions (gender, age and educational level). In the second Section what the students access internet type and which electronic device use to attend virtual class. The third section covers technical skills and perception of the respondents were collected the closed-ended questions satisfaction level of respondents' measured in A five-point Likert-type scale type. A questionnaire was adapted from

previous studies and Reliability issues were attempted to maintain by using case study protocols for each of the data sources.

The students were asked to rate their level of agreement to each statement on a five-point Likert scale ("1= I highly dissatisfy" to "5= I highly satisfy"). The three-core variables were hypothesized to influence students' level of satisfaction on virtual learning in a positive way. Furthermore, the internet accessibility and electronics Device use for distance learning were explored.

3.3.1. Sampling Technique

In this study simple random sampling is takes place due to a larger group of population. The target participants were all admass university megenagna campus students who attending their class on virtual learning to the respected population (n= 286 students). The campus is located in Ethiopia Addis Ababa. Students were being evaluated based on their view of perspective for the virtual learning. The Students demographic variables were age and gender. All respondents were participating voluntarily without receiving any compensation for their participation. Students were surveyed anonymously. Data on characteristics of students, their learning preferences, and determinant influence factors of virtual learning environment were collected via an online survey, telegram and email. Pretest and posttest of student's satisfaction on virtual learning were also conducted.

3.4. Method of Data Analysis

Data from the questionnaires were analyzed using the Statistical Package for Social Sciences 26 (IBM SPSS 26), descriptive statistics (frequency, mean and standard deviation), correlation and multiple regression impact) were performed first in order to gain the general profile of the students. The frequency distribution, means, Standard Deviation, correlation and regression of key variables were also checked for the relationship and influence satisfaction level of students. Principal Component Analysis was performed to identify the underlying dimensions of the system quality, service quality, internet accessibility, electronics device use for online learning and information quality followed by regression to assess the impact of each factor on students' overall satisfaction. In order to assess the impact of each virtual learning quality factor on students' overall satisfaction, correlation was performed.

3.5. Reliability and Validity

Reliability is assessed in terms of Cronbach's alpha coefficient. A scale is considered reliable if the alpha coefficient is greater than 0.70 (Sekaran, U.2005). In the case of this research, the reliability for all questionnaire items was satisfactory as values for Cronbach's alpha is listed below and each variable had an acceptable, consistency and reliability.

TABLE 1. RELIABILITY AND CONSISTENCY OF DATA TEST

Reliability Statistics			
variables	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No of Items
System quality(SMQ)	.726	.754	5
Service quality(SRQ)	.731	.739	5
Information quality(INQ)	..820	.801	6
User satisfaction (USS)	.681	.721	4

4. RESULTS AND DISCUSSION

4.2. Demographic Profile of Respondents

4.2.1. Age and Gender of respondents

286 Respondents were represented the population and the questionnaires were distributed. The proportion of respondent gender was 173(60.5%) male and 113(39.5%) female. The ages of respondents were grouped into two which about 229(80.1%) of the respondents were less than 35 years old and 57(19.9%) were above 35 years old. The findings of this study showed that the majority of the educational status of the respondents 201(70.2%) were degrees and the rest 85(29.8%) of respondents were masters. From the respondents, 239(83.6%) of students were weekend students and 47(16.4%) were night students. generally. Generally, it can be understood from Table 2 that the majority of the respondents' age and gender distribution of the students were less than 35 years old and male. And also the majority of educational status and student's type distribution of the students were first degree and weekend students.

TABLE 2. AGE AND GENDER OF RESPONDENTS.

variables	demography	no	%
age	<35	229	80.1
	>35	57	19.9
gender	male	173	60.5
	Female	113	39.5
educational status	degree	201	70.2
	masters	85	29.8
student type	weekend	239	83.6
	night	47	16.4
	Total	286	100.0

4.2.2 Technological consideration

4.2.2.1 Electronic Device used for Distance Learning

The survey indicates the main electronics device used for virtual learning was a laptop (personal computer) of a majority 187(65.4%) use to attend the class. A small proportion 42(14.7%) consisted of students who use the desktop in their office. The remaining 57(19.9%) of the respondents were attending their class with a smartphone. It can be understood from Table 3 that the majority of respondent electronics devices used for education distribution was a laptop.

TABLE 3. Electronic Device Use for Virtual Learning of Respondents

Variables	device	no	%
Electronic device use for virtual learning	laptop	187	65.4
	smartphone	57	19.9
	Desk top	42	14.7

4.2.2.2 Internet Accessibility

The survey indicates the internet access that used for virtual learning was grouped under Wi-Fi, mobile data, and CDMA. The majority of the respondents 172(60.1%) did have Wi-Fi access to attend the class. A small proportion of respondents 12(4.2%) who used CDMA. It can be understood from Table 4 that the majority 102(35.7%) of respondents used mobile data.

TABLE 4. THE INTERNET ACCESSIBILITY TYPES

variables	internet accessibility	no	%
internet types	Wi-Fi	172	60.1
	Mobile data	102	35.7
	CDMA	12	4.2
	Total	286	100.0

4.3. Research Objectives (Major Issues of Analysis)

No	Statements	Highly Satisfied	Satisfied	Neutral	Dissatisfied	highly Dissatisfied	mean	Standard deviation
	1. System Quality of virtual learning							
1	Easy to use	29(10.1)	196(68.5)	42(14.7)	14(4.9)	5(1.7)	3.80	.752
2	User as friendly	15(5.2%)	210(73.4 %)	56(19.6%)	-	5(1.7)	3.80	.607
3	Stability	15(5.2%)	29(10.1%)	140(49%)	55(19.2%)	47(16.4%)	2.69	1.032
4	Security	16(5.6%)	169(59.1 %)	69(24.1%)	27(9.4%)	5(1.7%)	3.57	.808
5	Fast	42(14.7%)	73(25.5%)	84(29.4%)	28(9.8%)	59(20.6%)	3.04	1.331

	2. Service Quality of Virtual Learning							
1	Preventing physical movement	113(39.5%)	128(44.8 %)	13(4.5%)	-	32(11.2%)	4.01	1.205
2	Responsive	15(5.2%)	210(73.4 %)	38(13.3%)	15(5.2%)	8(2.8%)	3.73	.759
3	Fairness Of all individual	44(15.4%)	140(49.0 %)	79(27.6%)	15(5.2%)	8(2.8%)	3.69	.893
4	Knowledge	-	143(50%)	97(33.9%)	38(13.3%)	8(2.8%)	3.31	.806
5	Easily Availability	-	181(63.3 %)	43(15%)	54(18.9%)	8(2.8%)	3.39	.886
	3. Information Quality of Virtual Learning							
1	Well organized	29(10.1%)	115(40.2 %)	87(30.4%)	55(19.2%)		3.41	.913
2	Effectively presented	1(.3)	115(40.2 %)	91(31.8%)	46(16.1%)	33(11.5%)	3.02	1.021
3	The right length of lecture	14(4.9%)	144(50.3 %)	49(17.1%)	46(16.1%)	33(11.5%)	3.21	1.132
4	Clearly written or visualization	59(20.6%)	100(35%)	36(12.6%)	58(20.3%)	43(15%)	3.33	1.318
5	Usefulness	-	219(76.6 %)	16(5.6%)	48(16.8%)	3(1.0%)	3.58	.803
6	Up to date information	-	172(60.1 %)	71(24.8%)	42(14.7%)	1(.3)	3.45	.751
	4. Overall Student Satisfaction of Virtual Learning							
1	Overall satisfaction	--	241(84.3 %)	41(14.3%)	--	4(1.4%)	3.81	.486
2	Enjoyable experience	15(5.2%)	182(63.6 %)	15(5.2%)	68(23.8%)	6(2.1%)	3.46	.979
3	Overall success	29(10.1%)	196(68.5 %)	54(18.9%)	1(.3%)	6(2.1%)	3.84	.685
4	Recommended to others	--	214(74.8 %)	31(10.8%)	15(5.2%)	26(9.1%)	3.51	.950

FIGURE 3. CROSS TABULAR INTERNET ACCESSIBILITY TO USER SATISFACTION

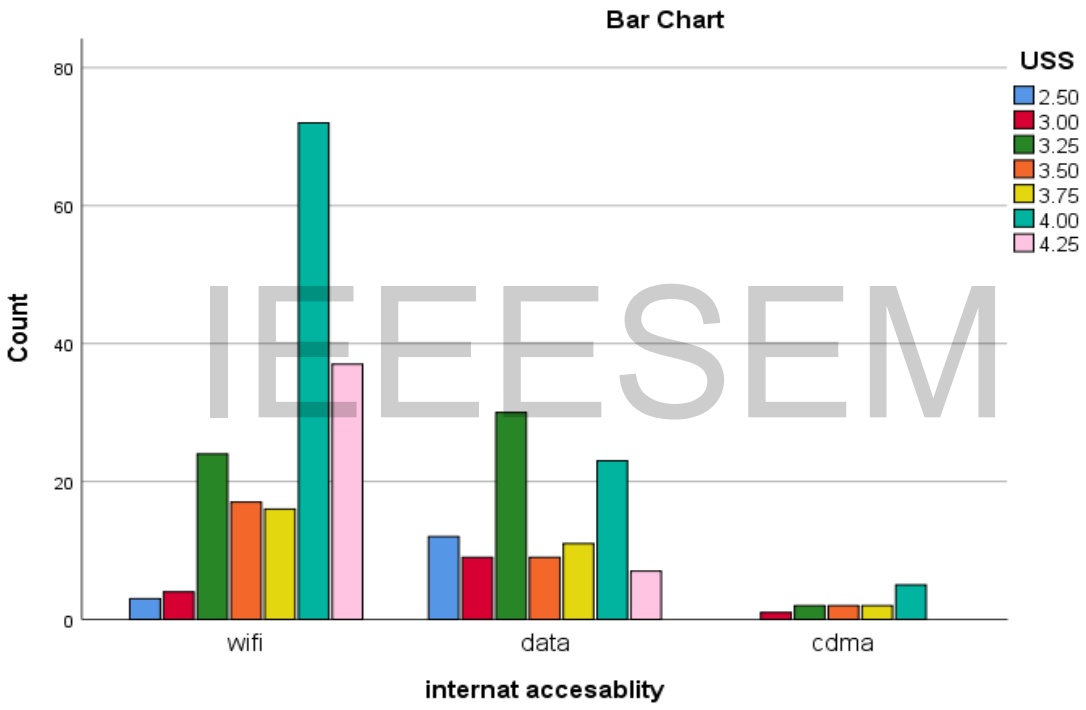


FIGURE 4. CROSS TABULAR ELECTRONIC DEVICE USE TO USER SATISFACTION

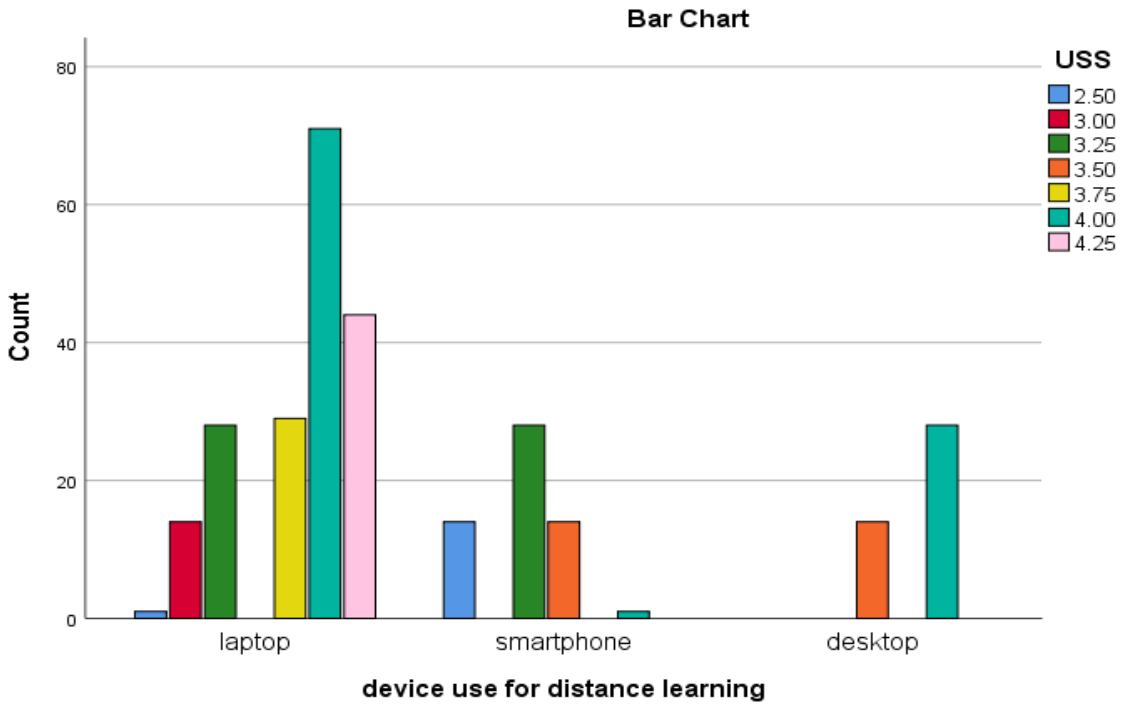


TABLE 9. CORRELATION COEFFICIENTS

			EDU	SRQ	INQ	SMQ	USS
Spearman's rho	**INA**	Correlation Coefficient	.092	-.256**	-.224**	-.123*	**-.348****
		Sig. (2-tailed)	.120	.000	.000	.038	**.000**
	EDU	Correlation Coefficient		-.560**	.100	.082	**-.291****
		Sig. (2-tailed)		.000	.093	.164	**.000**
	SRQ	Correlation Coefficient			.454**	.027	**.795****
		Sig. (2-tailed)			.000	.650	**.000**
	INQ	Correlation Coefficient				.131*	**.732****
		Sig. (2-tailed)				.026	**.000**
	SMQ	Correlation Coefficient					**.257****

Sig. (2-tailed)	**.000**

A number of significant correlations between the student's satisfaction and system quality, information quality, service quality, electronics device use types, and internet access were found. Positive correlations were identified between system quality on user satisfaction at ($r = 0.257$; $p < 0.01$). The information quality was positively and strong correlated with students satisfaction($r = 0.732$; $p < 0.01$) which is more advantageous and finds it easier to explain students satisfaction on virtual learning. Service quality was positively strong correlated to students satisfaction ($r = 0.795$; $p < 0.01$), as was highly and positively correlated. Students who use laptop computer electronic device type the students level of satisfaction on virtual learning environment often find it better than those of use smartphone, and were negatively correlated ($r = -0.291$; $p < 0.01$) more confident in computer use. Finally, the internet access was negatively and moderate correlated with students satisfaction($r = -0.348$; $p < 0.01$). Students who access Wi-Fi had higher degree of satisfaction than mobile data users.

4.5: Discussion of findings

In the present study, the authors evaluated the different variables directly linked with students' satisfaction with virtual learning. Due to the pandemic situation globally, all the colleges and universities were shifted to online mode by their respective governments. No one has the information that how long this pandemic will remain, and hence the teaching method was shifted to virtual mode. Even though some of the educators were not tech-savvy, they updated themselves to battle the unexpected circumstance (Pillai et al., 2021). The purpose of this study was to examine the satisfaction level students of on virtual learning at Admas University megenagna campus in Addis Ababa, Ethiopia. The study results will help the educators to increase the student's satisfaction in virtual learning. And also assists educators in understanding the different factors that are required for virtual learning. Five hypotheses are discussed in line with the findings direct linkage as shown figure 2. System quality, service quality, information quality, internet access and electronics device use with student's satisfaction. Based on changes in the role and management of information systems; we have updated our original success model. The updated model is presented in Figure 2 As discussed earlier, system quality service quality; information quality, internet access and electronics device type has three major dimensions. Each should be measured or controlled for separately individually or jointly, they

will affect subsequent "user satisfaction." The nature of these causal associations should be hypothesized within the context of a particular study. Relationship of Factors in system quality, service quality and information quality Courses to Overall Satisfaction a spearman correlation coefficient was calculated for the relationship between student satisfactions with each of the five factors.

A series of correlations and parametric estimation were calculated to examine the relationships between system quality, service quality, and information quality to their satisfaction level. The data analyses to address the first research question indicated that understandability and International illustration were significantly and positively related to enjoyment. Cronbach's analysis was conducted on the "satisfaction of students on virtual learning "sub-scale of questioner survey. It was found that the subscale's alpha level was 0.819 which indicates that the subscale has an acceptable level of inter-item reliability.

Thus, the first hypothetic H1 Service quality was positively strong correlated to student's satisfaction, thus, it is supported in this study. The present study's findings indicated that service quality was the most prominent factor that affects the student's satisfaction for virtual learning. This means that the service quality needs to be very efficient improvement. If the service quality can improve properly, it influences the student's satisfaction. The present study highlighted that H2 (system quality) was Positive correlations and significance with user satisfaction and it is the second most prominent factor affecting students' satisfaction. The third variables correlated with the student's satisfaction were information quality. But the internet access and electronics device use type correlated negatively with student's satisfaction and significance. The understanding of the respondent satisfaction level between who had Wi-Fi accesses and mobile data user was different. And also the students who attend virtual class via laptop and smart phone did have different consideration towards satisfaction level. If the university understands the service quality, system quality, information quality internet access and electronics device use as customizes and improve student's satisfaction will increase, then it is expected that the students will satisfied better with the virtual learning.

Comparing the current research with past studies, the past studies have examined the factors affecting the student's satisfaction in virtual learning. However, the present study was conducted

during lockdown period to identify the prominent factors that derive the student's satisfaction with virtual learning. User Satisfaction, constructs were also examined by several numbers of studies reporting positive relationships in studies by Chiu et al. (2007), Halawi et al. (2007), Bharati & Chaudhury (2006), Kulkarni et al. (2006), Wu & Wang (2006) on the contrary, the non-significant relationship was reported between these constructs in studies by Vlahos et al. (2004) and Ang & Soh (1997). The probable argument is that nowadays students are not reasonably satisfied with service quality only. Students judge their satisfaction based on system quality and information quality. Thus, only service quality is not good enough to influence student satisfaction. This finding is not parallel with past studies initiated by Hishamuddin et al. (2008), Yunus et al. (2010), Asaduzzaman and Mahabubur (2013), and Ambrose et al. (2014). This study also resembles with previous study conducted by Dib and Alnazer (2013) in respect of higher education services. Parasuraman et al. (1985) showed that satisfaction is the emotional position derived from the emotion which is combined with the consumer's previous feelings regarding consumption experience. Gilbert and Horsnell (1998) redefined customer satisfaction as an existing position of thoughts in which the client's requirements, and hopes throughout the product or service lifecycle have been satisfied or surpassed. In general, the customer satisfaction is the outcome of communication between prior-purchase and after-purchase evaluation

The findings of the current study could be beneficial for planning, designing and delivering virtual learning activities and it could increase student satisfaction with virtual learning and, consequently, the quality of learning. Correspondingly, it would be advantageous in increasing student engagement. To increase satisfaction and future improvement, the study recommends a combination of synchronous and asynchronous online approaches, incorporating different applications with the learning management systems used to engage students in virtual learning. Constructive and timely feedback on student performance is essential to enhancing their satisfaction with online learning.

The limitation of this study is the use of a self-assessment questionnaire. Further analysis is required to provide an in-depth exploration of factors affecting satisfaction. The implementation of information and communication technology for education is an emerging technology in the world, especially in higher education. Many educational institutions utilize virtual learning as an alternative way of representative of modern education. Consequently, several adoptions related

critical factors must be carefully evaluated before, during, and after any adoption of the technology.

5. SUMMARY OF FINDINGS:

This research tried to assess the factors that affect student satisfaction with virtual learning. The study was conducted by sending 30 questionnaires to students who were attending their class on virtual. As many as 286 questionnaires were gathered and used for further analysis. The results showed that system quality, service quality, information quality, electronic device used and internet accessibility were the independent variables for student level of satisfaction The research answered questions and meets the objective of the study.

5.1. Conclusion

the objective of This study "Assessing Students Level Of Satisfaction On Virtual Learning At Admass University, Megenagna Campus, Addis Ababa" firstly aimed to measure student satisfaction influenced by service quality, system quality, and information quality delivered by admass universities megenagna campus in Addis Ababa. This research also tried to find out if, the system quality, service quality, information quality, internet accessibility and electronic device use for virtual learning to relationship with satisfaction of students. This study tries to answer the following question

1. To what extent is system quality influence satisfaction levels of students enrolled in admas university megenagna campus?

2. To what extent is service quality influence the satisfaction level of students enrolled in admas university megenagna campus?

3. To what extent is the information quality influence the satisfaction level of students enrolled in admas university megenagna campus?

4. Doese internet accessibility influence the satisfaction level of students enrolled in admas university megenagna campus?

5. Does electronics device type influence the satisfaction level of students enrolled in admas university megenagna campus?

To accomplish the research objectives, a questionnaire survey was conducted from 16th February 2021 to 13th Jun 2021 by using a quantitative survey. Research questions were adopted from the studies by (Holsapple, and Lee-Post, (2006). The data was analyzed using SPSS 26. All the research questions of this study were answered in chapter five. We can conclude that all these service quality, system quality, and information quality variables positively influence student satisfaction. If there is an increase in the quality of these variables, it should help to increase the satisfaction level of the students. For the research question "Does internet access and electronic device use for virtual learning influence satisfaction level of students?" We found students who have access Wi-Fi internet access were better satisfaction level than mobile data user students who of satisfaction. After the analysis of the survey of all the collected data, we can conclude that these service quality, system quality, and information variables have significant and positively relationships with the overall satisfaction of the students who were attending class with virtual at admas universities megenagna campus. The service quality variables and student satisfaction have a moderately positive correlation which means there is still room for continuous improvement. The university may try to focus and put more effort into the service quality variables like non-academic aspects, and program issues because they have the lowest mean scores. The university can make some improvements to increase the satisfaction level of the students more by improving system quality service quality and information quality. They might try to provide various counseling services about career, education, and perhaps finance or others issues. Universities should provide a wide range of special programs and other programs with flexible structures, which gives more options for students to enroll. The university should also consider focusing on the other variables since other variables like academic aspects, reputation, and design delivery, and assessment, as are important variables for influencing the satisfaction level.

5.2. RECOMMENDATIONS

This study should be taken as timely and relevant in the admass university megenagna campus context. It is further recommended that Admas University should make a greater effort to utilize

the full potential of virtual learning framework for the sector to assure it. This suggests that institutions should pay more attention to the quality of virtual learning especially in terms of service quality, system quality, and information quality for ease of use, and the interaction between lecturers and students. Improving these factors related to the quality of virtual is expected to enhance student learning outcomes. Students' participation in virtual learning can also help them to improve their learning quality to achieve the expected competencies. Based on study results and researcher conclusions, suggests the following recommendations to meet the study objectives:

- Ensuring adequate training and user support services for students rather than assuming that students are deft with technologies. Developing and supporting faculty is crucial to the success of institutions as learning organizations. One approach to improve virtual learning system pre awareness creating and post evaluation mechanism department or implement "brown–bag" lunch seminars to routinely exchange ideas and share experiences platforms. Ideas, experiences, and best pedagogical teaching practices for the enhancement of virtual Learning courses would be beneficial for faculty development and student learning experiences and satisfaction virtual Learning.

- The university should pay high attention to Technological / IT infrastructural issues especially for internet access and sustainable power supply in the university. Automatic generator power source, broad band and wireless internet needed be installing for reserve emergency interruption

- I also suggest including virtual learning use as another criterion in the yearly assessment method that is used to evaluate teaching staff performance. The institution shall to have online feedback box and review it daily and response quickly.

- Preparing professional technical staff is necessary to maintain virtual learning and support users. If learners or instructors face any difficulty, quick support should be provided to avoid user disruption. For the stability of the virtual learning system, Information Technology department and One IT expert represent to control the operation.

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