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Satisfaction of Management Undergraduates towards the Online Learning: A Study in Sri Lankan Context

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Abstract: ***This study investigates the factors which impact on online learning satisfaction of the undergraduates of the Faculty of Management Studies and Commerce (FMSC) of University of Sri Jayewardenepura (USJ) during the COVID'19 pandemic outbreak. In conducting this quantitative research, 600 undergraduates who participated in online lectures and tutorials during the pandemic outbreak were selected as the sample out of nearly a 5000 population. An electronically shared questionnaire was administrated in collecting data. Multiple linear regression analysis was conducted in testing hypothesis. Moreover a correlation analysis was done in order to identify the relationship between the learner satisfaction and several other variables. The findings of the study revealed that educator's role and relations, course design and quality, richness of media, and learner self-efficacy are significant factors that positively impact on the online learning satisfaction of undergraduates of FMSC, USJ. Further the results of the correlation analysis exposed that there is a positive significant relationships between learner satisfaction and learner's internet strength, learner satisfaction and level of English language skills, and learner satisfaction and level of IT skills. This research gives a significant insight on which spheres should be addressed in implementing online learning agendas relation to the Sri Lankan higher education.***

Keywords: COVID'19, Learner, Online learning, Satisfaction, Virtual classroom

1. Introduction

An Online Learning Environment (OLE) is a set of teaching and learning tools designed to enhance a student's learning experience by including computer and the internet in the learning process [1]. E-learning is gaining a significant impact in higher education, especially in the format of blended learning, and this new kind of traditional teaching and learning can be practiced in many ways [2]. The prominence of online learning in the higher education sector of Sri Lanka was highly emphasized with the rise of COVID'19 pandemic outbreak. With the rise of the first wave of the pandemic outbreak, the universities were closed and temporarily ceased all physical and face to face interactions with the students. With the proper guidance and compelled by the University Grants Commission, the universities undertook to conduct the lectures by using virtual platforms. ZOOM, Google Classroom, Moodle, and Blackboard are the popular virtual classroom applications that play a vital role in the transition from face-to-face classes to online and e-learning systems [3]. The Faculty of Management Studies and Commerce (FMSC) of University of Sri Jayewardenepura (USJ) also commenced their lectures through online basis by using the cloud based peer-to-peer software platforms such ZOOM and MS Teams, and Moodle is used as an assistant. Most of the lectures and tutorials were conducted in real time online classes by using the aforementioned software platforms and the video of the lecture conducted via online was subsequently uploaded to You Tube with the purpose of giving the opportunity for the students who were faced with difficulties and interruptions when participating with the online classes, to refer back the lecture.

At the first phase of commencing online lectures by FMSC, certain resistances and barriers emerged from the side of the students such unavailability of devices and strong connection. However, after a faculty-wide survey it was ensured that the majority of students are feasible with online learning and alternative methods were proposed for the limited number of unfeasible students. In that milieu, this study is aimed to investigate the factors which impact on undergraduates' satisfaction on online lectures and tutorials conducted by FMSC of USJ during the COVID'19 pandemic period. This research gives a significant insight on which spheres should be addressed in implementing online learning agendas relation to the Sri Lankan higher education.

2. Literature Review

Educational technology options are evolving, from the online classroom to the use of voting software, digital e-books and adaptive learning management systems, and have changed the way higher education institutions access curricular and learning engagement [4]. Online learning is defined as any class that delivers at least part of its curriculum in the online delivery system or it is a transmission of information and / or communication over the Internet without the interaction of instructors and students in physical presence [5]. Online learning is generally defined in contradistinction to face to face learning [6]. The most prominent feature of online learning is the absence of a physical classroom, which is replaced by the use of web-based technologies facilitating opportunities for out-of-class learning, independent of time, place and pace [7]. Online learning has been promoted as a cost effective, convenient and more convenient than traditional educational

environments as well as allowing more learners to pursue their education [8]. The convenience and flexibility which is facilitated through anytime and anywhere accessibility, ability to conceal the personal identities i.e. regardless of race, sex, disabilities are on equal ground, enabling the students to store and retrieve the information effectively are identified as some factors for the huge popularity of online learning [9], [10], [11]. However, some studies reveal that online learning is not as effective as traditional classroom learning because of its lack of face to face interactions[12]. Some students feel disconnected from others in an online learning environment because of the lack of facial expressions and other features common to a traditional classroom environment [13].

Collaborating and sharing of resources is limited in the online classrooms, but online learning enables learning, collaborating, and sharing of resources beyond a physical classroom while online learning environment facilitates features such as, user centre, user control and communication, and making teaching learning process learner centric [1]. Educator presence in online settings, interactions between students, teachers and content, and designed connections between online and offline activities as well as between campus-related and practice-related activities are the prominent factors among the plenty of factors which impact on the satisfaction in online-learning among the undergraduates [2]. When using online platforms for learning, it is very important to think about the student satisfaction, which is identified as a specific result of learning rather than a condition for learning [14]. Regardless of the popularity of online learning, student satisfaction with online learning is considered as one of the most important indicators of the quality of online learning experience [15]. Students are more satisfied with online learning if students believe that their professors effectively communicate, facilitate or encourage their learning, effectively organize the course series, show interest in students' learning and progress, respect students and evaluate students' work accurately [16]. Learner satisfaction refers to attitudes, perceptions and expectation of learners toward a specific mode of learning [17]. Learner is likely to be satisfied when the expectations of the learning environment, design of a course, teaching practices and learner achievement are met [18].

The factor of educator's roles and relations is identified as a significant factor which influence on learner's satisfaction within an online teaching platform. Attendance of educator can be established for an online class such as regular communication with students, consistent feedback and critical discourse exemplified by the educator [19]. Teacher instant behavior and the presence of others are important for those involved in providing online education [8]. Design of the course also matters when generating the student's satisfaction in online learning. In professional education, it is important that online and campus activities are relevant to future careers and that as part of the curriculum of professional programs, both content and skills should be developed accordingly for the transmission of knowledge and acquisition of skills [20].Under the design of the course, the attributes such development and design of the course resources, curriculum, instructional strategies and methodologies, course schedule, and overall planning of a course before, during, and after a course is taught are taken in to account [21]. The satisfaction of the student in an online class relies on the sufficient learner support as well. Some suggest that an educational framework, clear scaffolding of learning activities (via podcasts or online tutorials), proper use of media, assessment tasks, and student-staff communication are essential for students' learning experiences in a mixed learning background [22].

Richness of the media/ online platform is another prominent factor which determines the satisfaction of the students in online learning. Media richness refers to the extent to which a medium can support language variety, feedback, nonverbal cues, and learning [23]. This phenomenon is related to the concept of social presence which is often characterized in literature. Social presence represents the degree to which a medium is perceived as conveying the actual physical presence of the communicating participants [23].The theory of social presence argues that different media nurture different levels of cognition and immediacy and impact on media users, increasing interventions, performance, persuasion, social interactions [24]. Learner's self-efficacy is identified as a factor which influence his/her satisfaction in online learning. Learners with high self-efficacy are more confident in accomplishing e-Learning activities and improving their satisfaction [25]. Distance learning self-efficacy, self-regulated learning skills, and information literacy skills are prominent determinants of learners' overall attainments in distance learning [26].

3. Conceptual Framework

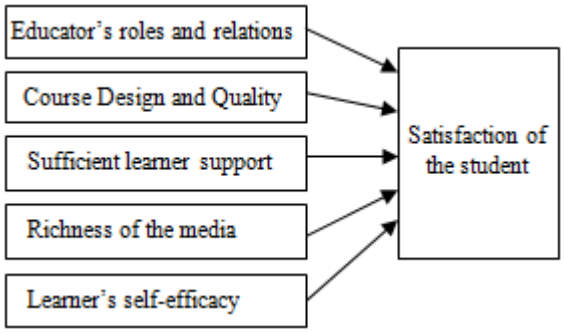

Figure 0.1: Conceptual framework
Source: Author compilation

Hypothesis

H1: There is a significant impact of educator's roles and relations towards the satisfaction of the student.
H2: There is a significant impact of course design towards the satisfaction of the student.
H3: There is a significant impact of sufficient learner support towards the satisfaction of the student.
H4: There is a significant impact of richness of the media/ online platform towards the satisfaction of the student.
H5: There is a significant impact of learner's self-efficacy towards the satisfaction of the student.

4. Methodology

This Quantitative study is aligned with the Positivism Philosophy which is preferably working with an observable

social reality and finally generalizing the end results. Under the ontological stance this research is inspired by the objectivism which describes social entities as independent social actors. Undergraduates of the faculty of Management studies and Commerce of University of Sri Jayewardenepura are concerned as the population of this study. There are only 5000 undergraduates who are currently studying in the faculty. 600 (n=600) of respondents were selected as the sample of the study by using the convenient sampling technique. In primary data collection, an electronically designed (Google form) questionnaire was administered. The validity and reliability of the data collection instrument was assured through conducting a pilot survey and reference of related literature. Cronbach's Alpha value ($\alpha > 0.7$) was counted to measure the reliability of the items and variables.

SPSS package was used in analyzing collected data. In descriptive analysis, a percentage analysis for the demographic variables and mean value analysis for the variables was conducted. Under descriptive analysis, frequency/ percentage analysis of variables and mean comparison is done. Correlation analysis was conducted to investigate whether there is any significant relationship between internet strength when attending the online class, number of hours attended to online lectures per week, English language skills and I.T knowledge. The multiple linear regression analysis was done in hypothesis testing.

5. Data Analysis

Descriptive Data Analysis

Table 0.1: Gender composition

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	181	30.2	30.2	30.2
	Female	419	69.8	69.8	100.0
	Total	600	100.0	100.0	

Source: Survey data

As per the Table 4.1 the majority of respondents of the study are females. It is approximately 70%. Male respondents consist of nearly 30% from the total population.

Table 0.2: Degree year of respondents

Degree year of respondent					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Year I	153	25.5	25.5	25.5
	Year II	153	25.5	25.5	51.0
	Year III	156	26.0	26.0	77.0
	Year IV	138	23.0	23.0	100.0
	Total	600	100.0	100.0	

Source: Survey data

There is a fair representation of respondents from each degree year. According to the Table 4.2, 26% of the total sample is represented by the students from Year III. 25.5% from Year I and II each and 23% from year IV. However, the variation of representation among different degree years is very low.

Table 0.3: Device used when attending online lectures

Device used when attending online lectures					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Desktop computer	8	1.3	1.3	1.3
	Laptop computer	198	33.0	33.0	34.3
	Tab	7	1.2	1.2	35.5
	Smart phone	387	64.5	64.5	100.0
	Total	600	100.0	100.0	

Source: Survey data

As per Table 4.3, 64.5% of the students use their smart phone to attend online lectures. 33% of the students are using their laptops. Usage of desktop computer or tablet is very low. It is 1.3% and 1.2% respectively.

Table 0.4: Internet Strength when attending online lectures

Internet Strength when attending online lectures					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strong	64	10.7	10.7	10.7
	Moderate	401	66.8	66.8	77.5
	Poor	135	22.5	22.5	100.0
	Total	600	100.0	100.0	

Source: Survey data

Majority of the students login to online lectures under a moderate level of internet speed. It is 66.8% as a percentage. 22.5% of the students attend online lectures under a poor internet speed and only 10.7% from the total sample are having a strong internet connection.

Table 0.5: Hours spent for online lectures (weekly)

Hours spent for online lectures (weekly)					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 10 hours	178	29.7	29.7	29.7
	10-20 hours	301	50.2	50.2	79.8
	21-30 hours	96	16.0	16.0	95.8
	More than 30 hours	25	4.2	4.2	100.0
	Total	600	100.0	100.0	

Source: Survey data

Most of the students of the Faculty attend online lectures between 10 to 20 hours per week. As a percentage it is 50.2%. 29.7% of students attend lectures below 10 hours per week. Approximately 20% of students spend more than 20 hours per week for online lectures.

Table 0.6: Level of English language skills

Level of English language skills					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	83	13.8	13.8	13.8
	Good	171	28.5	28.5	42.3
	Average	199	33.2	33.2	75.5
	Poor	103	17.2	17.2	92.7
	Very poor	44	7.3	7.3	100.0
	Total	600	100.0	100.0	

Source: Survey data

33.2% of the respondents have an average level of English language skills. The level of English language skills of 28.5% of the selected population is good. 17.2% of the

respondents are poor in English. Moreover, 13.8% of respondents are excellent in English while 7.3% are very poor.

Table 0.7: Level of IT related skills

Level of IT related skills					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	52	8.7	8.7	8.7
	Good	190	31.7	31.7	40.3
	Average	225	37.5	37.5	77.8
	Poor	101	16.8	16.8	94.7
	Very poor	32	5.3	5.3	100.0
	Total	600	100.0	100.0	

Source: Survey data

The level of IT skills of most of the respondents is in moderate. It is 37.5% as a percentage. The level of IT skills of 31.7% of the respondents is good. 16.8% of the respondents are poor in IT. The level of IT skills of 8.7% is excellent while 5.3% are very poor in IT.

Table 0.8: Opinion, when comparing an online course with a normal classroom course

Opinion, when comparing an online course with a normal classroom course					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Equal satisfaction on both online class and face-to-face classes	119	19.8	19.8	19.8
	Face-to-face class better than an online class	324	54.0	54.0	73.8
	Online class is better than face-to-face class	111	18.5	18.5	92.3
	I cannot tell which method of learning is better	46	7.7	7.7	100.0
	Total	600	100.0	100.0	

Source: Survey data

Most of the respondents believe that a face-to-face class is better than an online class. It is 54% as a percentage. Only 18.5% of the respondents believe that an online class is better than a face-to-face class. 19.8% of respondents stated that they have an equal satisfaction on both online classes and face-to-face classes. 7.7% of the participants cannot imagine which method of learning is better out of face-to-face learning and online learning.

Frequency Analysis- Mean comparison

Table 0.9: Mean comparison

Statistics							
		Satisfaction	Educator	Course	Support	Media	Self Efficacy
N	Valid	600	600	600	600	600	600
	Missing	0	0	0	0	0	0
Mean		2.7850	2.7413	2.6253	2.6504	2.5829	2.7327
Std. Deviation		.93878	.82289	.79993	.81486	.91494	.84829
Skewness		-.024	.008	.134	.121	.070	-.037
Std. Error of Skewness		.100	.100	.100	.100	.100	.100
Kurtosis		-.372	-.042	-.073	-.253	-.345	-.291
Std. Error of Kurtosis		.199	.199	.199	.199	.199	.199

Note: Five-point Likert scale was used (1- Strongly Agree; 5- Strongly Disagree)
Source: Survey data

The above Table 4.9 presents the frequency distribution of the variables. The mean value of the dependent variable and independent variables remain between 2 and 3. The mean value of student's satisfaction of online learning is 2.79 (0.93) and remains in positive side of the scale. Since it is closer to 3, it can be said that the satisfaction of the respondents on online learning during the COVID'19 pandemic period is in a moderate level. The mean values of educator's role and relations, course design and quality, learner support, richness of media, and learner self-efficacy are 2.74 (0.82), 2.62 (0.8), 2.65 (0.81), 2.58 (0.91), 2.73 (0.85) respectively. The above values are also below 3 which indicate that the responses are dispersed to the agree/ higer side but very close to a moderate level as a whole. Further, the skewness and kurtosis values lies between +3 and (-3), which can be said that the variables are normally distributed.

Reliability Test – Cronbach's Alpha

Table 0.10: Reliability statistics

Variable	Crombach's Alpha value	Number of items
Satisfaction of the student	0.925	5
Educator's roles and relations	0.913	5
Course design and quality	0.843	5
Sufficient learner support	0.840	4
Richness of media	0.934	4
Learner self-efficacy	0.878	5

Source: Survey data

The reliability of a measure indicates the extent to which it is without bias (error free) and hence ensures consistent measurement across time and across various items in the instrument. Cronbach's Alpha statistic is used in testing the reliability of the selected variables. According to the analysis, all variables show a higher degree of reliability with a Cronbach's Alpha value higher than 0.7 which satisfies the rule of thumb. As per the Table 4.10, variable of "Richness of media" has the highest reliability with a

Cronbach's Alpha value of 0.934. The Cronbach's Alpha values of all the variables are higher than 0.8 which indicates that there is a better internal consistency of the variables.

Correlation

Correlation analysis is conducted to identify whether there is a significant relationship between students' satisfaction towards online learning and several other variables, namely, internet strength when attending the online class, number of hours attended to online lectures per week, level of English language skills, and level of IT skills.

Table 0.11: Correlation analysis

Correlations					
	Satisfaction	Internet Strength	Hours attend	English	I.T
Satisfaction	Pearson Correlation	.303**	-.051	.387**	.329**
	Sig. (2-tailed)	.000	.211	.000	.000
	N	600	600	600	600
**. Correlation is significant at the 0.01 level (2-tailed).					

Source: Survey data

As Table 4.11 demonstrates, there is a weak positive significant relationship between students' satisfaction and internet strength when attending the online class, number of hours attended to online lectures per week, level of English language skills, and level of IT skills. There is no significant relationship between students' satisfaction and number of hours attended to online lectures per week during the COVID'19 pandemic period.

Regression: Hypothesis testing

In order to investigate the factors which impact on the satisfaction of online learning among the undergraduates of FMSC, USJ, a regression analysis was done. The output and the interpretation of the regression are as follows.

Table 0.12: Model summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.813[a]	.662	.659	.54847
a. Predictors: (Constant), Self Efficacy, Educator, Media, Course, Support				

Source: Survey data

The fitness of the model described by the R Squared with a value of 65.9% where the satisfaction level can be described by the explanatory variables as a good level in the multiple regression model. Therefore, it can be conclude that, since the explanatory power of the model is good, the explanatory power of the selected model is also good.

Table 0.13: ANOVA

ANOVA[b]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	349.221	5	69.844	232.184	.000[a]
	Residual	178.684	594	.301		
	Total	527.905	599			
a. Predictors: (Constant), Self Efficacy, Educator, Media, Course, Support						
b. Dependent Variable: Satisfaction						

Source: Survey data

As per the analysis of variance of the regression the F statistical significance (probability value < 0.05) takes almost zero value giving satisfactory circumstance to admit the regression model. As per the results, the overall model is significant at 95% confident level.

Table 0.14: Coefficients

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.103	.085		1.209	.227		
	Educator	.188	.048	.165	3.923	.000	.322	3.104
	Course	.538	.056	.459	9.538	.000	.246	4.061
	Support	-.056	.056	-.049	-1.000	.318	.239	4.176
	Media	.159	.044	.155	3.593	.000	.305	3.276
	Self_Efficacy	.179	.046	.162	3.914	.000	.333	3.005
a. Dependent Variable: Satisfaction								

Source: Survey data

As per the regression statistics, educator's role and relations, course design and quality, richness of media, and learner self-efficacy variables are significant at a 5% level of significance while considering the respective p-values (p-value <0.05). Therefore, based on the calculated statistics, there is not enough/suffecient evidence to accept the alternative hypothesizes in favor of H3. It indicates that there is no significant impact of learner support on satisfaction. According to the given sample we can conclude that there is a positive significant impact of educator's role and relations, course design and quality, richness of media, and learner self-efficacy on the satisfaction of students towards online learning. The VIF values are below 5, indicating that there is no problem in multicollinearity.

Significance of the Model Parameters/ Results of Hypothesis testing

H0.1: There is no significant impact of educator's roles and relations towards the satisfaction of the student

H1.1: There is a significant impact of educator's roles and relations towards the satisfaction of the student

As Table 4.14 demonstrates, the P-value of the variable, 0.000 is lower than the significant level of 0.05. Beta value of the variable is positive. Therefore, the null hypothesis is rejected and it is to be concluded that there is a positive significant impact of educator's role and relations towards the satisfaction of the student.

H0.2: There is no significant impact of course design and quality towards the satisfaction of the student

H1.2: There is a significant impact of course design and quality towards the satisfaction of the student

As Table 4.14 demonstrates, the P-value of the variable, 0.000 is lower than the significant level of 0.05. Beta value of the variable is positive. Therefore, the null hypothesis is rejected and it is to be concluded that there is a positive significant impact of course design and quality towards the satisfaction of the student.

H0.3: There is no significant impact of learner support towards the satisfaction of the student
H1.3: There is a significant impact of learner support towards the satisfaction of the student

According to the Table 14, the P-value of the variable, 0.318 is greater than the significant level of 0.05. Therefore, the null hypothesis is accepted and it is to be concluded that there is a positive significant impact of learner support towards the satisfaction of the student.

H0.4: There is no significant impact of richness of media towards the satisfaction of the student
H1.4: There is a significant impact of richness of media towards the satisfaction of the student

As Table 4.14 demonstrates, the P-value of the variable, 0.000 is lower than the significant level of 0.05. Beta value of the variable is positive. Therefore, the null hypothesis is rejected and it is to be concluded that there is a positive significant impact of richness of media towards the satisfaction of the student.

H0.5: There is no significant impact of learner self-efficacy towards the satisfaction of the student
H1.5: There is a significant impact of learner self-efficacy towards the satisfaction of the student

As Table 4.14 demonstrates, the P-value of the variable, 0.000 is lower than the significant level of 0.05. Beta value of the variable is positive. Therefore, the null hypothesis is rejected and it is to be concluded that there is a positive significant impact of learner self-efficacy towards the satisfaction of the student.

6. Discussion and Findings

COVID -19 has changed the entire model of the education sector. With the COVID 19 pandemic, administrators, teachers, and students faced the dilemma of achieving their objectives as institutions and individuals [27]. With the emerge of the pandemic, the abrupt transformation of teaching and learning activities into virtual methods was done to continue the courses and prevent the spread of infection while avoiding individuals from assembling [28]. This study is designed to investigate the factors which impact on the online learning satisfaction of the undergraduates of FMSC, USJ during the COVID 19 pandemic period. As per the descriptive analysis on the demographic variables, the majority of the respondents are females. Representation of the undergraduates who are in year III is slightly higher than the others. Further, most of the students attend online lectures under a moderate level of connection strength. Majority of the students attend online lectures from 10 to 20 hours per week. The levels of English language and IT skills of the students are moderate. More than 50% of the respondents believe that the face-to-face class is better than the online class. When it refers the mean comparison, the level of satisfaction towards online learning is in a moderate level.

The correlation analysis results show that there is a weak positive significant relationship between satisfaction and internet strength when attending the online class, level of English language skills, and level of IT skills. When the internet connection is strong, a learner does not face disturbances due to poor signal. It saves the time and facilitates an active engagement. Moreover, when the learner possesses a pool IT and English skills, he/ she is more likely to easily operate the online learning applications and understand the contents of online lecture. However, it was found that there is no significant relationship between students' satisfaction and number of hours attended to online lectures per week. Either lecture hours increased or decreased, it does not make a significant effect on learner satisfaction.

As per the regression results, it was identified that 65.9% of the dependent variable (students' satisfaction on online learning) is explained by the independent variables (educator's role and relations, course design and quality, learner support, richness of media, and learner self-efficacy). It was identified that there is a positive significant impact of educator's role and relations towards students' satisfaction on online learning. This result is consistent with previous studies. Effect of students' satisfaction is influenced by instructors' dimensions in handling learning activities [25]. Instructors' presence in online learning leads to students' satisfaction [25]. The researcher identified that there is a positive significant impact of course design and quality towards students' satisfaction on online learning. This result is consistent with previous literature. Structure and design of the online course significantly impact on the student satisfaction [29]. Course quality is significant with online learning satisfaction [25]. Moreover, this study \ identified that there is a positive significant impact of richness of media towards students' satisfaction on online learning. The perceived richness of the technology is a factor that influences the student satisfaction of online delivery [29]. Media richness is a key technological aspect to be considered in generating student's satisfaction [30]. It was identified that there is a positive significant impact of learner self-efficacy towards students' satisfaction on online learning. Self-efficacy is a significant factor in predicting effects in online-based learning [31]. When the self-efficacy of the students' is high, they are more tending to adopt online learning [32].

Learner support impacts the students' satisfaction in online learning [19], [22], [33]. But in this study it was identified that there is no significant impact of learner support towards students' satisfaction on online learning. This finding is not consistent with previous studies.

7. Conclusions

According to the findings of this study, it can be concluded that educator's role and relations, course design and quality, richness of media, and learner self-efficacy are significant factors that positively impact on the satisfaction of undergraduates of FMSC, USJ towards online learning. In order to improve the satisfaction of the undergraduates towards online learning, the lecture/tutor's active role and effective interaction in the online class should be improved. Also the designed courses should be compatible to be delivered in an online setting. When the compatibility, flexibility and perceived quality of the course increase, the student satisfaction also increases. Further, the media which deliver the online lecture should be easy to obtain, learn and it should have adequate options and flexibility in order to increase learner satisfaction. Moreover, the high self-efficacy of the student, i.e. the higher level learner's self-confidence to engage and interact in the online class leads to a higher level of learner satisfaction on online learning. Therefore, according to this study, in order to improve the learner satisfaction on online learning, the educator's role and relations, course design and quality, richness of media, and learner self-efficacy should be improved.

Further, the results of the correlation analysis revealed a positive significant relationship between satisfaction and internet strength when attending online classes, level of English language skills, and level of IT skills. Actions should be taken to minimize the disturbances happening due to poor signal. Also, the skills and knowledge English and IT should be enhanced in the learner, in order to improve the learner satisfaction on online learning. Moreover, it can be said that the students are neither much satisfied nor dissatisfied with online learning during the COVID'19 pandemic period.

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