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Impact of Quality of Online Education on Student's Satisfaction Level: A Study during Pandemic

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Abstract

This study was conducted to check the impact of quality of online education during a worldwide pandemic on satisfaction level of students. The total sample size of this study was 212. Through the use of purposive sampling technique, the participants were chosen from different departments of The Islamia University of Bahawalpur. Cross-sectional survey research design is included in the present study. Students' Perceptions of E-learning Questionnaire and Student Satisfaction with Online Learning were the two questionnaires used for collecting data. Using descriptive statistics, t-test, ANOVA, Bivariate Correlation, and Regression Analysis, the results were examined. Online education was significantly negatively associated with student satisfaction, indicated the findings of this analysis. The sample of the study was restricted to students only. Further, in order to broad the scope of the study it is suggested to expand the present research on other universities students from all over Punjab.

Key Words: Online Study; Pandemic; COVID-19; Effectiveness; Satisfaction

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Introduction

It can be very traumatic to live through the risk of a public health emergency such as COVID-19. Since, it is not a normal day-to-day experience. Therefore, dealing with the risk of COVID-19 is quite unsettling. You might feel distressed or be afraid for yourself and your loved ones to catch the viral virus. You might be feeling devastated by the constantly varying, and often inconsistent information given by the media about the growing risk of COVID-19.

The rapid development of the Internet and other web resources significantly increased the dynamic growth of online teaching and learning and had an enormous teaching impact on learning quality (Dziuban et al., 2015). Online classes show the students satisfying themselves by instantly making the knowledge, advice, and comments available by the teacher. Students get obstructed whenever this accessibility is intervened or disapproved because of any technical issues. (Wilson, 2000; Wilson & Whitelock, 1998).

The speedy and successive spread of virus warns the country of destroying forthcoming. The Ministry of Federal Education Pakistan ordered the suspension of academic operations amid all schools, colleges, and universities right after two days of declaration of COVID-19 (Iqbal et al., 2020). Online learning enables students in higher education to use the time and take them to the course efficiently. It can improve trust, reduce stress and promote concern and empathy (López et al., 2018). But sometimes

students may not enter the modules or fail to comprehend the content of the modules. The main reason behind this failure is the preparatory material for e-learning is rather difficult as compared to physical classes (Bovill, 2020; Bovill & Woolmer, 2019).

Factors of learning quality also play an important role in satisfying such pupils, such as perceived usability, observable value, and computer self-efficiency (Isik, 2008). However, it is important to note that pupils need computer efficiency to achieve happiness with e-learning (Roca et al., 2006). The universities and higher learning institutions as providers of educational services struggle hard to satisfy their clients, that is, learners. They tried to offer their many central methods that make e-learning easy (Martınez & Batalla, 2016; Stodnick & Rogers, 2008). Colleges and schools are going towards online education technology for student learning to avoid damage during the epidemic season (Bridge et al., 2020).

The pupils' performance in online learning is significantly greater than in traditional learning. During their move from offline to online education, Henriksen et al. (2020), underlined the problems experienced by educators. In the past, numerous online learning study analyses had been performed to assess student happiness, online ratification, distance learning success elements, and learning efficiency (Lee, 2014; Sher, 2009; Yen et al., 2018). However, a little quantity of material is accessible on characteristics that affect student happiness and performance during the COVID-19 epidemic in online classrooms (Rajabalee & Santally, 2020). Disgracefully, these recent and advanced technologies were not encouraged by universities in Pakistan as a formal model of education (Bughio et al., 2014).

The causes behind the non-acceptability of online learning can be dissolved as lack of access to high-quality internet, interaction gap amid tutors and students, non-obedience to technical gadgets, discipline and lack of support from the government (Kwary, &Fauzie, 2017; Mukhtar et al., 2020).In Pakistan, undergraduate students` perception and satisfaction about the online learning system amid COVID-19 suggested 78% of students were dissatisfied from online learning (Ansar et al., 2020).

Theoretical Framework of the Study

The achievement goal theory is used to support the current research. It develops and examines the motivation of academics. The theory was particularly prominent in the 1980s and 1990s and was one of the most recognized and endorsed ideas in educational psychology (Elliot, 1999; Maehr & Zusho, 2009).The induction and performance behavior of students may readily be understood accordingly as per this theory (Dweck & Leggett, 1988).

On the basis of the previous literature, it has been evident that in this critical situation of COVID-19 pandemic, it is necessary to conduct a research that address regarding student's satisfaction level towards online education. To fulfill this research gap, the current nation-wide survey-based study was designed with the objectives to assess the perception of students regarding the effectiveness of online education and student satisfaction in Pakistan and highlight the challenges faced by them in adjusting to this new mode of learning.

Study Objectives

The following objectives are included in the present study:

i. To quantify the success of online study on students' satisfaction level.
ii. To investigate the impact of online education and student satisfaction level.
iii. To discover the gender differences and educational distinctions of success of online

study and students' satisfaction.

Method

Research Design

Cross-sectional survey technique was used in the present study. The present study examined the Quality of online study and its effectiveness in the time of pandemic and students' satisfaction level.

Sample

Undergraduate, post graduate, and graduate students from the Islamia University of Bahawalpur were selected as participants for this research through online surveys because of COVID-19 lockdown. The questionnaire was comprised of demographic variables questions such as age, gender, and education. A purposive sampling technique was used in the current study. Online Google survey forms were used for choosing the sample from Bahawalpur Pakistan. 212 participants (university students) were selected to take part in this analysis.

Measures

Students' Perceptions of E-learning Questionnaire

The questionnaire measures the perception and attitude of students in accordance with the effectiveness of e-learning during COVID-19 (Khan et al., 2021).

Student Satisfaction with Online Learning

This scale was used to measure student satisfaction level with online learning system (Dziuban et al., 2015).

Procedure

Data were collected by using questionnaires. The participants were given all the necessary information regarding present research. They were told that the data will be treated confidentially and also that they had every right to quit the study at any time during the research. Participation in the study was voluntary, assented, and undesignated. No economic donation was given in exchange. The whole questionnaire needed 10-15 minutes to complete. Statistical Package for Social Sciences (SPSS) software and descriptive statistics was initially operated to assess the data following the association between variables.

Results

Table 1

Frequency Distribution of Demographic Variables (N=212)

Respondent's Characteristics		***F***	***(%)***
Gender	Male	63	29.7
	Female	149	70.3
Education	Undergraduate	96	45.3
	Graduate	56	26.4
	Postgraduate	60	28.3

The Table 1 showed the results of demographic variables; the sample of this research was collected from both male and female students. The data were from under graduate, graduate and post graduate students.

Table 2
Reliability Analysis of all Study's Variables (N=212)

Variables				***Range***	
	M	***SD***	***A***	***Potential***	***Actual***
Student Satisfaction	14.06	3.1	.94	10-35	10-85
Online Study	57.86	5.7	.95	45-72	15-75

In Table 2, the results revealed that all scales used in this research found reliable instruments and confirmed the acceptable ranges of Cronbach's alpha (.94 to .95) for the analysis of reliability.

Table 3
Inter-Correlation among Online Study and Student Satisfaction (N=212)

Variables	**Student Satisfaction**
Online Study	-.44**

***p* < .01

The results of Table 3 found that online study was significantly (*p* < .01) and negatively correlated (r = -.44) with students' satisfaction level. This means that as online study mode increases, then students' satisfaction level towards study decreases.

Table 4
Impact of Online Study on Student Satisfaction (N=212)

Predictors	**Student Satisfaction**	
	Model 1 B	**95% *CI***
Constant	27.5	[23.7, 31.3]
Online study	-.43**	[-.29, -.16]
R2	.44	
F	49.6**	

***p <.01; B for Unstandardized regression coefficient; CI for Confidence interval*

The Table 4 showed that online study was a significant negative predictor of student satisfaction and contribute 44% variance (R^2 = .44) in student satisfaction. It means that online study has negative significant (*p* <.01) impact on students' satisfaction level. As the online study mode was extended, students satisfaction towards online education decreases.

Table 5

One Way ANOVA Used for Comparison among Education (graduate, under graduate and post graduate) of Respondents for Satisfaction level (N=212)

Variable	***Under-Graduate (n = 96)***		***Graduate (n = 56)***		***Post Graduate (n =60)***				
	M	***SD***	***M***	***SD***	***M***	***SD***	***F***	***P***	***Eta squared***
Student Satisfaction	13.5	2.4	14.0	3.7	15.0	3.7	3.1	.04	0.34

The table 5 presented that education of respondents played a significant role in student satisfaction level. While, the mean score of student satisfaction were higher among the respondents of post graduate respondents as compared to under graduate and graduate level of education.

Table 6

Comparison between Gender differences (Male & Female) Sample through Independent Sample t-test for Student Satisfaction (N=212)

Variable	**Male (*n* = 63)**		**Female (*n* = 149)**		***95%CI***				
Student Satisfaction	***M***	***SD***	***M***	***SD***	***t***	***P***	***LL***	***UL***	***Cohn's d***
	13.4	2.1	14.3	3.4	-1.74	.00	-1.7	.10	0.40

The Table 6 indicates the significant gender (male & female) differences in student satisfaction level towards online study. The mean score of student satisfaction was found higher among female respondents as compared to male students.

Discussion

The main objective of the current study was to investigate the quality of online study and its effectiveness between student satisfaction level and what kind of correlation possessed by online study with student satisfaction. In this regard, it was found that online education success was significantly and negatively correlated with student's satisfaction level. Results showed a negative predicting impact of online study on student satisfaction level. Moreover, equivalent findings were reported by previous studies conducted on determining the key factors associated with student satisfaction in online learning programs in Pakistan (Abid, et al., 2020; Ali & Ahmad, 2011; Khan et al., 2011). These previous studies added more that respondents from all over the country were commonly discontented with their internet service provider and demanded fast internet speed and high broadband connections to make possible and improve their online learning experience.

The second objective was to investigate the impact of online education on student satisfaction level. The results of the study revealed that online education is a strong negative predictor of student's satisfaction. This means that online study has negatively

significant impact on student's satisfaction level. The current findings add to the body of research that quality of online study individual's show more dissatisfaction. It was also revealed by the results that online study has negative association; it means that the increase of online study can decrease student satisfaction level.

The third objective was to find out impact of different levels of education on students' level of satisfaction during online study. The result of the study revealed that the education of respondents played a significant role in student's satisfaction level on online study. The mean score of student's satisfaction were higher among the respondents of post graduate as compared to under graduate and graduate level of education. The findings of the research are further supported by previous researches. The main reason behind this is that undergraduates' students did not believe online learning as a most satisfactory instructional approach since they more positively evaluated teachers and course contents than the online videos. Another reason might be either that undergraduates were more distracted to visual stimulation such as online videos or that they failed to spend enough time watching the online videos to acquire knowledge (Evans, 2014; Iqbal, 2020). They might have been surfing the internet for entertainment or chatting with their friends. However, the postgraduates, with stronger self-regulation, might have been more resistant to the external disturbances and could keep their learning behaviors under control.

The fourth objective was to find out the significant gender differences in students' satisfaction level on online study. The mean score of student's satisfaction were found higher among female respondents as compare to male students. Females could achieve higher learning outcomes than males because they were more persistent and committed than males (Richardson & Woodley, 2003). Females had stronger self-regulation than males, which also led to their significantly more positive online learning outcomes than males (Alghamdi et al., 2020). It was so because males were more stable in attitudes, while females performed well in engagement (Nistor, 2013).

Conclusion

In conclusion, the current study discovers the influence of online education and satisfaction for the students' education levels, gender, and outcomes of online learning, in particular during the COVID-19 epidemic. This study might provide an important reference to improve the efficacy of online education for online teachers and instructors.

Students from Pakistan showed non-acceptance for different components of online teaching sessions, showed the results of our analysis. This is understandable, as online teaching is a modernist technique that the country hastily supports in the fight against the current situation, with the expectation of continued academic efforts.

Limitations and Suggestions

Based on the evidence of above study, it is being suggested that conventional educational system is more acceptable in Pakistani students than the online system. But the small size of study sample could be a hurdle in generalizing the results. The data collection method can also be expanded from only online Google forms to the conventional data collection methods like physical surveys and interviews, to get the opinion of more affected students who could not even approached to this survey due to the difficulties in the access to the internet. It is obvious that the students, who have no access to internet facilities, would have less acceptance and satisfaction level to the online educational system. It is also suggested that educational authorities should have made sure to get the students more familiar with the online education, even after

the pandemic. Because online education is the need of the time.

Conflict of Interest

The authors declare no conflict of interest.

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References

Abid, K., Bari, Y. A., Younas, M., Tahir Javaid, S., & Imran, A. (2020). Progress of COVID-19 Epidemic in Pakistan. *Asia Pacific Journal of Public Health*, *32*(4), 154-156.

Alghamdi, A., Karpinski, A. C., Lepp, A., & Barkley, J. (2020). Online and face-to-face classroom multitasking and academic performance: Moderated mediation with self-efficacy for self-regulated learning and gender. *Computers in Human Behavior*, *102*, 214-222.

Ali, A., & Ahmad, I. (2011). Key Factors for Determining Student Satisfaction in Distance Learning Courses: A Study of Allama Iqbal Open University. *Contemporary Educational Technology 2*(2). DOI: 10.30935/cedtech/6047

Ansar, F., Ali, W., Khattak, A., Naveed, H., &Zeb, S. (2020). Undergraduate students' perception and satisfaction regarding online learning system amidst COVID-19 Pandemic in Pakistan. *Journal of Ayub Medical College, Abbottabad*, *32*(4), S644-S650.

Bovill, C. (2020). Co-creation in learning and teaching: the case for a whole-class approach in higher education. *Higher Education*, *79*(6), 1023-1037.

Bovill, C., & Woolmer, C. (2019). How conceptualizations of curriculum in higher education influence student-staff co-creation in and of the curriculum. *Higher Education*, *78*(3), 407- 422.

Bridge, S., Murtagh, B., & O'Neill, K. (2020). *Understanding the social economy and the third sector*. Bloomsbury Publishing.

Bughio, I. A., Abro, Q. M. M., &Rashdi, P. R. S. (2014). Effective online distance learning Pakistan and challenges. *International Journal of Management Sciences*, *2*(6), 274-279.

Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological review*, *95*(2), 256.

Dziuban, C., Moskal, P., Thompson, J., Kramer, L., DeCantis, G., &Hermsdorfer, A. (2015). Student Satisfaction with Online Learning: Is It a Psychological Contract? *Online Learning*, *19*(2), n2. *Education*, *97*(9), 2466-2471.

Elliot, A. J. (1999). Approach and avoidance motivation and achievement goals. *Educational Psychologist*, *34*, 169–189.

Evans, C. (2014). Exploring the use of a deep approach to learning with students in the process of learning to teach in D. Gijbels, V. Donche, J. T. E Richardson, and J. Vermunt. *Learning patterns in higher education. Dimensions and research perspectives* (pp. 187-213).EARLI Book Series. London and New York: Routledge.

Henriksen, D., Creely, E., & Henderson, M. (2020). Folk pedagogies for teacher transitions: Approaches to synchronous online learning in the wake of COVID-19. *Journal of Technology and Teacher Education*, *28*(2), 201–209.

Iqbal, M. M., Abid, I., Hussain, S., Shahzad, N., Waqas, M. S., & Iqbal, M. J. (2020). The effects of regional

climatic condition on the spread of COVID-19 at global scale. *Science of the Total Environment, 739*, 140101.

Isik, O. (2008, November). *E-learning satisfaction factors. In Proceedings of the 39th Annual Meeting of the Decision* Sciences Institute, Baltimore (pp. 941–946).

Khan, M. A., Nabi, M. K., Khojah, M., & Tahir, M. (2021). Students' Perception towards E-Learning during COVID-19 Pandemic in India: An Empirical Study. Sustainability, *13*(1), 57.

Khan, S. A., Khan, A. A. & Bhatti, R. (2011). Use of ICT by students: a survey of faculty of education at IUB. *Library Philosophy & Practice*. http://unllib.unl.edu/LPP/khan-bhatti-khan.htm

Kwary, D. A., & Fauzie, S. (2017). Students' achievement and opinions on the implementation of e-learning for phonetics and phonology lectures at Airlangga University. *Educação e Pesquisa*, *44*.

Lee, J. (2014). An exploratory study of efective online learning: Assessing satisfaction levels of graduate students of mathematics education associated with human and design factors of an online course. The *International Review of Research in Open and Distance Learning, 15*(1), 111–132

López-Catálan, L., López-Catalán, B., & Delgado-Vázquez, Á. M. (2018). Web promotion, innovation and postgraduate e-learning programs. IJERI: *International Journal of Educational Research and Innovation, 1*(11), 47–59.

Maehr, M. L., & Zusho, A. (2009). Achievement goal theory: The past, present, and future. In K. R. Wenzel, A. Wigfield, K. R. Wenzel, & A. Wigfield (Eds.), *Handbook of motivation at school* (pp. 77-104). New York, NY, US: Routledge/Taylor & Francis Group.

Martınez-Argu¨elles, M. J., & Batalla-Busquets, J. M. (2016). Perceived service quality and student loyalty in an online university. *International Review of Research in Open and Distributed Learning, 17*(4), 264–279.

Mukhtar, K., Javed, K., Arooj, M., &Sethi, A. (2020). Advantages, Limitations and Recommendations for online learning during COVID-19 pandemic era. *Pakistan journal of medical sciences*,*36*(COVID19-S4), S27.

Nistor, N. (2013). Stability of attitudes and participation in online university courses: Gender and location effects. *Computers & Education, 68,* 284–292.

Rajabalee, Y. B., &Santally, M. I. (2020). Learner satisfaction, engagement and performances in an online module: Implications for institutional e-learning policy. *Education and Information Technologies.* https://doi.org/10.1007/s10639-

Richardson, J. T., & Woodley, A. (2003). Another look at the role of age, gender and subject as predictors of academic attainment in higher education. *Studies in Higher Education*, *28*(4), 475-493.

Roca, J. C., Chiu, C. M., & Martınez, F. J. (2006). Understanding e-learning continuing intention: An extension of the technology acceptance model. *International Journal of Human-Computer Studies*, *64*(8), 683–696.

Sher, A. (2009). Assessing the relationship of student-instructor and student-student interactionto student learning and satisfaction in web-based online

learning environment. *Journal of Interactive Online Learning, 8*(2), 102-120.

Stodnick, M., & Rogers, P. (2008). Using SERVQUAL to measure the quality of the classroom experience. *Decision Sciences Journal of Innovative Education, 6*(1), 115–133.

Wilson, E. V. (2000). Student characteristics and computer-mediated communication. *Computers & Education*, *34*(2), 67-76.

Wilson, T., & Whitelock, D. (1998). Monitoring the on-line behavior of distance learning students. *Journal of computer assisted learning*, *14*(2), 91-99.

Yen, S. C., Lo, Y., Lee, A., & Enriquez, J. (2018). Learning online, offline, and in-between: comparing student academic outcomes and course satisfaction in face-to-face, online, and blended teaching modalities. *Education and Information Technologies*, *23*(5), 2141-2153.