

Teaching of English to Veterinary University Students: A Study to Examine Learner's Intentions towards Online Learning during Different Waves of COVID-19 in Pakistan

Abdul Khaliq *

Farzana Iqbal †

Rasheed Ahmad ‡

Abstract *In the present era, knowing the students' intention towards online learning has become necessary due to the persisting situations of the COVID-19. The current study explores the teaching of English to Biological Science students through online to explore their intentions towards online learning due to different waves of COVID-19 in Pakistan. The study used a rational method that utilizes cross-sectional data. The study employed a random sampling technique to trace the respondents. By using the AMOS, the results of a study underline a positive significant effect of performance expectancy (PE), effort expectancy (EE), social influence (SI), facilitating conditions (FC), and perceived usefulness (PU) on intention towards online learning (ITOL) among the Biological Science students. The findings of the study are significant as they provide valuable insights to comprehend the elements that influence online learning (OL) concerning the teaching of English as a second language.*

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Introduction

In the present era, advanced technology has brought education online through technological advancement. Such a scenario predominantly came through the outbreak of COVID-19 (Shah et al., 2020). The online education system appears to be effective and crucial, particularly for advanced instruction, as most colleges and universities are engaged to conduct their education (Yunus et al., 2021; Kim, 2020; Soomro & Shah, 2021a). However, in tertiary education, it has been become a severe issue due to the unavailability of digital technological access (Kopp et al., 2019; Yunus et al., 2021). The system has functioned with diverse online learning and teaching tools. For instance, some institutes use massive open online courses, social media, virtual learning environments, mobile applications, and others to apply educational web services. In various cases, online learning is a prerequisite of the day due to the pandemic (Agarwal & Kaushik, 2020; Basilaia & Kvavadze, 2020).

In 2020, all sectors and segments of the economy had been seriously affected by the COVID-19. Among this education sector was the robust victim. Almost every country decided and declared to their citizens to stay at home-based and inspire communal estrangement to stop the diffusion of the pandemic. With regard to students, they are trying to convert their approaches from physical education to digital learning (Mulenga & Marbán, 2020). BI of the learners regarding online learning remains the central issue in the education sector. Several studies have examined the students' acuties on learning English through technological usage during non-pandemic situations (Sharma, 2019). On the other hand, there is a lack of empirical evidence of examination of intention towards online learning that may be conducted during the different waves of the pandemic in Pakistan. Due to the pandemic, all higher education institutes are seriously affected and closed for the different waves (Lakhan et al., 2021a; Soomro et al., 2021).

* Assistant Professor, Department of Social and Allied Sciences, Cholistan University of Veterinary and Animal Sciences Bahawalpur, Punjab, Pakistan. Email: abdulkhaliq@cuvas.edu.pk

† Assistant Professor, Department of Islamic Studies, The Govt Sadiq College Women University Bahawalpur, Punjab, Pakistan.

‡ Visiting Lecturer, Department of English Literature, The Islamia University of Bahawalpur, Punjab, Pakistan.

Students of the various institutes tried to continue their education online ([Soomro & Abdelwahed, 2021](#)). Henceforth, it is necessary to inspect the students ITOL among the Biological Science students of the diverse universities of Pakistan by focusing on teaching English as the second language that is most significant for the students daily lives ([Shahzad et al., 2020](#)).

Determination of the Study

The present research proposes the investigation of ITOL throughout the different waves of COVID-19. The findings of a survey would provide significant insights into the higher education contexts. The study would further offer the effectiveness of online learning (OL) and be fruitful to the academic leadership and policymakers to consider the Biological Science students' perceptions of OL. It would increase awareness concerning the constructs and obstacles that impact students' behavioral intention (BI) to use OL.

Literature Review

The outbreak of COVID-19 has significantly transferred the physical education system into an online learning system. Such an e-learning system depends upon the technology. In this regard, the finding of the study of [Qiao et al. \(2021\)](#) highlights the focus of e-learning on the infrastructure to reach more users after the outbreak of COVID-19. It is due to e-learning being the only significant source of acquiring education. Fear is a potent factor that moderated the association between the external predictors and the BI of e-learning users. The adaptation of new technology can be affected and weakened by a lack of financial support. Social Isolation provides more occasions for students to involve in e-learning. In the meantime, it breaks down the operation of e-learning because of out-to-date software and hardware. Zawaideh (2017) posits the importance of the e-learning environment of a university's infrastructural features in a similar domain. The findings of a study demonstrate a significant and positive association of PE, EE, SI, and FC with BI to use e-learning. In Turkey and United Kingdom, [Kurt and Tingöy \(2017\)](#) conducted a study among undergraduate students. The scholars tested the significance of PE, EE, FC, and SI in both contexts.

The outcomes of a survey confirmed BI and user behavior concerning the use of OL

environment in HEC changed between the two nations. Besides, the effectiveness of constructs from user behavior and BI also varied from one construct to another. [Soomro et al. \(2020\)](#) indicate that intention can be predicted through perceived feasibility and desirability. The TPB theory is robust in developing the techno preneurship intention ([Soomro & Shah, 2021b](#)). Similarly, [Memon et al. \(2019\)](#) demonstrate the predictor power of self-efficacy in developing entrepreneurship intention. According to Stephenson (2018), there is a growing trend of technology and the internet, which significantly transferred the conventional homeroom to internet learning (OL). The OL incorporates web-based learning and instructing, which possess the students' learning cycle through computerized media and the web. It shapes portable learning through versatile computational moves and electronic gadgets ([Almutairi et al., 2017](#)). In the impression of Selwyn (2003), innovation-based learning is an inventive learning strategy that is better for essential and auxiliary schools. In any case, it is more successful in more significant level schooling.

The use of ICT in schooling is useful to instructors to do administrative obligations all the more proficiently and understudies to learn all the more ably. Web access twisted schooling, flagging another time where innovation mediated pinion wheels were reused to exaggerate the conventional instructing with a learning strategy meant as internet learning ([Yakubu et al., 2018](#)). Additionally, [Devisakti and Ramayah \(2019\)](#) upheld OL as an elective way to deal with customary eye-to-eye instructing and learning. It fosters communication among understudies and instructors adequately. The applications, for example, Google Meet and ZOOM, permit the example to be brought life, where the understudies could interrelate with one another continuously ([Basilaia and Kvavadze, 2020](#)). Google Classroom is one of the internet learning platforms that helps educators to increment relational correspondence among understudies and save time ([Iftakhar, 2017](#)). In the overarching circumstance of the COVID-19 pandemic, it is important to restrict such a risky spread worldwide ([UNICEF, 2021](#)). The establishments, for example, schools, universities, and colleges, have quickly been shut. The foundations can change to substitution, which is web-based learning programs ([Clancy & Sentance, 2020](#)).

Consequently, the domain literature provided different assumptions regarding online learning

PE is an extent to which individuals undertake OL would increase their learning procedure (Yunus et al., 2021). [Venkatesh et al. \(2003\)](#) reveal that the PE is associated with the trust of individuals that using ICT would assist in enhancing the success of their mission. It develops the PU, extrinsic motivation, and comparative benefit, which increases the expectancies of online learning usage. In the perception of [Taiwo and Downe \(2013\)](#) and [Ngampornchai and Adams \(2016\)](#), PE is the significant predictor of BI of the students. Zawaideh (2017) conducted a study and found PE's association with behavioral intention to use e-learning. Similarly, [Handoko \(2019\)](#) supported the positive relationship between PE and BI. Besides, among the postgraduate students of the public university of Malaysia, the empirical study of Yunus et al. (2021) highlights a significant and positive impact of PE on ITOL in pandemic situations. EE is regarded as the ease of using a specific system. EE significantly and positively affects the BI to use e-learning in the Malaysian context (Zawaideh, 2017). The same findings are strongly supported by Handoko (2019) and claim EE's positive and significant effect on BI. Likewise, SI has considerable importance, which is usually associated with an individual accord to the thoughts of others concerning their use of a new system. According to [Handoko \(2019\)](#), SI is a robust analyst of BI. It has a significant and positive correlation with BI (Zawaideh, 2017). Along with these factors, FC is valuable for usage and connected with the individual's belief in the essential technical and organizational infrastructure ([Kurt & Tingöy, 2017](#)). A quantitative study was conducted by [Handoko \(2019\)](#) from 365 students of the online learning program.

The outcomes of a study highlight that the factors such as PE, EE, personal innovativeness, and quality of service significantly affect the BI. Further, BI impacts use behavior, whereas FC does not affect user behaviour. Similarly, in Egypt, PE, learners' autonomy, FC, and SI positively associate with BI to use m-learning. In contrast, EE has appeared with no impact on intention to use mobile learning ([Ali & Arshad, 2018](#)). By employing the UTAUT constructs, the findings of [Alshehri et al. \(2020\)](#) confirm the UTAUT parameters as robust and valid, and robust in the context of LMS in Saudi Arabia in

colleges and universities. Besides, the aspect of SI arisen to affect the students' usage behaviour and intention significantly. The PE is influenced by system interactivity and information quality. On the other hand, the EE was affected by instructional assessment, system learnability, and system navigation.

Consequently, the relevant literature emphasizes the significant effect of PE, EE, SI, FC, and PU on ITOL ([Venkatesh et al., 2003](#); [Kaba & Touré, 2014](#); [Hou, 2014](#); [Diño & de Guzman, 2015](#)) in the different contexts. However, a limited number of studies are found in the Pakistani context, particularly in Biological Science students in English as a second language ([Ngampornchai & Adams, 2016](#); [Handoko, 2019](#); Yunus et al., 2021).

Hypothesis of the Study

On the basis of the unavailability of valuable investigation, we suggest the following hypothesis.

- H1:** There is a significant positive calculates performance expectancy on intention towards online learning.
- H2:** There is significant positive estimates of effort expectancy on intention towards online learning.
- H3:** There is a significant positive predicting social influence on intention towards online learning.
- H4:** There is a significant positive forecast facilitating conditions on intention towards online learning.
- H5:** There is a significant positive anticipates perceived usefulness on intention towards online learning.

Research Procedure

We employed a deductive approach based on a quantitative manner. We correctly followed the previous domain scholars like [Kurt and Tingöy \(2017\)](#), [Ali and Arshad \(2018\)](#), [Alshehri et al. \(2020\)](#), [Qiao et al. \(2021\)](#), and Yunus et al. (2021). They have already conducted such types of studies in various contexts. The base of investigation is on cross-sectional data. The cross-sectional data is valuable due to saving time and cost ([Soomro et al., 2019](#); [Lakhan et al., 2021b](#)). A random technique is employed to trace the respondents of the study. The study participants are Biological Science individuals of the several general universities of Pakistan that mainly offer Biological Science degrees with

English as a second language. We visited the contexts of the study, where we followed proper governmental SOPs. However, we attained a few data through emails and doc services due to movement restrictions of the COVID19.

Results and Discussion

Before handing over the questionnaires to the respondents, we got their consent to participate

in the study. They were made aware of the study's aim and purposes. We properly got them to ensure the usage of their data and the confidentiality of their personal information. We collected 209 valid samples and utilized them for final analysis. We employed AMOS version 26.0 for the examination of the data.

Table 1. Demographic Variables of the Study

Variable	Category	frequency	Percentage
Gender	Male	131	62.67
	Female	78	37.32
	Total	209	100
Age	<20	64	30.62
	21-25	137	65.55
	26-30	8	03.82
	Total	209	100

In total, 209 students of Biological Sciences have participated in the study. The demographic trend underlines a majority of male students (62.67% or n=131) as compared to female students (37.32% or n=78) (Table 1). We found many students

(65% or n=137) between 21-25 years of age. The less than 20 years were found as 30% or 64 students. On the other hand, a low ratio of age among 26-30 was observed with only 3%. (Table 1).

Table 2. Consistency of Research Instruments

Variables	Cronbach's Alpha (α)
PE	.869
EE	.812
SI	.718
FC	.842
PU	.871

Alluding to Table 2, there is an aggregate of five specialists who helped in really taking a look at the legitimacy of the instrument in this exploration. Every one of the specialists in showing English as the headboard in college and the senior educators in college. They are needed

to fill in a substance approval structure and rate the instruments likewise. The analyst then, at that point, altered the inquiries in the study before circulating it to the members. Dependability was estimated as demonstrated in the above Table.

Table 3. Correlation Analysis about Teaching of English to University Students through Online Learning Plans due to Different Waves of COVID-19 in Pakistan

Domains	Mean	Sd	1	2	3	4	5	6
1. Intention towards Online Learning	3.88	0.975	---					
2. Performance Expectancy	3.22	0.890	0.333**	---				
3. Effort Expectancy	3.76	1.002	0.419**	0.291*	---			
4. Social Influence	3.03	1.254	0.393**	0.473**	0.149*	---		
5. Facilitating Conditions	3.09	1.200	0.325**	0.432**	0.239*	0.223*	---	
6. Perceived Usefulness	3.28	0.805	0.398**	0.328**	0.346**	0.349**	0.459**	-

***Correlations are significant at 0.01 and 0.05 levels, respectively (two-tailed)

We examined the descriptive statistics to perceive the demographic trend of participants. We noticed the upper range of mean (3.888) for the ITOL construct, and a lower range of mean was observed (3.032) for SI (Table 3). Likewise, the standard deviation score suggests a maximum score (1.254) for SI, while minimum

ranges of the score were observed (0.002) for the EE predictor. Besides, we confirmed the correlation among the constructs through Pearson's correlation (r) coefficients. As a result, all the factors have appeared with satisfactory correlation scores in ranges, and there is no assumption of multicollinearity (Table 3).

Table 3. Model fitness

Model fit indicators	CMIN/df	GFI	AGFA	NFI	CFI	RMS
	2.456	0.928	0.932	0.919	0.906	0.031
Recommended values	< 3	> 0.90	> 0.90	> 0.90	> 0.90	<0.05

Note: CMIN= χ^2 /Chi-square/df; df= degree of freedom; GFI=goodness of fit index; AGFI=adjusted goodness of fit index; NFI= normed fit index; CFI= comparative fit index; RMSEA=root mean square error of approximation before going to assess the hypotheses, the model fitness was ensured. The values for such indicators, i.e. the CMIN= χ^2 /chi-square, occurred to be 2.456 (Table 3).

Table 4. Path Analysis

IVs	Path	DV	Estimate	SE	CR	P
Performance Expectancy	→	ITOL	0.244	0.044	5.330	.000
Effort Expectancy	→	ITOL	0.254	0.068	6.078	.000
4. Social Influence	→	ITOL	0.338	0.059	6.563	.000
5. Facilitating Conditions	→	ITOL	0.403	0.064	5.776	.000
6. Perceived Usefulness	→	ITOL	0.398	0.078	4.372	.000

Note: SE=standard error; CR=critical ratio; p=significance level, *** $p < 0.05$ IVs=independent variables; DV=dependent variable. Path analysis shows significant values.

Table 5. Path Analysis

Hypothesis	Decision
There is a significant positive predicts Performance Expectancy on Intention towards Online Accepted Learning.	Accepted
There is a significant positively predicting effort expectancy on Intention towards Online Learning.	Accepted
There is a significant positively predicts social influence on Intention towards Online Learning.	Accepted
There is a significant positive predicts facilitating conditions on Intention towards Online Learning.	Accepted
There is a significant positive predicts perceived usefulness on Intention towards Online Learning.	Accepted

Note: CMIN= χ^2 /Chi-square/df; df= degree of freedom; GFI=goodness of fit index; AGFI=adjusted goodness of fit index; NFI= normed fit index; CFI= comparative fit index; RMSEA=root mean square error of approximation We applied the path analysis through AMOS to confirm the proposed hypotheses. The results suggest a substantial impact of PE on ITOL (SE=0.044, CR=5.330***; p

Discussion and Conclusion

The research investigated ITOL among Biological Science students whose teaching English as a second language. We investigated such problems during the different waves of the COVID-19 pandemic. We employed quantitative methods, which is based on 222 valid samples. These samples were collected through a random sampling technique. A questionnaire was used as a principal instrument for the data gathering. Through the AMOS, outcomes of a study underline a substantial constructive effect of PE

on ITOL, which accepted the H1. Such the results are unailing with the earlier findings like [Taiwo and Downe \(2013\)](#), [Ngampornchai and Adams \(2016\)](#), [Zawaideh \(2017\)](#), [Handoko \(2019\)](#), and [Yunus et al. \(2021\)](#), who provided the same outcomes earlier. The present findings suggest that OL significantly increases the individuals' intention to adopt the OL during the pandemic. Likewise, the second hypothesis was accepted by the data, which confirmed the positive association between EE and ITOL (H2 supported). These results are in line with several

scholars, i.e., Zawaideh (2017), [Ali and Arshad \(2018\)](#), [Handoko \(2019\)](#), and [Alshehri et al. \(2020\)](#), who claimed the significant and positive linkages between EE and ITOL in the different contexts. The present study's findings may reflect that personal innovativeness and quality of service significantly affect the BI.

Similarly, the path analysis supported the positive relationship between SI and ITOL. These results accepted the H3. Similar to other studies, the present findings are supported by several studies (Zawaideh, 2017; [Kurt & Tingöy, 2017](#); [Handoko \(2019\)](#)). The study underlines that the SI has the powerful influence that diverted the students to adopt OL. Further, the findings showed a significant linkage between FC and ITOL (H4 supported). In the literature, these associations existed earlier, i.e., Zawaideh (2017), [Kurt and Tingöy \(2017\)](#), and [Handoko \(2019\)](#), who demonstrated similar correlations. FC was found as a strong belief in individuals' towards essential technical and organizational

infrastructure in the study. Finally, the path analysis found the significant relationship of PU with ITOL, which supported the H5. The findings are in line with the outcomes of [Ngampomchai and Adams \(2016\)](#), Zawaideh (2017), [Handoko \(2019\)](#), and Yunus et al. (2021), who pointed the positive associations. These findings highlighted that the PU play a vital role in developing the Biological Sciences students ITOL among the different universities of Pakistan.

In conclusion, the inclusive results underline a significant and positive effect of PE, EE, SI, FC, and PU on ITOL among the Biological Sciences students who learn English as a second language. The findings of an investigation would deliver the strategies to developers and policymakers to design the procedures and strategies that further create the interest and intention to learn through OL. Lastly, the study's outcomes may contribute and deepen the depth of the literature of arts, management, and COVID-19 situations.

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