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E-Learning Experiences of Bachelor of Science in Public Health Students of PUMHSW (S.B.A) During the Period of Covid-19 in 2020

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Keywords:

E-learning, Software System, Internet, COVID-19, Quantitative Methods, PUMHS. **Abstract:** An e-learning is an important part of new-age education, where students obtain materials electronically using the different software system. These systems allow students to learn at any time and from any place through the Internet. Difficulties, like adapting to the online environment, frequently cloud the students' learning process. The goal of this research is to determine how e-learning affects university students studying to see if they are still expecting that to be a coming classroom. Data was collected from 188 students enrolled in PUMHSW, Shaheed Benazirabad using a quantitative research approach. Training on data till up to Oct 2023. The findings reveal significant challenges in e-learning arrangements, including poor internet connectivity, lack of electronic devices, frequent power outages, and distractions caused by an unconducive learning environment. These issues collectively paint a grim picture of the e-learning experience for students.

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INTRODUCTION

The term e-learning stands for electronic learning is a method of acquiring knowledge and skills using electronic sources. E-learning is when we use technology, such as computers, tablets, smartphones, and other electronic devices, as well as internet access to receive educational content, instead of a traditional classroom setting. Often, they can choose to study something at any time they want and from any location they are. The terms used to describe elearning include virtual learning, distributed learning, or online learning (Lawless, 2018).

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E-learning can be defined operationally For this study, "e-learning" will include electronic

devices (personal computers, smartphones, and tablets or laptops) and internet-based platforms such as Zoom, Google Classroom, Moodle, and other virtual learning tools. It includes participating in online discussions, submitting assignments, taking tests online, and viewing lectures online. Major focuses of the study are the use public health students make of these technologies for academic purposes and home distractions device availability and internet access respectively (SAMERA et al., 2021).

While its benefits are numerous, E-learning presents serious challenges, especially in resource-constrained contexts. Writing a reply students from rural areas also face issues of poor internet connectivity, power failure, slow internet, etc. However, if previously we were looking for digital opportunities outside the classroom, the transition to technology has now ensured that we replace books with resources in the classroom. Help students make a concept easy and understand in a few words and delivery knowledge through presentations and electronic tools – teachers now (Aung & Khaing, 2016).

E-learning has become all the more vital, especially during the COVID-19 outbreak, which restricted movement and compelled students to study from home. It allows access to global educational content, opportunities to earn international degrees, and examinations and assessments can now be done remotely. This saves time, and cost and gives learners confidence by performing the activities virtually (Zamani et al., 2022).

All-inclusive, nations such as Saudi Arabia, China, India, the Joined Together Kingdom, the Joined Together States, South Korea, Malaysia, and Australia have received E-learning frameworks broadly. Saudi Arabia, in particular, has set up a national center for E-learning in most of its colleges, advancing mechanical integration in instruction. The far-reaching appropriation of E-learning in higher instruction has changed the student-teacher relationship by empowering far-off learning without physical contact. This advancement highlights the part of E-learning in forming advanced instruction and cultivating collaborative learning (EdX, 2021).

This study analyzes the effects of E-learning on BSPH students, in terms of their attention and attraction towards the course. While E-learning has its advantages of flexibility and collaboration, it has its shortcomings about limited resources and network issues. With these limitations in mind, this study attempts to add value to the debate on how E-learning tools and techniques can be improved to facilitate students' enhanced academic experience.

The purpose of this research is to ascertain the impact of desire and expectation of learning in a traditional classroom setting among tertiary education students.

METHOD

Study Setting The research was undertaken with Bachelor of Science in Public Health (BSPH) students who were registered at the People's University of Medical and Health Sciences for Women (PUMHSW). This research utilized a cross-sectional study design. The study was conducted over 12 months. Sample Size A total of 188 BSPH students were involved in the study. The study covered all BSPH students who were registered at PUMHSW. Exclusion criteria: Those who declined to participate and applicants from other academic disciplines were not included in the study.

Data Collection Tool and Procedures

Data was collected using a systematic questionnaire designed to measure various factors

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of e-learning. It covered learners' experiences, the resources at their disposal, interruptions at home, and opinions on the advantages and disadvantages of online learning. The survey consisted of closed-ended and open-ended questions to gather qualitative and quantitative data. The entire process of data collection was done online for the convenience of all participants.

Statistical Analysis

Data were analyzed using descriptive statistics, which include frequencies and percentages. This helped in consolidating demographic data and responses to the questionnaire. Results have been given in tables and graphs to provide a thorough understanding of what was found. Any meaningful connections between the materials provided for e-learning and the experiences of the students were investigated using inferential statistics, such as chi-square tests. Version 25 of SPSS (Statistical Package for the Social Sciences) was used for all statistical analyses. An important threshold of p < 0.05 was established.

Ethical Considerations

This study adhered to ethical guidelines for research involving human participants. Ethical approval was obtained from the Institutional Review Board (IRB) of PUMHSW. Informed consent was obtained from all participants before data collection, ensuring they understood the purpose of the study, their right to withdraw at any time, and the confidentiality of their responses.

Table 1. Socio-demographic Variables of the study participants					
Variables	Categories 1	Categories 2	Categories 3	Categories 4	
years of study	1 st year	2 nd year	3 rd year	4 th year	
	25.5%	28.2%	21.3%	23.9%	
Area of Residence	Village	Town/City	Live in cities	No issues	
	13.4%	9.6%	75.6%	0.5%	
Awareness about	Fully aware	Some	Only heard	No information	
E-learning	23.5%	Knowledge	18.2%	24.1%	
		34.2%			
Internet Access	Laptop	Smartphone	Tablet	None	
	5.7%	93.6%	0.35%	0.35%	
Device ownership	PTCL	Jazz	Zong	Telenor	
	35.3%	30.5%	26.2%	8%	
Internet Service	Fast 22%	Moderate	Slow	Very Slow	
Providers		58.1%	15.1%	4.8%	
Disturbances	Severe	Moderate	Little	No Disturbance	
During-learning 19.7%		30.3%	39.4%	9.6%	
Eye Strain	Very often	Often 44.7%	Occasionally	Never	
	43.6%		10.1%	0.56%	

RESULT AND DISCUSSION

Table 1. Casta da casa a data Martable a Cuba

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Psychological	Very often	Often 38.8%	Occasionally	Never
Stress	22.3%		17.6%	20.2%

Table 1. Shows The demographic characteristics of the study participants reveal key trends regarding their experiences with e-learning. A majority of the respondents were from the 2nd year (28.2%), followed by the 1st year (25.5%), 4th year (23.9%), and 3rd year (21.3%). Regarding the area of residence, 75.6% of students lived in cities, while only 13.4% resided in villages, with a small proportion (9.6%) living in towns. Awareness about e-learning varied, with 34.2% of students having some knowledge, 23.5% fully aware, and 24.1% having no information at all. Most students (93.6%) owned smartphones, while only 5.7% had laptops and 0.35% owned tablets. In terms of internet service providers, PTCL (35.3%) and Jazz (30.5%) were the most popular, while 58.1% of students reported having moderate internet speeds. Disturbances during e-learning were prevalent, with 39.4% experiencing little disturbance, 30.3% moderate disturbance, and 19.7% severe disturbances. Eye strain was a common issue, with 44.7% of students reporting it often, and 43.6% experiencing it very often. Psychological stress was also notable, with 38.8% of students experiencing it often and 22.3% very often.

Table 2. Device Ownership Among Study Participants				
	Device used	Percentage %		
Smartphone		93.5%		
Laptop		5.7%		
Tablet		0.35%		

In the table, it is observed that 93.6% of students primarily use smartphones for elearning, while 5.7% use laptops, and only 0.35% use tablets. This suggests that smartphones are the dominant device for online education among the students in this study, which may have implications on the usability and experience of e-learning, given the smaller screen size and limitations in multitasking.



Figure 1. Student preferences for learning

Discussion

The study's results discussed how the COVID-19 pandemic has created critical difficulties for the students of Bachelor of Science in Public Health (BSPH) at PUMHSW in particular in the context of e-learning. Results indicate that limited internet connectivity, want of electronic devices, regular load shedding/hours without power supply, and disruption of home environment were the main limitations for effective e-learning. These results corroborate other research in similar contexts, which found that many infrastructure-related issues represented major barriers to online education. However, in a study Lee (2021) conducted on the challenges of online learning during the COVID-19 pandemic in India similar results were found where students from rural areas also reported to have faced problems such as, lack of internet connectivity and electronic devices (Siddiqui et al., 2021). And this is consistent with our results, where 13.4% of students living in villages reported severe difficulties accessing e-learning platforms. Further, Dhawan (2020) noted that the digital gap, between urban and rural communities (Dhawan, 2020), compounded these challenges and exacerbated the challenges of online learning, which is also reflected in our results, where 75.6% of students living in cities had better access to resources compared to their rural counterparts (Zhao et al., 2022). In another study, Almaiah et al. (2020) discussed how students in Saudi Arabia preferred traditional face-to-face learning to e-learning because, in their view, interaction and engagement in online classes were lacking (Almaiah et al., 2020).

Our finding of 3.2% of students preferring virtual learning is also supported since 68.1% of respondents preferred face-to-face learning (Gurban & Almogren, 2022). In addition, the study conducted by Adedoyin and Soykan (2020) regarding the challenges of e-learning during the COVID-19 pandemic in Turkey reveals that students were immensely distracted at their homes, resulting in difficulties in focus during virtual classes. Our results are consistent with published reports 39.4% of students indicated "little disturbance," while 30.3% indicated "moderate disturbance" during e-learning (Adedoyin & Soykan, 2023). Furthermore, previous study (Adedoyin & Soykan, 2023) has suggested that to enhance e-learning experience, students should be provided with sufficient technological resources and training, which is also one of the primary recommendations of our study. Despite more pupils owning mobile or tablet devices overall (952 or 67.5% vs 371 or 15.7%) the disparity was even greater when it came to e-learning through a laptop (5.7%), compared to smartphones (93.6%). This is also in accordance with the study of Kaur (2020) in India, which reported that smartphones are the dominant devices used for online learning as they are affordable and easily accessible.

Furthermore, the small screen size of smartphones limited students' ability to multitask, making participation in online classes challenging, which has also been raised as a concern in our findings (Jakhar et al., 2020). The results of this study also shed light on the demands of e-learning platforms and the problems that students encounter. The preference of face-to-face over virtual learning indicates that as students, we still value the interaction face-to-face learning provides. A study by Means et al. also supports this (2014) observe that in the massive open online course (MOOC) instructional approach, blended learning models, incorporating both online and face-to-face instruction, were superior to fully online traditional classroom-based learning. Our study also found that 27.7% of students preferred a hybrid model, which aligns with the findings of Means et al. (2014).

In conclusion, the challenges encountered by BSPH students at PUMHSW during COVID-19 are similar to the issues reported in other studies in comparable settings. The results Kiran Shahbaz, Fahmida Naz, Zubeda Khanum, Farkhanda Shaheen, Saima, Fatima Bibi

highlight the importance of factors related directly to the infrastructure: poor internet connection and accessibility of devices for the students as well as the quality of e-learning platforms in terms of improving student engagement and satisfaction in terms of e-learning. Future research must seek to build up solutions to shrink the digital divide and offer students the necessary resources and support to succeed in an online learning environment.

Recommendations

To enhance e-learning, institutions should improve internet access, provide affordable devices, and adopt user-friendly platforms with interactive features. Support for mental and physical health, such as counseling and stress management, is essential. A hybrid learning approach, combined with digital literacy training, can ensure a more inclusive and effective learning experience for all students.

CONCLUSION

This study highlights key barriers to e-learning, including poor internet access, lack of devices, and psychological stress. By addressing these challenges and implementing strategies like hybrid learning and digital literacy programs, institutions can create a more accessible and effective educational environment.

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