

Barriers and Facilitators to Online Nursing Education during the Covid-19 Pandemic at Islamia University in Bahawalpur

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Abstract

Online learning is the substitute to face to face learning due to pandemic of COVID 19. by converting face to face learning by changing to online learning, all are shifted on online education especially nursing students in Islamia University Bahawalpur. Hence, the aim of this study is to perceive the barriers and facilitation for online education among nursing students in Islamia University in Bahawalpur due to Covid-19. This quantitative study with cross-sectional design involved 133 Nursing students, using convenient sampling. SPSS version 26 is used to analyze the result findings and there is significant relationship between the barriers and facilitation for online learning among nursing students in Islamia University in Bahawalpur. In this study, the researcher (myself) discovered that although students' acceptance online education during the epidemic was low, over half of them indicated interest in using online education in the future. Despite the massive disruptions the pandemic has brought to the nursing education for students, this technological revolution also opens the door to a new world of learning approaches. The researchers had faced limitations in this study which are communication barrier, since that time is MCO so it's difficult to communicate and explain things to all the respondents, inadequate number of respondents and short time range given for doing this study. In conclusion, this research study cannot be generalized to others because the result findings only focus to student nurse in Islamia University in Bahawalpur. Future studies should employ both qualitative and quantitative methods, and involving other universities, in order to develop a thorough understanding of the subject matter and to improve the reliability and validity of the study findings.

Introduction

This chapter begins with an introduction and background of study about online barrier and facilitators of learning in nursing education during COVID-19 in Islamia University Bahawalpur. It is also discussed about problem statement during the COVID-19 pandemic period's that hurdles to online learning for nursing students. Besides that, general objective and also specific objective will be discussed. In additional, conceptual framework, research question, significant of the study, research hypothesis and definition of term:

Introduction of the Study Area

Online learning is referred as an electronic learning, which is the acquisition of knowledge that takes place through electronic technologies and devices. Typically, online learning is conducted through internet, where students can access their learning materials online at any time and any

place. It takes place in the form of online courses and programs. During online learning tutor or students didn't in the same location.

Online learning (OL) applicable in Pakistan starts from last year (2020). It is because pandemic that occur in our country (COVID19). Due to the present of this pandemic the government had decided to implement the movement control order (MCO) around the nation in aid to control the spread of the disease. The sudden shift affects the students a lot of changes from the physical classroom to virtual space are actually creating a direct impact on the students, educators and institutions. During the sudden changes students affects a major problem is barriers during their online leaning.

For university' nursing students; online education is only way to maintain their learning, however during online learning which is new teaching approaches, students may face many factors that cause barriers and facilitation for their education after switch direct learning (face –to –face) to online learning(OL).

Background of the study:

Online learning is currently the only method of continuing classes amongst all universities across the globe where the students and lecturers get an opportunity to communicate via available online platforms. The implementation of online learning has been increasing time by time in every university in all courses as this lockdown of the COVID -19 pandemic is being extended and has been obstructing the flow of studies of students and their semesters.

According to previous research it is proven that online learning has its own advantages and disadvantages differing to every student that takes part in it. Referring to previous studies, there are several factors that correspond to student's feedback on online classes. Some of these factors are course subjects(Hassan 2007) ,effectiveness (Sun, Lin et al. 2008), standard of communication and information channeling (Lonn and Teasley 2009), as well as student self-efficiency, past achievements and computer expertise (Liaw 2008)

The COVID-19 pandemic severely disrupted many aspects of human existence, including educational technology. It caused chaos and persuaded educational institutions to halt their regular operations (Jawadi, Geri, et al. 2020) Undoubtedly, the Covid disorder 2019 (COVID-19) pandemic poses a significant challenge to the tutoring systems throughout the world by disrupting routine instruction and focusing on trajectories (Daniel 2020).

Many institutions have switched to online education to better serve students and reduce idleness. Different chances for global domination, data sharing, nonexclusive availability, and stable network have been created by cutting-edge mechanical transformation. In contrast to many wealthy nations, the majority of medical schools in terrible countries—including Pakistan—don't provide regionally mounted distant learning and online courses. The challenges of using the internet to learn in impoverished countries differ from those inside the developed world (Nawaz 2012).

It was a clear story to conduct online distributions at some point in the COVID-19 fiasco despite the fact that online tutoring is well perceived and documented as a promising and strong mode for teaching undergraduate clinical and nursing school students (Nawaz 2012; Needleman, Garcia, et al. 2018). This is because the component of web-based courses and people's scholarly states may be exceptionally restrictive from those at some point in standard times (Zhang, Jia, et al. 2020).

According to Khan (1997), it is a modern technique of educating students who live in remote locations and incorporates all forms of research that are carried out using computers or other ICT (information, communication technology) resources.

According to Howlett, internet focusing is "the use of electronic time and media to provide, support, and complete each investigation and teaching and integrates spoken exchange between

novices and instructors using online content" (Bataclan, Sy et al. 2021). The benefits of using online learning for clinical tutoring include improved measurement transparency, ease of standardizing and updating content, sufficiency of obligation, and enhancement of the learning process, whereby undergrads are encouraged to be active beginners (Chen, Kern, et al. 2019). Internet information gathering has been successfully used to prepare evidence-based restorative medicine and to support inter-professional education; it may provide student's fundamental competence and confidence before exposure to real or normalized patients. (2012) (Ellman, Schulman-Green, et al.

It is impossible to minimize the role of ICT in tutoring, especially in higher education, since it benefits both professors and students (Antti, Bansal, et al. 2018)

The ability and capacity to use the web helps the understudy apply knowledge efficiently, run searches, and collect survey data. Online data sources, such as data sets, websites, and blogs, provide students with a fantastic environment in which to search for and read. They also act as coordinators, interpreters, and practitioners of understanding in certain academic subjects. In Jacobs (2008) Numerous advantages of using the internet for study, communication, and tutoring encourage supported universities and superior tutoring organizations to provide their students and staff access to this vast local community.

Slow and dubious organizational linkages have an impact on the wonderful of internet dominance (Darkwa 2021). Directions may be delayed due to unfavorable online connotations. In online notice, a confined net get section that incorporates poor internet association and espresso speed demotivates companies from pursuing online training. Rural gatherings concerned in web-based learning find it difficult to fund and attract qualified educators to coach advanced courses. The lack of internet access and PC frameworks in households in provincial districts has an impact on the advancement of online learning. The absence of regular energy transports and internet access to in-country groups makes it difficult to adapt to the web-based training technique. (2020 DePaul) Numerous understudies had the challenge of keeping focused when in a web concentrate on the room, despite interruptions from family or the weather. When there is a lack of ability, as discussed above in the primary Endeavor, online verbal trade among instructors and understudies might be hampered. This makes it more difficult for students to connect with their lecturers and hence lose interest; the excitement that comes from clinical practice in the clinical topic is also diminished. It's also challenging to lead understudies via standard brilliance assessments. (Bai, Yao, and colleagues, 2020)

The use of internet thinking to match the skill-based educational program is a way of incorporating the association as an unusual arrangement as the academics and undergrads. The lack of a collection guide and the lack of departmental verbal communication might be intentional annoyances. Two divisions may perhaps design addresses at the same time, for example, or they could prepare addresses without giving the researchers a chance to unwind and contemplate. This may result in understudies who lack awareness and competence in logical instructing as a whole. Doherty, Drome, and colleagues (2018)

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Internet preparation is essential due to the lack of innovative skills and the poor understanding of the past with the web-based test. Since mentors likely needed unmatched creative ability, schools may hire mentors from outside groups that already have the skills. The difficulty in organizing

online preparation is due to the lack of awareness for web-based education. Undergraduates who like finding information online but lack prior knowledge occasionally also require specific assistance and support systems. (Luong 2018)

There are several codecs available for online RN-BSN programs, including an eight-week term/semester, a seven-week time period/semester, a ten-week term/semester, and a fifteen to sixteen-week period/semester. Running medical attendants can manage their time, provide students flexibility, and handle 24-hour access to course materials with the use of online tools. In any situation, there may be obstacles that prevent or postpone the certificate of the total. In addition to being essential for satisfying IOM recommendations, RN-BSN program completion on time is also essential for certification in nursing programming. In order to fully understand the factors that contribute to students' dissatisfaction or incapacity to finish RN-BSN programs, it is essential to see the situation from their point of view. (2021, Iheduru-Anderson)

A key aspect of clinical tutoring is helping students develop their general logical abilities. As a result, logical resources provide OSCE (Objective Structured Clinical Examination) to test undergraduates' reasoning skills, and they devote a lot of time to self-analyzing these skills. 2014 (Jang and Kim) As a result, clinical resources must assist students in learning about resources that will enable them to independent research their clinical aptitude. One of the main goals of clinical teaching capacities is to preserve undergraduates' capacity in fundamental logical skills. 2014 (Jang and Kim) Therefore, it is absolutely crucial that clinical schools provide students with learning resources to guide their independent research skills.

Many previous studies from frequently aided environments have shown that internet-based information gathering for nursing undergraduates significantly affects abilities, knowledge, conduct, and impacted individual consideration in examination without mediation and generally comparable viability to traditional non-net-basically based schooling. Less is known about the influence or value of internet in resource-required contexts. One comprehensive writing analysis of online focusing on in low- or focus profit countries suggested excitement and great outcomes for eLearning, but the assessment overwhelmingly focused on pre-supplier education and noticed that the majority of posted educational endeavors were focused on doctors (fifty-eight percent) versus other units. (Jacob Feedbacker et al., 2017)

The primary barriers to online teaching appear to be interruptions from one's own family, Internet connectivity, and the scheduling of educational activities. Additionally, this may hurt students with large families or restricted Internet access. Additionally, as indicated by using the free message reactions, the psychological health of students who are now showing signs of being affected by the COVID-19 epidemic may be negatively impacted. This can be partially attributed to the lack of communication with friends and coworkers, which is crucial to the rise in stress. Understudies can, nonetheless, be less helpless to gauge unease thanks to checks being exposed to digital books and unlimited placing. Although this doesn't control the circle of family members and disturbance aggravations, which may still have an impact on evaluation performance in general. (Cao, Fang, and others 2020)

It is possible to help clinical tutoring by relearning material, according to research. Sight and auditory cues are extremely important for learning clinical skills since people can evaluate them well. Jiang and Kim (2014). In addition, academic movies provide money for us "to profit from the ability of moving pictures to educate methodology needing gifted approaches and special actual examination (Jang and Kim 2014). In light of this, video demonstrations of clinical skills have been shown to improve clinical command, and clinical students appreciate the availability of such learning resources. E-learning in clinical education is possible in a variety of formats.

Problem Statement:

COVID-19 is currently the biggest challenge facing these expanding public-school systems. Many states have mandated that institutions stop providing in-person education to the majority of their students and swiftly transition to online learning and virtual instruction. In order to curb the spread of COVID-19, more than 100 nations, according to UNESCO (COVID), had momentarily covered every one of their educational offices. A few governments have also ordered the closure of specific schools in vast areas. 2019 Pei and Wu According to study, reviewing information can be helpful in assisting therapeutic education. People learn best from visual and auditory cues; thus, they are crucial for clinical training. Kim and Jang in 2014. Additionally, educational movies help us financially so that we may "benefit from the power of moving pictures to instruct methods needing gifted approaches and particular actual examination (Jang and Kim 2014). Videos of clinical skills being practiced have been demonstrated to enhance clinical command since clinical understudies enjoy having access to such learning tools. There are several codecs available for e-learning in clinical education.

To avoid learning gaps while the Coronavirus lockdown is in effect, students must continue their academic work. Despite attending classes online, nursing students encounter a few challenges. Potentially opening doors for online training among nursing students is the evaluation or contribution of students on obstacles.

Conducting entirely online classes during the COVID-19 emergency will be challenging because people's psychological states and how online courses operate may differ significantly from those of normal times, despite the fact that web-based schooling is generally known and demonstrated to be a promising and effective method for training undergraduate clinical and nursing understudies (Pei and Wu 201 Jia Zhang and colleagues 2020).

The other problem is internet connection make the students miss the classes because of WIFI connection problem. Students enter the class late because of WIFI problem and they might had missed the earlier lesson taught by their lecturer. This will definitely affect the quality of online learning and make the student stress(Adnan and Anwar 2020)found, that online classes cannot produced desire academic performance, since most students cannot successfully solve connection problems. Furthermore, the students lack of interaction with lecturer during e-learning compare to face to face.

The sudden transition to online learning without proper training for students and lecturers, unstable internet access, and inadequate preparation will make it difficult for students to participate in the online learning and learn something, according to some students' feedback from a chosen study area. In my personal experience, I also ran across this issue. Others feel that a better education system will be developed with a correct strategy, which might be advantageous to kids in the future, but if this issue is not brought to light it will continue to produce an unfavorable persistent growth. There is, however, no information on how well the new educational system is working for pupils or whether they are happy with how it is assisting them in learning about various subjects, technologies, system designs, and environmental categories. As a result, there are still numerous obstacles to be addressed, especially for those students who lack consistent internet connection or the necessary technology to engage in digital learning, such as a computer, a suitable microphone, or headphones (University of Illinois 2020). Every community in the nation, regardless of financial level, has experienced this divide. Therefore, the purpose of this work was to suggest future research into the efficiency of online learning among nursing students at Islamia University. Surveys were done to obtain input directly from the students themselves. Therefore, the results of this study offered evidence for improved comprehension in the analysis and correlation of the variables under examination.

Problem Analysis:

Internet access, a lack of technological know-how, insufficient expertise, being distracted by family, a sluggish network, and the time of lessons are all obstacles to online learning. The efficient use of information, conducting searches, enhancing communication between professors and students, cost-effectiveness, accountability, and active learning are all facilitators of online learning.

Justification:

There is very little evidence showing how e-learning improves education and learning in non-industrial nations and the factors associated to it in Pakistan, despite certain learning studies making some claims that it would be equally practically as feasible as conventional tactics for learning or educating.

Most of the study is being carried out in Western country, thus some finding could not be employ as Pakistan and western country still under developing country, and the culture and belief is not similar practice as western country. In this sense, the current analysis explores the obstacles to and enablers of e-learning in developing countries like Pakistan.

Significance:

The information about web-based training or remote learning provided by the current study will assist nursing students in comprehending how to properly advance their knowledge and capabilities using web-based schooling. Following the analysis of the data, the analyst will discuss what remote learning means for nursing students. By using web-based learning more effectively, nursing students at the Islamia University of Bahawalpur will be able to overcome obstacles and make just as much progress at home as they would in a classroom, according to this review.

Objective:

According to (Polit and Beck 2014) define that study objectives is the study's unique objectives. The following being the objectives of this proposal paper:

General Objective

1. To research the influences on online learning among nursing students at a public institution in Pakistan.

Specific Objectives

1. To ascertain the COVID-19 pandemic period's hurdles to online learning for nursing students at government Bahawalpur University in Pakistan.
2. To identify the COVID-19 pandemic era facilitators for online learning among nursing students at Government t Bahawalpur University in Pakistan.
3. To assess the effectiveness of the online nursing program at the government-run Bahawalpur University in Pakistan during the COVID-19 epidemic.
4. To ascertain the relationship between obstacles to and enablers of online learning among nursing students at a government Bahawalpur University in Pakistan.

Research Question:

Generating research questions are vital as the research question gives focus, set boundaries and provide a pathway (Polit and Beck 2014). To be able to conduct this study, the subsequent research inquiries acted as a guidance to generate the finding in fulfilling the objectives of this study proposal.

1. What obstacles face government institutions' online nursing programs amid the COVID-19 pandemic?
2. What parts of the design and delivery of online learning do you believe vary from traditional classroom instruction?
3. How can the relationship between obstacles and enablers for nursing students enrolled in online courses at an Islamic university during the COVID-19 epidemic be determined?
4. What do nursing students believe contributes to the effectiveness of online instruction and learning?
5. What advice may nursing students provide novice coworkers who use a materials-based approach to online instruction, such as sharing resources with students or having them create their own materials?
6. What are some successful techniques of monitoring students' involvement and learning during online courses? How do they contribute to assessment?

Research hypothesis:

Null Hypothesis:

1. During the COVID-19 epidemic, there is no correlation between impediments to online education and nursing students attending Islamic universities.
2. During the COVID-19 epidemic, there is no organization of online education facilitators among nursing students attending Islamic universities.

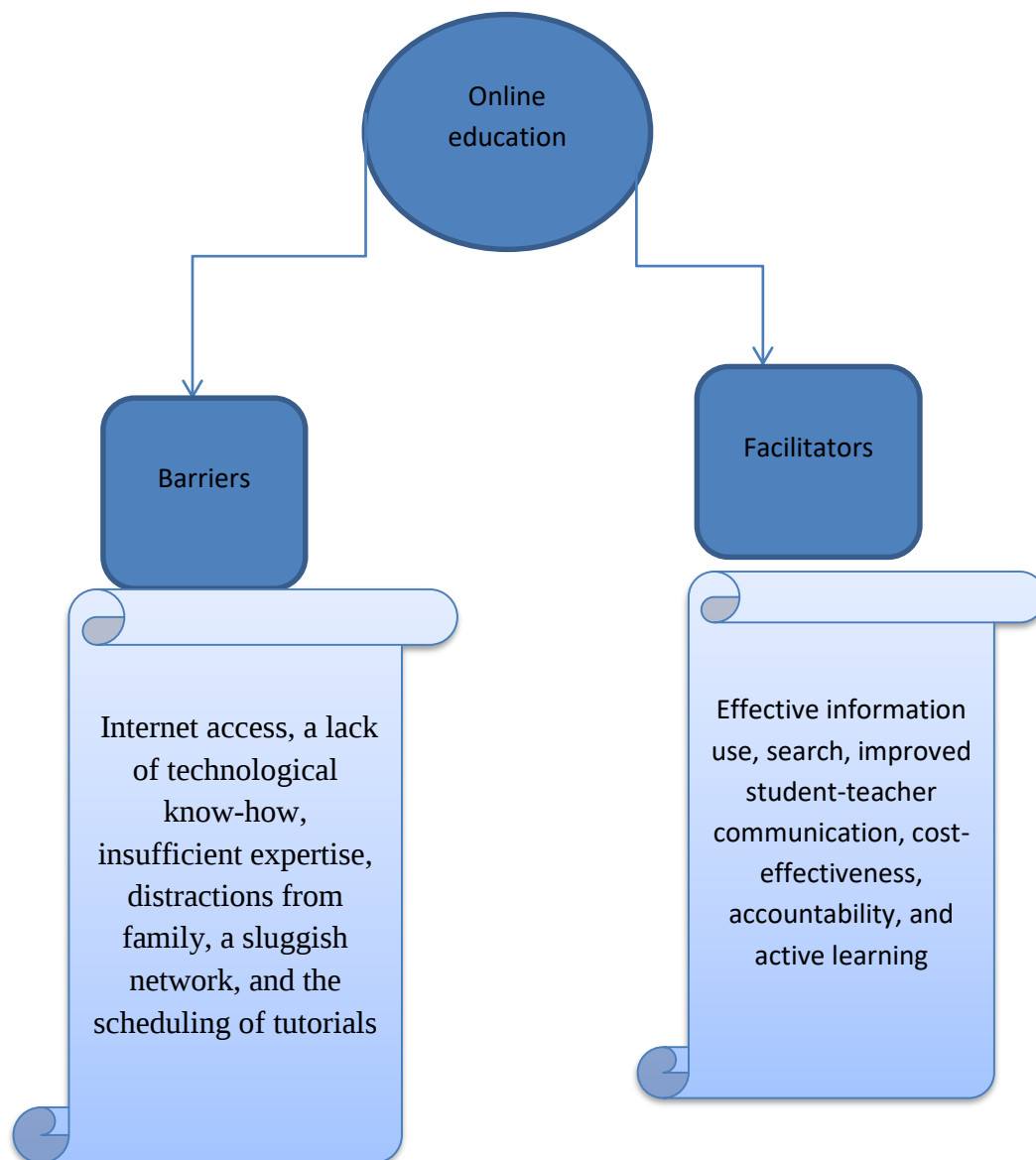
Alternative hypothesis

1. In an Islamic institution offering online courses during the COVID-19 epidemic, there is a correlation between these hurdles and the enrollment of nursing students.
2. During the COVID-19 epidemic, nursing students who participated in online courses at an Islamic institution formed an association of online education facilitators.

1.8. OPERATIONAL DEFINITION

- 1.8.1 Barriers: A learning barrier is anything that interrupts or prevents learning. It impedes the way students engage with learning, encode information, store knowledge and retrieve it during practice.
- 1.8.2 Facilitation: Facilitation is a technique used by trainers to help learners acquire, retain, and apply knowledge and skills.
- 1.8.3 Online learning: education that take place over the internet. It is often referred to as e-learning among other terms. Online learning is just one type of distance learning (JOSHUA STEM)
- 1.8.4 Student nursing: student nurses are different from students pursuing other subjects. They practice what they learn in class by joining clinical rotations under the supervision of a nursing instructor. As a student nurse, they will work to promote, maintain and restore the health of patients by following the clearly outlined hospital procedures. Because it is limited, so students will often need approval before a student can administer any care to a patient (BY EPIC UNIVERSITY, 26/1/21)

Conceptual framework:



Literature review:

A literature review is an exhaustive summary of prior research on a subject. It analyses intelligent books, articles, and other resources pertinent to a certain field of study. The survey should accurately count, represent, summarize, and objectively evaluate this previous investigation (Harvey A 2020).

Facilitation for online education:

To prevent the gaps in nursing student training during the COVID-19 epidemic, the role of online learning is vital. Remote learning refers to the lessons that were taken online about using the web, which is what this article's final aim is all about. Typically, the term "remote learning" refers to distant education, in which the majority of lessons are taken online. Generally speaking, remote learning is a dynamic, student-focused learning process where students choose how and when to interact with the resources and advice offered (Raanta, Buttery, et al. 2020)

According to Bozkurt, the market for distant learning would be small before the COVID-19 pandemic; this public health emergency has forced educational companies to switch from an in-person learning system to a remote learning mode due to the closure of educational institutions. (Sharma and Bozkurt 2020)

According to Rajab, a different scientist, there are differing opinions on the practicality, suitability, and methods employed to impart knowledge over the web. A study conducted at Al Faisal University in Riyadh to determine the impact of the COVID-19 pandemic on online clinical education revealed that among teachers and students, 62.5 percent preferred a combination of online and traditional eye-to-eye guidance, 25.5 percent preferred traditional eye-to-eye guidance, and 12.0 percent preferred only internet-based guidance. Although the execution of online education during COVID-19 clearly influences clinical schooling, correspondence, evaluation, utilization of innovation gadgets, managing time effectively, and sense of fear toward innovation usage were the evident tests of online training. 2020; Rajab, Gazala, et al. This suggests that educational delivery methods like online learning or face-to-face instruction have had little effect on how students present themselves. 2019 (Paul and Jefferson).

According to another review, ICT technologies may be used to support teaching and learning at any time and any location. (Geer 2002). In the US, a meta-analysis of the available data revealed that students who engaged in online learning outperformed those who attended face-to-face classes, and that students who combined online and traditional learning did the best overall (Morphew, Ward, et al. 2016).

Barriers for online education:

According to Mailizar, Almanthari, Maulina, and Bruce (2020), COVID-19 had a serious impact among students and educational organizations around the globe. Educational institutions across the globe decided to use the already available technical resources to create an online learning for students such as zoom and google meeting. (Mailizar, Abdulsalam et al. 2020) found studies have explored the challenges and opportunities associated with e-learning during pandemics. Technology and internet accessibility and lack of an e-learning curriculum and assessment tools to effectively evaluate student growth limit what teachers can teach. Motivation in learning online, confidence in using e-learning technology, and teachers' attitudes to online instruction impact how and if learners will learn. Because of this problem forces teachers and students to immediately adjust to a different mode of teaching and learning from face to face to online learning.

For a successful online learning (OL), students and lecturers must identify the value on how it functions to build a trust and confidence with the various online platforms. According to (Gregory and Lodge 2015) said developing institutional competence for online instruction requires a careful approach to training online instructors and a workload investment in staff training and development. On the other hand, online education may fail if faculty members are not trained in using online programs, if online courses are not designed properly, or if there is inadequate financial management (Rovai and Downey 2010). Furthermore, adopting new technology in teaching can affect the success of students in learning and educational institutions (Al Meajel and Sharadgah 2018)

According to the survey conducted by Bataclan, the barriers that have been identified in writing include high costs, poor infrastructure, a lack of ICT skills, the termination of e-advancing by employees, and the lack of access to reliable online connections and energy (Bataclan, Sy et al. 2021). The start-up costs for online education might be high (Queiroz and de Villiers 2016) Online courses could be more expensive to develop and provide than in-person ones (El Turk and Cherney 2016) Understudies may be undervalued and restless due to inadequate access to technology, focusing on materials, and PCs, which affects the web-based learning process (Queiroz and de

Villiers 2016). Sauna concluded that just 5 out of 22 students considered their home computer and internet access (Sauna 2008).

Students who lack prior knowledge of and experience with the internet occasionally also require specific assistance and support mechanisms (Recantation 2014). The characteristics of online learning are influenced by slow and dubious organizational relationships (Ade, Aguirre, et al. 2019)

It is obvious to concur with Li that 36.5 percent of students and 61.1 percent of teachers were happy with the online learning environment. The success of online education will be significantly determined by the instructors' degrees of specialization, the students' prolonged study periods, their initial landmass, and their continued residence. The COVID-19 situation's power will be a big challenge for children, and it will cause teachers to feel disengaged. Effective task completion will be the most important working component for students, and for instructors, it will be the efficient management of the online courses. (Li, Gillies, and others, 2021)

Theoretical framework

A theory is clarified as a bunch of statements, concepts or findings that correlate to a certain subject. A theory mainly describes, explains and/or predicts a spectacle. The meaning of theory also may vary based on disciplines (Anthony, Tian et al. 2017). A theoretical framework comprises of ideas and, along with their definitions and reference to significant academic literature, existing hypothesis that is utilized for your specific study. The theoretical framework must exhibit a comprehension of hypotheses and ideas that are pertinent to the subject of your research paper and that correlate with the wider zone of the subject in matter (Ravitch and Riggan 2016).

George Siemens explained in his paper that learning theory is to give a detailed description and aid us in understanding people's way of learning. Connectivism was first introduced in 2005 by two theorists, George Siemens and Stephen connectivism is a relatively new learning theory that suggests students should combine thoughts, theories, and general information in a useful manner. It accepts that technology is a major part of the learning process and that our constant connectedness gives us opportunities to make choices about our learning. It also promotes group collaboration and discussion, allowing for different viewpoints and perspectives when it comes to decision-making, problem-solving, and making sense of information.

Connectivism promotes learning that happens outside of an individual, such as through social media, online networks, blogs, or information databases. In this section, the theory that I propose for online learning environment is the Connectivism. This theory model supports the design of online and a mixture of courses as an active learning environment. It also supports the community that depends on instructors and students sharing their ideas and interacting actively through the online learning platform. It has played a crucial role in promoting active discussions and collaborative learning sessions among students and educators. These criteria made the Connectivism theory that most accurate model to represent my research paper and fulfills the core of my study, which is the barriers and facilitation for online learning among nursing students. (Downes May 27, 2021)

Material and Method (Methodology)

This chapter provides the methodological research approach that was employ in this study. The research design, participants, research instruments, and research procedure be explained. In-depth discussion is also given to the methods used to gather and evaluate the data, including the software and statistical tests used.

STUDY Settings

The study was carried out at Bahawalpur's Islamia University. The selected of the study's location based on the population that coincided with the purpose of the study, which is expected to answer the question of the study.

Research Design

The study design is a cross sectional study with quantitative approach pertaining to the research objective, systematic process and the study design provided for data collection of relevant information, and it was conducted based on descriptive method. According to (McCusker and Gunaydin 2015) the quantitative research is a study in general that uses statistical analysis associated with numerical data and accuracy. The Quantitative-based cross-sectional designs use the data to make statistical inferences about the population of nursing at a single point in time (Tuckman and Harper 2012).

Targeted Population:

All nursing students at the university were the targeted population.

Inclusion Criteria:

The inclusion criteria for choosing nurses eligibility required a nurse who has been previously participated in online education, who can speak and write in English. The selection criteria also involved nurses who agreed to take part in the study.

Exclusion Criteria:

The respondents were excluded if they were having the following criteria:

- The Nursing students who did not take any online classes were excluded.
- The nurses who were not agree to take part in this study.

Sampling:

Sampling was done by using the probability sampling technique which is random sampling. A simple random sampling be employed, which is the subjects in the population are sampled by a random process, using either a random number generator or a random number table. The sample was drawn from the population in such a way that each member had an equal chance of being selected (Starr, 2014).

Sample size calculation:

The sample size calculation in this study utilize Krejcie & Morgan Table formula (Table 1). This is to determine the sample size needed to be representative of a given population. Sample size was 133 students and according to this table, only 113 of students were taken as respondents in this study.

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	283	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	100000	384

Note: N is Population Size; S is Sample Size *Source: Krejcie & Morgan, 1970*

Available at :

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607–610.

https://www.researchgate.net/publication/349118299_Sample_Size_Determination_Using_Krejcie_and_Morgan_Table

Variables

Independent Variable

- Online education in Islamia Bahawalpur University, Pakistan nursing students in online learning during the outbreak of COVID 19
- Socio- demographic characteristics of participants (age, gender and educational background), learning attitude and style of participants.

Dependent Variable

- The efficiency of the implementation of online classes
- Barriers (network issue, practice, and noise)
- Facilitation (technology etc.).

Instrumentation

Instrumentation is the term used to describe the equipment or methods used by researchers to try and measure variables or other objects of interest throughout the data gathering process. It has to do with the circumstances in which the defined instruments are used, in addition to the design, choice, construction, and assessment of the instruments. The tool is the equipment used by researchers to gather data (Salkind 2010).

Close ended questions were the research tool in this study. The questionnaires were prepared to analyze the students take on online classes. Questionnaires were obtained from School of International Education, Xuzhou Medical University, and were edited to be used. Some of the items from the adopted questioners were edited to suit our research topic. Statistical Package for Social Sciences (SPSS) version 27 was used to test the research hypothesis and analyze the effects of using online classes.

The survey questions consisted a total of 18 items which was used as an instrument to provide answers based on our research topic and research hypothesis. 133 questionnaires were distributed among students from nursing students. The students were required to read the questions and choose their answer based on 4–Likert scale ranged from.

The rating scale is as follows:

- 0 Did not apply to me at all
- 1 Applied to me to some degree or some of the time
- 2 Applied to me to a considerable degree or a good part of the time
- 2 Applied to me very much or most of the time

The questionnaire was divided into the total of 2 sections:

Section A(Demographical): Mainly focused on the student's information, such as gender, race, course background, highest academic qualification, learning preference style, frequency of exposure to technology.

Section B: Looked into student's acceptance and readiness in utilizing online methods for class. Focused on student's perception of online classes and the effectiveness of online classes which was our research topic core focus.

Data Collection Procedures

Data was be gathered using a Structured Questionnaire(Li, Gillies et al. 2021)

The modified questionnaires, total of 133, attached with the participant's consent form informing about the research project was used for nursing students. The questionnaires were done by the students. The respondents were given 7 days to complete the questionnaires. After 7 days the hard copy collected and the answered questionnaires was gathered and collected to be further analyzed. These data were analyzed using Statistical Package for Social Sciences (SPSS) version 27.0 for further analysis and get the study findings.

Data Analysis

Raw data was drawn into the Statistical Package for Social Sciences (SPSS) version 27.0 Program for data analysis, SPSS (Statistical package for the social sciences,) is the set of software programs that are combined together in a single package. The basic application of this program is to analyze scientific data related with the social science. This data can be used for market research, surveys, data mining, etc. (John Noels, 2018)

A categorical variable was tabulated using frequencies and percentages for descriptive information. Socio-demographic data was analyzed and reported using descriptive statistics using percentage. The data was analyzed to determine relationships with the results of the 26 statements of online learning including the socio-demographic data of the respondents.

Correlation coefficient was used to assess the participants' relationship to the statements regarding online learning. The correlation coefficient is a statistical measure of the strength of the relationship between the relative movements of two variables. (Jason Fernando, 2020) A 1.5% level of significance was set, P values 0.015 or less than was considered statistically significant, thereby the null hypothesis was rejected.

Planning:

Gantt chart

Year	2022						2023	
Activity/month	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb

Research Proposal								
Ethics committee								
Data collection								
Data analysis& report								
Review research report with the supervisor								
Prepare for final								
The final presentation of the research								
Submit research paper								

Pilot study

A pilot study carrying out prior distributing the questions to determine the reliability of the questionnaire. The purpose of the pilot study is to discover whether any potential problems would exist in the questionnaire. Pre-testing questionnaires conducted to 30 nursing students. The samples requested to comment freely on the content, the format, the length of questionnaire and the type of question. The piloted responses excluded from the study's result.

Ethical consideration was obtained from the following prior to conduct the study

- Dean, Lecturer of Faculty of Islamia University Bahawalpur university... approved and permitted to conduct the study.
- The participant (nursing student of Islamia University Bahawalpur university. will sign consent before the study.
The participants were explained that the data will be private and confidential.
The participants were not being penalized if they choose to withdraw from the research study at any time.
The anonymity of participants ensured by non-disclosure of identification details such as name or address.

Data Analysis and Interpretation of Data

Data collection and analysis written questionnaires were employed. The questionnaire for the students was in English. In the questionnaires, it was clearly explained that the participation was completely voluntary and the aim was to investigate the online nursing education.

All participants gave written consent for their opinions to be published anonymously. The data obtained from this study were analyzed using IBM SPSS Statistics (version 27.0). Responses to the four-point Likert-scale questions ranged from "Did not apply to me at all, applied to me to

some degree or some of the time, applied to me to a considerable degree or a good part of the time & Applied to me very much or most of the time“.

The Chi-square test was used to determine the influence of the characteristics of students on the education satisfaction and to compare the barriers and facilitation for online education among nursing students. The Kruskal–Wallis rank-sum test was performed to identify the positive and negative factors influencing students' online education satisfaction. A binary logistic regression model was performed to compare the influence of factors in different categories on the online education satisfaction.

The major findings from the research study were now be presented. Demographic data of the participants included in the study sample was be discussed first, followed with the statements about the barriers and facilitations for online learning. The association of effectiveness of online learning and the year 4 nursing students was included. The association between online learning and student's academic performance was also include. The population involved were 87 (65.4%) of 1st year, 32 (24%) of 2nd year, and 8 (6%) of 3rd year of nursing student. Their age involved in the research were 18-20 years old is 76 (57.1%), 21-23 years old is 37 (27.8%), 23-25 years old is 12 (9%) and above 25 is 8 (6%) respectively. In this research the female respondents (62.4%) which were more than male (37.6%).

Social Demographic Data

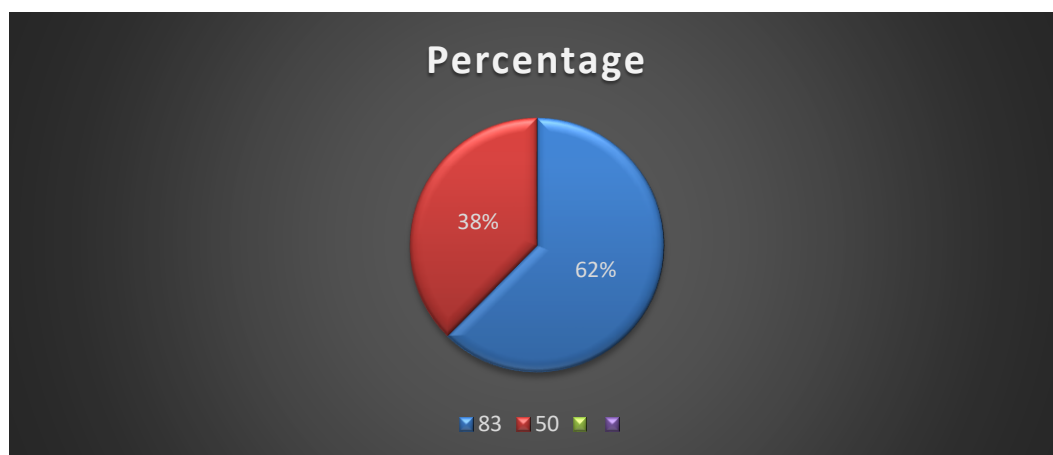
Female	83	62.4%
Male	50	37.6%
Age	Frequency	Percent
18-20	76	57.1%
21-23	37	27.8%
23-25	12	9%
Above 25	8	6%
Year of respondent	Frequency	Percent
1st year	87	65.4%
2nd year	32	24%
3rd year	8	6%
4th year	0	0

Table 4.1.1: SOCIAL DEMOGRAPHIC DATA

According to table 1, there are total 133 of respondents involved this study. Participants involved was divided into female and male. 83(62.4%) of them are female whereas 50(37.2%) are male. 76 (57.1%) out of 133 respondents were student nurses age group between 18-20 years old followed by age group 21-23 with 37(27.8%) also followed by age group 23-25 with 12(9%) and last age group who participate in this research is above 25 with 8(6%) participants. Out of 133 respondent 87(65.4%) people is from 1st year, 32(24%) people is from 2nd year and 8(6%) people is from 4th year.

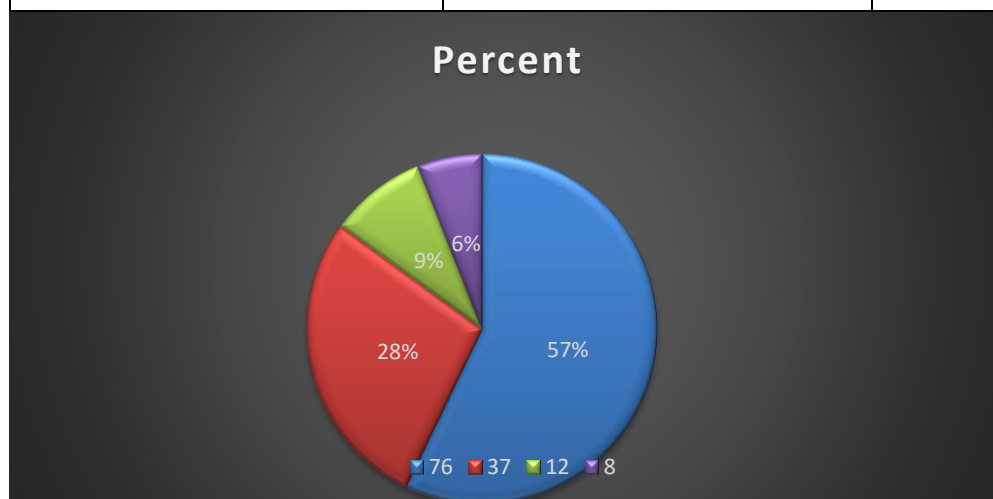
Gender

Gender	Frequency	Percent
Female	83	62.4%
Male	50	37.6%



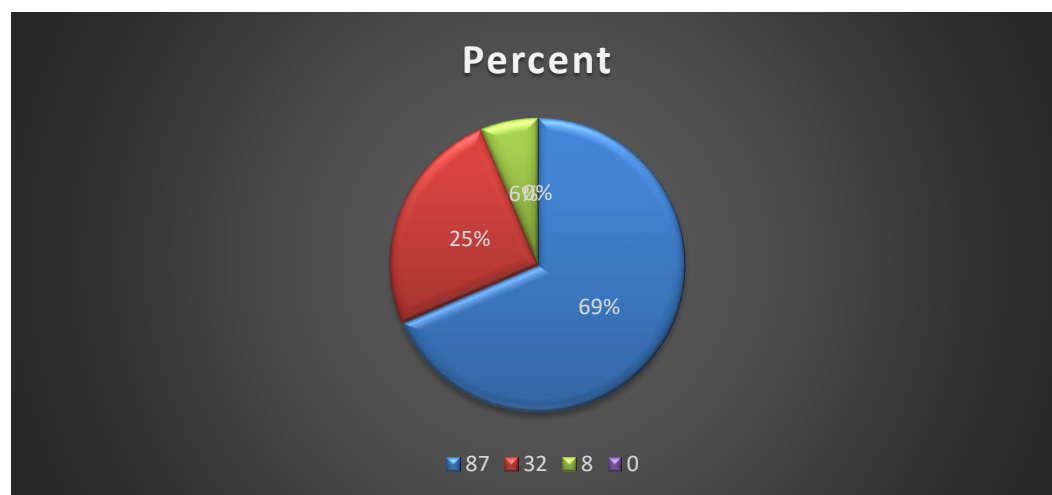
Age

Age	Frequency	Percent
18-20	76	57.1%
21-23	37	27.8%
23-25	12	9%
Above 25	8	6%



Year of respondent

Year of respondent	Frequency	Percent
1 st year	87	65.4%
2 nd year	32	24%
3 rd year	8	6%
4 th year	0	0



Statements about online learning

		Did not apply to me at all		Applied to me to some degree or some of the time		Applied to me to a considerable degree or a good part of the time		Applied to me to a very much or most of the time		Total
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency
4.2: Crisis Related Category										
QUESTION 1	How much do the epidemiological data related to the COVID-19 pandemic affect your online learning?	17	12.7 %	64	48.1 %	41	30.8 %	11	8.2 %	133
QUESTION 2	How much does the lockdown due to the COVID-19 pandemic affect your learning state?	15	11.2 %	19	14.2 %	59	44.3 %	40	30 %	133
QUESTION 3	How much are you satisfied with your current learning environment?	14	10.5 %	51	38.3 %	58	43.6 %	10	7.5 %	133

QUESTION 4	How well are you adapting to the sudden change in the teaching pattern (from fully offline to fully online)?	11	8.2%	86	64.6%	33	24.8%	3	2.2%	133
QUESTION 5	How much are you affected by the uncertainty of the university-opening date and the following teaching arrangement?	12	9%	48	36%	64	48.1%	9	6.7%	133
QUESTION 6	How much do the economic issues related to COVID-19 affect your online learning?	9	6.7%	45	33.8%	56	2.1%	23	17.3%	133
4.3: Learner-Related Program										
QUESTION 1	How much do you enjoy independent study?	10	7.5%	14	10.5%	23	17.2%	86	64.6%	133
QUESTION 2	How much are you concerned about the data cost for online learning?	10	7.5%	8	6%	69	51.8%	46	34.6%	133
QUESTION 3	How much are you familiar with the online learning technologies?	13	9.77%	43	32.3%	52	39.1%	25	18.8%	133
QUESTION 4	How much do you enjoy having the flexibility to regulate your time for online learning?	14	10.5%	77	57.9%	39	29.3%	3	2.2%	133
QUESTION 5	How much do you consider yourself self-disciplined?	10	7.5%	11	8.2%	71	53.3%	41	30.8%	133
QUESTION 6	How much are you motivated for online learning?	9	6.7%	41	30.8%	77	57.8%	6	4.5%	133
4.4: Instructor-related category										
QUESTION 1	How would you evaluate the teachers' overall performance?	10	7.5%	0	0%	80	60.2%	43	32.3%	133
QUESTION 2	How adequate is the duration of the online courses?	12	9%	40	30.1%	68	51.1%	13	9.7%	133

QUESTION 3	How adequate is the attention and care you have received from the teachers during the learning process?	10	7.5%	10	7.5%	54	40.6%	59	44.3%	133
QUESTION 4	How adequate are the interactions with the teachers during the online teaching process?	11	8.3%	20	15%	65	48.8%	37	27.8%	133
QUESTION 5	How adequate is the time scheduled for discussions (such as Q and A class)?	11	8.3%	69	51.8%	51	38.3%	2	1.5%	133
QUESTION 6	How helpful are the course resources (such as preview and review materials) provided by the teachers?	11	8.3%	64	48.1%	56	42.1%	2	1.5%	133

Crisis Related Category

QUESTION 1: How much do the epidemiological data related to the COVID-19 pandemic affect your online learning?

Out of 133 respondents, 8.2% (11) of the respondent as Applied to me very much or most of the time, 30.8% (41) of respondent were respond as Applied to me to a considerable degree or a good part of the time, 48.1% (64) of respondent respond as Applied to me to some degree or some of the time and 12.7% (17) of respondent were responded Did not apply to me.

QUESTION 2: How much does the lockdown due to the COVID-19 pandemic affect your learning state?

Out of 133 respondents, 30% (40) of the respondent as Applied to me very much or most of the time, 44.3% (59) of respondent were respond as Applied to me to a considerable degree or a good part of the time, 14.2% (19) of respondent respond as Applied to me to some degree or some of the time and 11.2% (15) of respondent were responded Did not apply to me.

QUESTION 3: How much are you satisfied with your current learning environment?

Out of 133 respondents, 10.5% (14) of the respondent as Did not apply to me, 14% (51) of respondent were respond as Applied to me to some degree or some of the time, 43.6% (58) of respondent respond as Applied to me to a considerable degree or a good part of the time and 7.5% (10) of respondent were responded Applied to me very much or most of the time.

QUESTION 4: How well are you adapting to the sudden change in the teaching pattern (from fully offline to fully online)?

Out of 133 respondents, 2.2% (3) of the respondent as Applied to me very much or most of the time, 24.8% (33) of respondent were respond as Applied to me to a considerable degree or a good part of the time, 64.6% (86) of respondent respond as Applied to me to some degree or some of the time and 8.2% (11) of respondent were responded Did not apply to me.

QUESTION 5: How much are you affected by the uncertainty of the university-opening date and the following teaching arrangement?

Out of 133 respondents, 6.7% (9) of the respondent as Applied to me very much or most of the time, 48.1% (64) of respondent were respond as Applied to me to a considerable degree or a good part of the time, 36% (48) of respondent respond as Applied to me to some degree or some of the time and 9% (12) of respondent were responded Did not apply to me.

QUESTION 6: How much do the economic issues related to COVID-19 affect your online learning?

Out of 133 respondents, 17.3% (23) of the respondent as Applied to me very much or most of the time, 42.1% (56) of respondent were respond as Applied to me to a *considerable degree or a good part of the time*, 33.8% (45) of respondent respond as Applied to me to some degree or some of the time and 6.7% (9) of respondent were responded Did not apply to me.

Learner-Related Program

QUESTION 1: How much do you enjoy independent study?

Out of 133 respondents, 7.5% (10) of the respondent as Did not apply to me, 10.5% (14) of respondent were respond as Applied to me to some degree or some of the time, 27.2% (23) of respondent respond as Applied to me to a considerable degree or a good part of the time and 64.6% (86) of respondent were responded Applied to me very much or most of the time.

QUESTION 2: How much are you concerned about the data cost for online learning?

Out of 133 respondents, 7.5% (10) of the respondent as Did not apply to me, 8% (8) of respondent were respond as Applied to me to some degree or some of the time, 51.8% (69) of respondent respond as Applied to me to a considerable degree or good part of the time and 34.6% (46) of respondent were responded Applied to me very much or most of the time.

QUESTION 3: How much are you familiar with the online learning technologies?

Out of 133 respondents, 9.77% (13) of the respondent as Did not apply to me, 32.3% (43) of respondent were respond as Applied to me to some degree or some of the time, 39.1% (52) of respondent respond as Applied to me to a considerable degree or a good part of the time and 18.8% (25) of respondent were responded Applied to me very much or most of the time.

QUESTION 4: How much do you enjoy having the flexibility to regulate your time for online learning?

Out of 133 respondents, 10.5% (14) of the respondent as Did not apply to me, 57.9% (77) of respondent were respond as Applied to me to some degree or some of the time, 29.3% (39) of respondent respond as Applied to me to a considerable degree or a good part of the time and 2.2% (3) of respondent were responded Applied to me very much or most of the time.

QUESTION 5: How much do you consider yourself self-disciplined?

Out of 133 respondents, 7.5% (10) of the respondent as Did not apply to me, 8.2% (41) of respondent were respond as Applied to me to some degree or some of the time, 53.3% (71) of respondent respond as Applied to me to a considerable degree or a good part of the time and 30.8% (41) of respondent were responded Applied to me very much or most of the time.

QUESTION 6: How much are you motivated for online learning?

Out of 133 respondents, 6.7% (9) of the respondent as Did not apply to me, 30.8% (41) of respondent were respond as Applied to me to some degree or some of the time, 57.8% (77) of respondent respond as Applied to me to a considerable degree or a good part of the time and 4.5% (6) of respondent were responded Applied to me very much or most of the time.

Instructor-related category

QUESTION 1: How would you evaluate the teachers' overall performance?

Out of 133 respondents, 7.5% (10) of the respondent as Did not apply to me, 0% (0) of respondent were respond as Applied to me to some degree or some of the time, 60.2% (80) of respondent respond as Applied to me to a considerable degree or a good part of the time and 32.3% (43) of respondent were responded Applied to me very much or most of the time.

QUESTION 2: How adequate is the duration of the online courses?

Out of 133 respondents, 9% (12) of the respondent as Did not apply to me, 30.1% (40) of respondent were respond as Applied to me to some degree or some of the time, 51.1% (68) of respondent respond as Applied to me to a considerable degree or a good part of the time and 9.7% (13) of respondent were responded Applied to me very much or most of the time.

QUESTION 3: How adequate is the attention and care you have received from the teachers during the learning process?

Out of 133 respondents, 7.5% (10) of the respondent as Did not apply to me, 7.5% (10) of respondent were respond as Applied to me to some degree or some of the time, 40.6% (54) of respondent respond as Applied to me to a considerable degree or a good part of the time and 44.3% (59) of respondent were responded Applied to me very much or most of the time.

QUESTION 4: How adequate are the interactions with the teachers during the online teaching process?

Out of 133 respondents, 10.5% (14) of the respondent as Did not apply to me, 14% (51) of respondent were respond as Applied to me to some degree or some of the time, 43.6% (58) of respondent respond as Applied to me to a considerable degree or a good part of the time and 7.5% (10) of respondent were responded Applied to me very much or most of the time.

QUESTION 5: How adequate is the time scheduled for discussions (such as Q and A class)?

Out of 133 respondents, 8.3% (11) of the respondent as Did not apply to me, 51.8% (69) of respondent were respond as Applied to me to some degree or some of the time, 38.3% (51) of respondent respond as Applied to me to a considerable degree or a good part of the time and 1.5% (2) of respondent were responded Applied to me very much or most of the time.

QUESTION 6: How helpful are the course resources (such as preview and review materials) provided by the teachers?

Out of 133 respondents, 8.3% (11) of the respondent as Did not apply to me, 48.1% (64) of respondent were respond as Applied to me to some degree or some of the time, 42.1% (56) of respondent respond as Applied to me to a considerable degree or a good part of the time and 1.5% (2) of respondent were responded Applied to me very much or most of the time.

Discussion and Conclusion

This final chapter was providing a discussion on an analytical cross sectional study design that carried on 133 participants that comprises of 4 years BScN nursing students to determine the barrier and the facilitation among them during online learning. The implication of the study's finding is discussing on its similarity as well as to the research hypotheses. This also covered the implication and suggestion for local practice and future study to be carry out.

In the study, the researcher conducted a thorough evaluation of the online education among nursing students and their teachers during the COVID-19 crisis, and discovered that: i) the majority of teachers were satisfied with the online education experiences, whereas the majority of students were dissatisfied; (ii) the teachers' professional title, students' year of study, continent of origin, and location of current residence significantly affected the online education satisfaction; and (iii) the online education satisfaction was negatively impacted by the teachers' professional title (iii) The most significant enabling factor for online education for students was a successfully completed course assignment, while for teachers it was effective management of the online courses; (iv) The most significant impediment for online education for students was the seriousness of the COVID-19 situation, while for teachers it was the feeling of distance.

Socio-demographic data

There was a demographic data from our respondents in order to know the comparison about barrier and facilitation among the nursing students in Islamia university of Bahawalpur. The population

involved were 87 (65.4%) of 1st year, 32 (24%) of 2nd year, and 8 (6%) of 3rd year nursing students. Their age involved in this research were 18 – 20 years old (57.1%), 21 -23 years old (27.8%), 23-25 years old (9%) and above 25 years old (6%) respectively.

Crisis Related Category

The effectiveness of online learning in imparting a health sciences curriculum has been supported by some empirical evidence, exemplified by nursing students' promising outcomes in tests (Gerdprasert, Pruksacheva et al. 2011; Frehywot, Vovides et al. 2013) as well as their positive perceptions on the acquisition of knowledge (Shenoy and Kuriakose 2016; Montayre and Sparks 2018) and skills (Warnecke and Pearson 2011; Shenoy and Kuriakose 2016). Several recent studies also reported a high overall satisfaction rate for the online education during the COVID-19 crisis among Chinese (80.29%) and Indian (97.14%) students and teachers at medical schools (Kan, Jing et al. 2020; Rathee and Sarkar 2020); however, a study from Jordan reported a low satisfaction rate (26.77%) with the distance e-learning amid the pandemic among medical students in clinical years (Al-Balas, Al-Balas et al. 2020). In this study, we found a comparatively medium satisfaction rate in nursing students, whose online education experiences were significantly influenced by various factors.

For the first question How much do the epidemiological data related to the COVID-19 pandemic effect your online learning? Out of 133 respondents, 8.2% (11) of the respondent as Applied to me very much or most of the time, 30.8% (41) of respondent were respond as Applied to me to a considerable degree or a good part of the time, 48.1% (64) of respondent respond as Applied to me to some degree or some of the time and 12.7% (17) of respondent were responded Did not apply to me. According to journal, the epidemical data related to covid 19 pandemic (independent variable) impact the online learning (dependent learning).

For second Question **How much does the lockdown due to the COVID-19 pandemic affect your learning state?** Out of 133 respondents, 30% (40) of the respondent as Applied to me very much or most of the time, 44.3% (59) of respondent were respond as Applied to me to a considerable degree or a good part of the time, 14.2% (19) of respondent respond as Applied to me to some degree or some of the time and 11.2% (15) of respondent were responded Did not apply to me. It is there for understandable that factor related to Covid 19 pandemic these factors did not affect the students staying in university.

For third Question **How much are you satisfied with your current learning environment?** Out of 133 respondents, 10.5% (14) of the respondent as Did not apply to me, 14% (51) of respondent were respond as Applied to me to some degree or some of the time, 43.6% (58) of respondent respond as Applied to me to a considerable degree or a good part of the time and 7.5% (10) of respondent were responded Applied to me very much or most of the time. Among the crisis related factor, the current learning factors and the current teaching environment were found to promote the education experiences for student outside university.

5.2.2 Factor Related to Learner and Effector

For first Question, **how much do you enjoy independent study?** Out of 133 respondents, 7.5% (10) of the respondent as Did not apply to me, 10.5% (14) of respondent were respond as Applied to me to some degree or some of the time, 27.2% (23) of respondent respond as Applied to me to a considerable degree or a good part of the time and 64.6% (86) of respondent were responded Applied to me very much or most of the time. The result showed that the factor related to the attitude and the engagement of learners (self-discipline, cooperation, learning cooperation, time regulation, assignment, assess frequency to the internet, participation in discussion, lesson renewing and resource usage). Instructors (attention to the students, interaction with students, resource preparation, availability form the students and passion for teaching) significantly affects

the online education.(Bernardo, Ramos et al. 2004; Muilenburg and Berge 2005; Pei and Wu 2019).

For second Question, **how much are you familiar with the online learning technologies?** Out of 133 respondents, 9.77% (13) of the respondent as Did not apply to me, 32.3% (43) of respondent were respond as Applied to me to some degree or some of the time, 39.1% (52) of respondent respond as Applied to me to a considerable degree or a good part of the time and 18.8% (25) of respondent were responded Applied to me very much or most of the time. Familiarity of technological skills was no found to be an influential factor for both students and teachers, manifested in their rating results. That learning attitudes outweigh regarding online learning. Those students' quick adaptation in using the internet for academic studies can compensate for their unfamiliarity with the web technologies at the beginning.

5.2.3 Factor related to the Courses

For first Question, **how adequate is the attention and care you have received from the teachers during the learning process?** Out of 133 respondents, 7.5% (10) of the respondent as Did not apply to me, 7.5% (10) of respondent were respond as Applied to me to some degree or some of the time, 40.6% (54) of respondent respond as Applied to me to a considerable degree or a good part of the time and 44.3% (59) of respondent were responded Applied to me very much or most of the time. Our results showed that technical issues such as network conditions and facilities used significantly affected students' dissatisfaction of online learning. This finding is in agreement with studies in India(Shenoy and Kuriakose 2016) , Malaysia (Seluakumaran, Jusof et al. 2011), Ghana (Adanu, Adu-Sarkodie et al. 2010) and South Africa(Mars 2012) . All the students in our study were learning online. As documented by Frehywot et al.(Frehywot, Vovides et al. 2013), the implementation of e-learning among health sciences students in the resource-constrained LMICs is usually technically challenged, and the main problems include slow speed of accessing and downloading from the Internet, poor quality images/sounds, limited electronic facilities and frequent electrical power failures. To ameliorate technical disturbance on e-learning in less privileged settings, scholars propose the application of approaches requiring less bandwidth, such as a hybrid teaching method or a digital library independent of the Internet(Missen 2005).

Additionally, the absence of experimental/practical classes was considered as an important inhibiting factor for online nursing education by both students and teachers. Our results also showed that students in their clinical years were significantly more dissatisfied than those in their basic years, which implies that the unavailability of the clinical experience possibly produces a more adverse effect on theory learning than the inability to undertake experiments does. In fact, thanks to digital technology, experimental operations traditionally learned in laboratories and clinical skills traditionally acquired in hospitals are presently allowed for online learning. For example, some medical schools in Australia and the UK have already replaced dissection with e-textbooks and online resources in anatomy teaching(Patel, Mauro et al. 2015) . Additionally, during the COVID-19 pandemic, an American institution used telehealth clinics for surgical residents to maintain their clinical exposure. This allowed the trainees to participate in the entire process electronically, including talking with the attending surgeon on the phone after gathering the patient's medical record and videoconferencing with the patient and the medical team to formulate the treatment plan. It is argued that face-to-face contact and interactions with classmates as well as instructors are preferred for experimental hours (Franchi 2020) and that hands-on clinical operative experiences and direct patient care are indispensable (Chick, Clifton et al. 2020). Although it seems feasible to perform experiments and clinical practice online, which provides an example of how to cope with the current policy of restricting gatherings. Therefore, it is crucial for colleges in Pakistan to forge domestic and international partnerships in order to come up with innovative solutions to these problems. In a recent national conference on international medical

education, recommendations were made that medical schools in China work together to connect with foreign medical schools and hospitals, particularly those located in the IMSs' and INSs' countries of origin, to provide substitute experiences locally for the experimental classes and clinical practice they lack.

Conclusions

COVID - 19 pandemic presents a wide range of public health challenges around the world. The COVID - 19 outbreaks is complex, and highly contagious this study has identified the key factors which have influenced the satisfaction and barriers of nursing students and their teachers towards their online education in the Islamia University during the pandemic. This information can be used to inform nursing schools on how to improve their online teaching delivery in a similar crisis in the future and enhance their education outcome.

The current COVID-19 crisis significantly affects the online education outcome of students and teachers, whereas the influence might be in disparity according to the pandemic situation at their current places of residence. Nursing schools are urged to look after the mental health of their students and make learning more fun for them, as well as care for those who are studying remotely and may be under strain from a poor Internet connection and expensive data usage. Even though most of studies had been done around the world on online learning showed positive outcome from respondents, there are still some or few studies revealed negative feedbacks about online learning. In this study, findings showed that respondents may or may not possess the equipment to attend online classes but personally they aren't ready to learn through an online medium, but still show a positive attitude towards the implementation of e-learning. Several barriers had been identified which are being obstacles to the respondents in completing a course electronically and most of the barriers are similar with the other studies previously. The findings from this study have meet the overall hypotheses and general objective, which was to assess the overall effectiveness of online learning among nursing students in islamia University. The study finding also interrelated with the theory and research conceptual framework that enhance effective online learning environment for students.

Additionally, it is proposed that universities in Pakistan should work together with other Pakistan Higher Education Institution to link with foreign medical schools and hospitals in order to establish students practice in online learning.

Recommendations for Education and Research:

They are few recommendations which can make to solve problem during online learning. These are the few recommendations. Find comfortable and quiet place to concentrate in online learning courses such as their own bed room, patio or balcony, or even at a park without distracting from the family member. Then, Identify and use more effective time management strategies which make a timetable so that you won't be miss out anything given by lecturer such as assignment or the classes time.

The fusion of information technology into medical education requires a dramatic shift in mindset. Studies indicate that time constrictions, weak technological skills, insufficient groundwork, lack of organized strategies and support and negative attitudes of those concerned are the primary obstacles affecting the establishment and implementation of online learning in nursing education. Despite nursing educators being rather excellent clinicians and educational trainers and mentors, many are not familiar teaching and learning via electronic platform due to various barriers as mentioned previously.

The initial questions focus more on prompting course developers to consider the learning needs of their target group. (Hodges 2023). The university is responsible for creating an academic

environment where learning and research can progress in the optimal manner. For the purpose of improvement of nursing knowledge and providing the best quality of health protection, active medical research, as such, has to be performed under academic conditions, in order to meet the highest healthcare standards (Masic, Miokovic et al. 2008). (Wook Kim 2006) has published about the use of standardized patients being an integral part of nursing education for both teaching and assessment purposes. Kim also mentioned that in recent years, Web-based OSCEs (Objective Structured Clinical Exams) and video technology have been piloted to test whether performance-based skills, such as decision making or error disclosure skills, can be taught and evaluated. the future pillars of the healthcare system therefore require tremendous and dynamic trainings from proficient tutors and educators.

Research

For the future research, maybe the scope of this study not only to be done between nursing students, but to include other faculties as well for better results. The questions should be added more items related to online learning to get a clear picture of problems occurred, for example health issues and academic results. As this was descriptive quantitative study with a cross-sectional research design in future for better result qualitative research must be done about online education, so, Triangulation refers to the use of multiple methods or data sources in qualitative research to develop a comprehensive understanding of phenomena (Patton, 1999). Triangulation also has been viewed as a qualitative research strategy to test validity through the convergence of information from different sources. (Triangulation 2014) Hopefully, there will be lot of research done by nurses about e-learning to have a better outcome.

Limitations:

It's important to note that the current study has a number of limitations. If this is a cross-institutional research with a bigger sample size, the study may be more representative. Additionally, the study did not examine how the participants' choices to go home or stay in school during the COVID lockdown affected their later levels of satisfaction. The limited generalizability of the results is also a result of the descriptive study approach and small sample size. In addition, even though it was stated before the focus group discussion and at the start of the questionnaire that the goal of this study was to only research and improve the quality of online education, there may have been some students and teachers who did not give accurate ratings because of certain factors.

References:

- Adanu, R., Y. Adu-Sarkodie, et al. (2010). "Electronic learning and open educational resources in the health sciences in Ghana." Ghana Medical Journal **44**(4).
- Adnan, M. and K. Anwar (2020). "Online Learning amid the COVID-19 Pandemic: Students' Perspectives." Online Submission **2**(1): 45-51.
- Al-Balas, M., H. I. Al-Balas, et al. (2020). "Distance learning in clinical medical education amid COVID-19 pandemic in Jordan: current situation, challenges, and perspectives." BMC medical education **20**(1): 1-7.
- Al Meajel, T. M. and T. A. Sharadgah (2018). "Barriers to using the blackboard system in teaching and learning: Faculty perceptions." Technology, Knowledge and Learning **23**: 351-366.
- Anthony, T., Z. Tian, et al. (2017). "Thinking fast and slow with deep learning and tree search." Advances in neural information processing systems **30**.

- Bernardo, V., M. P. Ramos, et al. (2004). "Web-based learning in undergraduate medical education: development and assessment of an online course on experimental surgery." International journal of medical informatics **73**(9-10): 731-742.
- Downes, G. S. a. S. (May 27, 2021). "connectivisim theory ".
- Frehywot, S., Y. Vovides, et al. (2013). "E-learning in medical education in resource constrained low-and middle-income countries." Human resources for health **11**: 1-15.
- Gerdprasert, S., T. Pruksacheva, et al. (2011). "An interactive web-based learning unit to facilitate and improve intrapartum nursing care of nursing students." Nurse Education Today **31**(5): 531-535.
- Gregory, M. S.-J. and J. M. Lodge (2015). "Academic workload: the silent barrier to the implementation of technology-enhanced learning strategies in higher education." Distance education **36**(2): 210-230.
- Hassan, A. (2007). "Human resource development and organizational values." Journal of European Industrial Training.
- Hodges, G. R. G. (2023). Anna May Wong: From laundryman's daughter to Hollywood legend, Chicago Review Press.
- Kan, D., Z. Jing, et al. (2020). "Research and analysis of online learning of clinical theory course for medical undergraduates." China Med Educ Tech **3**: 267-270.
- Li, W., R. Gillies, et al. (2021). "Barriers and facilitators to online medical and nursing education during the COVID-19 pandemic: Perspectives from international students from low-and middle-income countries and their teaching staff." Human Resources for Health **19**(1): 1-14.
- Li, W., R. Gillies, et al. (2021). "Barriers and facilitators to online medical and nursing education during the COVID-19 pandemic: perspectives from international students from low-and middle-income countries and their teaching staff." Human resources for health **19**(1): 64.
- Liaw, S.-S. (2008). "Investigating students' perceived satisfaction, behavioral intention, and effectiveness of e-learning: A case study of the Blackboard system." Computers & education **51**(2): 864-873.
- Lonn, S. and S. D. Teasley (2009). "Saving time or innovating practice: Investigating perceptions and uses of Learning Management Systems." Computers & education **53**(3): 686-694.
- Mailizar, A., M. Abdulsalam, et al. (2020). "Secondary school mathematics teachers' views on e-learning implementation barriers during the COVID-19 pandemic: The case of Indonesia." Eurasia Journal of Mathematics, Science & Technology Education: 1-9.
- Mars, M. (2012). "Building the capacity to build capacity in e-health in sub-Saharan Africa: the KwaZulu-Natal experience." Telemedicine and e-Health **18**(1): 32-37.
- Masic, I., M. Miokovic, et al. (2008). "Evidence based medicine-new approaches and challenges." Acta informatica medica: AIM: journal of the Society for Medical Informatics of Bosnia & Herzegovina: casopis Drustva za medicinsku informatiku BiH **16**(4): 219-225.
- McCusker, K. and S. Gunaydin (2015). "Research using qualitative, quantitative or mixed methods and choice based on the research." Perfusion **30**(7): 537-542.
- Missen, C. (2005). "Internet in a box: the eGranary digital library serves scholars lacking internet bandwidth." New review of information networking **11**(02): 193-199.
- Montayre, J. and T. Sparks (2018). "As I haven't seen a T-cell, video-streaming helps: Nursing students' preference towards online learning materials for biosciences." Collegian **25**(5): 487-492.
- Muilenburg, L. Y. and Z. L. Berge (2005). "Student barriers to online learning: A factor analytic study." Distance education **26**(1): 29-48.

- Patel, S. B., D. Mauro, et al. (2015). "Is dissection the only way to learn anatomy? Thoughts from students at a non-dissecting based medical school." Perspectives on medical education 4: 259-260.
- Pei, L. and H. Wu (2019). "Does online learning work better than offline learning in undergraduate medical education? A systematic review and meta-analysis." Medical education online 24(1): 1666538.
- Polit, D. F. and C. T. Beck (2014). "Essentials of nursing research." Appraising evidence for nursing practice.
- Rathee, N. and C. Sarkar (2020). "COVID-19 Lockdown: how the pandemic bringing change in Indian education system." Impact of COVID-19 and pandemic lockdown in India. Balewadi: Eureka Publications.
- Ravitch, S. M. and M. Riggan (2016). Reason & rigor: How conceptual frameworks guide research, Sage Publications.
- Rovai, A. P. and J. R. Downey (2010). "Why some distance education programs fail while others succeed in a global environment." The Internet and Higher Education 13(3): 141-147.
- Seluakumaran, K., F. F. Jusof, et al. (2011). "Integrating an open-source course management system (Moodle) into the teaching of a first-year medical physiology course: a case study." Advances in physiology education 35(4): 369-377.
- Shenoy, S. J. and C. Kuriakose (2016). "Effects of E-learning as a teaching learning method in medical education." Journal of Evolution of Medical and Dental Sciences 5(99): 7272-7276.
- Starr, S. B. (2014). "Evidence-based sentencing and the scientific rationalization of discrimination." Stanford law review: 803-872.
- Sun, Y., L. Lin, et al. (2008). "Structural changes of bamboo cellulose in formic acid." BioResources 3(2): 297-315.
- Triangulation, D. S. (2014). The use of triangulation in qualitative research. Oncol Nurs Forum.
- Tuckman, B. W. and B. E. Harper (2012). Conducting educational research, Rowman & Littlefield Publishers.
- Warnecke, E. and S. Pearson (2011). "Medical students' perceptions of using e-learning to enhance the acquisition of consulting skills." The Australasian medical journal 4(6): 300.
- Wook Kim, S. (2006). "Effects of supply chain management practices, integration and competition capability on performance." Supply chain management: An international Journal 11(3): 241-248.
- Adarkwah, M. A. (2021). "I'm not against online teaching, but what about us?": ICT in Ghana post Covid-19." Education and Information Technologies 26(2): 1665-1685.
- Ade, P., J. Aguirre, et al. (2019). "The Simons Observatory: Science goals and forecasts." Journal of Cosmology and Astroparticle Physics 2019(02): 056.
- Antwi, S., A. K. Bansah, et al. (2018). "The information technology challenge in teaching senior high school geography in Ghana." Issues and Trends in Learning Technologies 6(1).
- Asunka, S. (2008). "Online learning in higher education in Sub-Saharan Africa: Ghanaian University students' experiences and perceptions." International Review of Research in Open and Distributed Learning 9(3): 1-23.
- Bai, Y., L. Yao, et al. (2020). "Presumed asymptomatic carrier transmission of COVID-19." Jama 323(14): 1406-1407.
- Baticulon, R. E., J. J. Sy, et al. (2021). "Barriers to online learning in the time of COVID-19: A national survey of medical students in the Philippines." Medical science educator 31(2): 615-626.

- Bozkurt, A. and R. C. Sharma (2020). "Education in normal, new normal, and next normal: Observations from the past, insights from the present and projections for the future." Asian Journal of Distance Education **15**(2): i-x.
- Cao, W., Z. Fang, et al. (2020). "The psychological impact of the COVID-19 epidemic on college students in China." Psychiatry Research **287**: 112934.
- Chen, B. Y., D. E. Kern, et al. (2019). "From modules to MOOCs: application of the six-step approach to online curriculum development for medical education." Academic Medicine **94**(5): 678-685.
- Daniel, S. J. (2020). "Education and the COVID-19 pandemic." Prospects **49**(1): 91-96.
- Dawadi, S., R. A. Giri, et al. (2020). "Impact of COVID-19 on the Education Sector in Nepal: Challenges and Coping Strategies." Online Submission.
- DePaul, K. (2020). "Can online learning mitigate rural schools' biggest challenges?" Getting Smart.
- El Turk, S. and I. D. Cherney (2016). "Perceived online education barriers of administrators and faculty at a US university in Lebanon." Creighton Journal of Interdisciplinary Leadership **2**(1): 15-31.
- Ellman, M. S., D. Schulman-Green, et al. (2012). "Using online learning and interactive simulation to teach spiritual and cultural aspects of palliative care to interprofessional students." Journal of palliative medicine **15**(11): 1240-1247.
- Feldacker, C., S. Jacob, et al. (2017). "Experiences and perceptions of online continuing professional development among clinicians in sub-Saharan Africa." Human resources for health **15**(1): 1-8.
- Geer, C. H. (2002). "Technology training for school administrators: A real-world approach." TechTrends **46**(6): 56-59.
- Iheduru-Anderson, K. C. (2021). "Students' perspectives of factors related to delayed completion of online RN-BSN programs." BMC nursing **20**(1): 1-13.
- Jacobs, H. L. (2008). "Information literacy and reflective pedagogical praxis." The journal of academic librarianship **34**(3): 256-262.
- Jang, H. W., and K.-J. Kim (2014). "Use of online clinical videos for clinical skills training for medical students: benefits and challenges." BMC medical education **14**(1): 1-6.
- Li, W., R. Gillies, et al. (2021). "Barriers and facilitators to online medical and nursing education during the COVID-19 pandemic: Perspectives from international students from low-and middle-income countries and their teaching staff." Human Resources for Health **19**(1): 1-14.
- Luongo, N. (2018). "An examination of distance learning faculty satisfaction levels and self-perceived barriers." Journal of Educators Online **15**(2): n2.
- Morphew, C., K. Ward, et al. (2016). "Changes in Faculty Composition at Independent Colleges." Council of Independent Colleges.
- Nawaz, A. (2012). "E-Learning experiences of HEIs in advanced states, developing countries, and Pakistan." Universal Journal of Education and General Studies **1**(3): 72-83.
- Needleman, I., R. Garcia, et al. (2018). "Mean annual attachment, bone level, and tooth loss: A systematic review." Journal of clinical periodontology **45**: S112-S129.
- O'Doherty, D., M. Dromey, et al. (2018). "Aneurismas aorticos gigantes." BMC Medical Education **20**(22): 832-834.
- Paul, J. and F. Jefferson (2019). "A comparative analysis of student performance in an online vs. face-to-face environmental science course from 2009 to 2016." Frontiers in Computer Science: 7.

- Pei, L., and H. Wu (2019). "Does online learning work better than offline learning in undergraduate medical education? A systematic review and meta-analysis." Medical education online **24**(1): 1666538.
- Queiros, D. and M. de Villiers (2016). "Online learning in a South African higher education institution: Determining the right connections for the student." International Review of Research in Open and Distributed Learning: IRRODL **17**(5): 165-185.
- Rajab, M. H., A. M. Gazal, et al. (2020). "Challenges to online medical education during the COVID-19 pandemic." Cureus **12**(7).
- Rapanta, C., L. Botturi, et al. (2020). "Online university teaching during and after the Covid-19 crisis: Refocusing teacher presence and learning activity." Postdigital Science and Education **2**(3): 923-945.
- Srichanyachon, N. (2014). "EFL Learners' Perceptions of Using LMS." Turkish Online Journal of Educational Technology-TOJET **13**(4): 30-35.
- Zhang, X., W. Jia, et al. (2020). "An investigation and analysis of the psychological status of 1486 medical students in the period of COVID-19." J Inner Mongolia Med Univ **2**: 128-130.