The impact of online learning on students: Evidence from Lebanese French University-Erbil

Shirin Jamal

Head of Health Administration & Hospital Department, College of Administration and Economics, Lebanese French University, Erbil, Kurdistan Region, Iraq

A R T I C L E   I N F O
Article history:
Received 08 March 2021
Received in rev. form 14 April 2021
Accepted 15 April 2021

Keywords:
Online Learning, Online Education, International Universities, Students

JEL Classification:
F59

A B S T R A C T
Online education has been introduced as a tool in the learning process in the majority of international universities worldwide. The term “e-learning” is defined as “any learning that involves using the internet or intranet. In this research, we tried the check the impact of online learning upon the students of Lebanese French University Erbil, Kurdistan region Iraq. The Objectives of the study are multi-folded. Firstly, to evaluate the influence of online learning upon the performance of students and secondly, to test the motivation of online learning towards the students. For this purpose, a detailed questionnaire was developed in order to get the response of the students. The questionnaire was built up and distributed to almost eighty respondents in which we got back a perfect response in complete shape only fifty. Graph analysis has been used in order to present the response of the respondent. Mix response was recorded in which slightly negative response was in high portion. Furthermore, results showed that 60 % of respondents answered they are not happy with the online learning process and they want to have a traditional learning process that is on campus. Similarly, in each question, an extraordinary negative response toward online learning is recorded such as 76 % respondents said that they are not satisfied with this implementation of online learning. Also, they are facing hard times and 58 % of people showed their response one of the big challenges toward online learning is a poor internet connection. 60% claimed that the instructor is not helping them to understand this whole process as a tool of online learning. The possible reason that was claimed from respondents are following: (i)This online process is first time they are interacting with; (ii) Lack of training of such online tools for the online learning process, (iii) once any student is facing trouble while this online process less support is available from the department and technical staff of the university.

© 2021 by the authors. Licensee SSBFNET, Istanbul, Turkey. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).

I N T R O D U C T I O N
Online learning is a form of distance learning or distance education, which has long been a part of the American education system, and it has become the largest sector of distance learning in recent years (Hawkes, M., Cambre, M. (2000)). For the purpose of this literature review, both hybrid or blended learning and purely online learning are considered to be online learning as much of the literature compares these two formats against the traditional face-to-face. Purely online courses are courses delivered entirely over the Internet, and hybrid or blended learning combines traditional face-to-face classes, learning over the Internet, and learning supported by other technologies (Hawkes & Coldeway 2002; Hixon 2008; Hyllegard et al., 2008).

Online education has been introduced as a tool in the learning process in the majority of the international universities worldwide. The term “e-learning” is defined as “any learning that involves using internet or intranet.” A year later made the definition more generalized by indicating that it is “anything delivered, enabled, or mediated by electronic technology for explicit purpose of learning”. According to “e” in e-learning should not stand for electronic; it should be an abbreviation for “evolving, enhanced, everywhere, every time and everybody.” In fact, the quotation shows most of the advantages of e-learning for learners and instructors.
Although the e-learning term and tools do exist for over a decade, the educational research field has not given enough attention to the study of student motivation under the effect of e-learning (Howel et al., 2004).

One reason why there is so much discussion around online learning is that there are many purported benefits and uses of online learning. Some of the most important ones are: its effectiveness in educating students, its use as professional development, its cost-effectiveness to combat the rising cost of postsecondary education, credit equivalency at the postsecondary level, and the possibility of providing a world class education to anyone with a broadband connection (Xu & Morries 2017; Wooldridgr 2002; Taskforce 2001; Thille 2008)

Whalen & wight (2014) explored that online learning is education that takes place over the Internet. It is often referred to as “elearning” among other terms. However, online learning is just one type of “distance learning” - the umbrella term for any learning that takes place across distance and not in a traditional classroom. Distance learning has a long history and there are several types available today, including:

i. Correspondence Courses: conducted through regular mail with little interaction.
ii. Tele courses: where content is delivered via radio or television broadcast.
iii. CD-ROM Courses: where the student interacts with static computer content.
iv. Online Learning: Internet-based courses offered synchronously and/or asynchronously.
v. Mobile Learning: by means of devices such as cellular phones, PDAs and digital audio players (iPods, MP3 players).

Online learning is the newest and most popular form of distance education today. Within the past decade it has had a major impact on education and the trend is only increasing. In this study we will explore what the experience of online learning is like for students and how it has changed the role of the students(Long & Kurlaender 2009).

Nowadays across the Kurdistan region Iraq all the universities have implemented online learning due to Covid-19, including Lebanese French University. In this study, we examine the influence of interactive forms of students - teacher interaction, student - student interaction, student - content interaction, and student - technology interaction to online learning outcomes. This study will try to high light all the problems that are coming under above categories that is related to online learning. And at the end proposed solution will help to policy makers (head of departments, Deans of colleges, voice president as well as president) of Lebanese French University to overcome the issues of students related to the online learning such as time availability, availability of technology including internet in backward areas and familiarly with online tools. The main research questions in the study as follows:

i. Does the online learning significance influence upon the performance of the students?
ii. Does the online learning give motivation to the students?

The general objective of this peace of research to check the impact of online learning upon the students of Lebanese French University.

Further followings are the specific objectives of the study:

i. To evaluate the influence of online learning upon the performance of students.
ii. To test the motivation of online learning towards the students.

The main objective of this study is to measure to what extent using the interactive features of online learning increases the motivation of undergraduate students for the learning process. The significance of this study is that it raises the awareness of academic staff to the importance of using the interactive features of e-learning as an important asset in teaching adult students.

The study will be conducted in Kurdistan region Iraq and will target to the students of Lebanese French University in order to get the data and will check the impact of online learning upon the students of Lebanese French University whereas the results of study can be useful for all the other universities of Kurdistan region as infrastructure of education is similar to across the Kurdistan region.

This research consists of five chapters. In chapter 1, study has focused upon the meaning of online learning.. The second chapter is about the literature review in which it discussed past studies related to the topic online learning. The followed up chapter is about the methodology in which it explains the process of data collection, and techniques which have been used to analyze them. The study uses the primary data which have been directly collected from the students. The chapter four explains the findings while analyzing primary data. The last chapter is about the discussion of the findings, and outcomes which can be helpful for the policy makers of the university. This chapter ends with conclusion.

**Literature Review**

This chapter contains about the past studies related to the same subject of the study and will cover both kind of literature empirical literature and theoretical and at the end study will cover the literature gap.

**Benefits of Online Teaching and Learning:** Why online distance learning and why now? Online distance learning meets the needs of an ever-growing population of students who cannot or prefer not to participate in traditional classroom settings. These learners
include those unable to attend traditional classes, who cannot find a particular class at their chosen institution, who live in remote locations, who work full-time and can only study at or after work, and those who simply prefer to learn independently. The minimum requirement for students to participate in an online course is access to a computer, the Internet, and the motivation to succeed in a non-traditional classroom. Online courses provide an excellent method of course delivery bound by time or location allowing for accessibility to instruction at anytime from anywhere. Learners find the online environment a convenient way to fit education into their busy lives. The ability to access a course from any computer with Internet access, 24 hours a day, seven days a week is a tremendous incentive for many of today’s students (Millet 2008; Mentser et al., 2007; Moor et al., 2003 Stock & yogo 2002).

Some of the main advantages of online learning include:

**Convenience:** 24/7 access from any online computer; accommodates busy schedules; no commuting, no searching for parking.

**Enhanced Learning:** Research shows increased depth of understanding and retention of course content; more meaningful discussions; emphasis on writing skills, technology skills, and life skills like time management, independence, and self-discipline.

**Leveling of the Playing Field:** Students can take more time to think and reflect before communicating; shy students tend to thrive online; anonymity of the online environment.

**Interaction:** Increased student-to-teacher and student-to-student interaction and discussion; a more student-centered learning environment; less passive listening and more active learning; a greater sense of connectedness, synergy.

**Innovative Teaching:** Student-centered approaches; increased variety and creativity of learning activities; address different learning styles; changes and improvements can translate to on-ground courses as well

**Improved Administration:** Time to examine student work more thoroughly; ability to document and record online interactions; ability to manage grading online.

**Savings:** Accommodate more students; increased student satisfaction = higher retention and fewer repeats.

**Maximize Physical Resources:** Lessen demand on limited campus infrastructure; decrease congestion on campus and parking lots.

**Outreach:** Give students options; reach new student markets; appeal to current students thus increasing enrollments.

**Attitudes towards teaching and learning in the online environment**

An online instructor should be able to accept the value of facilitated learning as equal to the traditional model. If a teacher feels the only way that true learning can take place is through the traditional means of educating in a classroom, the person is generally not a good fit for the online paradigm. This is OK, but we must be honest with ourselves. Both an accelerated learning model and the online process depend on facilitative techniques for their success. The online classroom requires new teaching strategies and instructional techniques; you should not try to recreate the on-ground classroom in the online paradigm. The person leading a successful online class must be a proponent of facilitative learning, and have confidence in the system in order to make it work (Larose & Eastim 2000).

**Teaching style and habits needed to teach online.**

Lavine & Sun (2012) explored in his peace of research that online facilitator should be open, concerned, flexible, and sincere. An online instructor must be able to compensate for the lack of physical presence in the virtual classroom by creating a supportive environment where all students feel comfortable participating and especially where students know that their instructor is accessible. Failure to do this can alienate the class both from each other and from the instructor and would make for a very weak learning environment. Online students are as busy, or busier, than anyone else in today's hurried world. An online instructor should be willing to give individual attention to students who may need extra help. Being sensitive, open and flexible is mandatory for success in the online realm.

**Seven Principles of Good Teaching**

Based on considerable educational research, Chickering and Gamson (1987) outlined Seven Standards of Good Practice for Undergraduate Education, principles that have been widely accepted as measures for judging the effectiveness of classroom teaching. ETUDES-NG incorporates elements in each of the seven areas, as demonstrated below:

**Principle 1:** Encourage student-faculty contact Through Private Messages students and faculty can communicate. Among other things, this allows instructors to be proactive by following up on students who are not participating in chats, discussions, etc. Students and faculty can also communicate through the discussion forums.

**Principle 2:** Encourage student cooperation The same areas of ETUDES-NG that allow for student-faculty contact can also be used for student-to-student contact. Assignments can be created to take advantage of this. Furthermore, the discussion forums can help foster group work and thread-leaders to moderate discussions. Student collaboration leads to a sense of community and higher learning outcomes.
Principle 3: Encourage active learning. Instructors can take advantage of the rich interactivity on the Web by designing assignments around appropriate Websites. When students come to these sites, they make choices, and they learn from their choices. Active learning also takes place when students work cooperatively. Give students more control, leadership roles, and options in what assignments to complete. Leave the center stage and transform yourself into a guide on the side.

Principle 4: Give prompt feedback. In ETUDES-NG, students can see results of their tests and view solutions to graded assignments immediately after submission. Instructors can and should promptly respond to student questions. ETUDES-NG allows you to provide both acknowledgement and information feedback.

Principle 5: Emphasize time on task. For example, give students something specific to respond to in each module via the discussions. Build in a reward system of points for each post and reply to the discussion forums. In other words, make posting and responding mandatory. Create a structure that can be followed, broken down week by week or unit by unit, allowing for acceleration of pace.

Principle 6: Communicate high expectations. In your syllabus you should include course goals and performance objectives. You might include model assignment submissions as examples for students to follow. The bottom line is that you must be explicit and clear in communicating your expectations to students.

Principle 7: Respect diverse talents and ways of learning. Create assignments that offer students options. Giving students choices in their learning experience increases satisfaction and retention. Consider giving students options as to what format to submit assignments or projects. For example, they might design a Webpage, write an essay, or develop a PowerPoint presentation. There is no reason why all students should submit the exact same homework or participate in one discussion topic. Variety is the spice of life and your online class; teach to the various learning styles of your students.

5 Reasons Why Online Learning is More Effective.

Online learning has been on the rise in recent years, and it’s really not hard to see why. On the one hand, eLearning courses have become hugely popular by the simple virtue of being so much more convenient than traditional face to face courses. Students can fit them around their existing responsibilities and commitments, and can engage with multimedia content and learning materials at whatever time is most convenient to them. Even better: they don’t have to travel anywhere to study, they can simply log in to the virtual campus from the comfort of their own home or office (Jung 2003; Howell & Lindsay 2004; Jewett 2003).

There’s a second reason why online learning has become so popular: it’s cheaper. Cost can often be a prohibitive factor in why individual students don’t enroll in courses they’re interested in. This is also an issue for corporations who wish to encourage their employees to undergo further training but don’t have much of a budget for conferences and training courses. Online courses are easily accessible on much smaller budgets (Millward 2008).

In addition to the convenience and the cost, a large number of students are turning to online learning courses because they have become a better way to learn. Those students who are serious about improving their understanding, learning new skills and gaining valuable qualifications are keen to enroll in the type of course that will be the most effective.

Students learn more than they do in traditional courses

IBM have found that participants learn five times more material in online learning courses using multimedia content than in traditional face to face courses. Because online courses give students full control over their own learning, students are able to work at their own speed. Generally students work faster than they would do otherwise and take in more information. They are able to move faster through areas of the course they feel comfortable with, but slower through those that they need a little more time on.

Retention rates are higher with online learning

Many offline courses struggle to retain students throughout the length of the course. The Research Institute of America have found that this is not the case with eLearning. Rather, online courses have increased student retention rates from anything from 25% to 60%.

It’s been suggested that more engaging multimedia content, more control over how they take in the material and less likelihood of classes clashing with other commitments all contribute to this rise.

Online learning requires less of a time investment

Many students are put off enrolling in a face to face course due to the time investment it will require. This generally involves the time to get back and forth to classes, plus the time spent waiting for tutors and other students. A Brandon Hall report on eLearning within corporations found that this style of learning typically requires 40-60% less employee time than learning in a traditional classroom setting. It’s also key to note that eLearning options generally allow students to split the time they are investing in the course in whichever way works for them. They don’t need to be able to dedicate large chunks of time to the course: it’ll work just as well if they can set aside half an hour from their lunch break each day.

More frequent assessments can reduce distractions
One of the great things about online courses is that assessment can become more of an ongoing process. This is good news for students as interspersing multimedia content and learning materials with regular short tests can improve student engagement. In fact, research from Harvard showed that using these short, regular tests halved student distraction, tripled note-taking and students’ overall retention of the content improved. It’s also worth noting that the more often students are assessed, the better their tutors are able to keep track of their progress. Increased student tracking means that tutors are able to step in earlier when assistance is needed.

E-Learning is the greener option

Online learning is certainly the more effective option for students, but it’s also better for the environment. E-Learning courses utilize high quality multimedia content to increase student understanding and provide an impressive virtually immersive experience (Moore 2003).

Research and Methodology

Sample & Target population

In this study descriptive qualitative design where 50 students as participants from Lebanese French University as sample size under. They were given a questionnaire as an instrument to dig up, how their teachers deliver their material in online learning, the process of online learning, and the effect of online learning to the students achievement. The questionnaire was contents upon 13 items. It divided into open ended and closed ended questions for the students. Likert formatted test was used in this study. This study used a Likert scale of 1-5, with the value of 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, and 5-strongly disagree. And open ended questionnaire explained. Microsoft office version 20th has been used for analysis of the data.

Theoretical framework

![Figure 1: Theoretical framework](image)

Above is the theoretical framework of the study in which independent variable is online learning (including all the tools and techniques) and dependent variable is the performance of the student. Study tries to check the impact of independent variable upon dependent variable that is performance of the Lebanese French University’s students.

Results and Discussion

This chapter contains about the graphical analysis of the response from the respondent. Response has been gathered from the students of Lebanese French University by choosing technique of random sampling, population were whole university where as respondent as a sample were from college of business administration and this college is having six department. After gathered the data analysis has been carried out by using excel software version eighteen, each question is analyzed critically and possible reasons behind the response are also mentioned beside each graph of question.

Question 1: Currently I am studying in

![Figure 2: Currently I am studying](image)

All the respondent were form the bachelor level under the college of administration and economics so 100 % response of respondents are from bachelor studies but these bachelor students are from different departments such as Business Administration, Marketing,
Legal administration Accounting & Finance and Health administration department. The reason behind to take response from this college to understand the core reasons and effect of online learning on students of this college.

Question 2: Do you have a personal computer of your own at home?

![Figure 2: Do you have a personal computer of your own at home? Source: Author self-calculation based on the questionnaire’s data.](image)

Out of fifty respondents all the respondents answered in positive mode that they are having personal computer or laptop in their homes so 100% response was in positive way. Because this is the era of technology and such things easily in acceded of each student as well as it is educational tool.

Question 3: How often do you use computer?

![Figure 3: How often do you use computer? Source: Author self-calculation based on the questionnaire’s data.](image)

Regarding this question “how often do you use computer” mix response was found from the respondents but majority of respondents such as 62% students said they get chance once per week for interaction with home computer one of the possible reason behind it, everyone is having smart phone so students are using all the educational tools on their smart phone. Whereas 26% students said that they get chance more than six time for interaction with their home computer and 8% response recorded that they get chance two to three time per week for use their home computer while just 4% students answered that they get chance four to five time per week for use their computer.

Question 4: Do you have access to Internet at home?

![Figure 4: Do you have access to Internet at home? Source: Author self-calculation based on the questionnaire’s data.](image)
Totally 100% response came positive in this question while gathering the answers from students. All of the students are in the position to use the internet and they are using. Because in this era technology is not far from the approach of students infect all the universities in Kurdistan region having access of internet for their student for the study purpose.

Question 5: How many hours per week do you use Internet?

[Figure 5: How many hours per week do you use Internet? Source: Author self-calculation based on the questionnaire’s data.]

In this question mix response is recorded from the students concerning the usage of internet per week, 56% students said that they use more than six hours where as 20% said that they use internet four to six hours per week and also 12% said 4 hours per week they use internet. In this question majority said they are using more than six hours internet per week that is good sign toward online education.

Question 6: Are you properly understating the lecture that is delivered by instructor?

[Figure 6: Are you properly understating the lecture that is delivered by instructor? Source: Author self-calculation based on the questionnaire’s data.]

In this question again mix response recorded about the understanding of lecturer to the students but one negative indication is noted that majority of the students 40% said that they are not understanding lecture that is delivered online whereas opposite of this 26% students said they are understanding the online lecture that is delivered from the instructor and 12% showed their response that totally and properly they are getting online lecturer while 8% students also showed slightly negative response. One of the possible reason could be behind the negative answer that first time online session is conducted at LFU and students are not familiar with this kind of education.

Question 7: Did you use difficulty at first time and now you are ok with this online process at LFU?

[Figure 7: Did you use difficulty at first time and now you are ok with this online process at LFU? Source: Author self-calculation based on the questionnaire’s data.]

Again in this question majority of the respondents showed negative response, 44% students answered that they are still in trouble while getting this online lecturer were as opposite of it only 12% said they are ok now and they are understanding each and every thing delivered online whereas 18% gave neutral response means they are not clear in this situation and 12% are on agree mode and
same 12.5 on disagree mode. One of the possible reasons of negativity that is 44%, because at LFU this is first time conducted online learning through google meet and this is the reasons students are not familiar as on other countries are such as Canada and Australia.

Question 8: Instructors who they are teaching you, help you to understand the tools of online education?

![Figure 8](image1)

**Figure 8:** Instructors who they are teaching you, help you to understand the tools of online education? ; **Source:** Author self-calculation based on the questionnaire’s data.

This question is regarding different instruction for online learning such as online quiz and submissions of assignments online, 42% majority of the respondents give answer strongly in negative mode whereas 18% said they are ok with all the instructions of instructor also 16% students said they are clear about everything said by instructor and 12% are not understanding and same 12% gave neutral response they are not confirm regarding it. Different possible reasons could be behind this portion of 42% lack of interest, not active while the session or came late in the online class.

Question 9: Technology facilitates the teaching learning process.

![Figure 9](image2)

**Figure 9:** Technology facilitates the teaching learning process; **Source:** Author self-calculation based on the questionnaire’s data.

40% respondent showed response strongly disagree about the technology facilitates to teaching learning process on the other side 18% showed positive behavior that it helps for learning process also 14% respondent showed strongly positive behavior toward it where as 12% showed neutral behavior. One possible reason behind negative response of respondent could be the software (Moodle) is not user-friendly and it is fact that the interface of this software is difficult to understand at first as compare to other portal systems of universities.

Question 10: Computers are effective tools in online teaching

![Figure 10](image3)

**Figure 10:** Computers are effective tools in online teaching; **Source:** Author self-calculation based on the questionnaire’s data.
This question showed response of user toward the computer as a tool for online learning either it is effective or not. Majority of the students showed positive and strong positive response such as 38 % are strongly agree and 18 % are agree as well. Whereas on the other side 34% and 2% response is recorded as strongly disagree and disagree. And 8 % showed neutral behavior. And possible reason behind strongly disagree response could be not much interaction with computer because most of the students like to use everything on mobile.

Question 11: Instructional technology is too costly

Figure 11: Instructional technology is too costly; Source: Author self-calculation based on the questionnaire’s data.

Majority of the students showed strongly agree and agree response in this question as per asked instruction technology is too costly 30 % response agree and 30 % strongly agree recorded on it and on other side 26% students gave indication toward strongly disagree and 8% said agree where as 6 % were neutral and they were not sure about it. The main reason for response of agree and strongly agree could be proper understanding is just possible on laptop or desktop and most of the students are mobile user and on mobile all the features of online learning do no work well so they need buy either good laptop or computer that is lil-costly.

Question 12: Bad connection of the internet impedes learning implementation

Figure 12: Bad connection of the internet impedes learning implementation; Source: Author self-calculation based on the questionnaire’s data.

This question was toward the hurdle of bad internet connection while online learning majority of the respondent showed strongly agree and agree response and they were in 48% and 10%. And on the opposite side 28 % response was under strongly disagree 12% response were under disagree and 2 % respondents were neutral. No doubt poor internet connection is a big challenge everywhere especially wireless connection once it is not in full strength.

Question 13: I prefer traditional approaches of teaching

Figure 13: I prefer traditional approaches of teaching; Source: Author self-calculation based on the questionnaire’s data.
This question was toward the intention of respondent either they are agree with traditional approach of learning or online learning majority of the respondent were agree for traditional type of learning that is on campus they are 60% and on the opposite side 30% respondent said they like to have online learning and 10% were neutral on this question. This is the first time university implemented online learning so things are little difficult to adaptive for the students that’s why high response is against the online learning.

Question 14: Are you satisfied with this online process at LFU?

![Graph showing satisfaction levels](image)

**Figure 14:** Are you satisfied with this online process at LFU? *Source: Author self-calculation based on the questionnaire’s data.*

In this question majority of the respondents showed negative response toward the satisfaction of this online learning at LFU and they are 64% in strongly disagree and 12% disagree whereas very few respondents gave positive response they are 12% of the total who are satisfied with this online learning at LFU and among all these 12% are neutral. Major possible reasons behind disagree and strongly disagree response could be lack of treating to the students of online modules (software) as many of students claimed that they are unable to upload assignments and even most of them are not aware how to use this online moodle software.

**Conclusion**

Online education has been introduced as a tool in the learning process at the majority of the international universities worldwide. In this peace of reach we tried to sightsaw the impact of online learning upon the students of Lebanese French University. The objective of the study was multi folded. Firstly, to evaluate the influence of online learning upon the performance of students and secondly, to test the motivation of online learning towards the students. For this purpose, a detailed questionnaire were developed in order to get the response of the students. Questionnaire were built up and distributed to almost eighty respondents in which we got back perfect response in complete shape fifty. Graph analysis has been used in order to present the response of respondent. Mix response were recorded in which slightly negative response was in high portion. Furthermore, results showed that 60% respondents answered they are not happy with online learning process and they want to have traditional learning process that is on campus. Similarly, in each question extraordinary negative response toward online learning is recorded such as 76% respondent said that they are not satisfied with this implementation of online learning. Also, they are facing hurdles and 58% people showed their response one of the big challenge toward online learning is poor internet connection. 60% claimed that instructor are not helping them to understand this whole process as a tool of online learning. Possible reason that were claimed from respondents are following: 1-This online process is first time they are interacting with. 2-Lack of training of such online tools for online learning process. 3-once any student is facing trouble while this online process less support is available from the department and technical staff of the university. No doubt, this online learning process is not new at the world various universities already following this kind of style from many years. Though, now they are successful after removing the flaws. On the base of flaws that were recorded in shape of results followings are some suggestion.

i. Proper training session is required from instructor toward the students.

ii. User friendly environment need to create while online learning process.

iii. Need to provide motivation from instructor toward the students who are having old mindset for this online learning.

One of the biggest limitations of the study is could not cover all the colleges of LFU and also this happened due to lack of time framework. For future direction for this research further authors can cover other dimensions of online learning in questionnaire such as subject wise understanding as well as instructor wise understanding.

**References**


Publisher’s Note: SSBFNET stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.