Exploring Influence of E-Learning on Students' Academic Achievement: A Case Study of B.Ed. Program

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ARTICLE INFO

ABSTRACT

The present study aimed to explore the influence of e-learning on students' academic achievement. The major aim was to explore the views of B.Ed. students studying at the Elementary College of Education Larkana about the impact of e-learning and its influence on their academic achievement. The study utilized the qualitative method of research specifically the case study approach of research, the population that this study targeted was the students of B.Ed. from Elementary College of Education Larkana. The respondents were selected by the purposive sampling technique. The total sample of the present study was 30 respondents while the data was saturated at 18. The data was collected by using semi-structured interviews and analysis was done by using thematic analysis. However, the findings of the present study showed that there are some factors of e-learning like flexible learning, motivating learners, enhancement, critical thinking, enhanced 21st-century skills and feedback on time that influences positively on students' academic achievement. Nonetheless, the study recommended that e-learning is positively influencing students' learning.

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INTRODUCTION

Technology has been evolving around the World rapidly. Educationists have started adopting the latest teaching techniques (Niyazova et al., 2022). These techniques enable them to deliver the content with interactive technological tools. Liu and Yu (2023) have disclosed that due to the quick progress of technology educational institutions in Pakistan have begun to implement e-learning and face-to-face classes in order to improve the quality of education. In addition, research studies (Alqahtani & Nadeem, 2021; Platonova et al., 2022) mentioned that the boost of the e-learning education system started after the COVID-19 pandemic occurred. The novel COVID-19 compelled the World specifically Pakistan to shift the education system from in-person to online mode. According to the literature the term e-learning could be conceptualized in various ways. It can simply refer to the adoption of computers in education (Xiberta et al., 2022). Further, it is also mentioned by (Santos et al, 2016) that e-learning is all about learning through computers, smartphones, tablets, and other communication technologies. Due to the advancement in technology, it has become a trend among researchers and educators to utilize e-learning (Zalat et al., 2021).

E-learning enabled teachers in higher education institutions to demonstrate their course content by creating an environment that is fully equipped with digital tools like digital boards, computers, etc. This type of environment is beneficial for both instructors to teachers more productive as well as learners to understand complex situations simply (Masalimova et al., 2022). Numerous studies have been carried out on the effect of E-learning on students' academic performance (Alqahtani & Nadeem, 2021; Platonova et al., 2022). However, e-learning has proved to be the best means in the cooperative sector. The schools that use E-learning technologies are a step ahead of those that still have a traditional classroom system. E-learning is utilizing electronic technology to access educational programs (Zedan, 2021). Different social application plays a main role in education like Twitter, FaceBook, and WhatsApp. Mostly these applications attract students and connect them with different people. In terms of education, E-learning has been introduced. E-learners want to adopt new technology and connect with people related to their field (Platonova et al., 2022).

Nowadays, E-learning has become an increasingly popular approach to learning in higher education institutions due to the rapid growth of Internet technology. As it is observed, higher education institutions use e-learning to improve the education of students and enhance their technology skills. Thus, the current study aims to explore the influence of e-learning on the academic achievement of students.

LITERATURE REVIEW

In a study by Prøitz (2010), it was mentioned that the learning outcome had remained a debatable topic around the World. Literature shows a variety of definitions of electronic learning. According to Maher (2004) "learning outcome" is the change in the behavior of students because of the environment provided to them. The change could include attitude, knowledge and skills. It has remained a matter of concern for both educators as well as researchers that there is a correlation between learned motivation and intended outcome (Alqahtani & Nadeem, 2021). For example, one of the studies in the literature showed that electronic learning has higher success rates than the traditional learning system (Sandybayev, 2020). In another study by Cook et al. (2008), it was found that students learn more skills when they use the electronic mode of learning than the students who adopt a traditional mode of learning. Also, George et al. (2014) showed that e-learning is suitable for getting success in academic terms and developing skills.

Literature is full of evidence about the influences of electronic learning on the achievements of learners in developing countries (Avgerou, 2010; Heek, 2010; Walsham, 2017). The technological skills of learners are important in terms of how they adopt technology. Although there have been moral concerns regarding the increased use of technology yet Karamti (2016) conducted a study on the impact of information communication technology on academic performance which shows that even parents are emphasizing the adoption of e-learning because of positive outcomes for their children. In addition, Al-Ansi et al. (2019) it was also found electronic mode of learning has transformed the strategies of students through which they can learn interactively instead of old-fashioned and boring way. The study also disclosed that e-learning creates a positive and interactive environment for learners where they can enhance their critical thinking skills. On the other hand, it was found in a study by Emeka and Nyeche (2016) that families in Nigeria believe that there is a correlation between the academic progress of their children and technological literacy. Such data supports the development of e-learning in developing countries.

Rakhyoot (2015) in a study entitled Barriers to adopting e-learning in Oman which was conducted by considering the viewpoint of academicians of higher education found that e-learning improves skills of students like collaboration, communication, and positive attitude towards learning. Sandybayev (2020) in their study entitled "From Classroom to Online: comparing the Effectiveness and Student Academic Performance of classroom learning and Online in Ghana" showed that electronic learning is proportional to the academic performance of students. Additionally, it was also argued in a study titled "Impact of individual differences in the inner and outer states of ICT on participation in online reading activities: examining the connection between traditional and digital literacy" that skills related to technology give more command to learners on learning new things and also boosts cognitive abilities in order to nurture the skills such as self-assurance, communication, critical thinking, and problem-solving. On the other hand, it was also studied in the context of Swedish to examine the effects in primary schools. Genlott and Grönlund (2016) studied the relationship between academic progress and e-learning. Their study revealed that pupils who use e-learning have a higher success ratio than those who do not adopt. However, the literature showed that the ways in which e-learning is integrated enhance the learning strategies of students.

Research Gaps

Learning gaps can be said here that the difference between what students are expected to have learned through offline learning versus what they have learned from online learning. When comparing face-to-face learning with online learning, one can look at the lack of human interaction, lack of opportunities for collaboration in class, teacher supervision in tough subjects like mathematics, difficulty in science subjects' experiments, and difficulty in doing practical work. E-learning shifts the weight of learning on students rather than teachers, here students work as active learners while teachers and instructors. Students in face-to-face learning are more likely to interact with each other, collaborate and help their peers, while in online learning they become introverted, and most of them even don't respond to their teacher due to shyness or due to the presence of their parents in the same room. The literature review makes the evident that several studies have been done on the factors affecting the results of students in online learning at different educational institutes, it is important to examine those factors at Elementary College Larkana. Further, it is stated that the characteristics of the learners play an important role in learning because every student has different learning styles and these styles affect the results of the students; if students can perform better in the virtual classroom and if he/she forced to learn online so he/she cannot perform effectively. Content should be well designed and organized according to the level of the students.

RESEARCH METHODOLOGY

The research methodology for this study is qualitative, and it was executed by utilizing a case study technique. A case study involves an up-close, in-depth, and detailed examination of a particular case or cases, within a real-world context. A case study tries to investigate the how and why questions (Creswell, 2015). A qualitative research approach

in which the researcher tries to inquire about a case or multiple cases with the help of comprehensive data collected with different tools (Lewis, 2015). The case study is an integrated system (Lewis, 2015), it is viewed as a bounded system. On the other hand, Creswell and Creswell (2017) defined a case in depth that has different ideas as a case study is a contemporary phenomenon in a real context, the boundaries of the context and phenomenon are not clear so the researcher has to control the context and phenomenon (Creswell and Creswell, 2017), he named it as "comprehensive research study. A case study is a qualitative data approach in which the researcher collects data by reading cases and collecting it with instruments (Lewis, 2015). The researcher can collect as much information as the interview technique of data collection tool (Creswell, 2015), where the researcher seeks to ask open-ended questions that are focused on How and Why questions. A researcher has to collect and analyze data in detail in a location, he chooses a small population to study in-depth to examine the real problems in life through critical analysis. The researcher chose a small sample of people to study in-depth in order to investigate the real-life scenario through a critical examination of their interactions. Research design helps the researcher to draw conclusions based on the relation of variables.

In addition, the population of this study includes all the B.Ed. Students from Elementary College Larkana. The technique for choosing the sample was purposive sampling. It was used because participants have knowledge about the subject that is under study. Purposive sampling is easy to collect data and it is usually used because it allows researchers to get in-depth data. The total number of respondents was thirty but the data was saturated at eighteen.

The data collection tools for the research are semi-structured interviews. Interviews as a tool for the qualitative research study helped the teacher-researcher to get deeper data and construct a theme. Interviews are only used in qualitative studies (Peters & Halcomb, 2015). Creswell (2015) stated that. Semi-structured interviews, where the researcher has some pre-written questions but then adds some promote questions further as the participant responds, can produce powerful data that provide insights into the participants' experiences, perceptions, or opinions. The interviews were conducted at the will of the participants. The interview type was semi-structured because it allows having guided questions and probes as per the situation and response of participants. The semi-structured interview is a set of questions carried out by the researcher. The researcher goes in one direction and here prompt questions were also used. Here researcher used an interview guide to conduct interviews.

However, for the collection of data, emails were sent to B.Ed. Students for their willing participation in this research. Another email was sent to them for their availability. The day and timing were chosen according to the availability of participants. The researcher also recorded their answers as well with their permission and wrote written in a notebook. Thematic analysis was adopted to analyze the data from this study. It is a common method of analyzing data in qualitative research.

Ethical Considerations
Ethical issues are considered during the process of evaluation or collecting data. Before starting the evaluation, the person participating in the evaluation is fully informed about the work being conducted.

- The main purpose is to inform the person about the work and ask them whether they participate in the work or not.
- All information should be provided before starting the evaluation so that the participant does not become distressed in any way during participation.
- Choose those participants who willingly want to participate.
- The information gathered from participants will not be misused, and participants treated with respect.
- Each participant should be respected, as well as their culture and beliefs.
- The data collection procedures were started after getting permission from the Coordinator, and faculty of elementary college.

FINDINGS
The findings of the present study disclosed that e-learning has a positive influence on students' academic achievement. Furthermore, it was shown that e-learning provides flexible learning, motivates learners towards their study, enhances their critical skills by putting them into real-world problems, improves their 21st century by fully involving them in the technology, and also provides them positive and timely feedback.

Flexible learning
The analyzed data showed that e-learning enhances the learning of students. When students use the e-learning mode of teaching-learning they become more flexible to learn. It enhances their learning in a better way. According to a

respondent, "*I understand things better when there e-learning mode of teaching and learning. Using this mode I feel very flexible and it creates more interest to learn and understand things".* In addition, most of the respondents showed that they are flexible in using e-learning just because of its ease of use. As different respondents said in S1 "*According to me flexibility begins with e-learning. Because taking classes physically encircles my head but I really feel good when there e-learning*". S3 *"Ask me the flexibility I will tell you the name of e-learning. Because it is very easy to participate in learning".*

The findings revealed that the majority of students are flexible in the e-learning mode of learning because the interactive tools facilitate them with a variety of platforms where they can learn in an easy way. In this regard, participants mentioned that S5: *"e-learning mode of learning was literally new to me and I used to think I might be able to get lectures and learning materials through this but after I used this it made me a fan of it because I am a type of student who learns through visualization. E-learning has this flexibility."* S6: *"E-learning is a flexible mode through which one can learn things easily. However, for me e-learning was a blessing as I used to suffer from backbone pain so e-learning helped me to do my degree easily".* Nonetheless, it is clear from the findings of the present study that e-learning is flexible for everyone.

Motivates learners
The findings of this study showed that the students get motivation when they use the e-learning mode of teaching and learning. In the direct method, only the teacher is supposed to put knowledge while, e-learning is the total opposite, as it gives learners with chance to participate. As one of the respondents showed *"I feel motivated when I use e-learning because it gives me a chance to participate in learning. Moreover, I am the type of student who could understand things by using lecture method or teacher-centered method thus, e-learning is beneficial for my type of students because it motivates us to learn".*

According to the analyzed data of the present study, it was disclosed majority of the participants agreed to the point that they feel motivated when they learn using technological tools. In this regard, respondents shared that *"technological tools are really helpful for effective and long-term learning. Whenever I use technological tools like PC digital board or I-pod I feel like I am visualizing the learning which creates in me the feeling of motivation".*

However, it is clear from the views of participants that e-learning or learning through technology creates motivation among learners to learn in a more positive and effective manner.

Enhances critical thinking
The findings of the study showed that e-learning enhances the critical thinking skills of students. Because e-learning involves different electronic tools and gadgets which put students in a situation to think differently. In this regard, a student showed that *"e-learning increases critical thinking because when there are different electronic devices they enable us to think about the World in a different way. However, the other methods of learning which are not technology-based do not enable learners like that".* In addition, respondents also agreed to the point that e-learning is very important when a teacher wants to enhance the critical thinking skills of learners. In this regard, it was mentioned a respondent that *"I feel like I am not the same because it pushes me to think differently rather than normally. I do not think like what is this tool but I think that how it works".*

Enhance the 21st-century skills of students.
According to the data, e-learning enhances the 21st-century skills of learners because it puts them in different activities where students need to use digital tools. When learners use that digital tool again and again they become experts in those tools. This is how e-learning enhances the 21st-century skills of learners. A respondent mentioned that *"before using e-learning I did not know about the CPU or monitor but alhamdulillah now I am an expert in using the PC".* Another participant also mentioned that *"e-learning has benefitted me in many ways because it enabled me to use search engines and now I use search engines for many other purposes. However, the point I want to tell you is that it enables me to have a mastery of 21st-century skills. Because I come from a very humble background I do not know much about technology but e-learning has made it possible for me to learn 21st century skills".*

The findings of the present study also revealed that e-learning improves the technological skills of students which are also called 21st century skills. One of the respondents, in this regard, mentioned that *"I belong from a very humble and conservative background where technology is very less used. But after getting admission here with a bachelor's degree and studying for two years I have learned a lot of skills related to technology. I not only developed myself personally but also academically just because of the use of technology in my college. These skills will help me in future".* Nonetheless, the study showed that e-learning enhances the 21st-century skills of students which could help to do their work.

Feedback on time

According to the analyzed data, the findings showed that e-learning is beneficial because it provides students a quick and timely feedback which further helps them to improve their rooms where needed. As one of the respondents said *"One of the benefits of e-learning is that it provides us timely feedback because the feedback is an important and crucial component of improving learning, and not all the modes of learning provide timely feedback which negatively affects students learning progress. However, e-learning has the benefit that it provides timely feedback so that we, the students, can further improve learning and learning styles and strategies".*

Another respondent also mentioned that *"technology is advantageous in providing quick and guiding feedback on time. Our teacher gives us assignments which we submit on LMS and s/he after assessing facilitates us feedback on our LMS portals. The LMS portal is such a platform where we could be connected with our teachers in terms of our academic affairs".* However, the study reveals that e-learning is helpful for providing fair feedback to students because it assesses the assignments of students on given criteria.

DISCUSSION

The major aim of the present study was to explore the effects of e-learning on students' performance. While the findings of the study are similar to it. The study found that e-learning is a very important mode of teaching and learning when it comes to the students' academic performance. Studies have found numerous factors of e-learning which foster students' performance. Those factors are; flexible learning, which motivates learners, enhances students' 21st-century skills, provides them timely feedback, and enhances learners' critical thinking skills. The study showed that e-learning enhances students' motivation towards learning which directly affects their academic progress. While Sarikhani et al. (2016) also mentioned that in order to do anything in a proper way motivation is crucial. When it comes to the students' academic progress the motivation of learners is really important. However, it was found in this study that e-learning enhances the motivation of learners and it directly affects their academic progress. In addition, the present study also found that e-learning puts students in different situations which enable them to think critically and this enhances their critical thinking skills. On the other hand, Tegegne (2014) has mentioned that e-learning is all about learning through digital tools or technological tools while technology is an important component when one wants to improve critical thinking skills. Tegegne (2014) also mentioned in his study titled "The Influence of e-learning on the Academic Performance of Mathematics Students in Fundamental Concepts of Algebra Course: The Case in Jimma University" that e-learning is best fit when students are learning the basic concepts of mathematics because it put them in such situations where they need to think critically. Furthermore, the study also found that e-learning provides students the feedback on time. While Elfaki et al. (2019) showed that feedback is a very important component for enhancing the learning progress of students. In addition, the present study also found that e-learning provides flexible learning for students. In this regard, Basri et al. (2018) mentioned that e-learning is flexible for most students because it is learner-centered which enables them to learn in a better and more flexible way. Nonetheless, the present study also found that e-learning enhances the 21st-century skills of students. Because it involves them in digital tools during their learning. On the other hand, Ajadi et al. (2008) mentioned that students learn better when they feel relaxed and flexible. However, e-learning has the advantage of providing flexible learning for the students.

CONCLUSION

In summary, the influence of e-learning on student performance in the B.Ed. The program has mixed results, with both positive and negative aspects. While e-learning provides benefits like flexibility, personalized learning, and access to a wide range of resources, it also presents challenges such as technical difficulties, limited interaction, and the requirement for self-motivation. The case study findings suggest that students benefit from the convenience, accessibility, and flexibility of e-learning. Those who are self-driven and disciplined tend to excel in this environment, which can also result in improved digital literacy and online research skills. On the downside, e-learning may lack the interpersonal connections and immediate feedback found in traditional classrooms. By recognizing both the advantages and drawbacks of e-learning, educators can harness its potential to boost student achievement within the B.Ed. Program, preparing future teachers for success in the digital era.

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