

INFLUENCE OF ONLINE EDUCATION OVER ACADEMIC LEARNING AND PERFORMANCE IN PUBLIC SECTOR UNIVERSITIES OF PAKISTAN

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Abstract

This research examines the effect of online education on university students' academic performance. This study ascertains the influence of online learning and assesses how it affects university students' learning ability and academic performance. To analyse various techniques that students use for onscreen education. The findings of this research will benefit both students and teachers by providing insight into the impact of online education. Using a simple random technique, a sample of 90 students was selected from two public sector universities in Karachi, Pakistan. This research targets three main questions. First, in what ways does online education enhance student learning? Second, how does participating in an online classroom differ from a traditional classroom in terms of ease? Third, how are young people and students making use of online education? To have answers to these questions, the Data was collected using a closed-ended questionnaire. The correlation between online education, computer literacy, students' creativity, motivation and performance was evaluated manually. The results indicate a need for continued efforts to progress online technology and create active educational prospects for young learners through online education. Improving the distance learning environment and creating better online classrooms that can respond adaptively to students' motivation levels is recommended.

Keywords: Online Education, Distant Learning, Academic, Performance, Public-Sector Universities

INTRODUCTION

Online education is becoming increasingly important today as it offers students the convenience of studying from anywhere at any time. With online learning, there are no geographical barriers, so anyone with access to the internet can study from the comfort of their own home without having to

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worry about attending classes in person. It also opens up more opportunities for those who may not be able to attend traditional universities due to financial constraints or other shortcomings. Furthermore, due to this flexibility, online courses are ideal for busy individuals who must fit education into their busy schedules. With so many courses available any time of day or night, it is easy and convenient for individuals to take advantage of this educational resource. Overall, online education provides a wide range of advantages worth exploring now and in the future (Gupta et al., 2022).

Online education is the practice of learning and teaching through the Internet or electronic supplementary materials such as video conferencing, wikis, and blogs. Such education sources help mitigate barriers of time, place, and physical ability by connecting individuals from distant geographical regions. Employers often prefer applicants with technological proficiency and profiles that demonstrate familiarity with various digital tools due to the increased requirement for businesses to operate digitally. As such, online education has supplied students with a more cost-effective and time-saving way to obtain an education and can be a helpful means to augment the knowledge, skills, and abilities of the workers of an organisation (Saraji et al., 2022).

The advantages of online education are innumerable and include cost-effectiveness, accessibility, enhanced learning experience and flexibility, among others. Online education is more cost-effective than on-campus learning due to the reduced need for physical infrastructure and resources and reduced fees. Moreover, online education removes the financial barrier of relocating to a physical university. Therefore, online education is more accessible and convenient, as technology has enabled students to save the time, travel and cost associated with physical universities (Stewart & Lowenthal, 2022; Warfvinge et al., 2022). Additionally, online education is an advanced learning system that, through virtual reality, allows for a more in-depth, interactive and rich learning experience for students due to the ability to access multiple learning materials, activities, simulations and modules. Moreover, online education is more flexible, as students can modify the intensity with which they take courses and the time, place and location of learning (Calamlam et al., 2022; Krouska et al., 2022).

On the other hand, despite being an innovative and convenient form of education, online education has its shortcomings. One of the primary disadvantages of online education is the lack of human interaction and social support, which could lead to isolation and stress. Additionally, online classes are prone to technical glitches, power outages, internet connectivity problems and system crashes, which could potentially disrupt the learning

process. Furthermore, online education may sometimes be too fast-paced and lack the fundamental depth of a subject, particularly for beginners. Lastly, security and privacy risks associated with online education, such as data theft and leaks, may cause concern (Kurt et al., 2022; Shambour & Abu-Hashem, 2022).

Online education has numerous advantages, such as cost-effectiveness, accessibility and enhanced learning experience. However, it has limitations, such as a lack of human interaction and social support, technical issues, and security and privacy risks (Jayakumar et al., 2022; Shrestha et al., 2022).

The present study investigated online education's effect on students' learning performance in 2 public sector universities in Karachi, Pakistan. As per results, it was shown that, although online education is the gateway to many opportunities, evaluating its effectiveness on students' learning performance in both virtual and physical settings is essential.

Research Methodology

This study was designed to be descriptive. The sample for this study was selected from the student population of NED University and Federal Urdu University of Art, Science and Technology Karachi, which consisted of 300 students. Simple random sampling was used to select a sample of 90 students, which represented 30% of the total population. Due to the constraints of time and resources, the sample was taken from two public sector universities.

Table 1. Study Sample

University	Population	Sample
NED University	200	60
Federal Urdu University of Art, Science and Technology	100	30
Total	300	90
Percentage	-	30%

This research aimed to examine the impact of online education on students' learning at the university level. The study adopted a descriptive research design, and a sample of 300 students from two public sector universities (table 1) was selected using simple random sampling. The sample was divided into two strata, and using proportional stratified random sampling, 30% of students were selected from each stratum as the sample size.

A close-ended questionnaire was developed, based on a review of relevant literature, to gather data from master's level students of both universities (Flores et al., 2022). The questionnaire consisted of 25 items, and the responses were collected using a five-point Likert scale. A pilot study was conducted with 30 conveniently selected respondents to test the instrument's reliability. The instrument was refined based on the pilot study results, and reliability was assessed using SPSS and Cronbach's Alpha with a value of .932 for 25 items.

The researchers personally visited the targeted population and distributed the questionnaires, requesting students from both universities to fill them out. The collected data was in quantitative form and was analysed using SPSS (15.0). Frequencies, percentages, and tabular representations of the data were used to present the results. All items in the questionnaire were positively phrased. The responses were 'Strongly Agree', 'Agree', 'Neutral', 'Disagree', 'Strongly Disagree' for some items and 'Fully', 'Much', 'Somehow', 'Very little', and 'Not at all' for the other items. This research design was used to gather data from students in a systematic way, and the facts and figures collected were analysed to conclude the effect of electronic education on students' studying at the university level.

Results and Discussion

This study focused on investigating and presenting essential findings obtained from the examination. As the research employed a quantitative research design, descriptive statistical analysis using SPSS was utilised to analyse the data, and frequencies and percentages were used to present the results (Li et al., 2022). To maintain objectivity, the researcher made every effort to present the information without incorporating personal biases or opinions.

In the present study, the demographic distribution of participants was as follows: A total of 90 students were selected, of whom 64% were male and 36% were female. As per qualification, all the participants were Masters Students. We also considered the participants' online education time. 38% of students had online education interaction for less than 6 hours a week, 44% had interaction of 8-16 hours, and the remaining 18 % had more than 16 hours of online education.

Table2. Distribution and Percentage

Self-study is helpful						
Responses	S	A	N	D	S	Total
Participants	11	55	12	7	6	90
Online education is engaging						
Participants	32	45	7	0	6	90
Competitiveness of e-learners						
Participants	20	56	13	1	0	90
Awareness of computer hardware						
Participants	23	38	22	4	3	90
Awareness of computer windows						
Participants	33	33	10	8	6	90
Awareness of computer software						
Participants	31	36	12	5	6	90
The development of web searching after e-lecture						
Participants	34	36	12	3	3	90
Awareness of Microsoft Office Programs						
Participants	53	31	7	1	0	90
Student's participation in e-lecture						
Scores	24	37	18	2	7	90
Study of the topic before attending class						
Participants	20	20	30	14	6	90
Revision of lecture after e-class						
Participants	23	26	26	7	8	90
Online study flourishes talent.						
Participants	30	36	22	1	3	90
Job opportunities after completing online education.						
Participants	38	34	16	2	0	90
E-learning is better than formal learning.						
Participants	16	30	32	7	5	90
Online education stimulates creativity.						
Participants	32	42	10	4	2	90
Online study provokes new queries about the topic.						
Participants	36	42	6	3	3	90
Online study enhances creativity.						
Participants	26	54	8	0	2	90
E-learning is different from traditional teaching.						
Participants	36	36	12	2	4	90
Comprehension of online lectures						
Participants	28	48	9	2	3	90
Enhancement of academic skills through online education						
Participants	34	48	6	1	1	90

Table 2 presents the survey results on students' perceptions regarding the benefits of independent study in online education. 71% of students strongly agreed that self-governing education benefits online education, as it assists them in being more motivated. They believe that self-paced learning allows them to take control of their learning and fosters a sense of ownership and responsibility towards their studies. However, 16% of students disagreed with this statement, believing that not all students can independently study. Some students may require more guidance and structure in their learning process.

Additionally, 83% of students believe online education fosters interest among students as they must take initiative in their learning. They find that the autonomy and flexibility provided by online education create a more engaging and stimulating learning experience. Conversely, 8% of students felt online education could be boring because of the reliance on computers and internet searching. They believe the lack of face-to-face interaction and the monotony of staring at a computer screen can make online education less stimulating. 84% of students believed that online instruction effectively creates interest and motivation among students. They found that online education provides them with a flexible and convenient way of learning that caters to their individual needs and preferences.

Furthermore, 82% of students felt that e-learners can compete in the viable job market, as online education provides them with the skills and knowledge required to succeed in the digital age. Regarding computer literacy, 63% of students reported that they have gained computer literacy through online education, with 68% stating that online education has taught them about computer systems. 72% of students essentially realised that e-education amplifies their understanding of the field of IT. 78% of students believed online education taught them valuable web research skills, and 91% agreed that basic computer skills are necessary for online learning. Furthermore, 83% of students felt that online learning has taught them how to use Microsoft Excel, and 86% agreed that presentation software such as PowerPoint is often required for online courses. 67% of students also reported being actively engaged during e-lectures, which are delivered online.

Table 2 provides insight into students' study habits and attitudes towards online education. The data shows that 42% of students engage in pre-class study before attending their online classes. This suggests that a relatively small number of students study before class, but a significant portion of students find it beneficial to review the material before attending online classes. Additionally, 52% of students reported reviewing their lectures after

online classes. This is a beneficial step as it helps them retain the information and solidify their understanding of the material. 51% of students believed online study enhanced their talents and motivated them to continue their education. They felt that the autonomy and flexibility provided by online education allowed them to explore their interests and passions. 78% of students believed they would secure suitable employment after completing their online education. They felt the skills and knowledge acquired through online education would make them more competitive in the job market. 49% of students preferred e-learning over traditional classroom learning as it offers flexibility and independent study. 80% of students felt that online education stimulates creativity, as it requires them to work on computers and the internet, which improves their knowledge and fosters creativity. 85% of students believed online education prompts them to think critically about their course material, and 87% felt that e-learning increases their creative attitude. 78% of students felt that e-learners differ from traditional learners as they study independently and have limited face-to-face interaction with teachers and classmates.

Finally, 82% of students understood the e-learning process and felt comfortable understanding their course material. 89% of students believed online education is better for honing academic skills as it encourages self-motivation and autonomy. The data suggests that students have a positive attitude towards online education and find flexibility, creativity and autonomy beneficial.

CONCLUSION & RECOMMENDATIONS

The research aimed to evaluate the effects of online education on the academic performance of university students in public sector universities in Pakistan. Specifically, it sought to explore the influence of online education on student learning and to examine how students utilise online resources for their educational needs. The study was conducted at two public universities in Karachi, Pakistan, with a sample of 300 students, 90 of whom participated in the survey. Data was collected through a closed-ended questionnaire administered by the researcher and analysed using SPSS software. The results will provide valuable insights into the efficacy of online education to enhance student learning at the higher education level.

The current study was conducted by administering a survey to independently selected participants. Due to limitations in time and resources, the researcher surveyed 90 individuals. Most participants reported that they gained knowledge and basic skills in computer usage, including Microsoft Word, Excel, and PowerPoint, through online instruction. Additionally, they

acquired web browsing skills, as online instruction relies heavily on computer usage. The study found that most participants agreed that self-paced learning in online instruction fostered motivation and enthusiasm for their studies. They also reported that the online instruction format was convenient and flexible for them. Participants studied online for 8-18 hours per week and achieved grades of A and B in their final exams. Most students also reported that completing an online degree provided them with better job opportunities or the ability to teach online classes. Online education also fostered creativity among the participants.

The findings and conclusions have led to several recommendations for improving online education. The study revealed that current online education methods are insufficient in improving academic skills. Therefore, it is suggested that more effort should be put into developing online technology that promotes dynamic learning opportunities for students. This could include introducing mobile or ubiquitous learning modes of online education. Additionally, the study found that online education does increase students' curiosity about computer learning and provides some basic computer skills. However, more learning opportunities are needed to significantly impact students' computer literacy performance.

The study's findings indicate that online education can be crucial in supporting students and providing additional learning opportunities. One way to achieve this is by incorporating web-based instructional modules that can supplement traditional classroom instruction. The study also revealed that students are motivated to learn when provided with engaging and interactive distance learning environments. Therefore, it is recommended that universities invest in developing first-class online classrooms designed to enhance students' motivation levels and respond adaptively to their learning needs.

Furthermore, the study suggests that online education has the potential to foster students' creativity and ingenuity. This is because online education environments that are progressive and well-designed can facilitate the effective delivery of instruction through problem-solving and other interactive activities that encourage students to think differently and creatively. To fully understand the potential of online education, it is recommended that formal educational institutions continue to invest in developing well-designed internet-based instructional models that can help foster students' thinking abilities and creativity.

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