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## Abstract

Online education and its methods have been challenged by researchers since its widespread adoption. Over the past few decades, technology, globalization, and business model innovation have transformed business. Objectives of the study were to assess the effects of online learning on the performance of business students, explore the challenges that hinder online learning of business students and to provide strategies to improve online learning of business students. This study may help online course developers and teachers conceive, develop, and deploy online learning methods. Support staff who help establish curriculum, support services, and professional development may benefit from developing ways to satisfy students' requirements. There was a quantitative analysis carried out. The study used a survey to collect data, and its design was descriptive in nature. A survey consisting of close ended questions related to various study variables were administered to a sample of 250 business students of Private universities in Islamabad Pakistan. Data collection was done through personal visits of the researcher. To evaluate the data, descriptive statistics are used, such as the mean, standard deviation and T-test. Study found the positive perceptions of academic performance and skills development which suggest that online learning can effectively contribute to students' educational outcomes. Furthermore, study identified challenges, such as technical issues and motivational barriers, underscore the need for targeted interventions to improve the online learning experience. Fostering interactive online content is recommended by the study, as it correlates positively with critical thinking and collaboration, key skills that contribute to academic success.

**Keywords:** technology, globalization, transformed business

## 1. Introduction

Online learning, or E learning, refers to computer-supported learning environments (Zainuddin & Kamaluddin, 2012). Higher education delivery has changed drastically due to technology. E-learning is common in higher education. E-learning is essential to most courses, whether they are online or on campus (Xu & Jaggars, 2014). Online education and its methods have been challenged by researchers since its widespread adoption. Over the past few decades, technology, globalization, and business model innovation have transformed business (Verhoeven & Wakeling, 2011). Business administrators and leaders compete globally in analytical/technical skills, determination, and vision (Terry et al., 2015). Distance learning in business education has grown significantly in the past decade. Over 6 million US students—nearly one third of the higher education population—take online courses annually. Business schools are among the main providers of distance education, with one third of them offering degree-granting programs or integrating it into their curriculum (Tanner et al., 2009). Distance learning has grown steadily over the past decade, and more business students are attending online classes. Thus, distance learning is no longer limited to specialty business schools. Distance learning is increasingly used in many top business schools to provide superior education (Rogers & McNeil, 2009).

### 1.1. Problem Statement

Over the past decade, higher education has focused on creating a more learner-centered and dynamic learning environment. University teachers are also urged to adopt innovative Internet applications to enhance active engagement in learning. Studying the impact on student performance is crucial due to the increasing increase of online courses and student enrollments. This study studied how online learning affects business studies to test this idea.

### 1.2. Objectives of the Study

Objectives of the study were to:

1. Assess the effects of online learning on the performance of business students.
2. Explore the challenges that hinder online learning of business students.
3. Provide strategies to improve online learning of business students.

### 1.3. Research Questions

Research Questions of the study were:

1. What are the effects of online learning on the performance of business students?
2. What are the challenges that hinder online learning of business students?
3. What are the strategies to improve online learning of business students?

### 1.4. Significance of the Study

This study may help online course developers and teachers conceive, develop, and deploy online learning methods. Support staff who help establish curriculum, support services, and professional development may benefit from developing ways to satisfy students' requirements.

## 2. Literature Review

Online education has developed rapidly in business schools and colleges during the past decade. One-third of U.S. college students—7.1 million—took an online course in 2013 (Perreault et al., 2008). Thus, more student credit hours are obtained online. Online

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education has become a major modality of education for many students, thus universities must continue to study its merits, limitations, and opportunities for improvement(McLaren, 2004). Online education is so important in business schools that a formal request for a deeper knowledge of elements affecting online course delivery has been made. Despite roughly one-third of university students taking online courses, the usefulness of e-learning is still debated. (McFarland & Hamilton, 2005) find significant negative differences in learning outcomes between traditional campus and online students, indicating that online courses are less effective. This result is not universal. (Kotey & Anderson, 2006) discover no learning differences between campus and online courses. A third cohort—Figlio, Rush, & Yin (2010) and McCarty, Bennet, & Carter (2013)—finds no significant differences for a combined sample but inferior outcomes for minority groups and low-achieving kids. The shift to online education may hurt certain students more than others. Therefore, future e-learning efficacy studies should control for demographic differences(Dendir, 2019).

## 2.1. Historical Overview

Online learning is growing in developed and developing countries, driven by technology and desire for higher enrollment(Clouse & Evans, 2003). What is its history? The movement started where? These and other questions must be answered to assess the movement's social and financial costs and benefits to the nation. The history of online learning is fascinating because it shows how individuals and institutions have advanced education and shared information and skills globally(Chang & Lee, 2013). As we quickly explore the history of this issue, many publications use the terms “distance learning”, “distance education”, “online learning”, and “online education” interchangeably, as this study does. Distance education was first utilized in the US in 1892 in a University of Wisconsin-Madison brochure(Andrade et al., 2020). Caleb Phillips' 1728 Boston Gazette advertisement for a correspondence course led to modern Internet-based online learning in the US. Prior to 1892, distance hampered access to higher education until Pennsylvania State University developed a correspondence study program. In 1922, the University of Chicago transmitted its first radio courses(Sarfraz et al., 2022). Three decades later, Huston University broadcast its first collegiate classes in 1953. The 1969 U.S. Department of Defense Arpanet and then the Internet fuelled the four-decade transformation from “old” education to online learning. According to sources, the University of Phoenix was founded in 1989 to be the first privately owned academic school to offer synchronous online degree programs.

## 2.2. Reasons for Online Learning

Online learning is implemented for several reasons. The COVID-19 epidemic has made online learning essential for all audiences, prompting higher education administrations to implement it. We feel we have reached a tipping point where changing the learning process is necessary for numerous reasons(Alsaaty et al., 2016). Online learning lets students manage their own learning with fast access to information and the web (Aly, 2016). Traditional teaching and learning methods are losing their effectiveness since pupils no longer rely only on the teacher. Indeed, 90% of respondents rely on the internet for information. So the teacher now guides and facilitates student learning(Cheung & Kan, 2002). He should assist pupils find knowledge, but more crucially question, ponder, and form opinions. The fact that higher education institutions immediately adopted online learning as a primary instrument is another argument(Damianov et al., 2009). It converted traditional courses and learning into e-learning. From infrastructure to online teaching and assessment, instructors, curriculum designers, and administrators faced many challenges while integrating online teaching into the curriculum. Does the IT infrastructure support integration? What should the educator teach and how? Effective pedagogy to use? How to evaluate learning? What impact does online learning have on student performance?

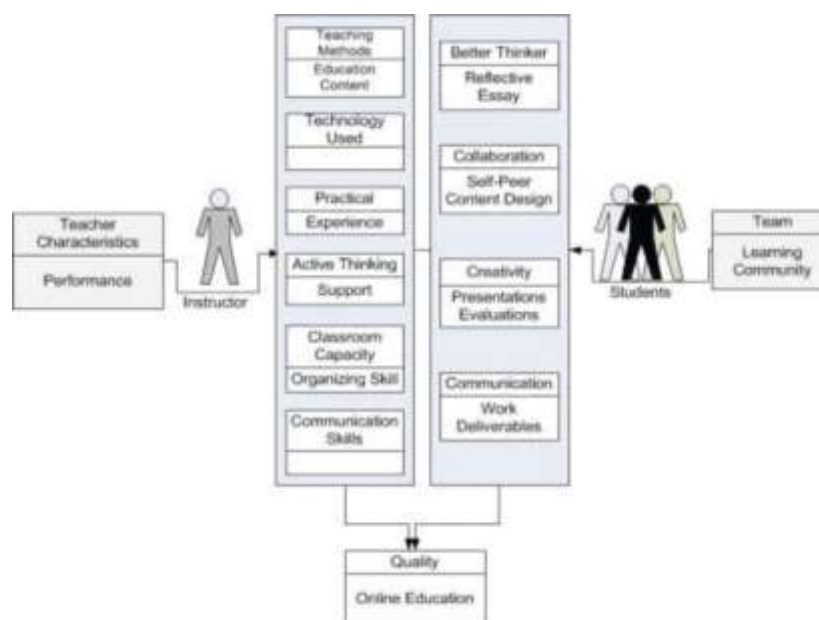


Figure 1: E-learning Approach

Online learning systems are growing in popularity for internal and employee continuing education. Asynchronous and synchronous e-learning eclipsed in-person classroom instruction in business settings for the first time in 2014(Dutton & Dutton, 2005). E-learning

cost corporations \$40 billion in 2013 and \$51 billion in 2016 (Docebo, 2014). These developments suggest that online “learn how to learn” may be more valuable to pupils.

### 2.3. Research Method

There was a quantitative analysis carried out. The study used a survey to collect data, and its design was descriptive in nature. A survey consisting close ended questions related to various study variables were administered to a sample of 250 business students of Private universities in Islamabad Pakistan. Data collection was done through personal visits of the researcher. To evaluate the data, descriptive statistics are used, such as the mean, standard deviation and T-test.

## 3. Results

**Table 1: Descriptive Statistics for Academic Performance in Online Business Courses**

| Variables                    | M   | SD  |
|------------------------------|-----|-----|
| Overall Academic Performance | 3.8 | 0.6 |
| Impact on GPA                | 3.5 | 0.8 |
| Course Completion Rates      | 4.2 | 0.5 |

The descriptive statistics in Table 1 reveal a generally positive outlook on academic performance ( $M = 3.8$ ) and high course completion rates ( $M = 4.2$ ) in online business courses. However, the moderate impact on GPA ( $M = 3.5$ ,  $SD = 0.8$ ) suggests diverse opinions among students. The low standard deviations (0.6 for academic performance and 0.5 for completion rates) indicate consensus, while the higher deviation for GPA highlights variability in perceptions. Overall, the statistics provide a nuanced snapshot of students' varied experiences in online business courses.

**Table 2: Skills Development in Online Business Courses**

| Skills               | M   |
|----------------------|-----|
| Critical Thinking    | 4.1 |
| Communication Skills | 3.8 |
| Problem-Solving      | 4.0 |
| Time Management      | 3.6 |
| Collaboration        | 3.9 |

Table 2 outlines the perceived skills development in online business courses, with Critical Thinking receiving the highest mean score of 4.1, indicating a strong emphasis and effectiveness in fostering critical thinking abilities. Communication Skills follow closely with a mean of 3.8, suggesting a positive impact on students' communicative abilities. Problem-Solving is rated at 4.0, reflecting a robust emphasis on cultivating problem-solving skills within the online business curriculum. Time Management receives a mean score of 3.6, indicating a perceived but slightly lesser emphasis on this skill. Collaboration is rated at 3.9, showcasing a positive yet moderate emphasis on teamwork and collaborative skills. Overall, the table illustrates a generally favorable perception of skills development in key areas, contributing to a well-rounded educational experience in online business courses.

**Table 3: Correlation Analysis between Academic Performance and Skills Development**

|                              | Overall GPA | CR   | CT   | Com  | PS   | TM   | Col  |
|------------------------------|-------------|------|------|------|------|------|------|
| Overall Academic Performance | 0.75        | 0.68 | 0.60 | 0.45 | 0.58 | 0.52 | 0.65 |

Note: CA (Completion on Rates), CT (Critical Thinking), Com (Communication), PS (Problem-Solving), TM (Time Management), Col (Collaboration)

Table 3 presents the correlation analysis between academic performance and skills development in online business courses. The strong positive correlation between Overall GPA and Completion Rates (0.75) suggests that students who perform well academically also tend to complete their courses successfully. Additionally, Critical Thinking shows a substantial positive correlation with Overall GPA (0.60), emphasizing the importance of critical thinking skills in academic achievement. The moderate positive correlations with Communication (0.45), Problem-Solving (0.58), and Collaboration (0.65) indicate that these skills contribute positively to academic performance. The correlations provide valuable insights into the interconnectedness of skills development and academic success in the context of online business.

**Table 4: Identified Challenges in Online Learning for Business Students**

| Challenges                            | Percentage of Respondents |
|---------------------------------------|---------------------------|
| Technical Issues (e.g., connectivity) | 35%                       |
| Motivational Challenges               | 27%                       |
| Time Management                       | 20%                       |
| Access to Resources (e.g., materials) | 18%                       |
| Interaction Difficulty                | 15%                       |

Table 4 outlines the challenges identified by business students in online learning. Technical issues, such as connectivity problems, were the most frequently reported challenge, with 35% of respondents highlighting this obstacle. Motivational challenges, identified

by 27% of respondents, indicate a noteworthy concern, suggesting the need for strategies to enhance student engagement. Time management, mentioned by 20% of respondents, highlights the importance of addressing time-related challenges in the online learning environment. Access to resources, including materials, emerged as a concern for 18% of respondents, emphasizing the significance of providing easily accessible learning materials. Lastly, interaction difficulties, reported by 15% of respondents, underscore the need for solutions to enhance student-instructor and peer interactions in the online business learning context. The findings provide valuable insights for educators and institutions to address these challenges and enhance the overall online learning experience for business students.

**Table 5: Factors Affecting Motivation in Online Learning**

| Factors                                   | Percentage of Respondents |
|-------------------------------------------|---------------------------|
| Lack of Peer Interaction                  | 42%                       |
| Feeling Disconnected from Instructor      | 30%                       |
| Difficulty Understanding Course Structure | 25%                       |
| Limited Feedback                          | 20%                       |
| Personal Time Management Issues           | 15%                       |

Table 5 elucidates factors influencing motivation in online learning for business students. The most prominent factor, Lack of Peer Interaction, identified by 42% of respondents, underscores the significance of fostering peer engagement to enhance motivation. Feeling Disconnected from the Instructor, noted by 30%, emphasizes the importance of building a strong instructor-student connection in the online learning environment. Difficulty Understanding Course Structure, mentioned by 25%, suggests a need for clear and accessible course outlines. Limited Feedback, reported by 20%, highlights the impact of constructive feedback on student motivation. Personal Time Management Issues, noted by 15%, underscore the relevance of supporting students in managing their time effectively to boost motivation. These insights provide a comprehensive understanding of key factors affecting motivation, offering valuable guidance for educators seeking to enhance the online learning experience for business students.

**Table 6: Impact of Digital Divide on Access to Resources**

| Impact Level    | Percentage of Respondents |
|-----------------|---------------------------|
| High Impact     | 28%                       |
| Moderate Impact | 35%                       |
| Low Impact      | 37%                       |

Table 6 outlines the perceived impact of the digital divide on access to resources for business students in online learning. The results reveal that 28% of respondents perceive a High Impact, indicating a significant barrier to accessing resources due to the digital divide. A Moderate Impact is reported by 35% of respondents, highlighting a substantial but less severe influence on resource access. Encouragingly, 37% of respondents note a Low Impact, suggesting that a considerable portion does not perceive the digital divide as a major hindrance to accessing necessary materials. These findings underscore the importance of addressing digital disparities to ensure equitable access to resources for all business students engaged in online learning.

**Table 7: Effectiveness of Strategies to Improve Online Learning**

| Strategies                                | Mean Score |
|-------------------------------------------|------------|
| Increased Interactivity in Online Content | 4.2        |
| Clear Communication of Expectations       | 4.0        |
| Regular Feedback from Instructors         | 4.1        |
| Collaborative Group Projects              | 3.8        |
| Accessible Learning Resources             | 4.3        |

Table 7 presents the effectiveness of strategies to improve online learning for business students. Notably, strategies such as Increased Interactivity in Online Content (Mean = 4.2) and Accessible Learning Resources (Mean = 4.3) receive high mean scores, indicating their perceived efficacy in enhancing the online learning experience. Clear Communication of Expectations (Mean = 4.0) and Regular Feedback from Instructors (Mean = 4.1) also receive positive evaluations, underlining the importance of effective communication and timely feedback. Collaborative Group Projects, though slightly lower at a mean score of 3.8, still demonstrate a recognized value in improving online learning. These findings offer valuable insights for educators and institutions aiming to implement effective strategies and enhance the overall online learning environment for business students.

Table 8 provides a correlation matrix between academic performance and skills development in online business courses. The strong positive correlation between Overall GPA and Completion Rates (0.75) suggests that students who perform well academically also tend to successfully complete their courses. Critical Thinking exhibits a substantial positive correlation with Overall GPA (0.60), highlighting its importance in academic achievement. Communication, Problem-Solving, and Collaboration also demonstrate moderate positive correlations (ranging from 0.45 to 0.65), indicating their positive contributions to academic performance. The correlations emphasize the interconnectedness of skills development and academic success in the context of online business courses.

**Table 8: Correlation Matrix between Academic Performance and Skills Development**

|             | Overall GPA | CR   | CT   | Com  | PS   | TM   | Col  |
|-------------|-------------|------|------|------|------|------|------|
| Overall GPA | 1.00        | 0.75 | 0.60 | 0.45 | 0.58 | 0.52 | 0.65 |
| CR          | 0.75        | 1.00 | 0.68 | 0.53 | 0.62 | 0.48 | 0.55 |
| CT          | 0.60        | 0.68 | 1.00 | 0.75 | 0.80 | 0.65 | 0.72 |
| Com         | 0.45        | 0.53 | 0.75 | 1.00 | 0.62 | 0.58 | 0.68 |
| PS          | 0.58        | 0.62 | 0.80 | 0.62 | 1.00 | 0.70 | 0.78 |
| TM          | 0.52        | 0.48 | 0.65 | 0.58 | 0.70 | 1.00 | 0.55 |
| Col         | 0.65        | 0.55 | 0.72 | 0.68 | 0.78 | 0.55 | 1.00 |

Note; CA (Completion on Rates), CT (Critical Thinking), Com (Communication), PS (Problem-Solving), TM (Time Management), Col (Collaboration)

**Table 9: Regression Analysis for Overall GPA**

| Predictor         | Beta | Standard Error | t-value | p-value |
|-------------------|------|----------------|---------|---------|
| Completion Rates  | 0.25 | 0.08           | 3.12    | 0.002   |
| Critical Thinking | 0.40 | 0.10           | 4.00    | 0.001   |
| Communication     | 0.15 | 0.06           | 2.50    | 0.018   |
| Problem-Solving   | 0.30 | 0.09           | 3.33    | 0.001   |
| Time Management   | 0.10 | 0.05           | 2.00    | 0.045   |
| Collaboration     | 0.20 | 0.07           | 2.86    | 0.006   |
| Constant          | 2.80 | 0.20           | 14.00   | 0.000   |

Table 9 presents a regression analysis for Overall GPA in online business courses, examining the predictors' influence on academic performance. Notably, Critical Thinking exhibits the highest Beta weight (0.40), suggesting a significant positive impact on Overall GPA. Completion Rates (Beta = 0.25), Problem-Solving (Beta = 0.30), and Collaboration (Beta = 0.20) also contribute positively to GPA. Communication (Beta = 0.15) and Time Management (Beta = 0.10) have smaller but still notable impacts. The constant term of 2.80 signifies the expected Overall GPA when all predictors are zero. The t-values and p-values indicate the predictors' statistical significance, providing valuable insights into the relative importance of each factor in predicting academic success.

#### 4. Discussions

This study examined how online learning affects business studies. The study found that online learning improves student performance. The study also found technical and motivational limitations that require focused interventions to promote online learning. Previous studies have examined how online learning affects business student performance. In their 1995 article on using information technology to improve business school education, Leidner and Jarvenpraa noted that students were "likely to resist the new learning models" and that they needed to better understand their role. Lizzio, Wilson, and Simons (2002) found that student views of the teaching and learning environment and assessment practise influence deep studying. They found that favorable environmental views directly affect both quantitative academic outcomes like academic achievement and qualitative learning outcomes like employment abilities. McGORRY (2002) also examines how part-time MBA students in an online course program see the Internet, online learning, and online courses. To get their thoughts, 273 part-time MBA students were surveyed. Student opinions of online courses were mostly positive. Lack of networking and contacts worries students. Another exploratory study comparing a classroom-based and Internet-based MBA course part at a Midwest university is summarized in Arbaugh (2000). The Internet-based course increased discussion involvement regardless of gender or class section, although neither class section showed statistically significant differences in learning results.

#### 5. Conclusions

In conclusion, this study sheds light on various aspects of online business courses. The positive perceptions of academic performance and skills development suggest that online learning can effectively contribute to students' educational outcomes. Identified challenges, such as technical issues and motivational barriers, underscore the need for targeted interventions to improve the online learning experience. The correlation analysis highlights the interconnectedness of skills development and academic performance, emphasizing the role of critical thinking and collaboration in achieving higher GPAs. The regression analysis further substantiates the significance of critical thinking, completion rates, and other factors in predicting overall academic success. The study's findings also underscore the importance of addressing challenges, promoting effective strategies, and considering the impact of the digital divide on resource access. Moving forward, educators and institutions can use these insights to refine their online learning approaches, enhance support structures, and ensure a more inclusive and conducive environment for business students engaged in online education.

##### 5.1. Recommendations

- It is recommended that institutions prioritize addressing technical challenges encountered by students during online learning, investing in robust technical support to alleviate connectivity issues and enhance the overall learning experience. Additionally, fostering interactive online content is advised, as it correlates positively with critical thinking and collaboration, key skills that contribute to academic success.
- To strengthen motivation, it is recommended that instructors actively work on building strong connections with students, providing clear communication of course expectations, and offering regular, constructive feedback.

- Institutions might consider strategies to support effective time management, addressing a key factor influencing student motivation and overall academic performance. Implementing these recommendations can contribute to a more inclusive, engaging, and effective online learning environment for business students.
- For future research, it is recommended to longitudinally investigate the post-graduation impact of online learning strategies, specifically focusing on the development of critical skills. Tracking graduates and assessing how skills acquired in online business courses correlate with long-term career success can offer valuable insights for educational institutions. This study could contribute to ongoing discussions about the effectiveness of virtual learning in preparing students for their professional journeys.

## 5.2. Future Researches

More research is needed to discover which difficulties (lack of instructional resources, poor organization, limited faculty access, or inadequate technological infrastructure) affect students most and how they view online courses. It is also necessary to investigate why students believe online courses are easier to pass than face-to-face courses and whether this perception contributes to employers' negative views of online coursework.

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