ANALYZING THE BENEFITS AND DRAWBACKS OF ONLINE LEARNING IN HIGHER EDUCATION

Article in African Journal of Biological Sciences · May 2024				
CITATIONS		READS		
0		292		
2 author	2 authors, including:			
	Tosendra Dwivedi			
	Alliance University			
	66 PUBLICATIONS 4 CITATIONS			
	SEE PROFILE			



African Journal of Biological Sciences



ISSN: 2663-2187

Journal homepage: http://www.afjbs.com

Research Paper

Open Access

ANALYZING THE BENEFITS AND DRAWBACKS OF ONLINE LEARNING IN HIGHER EDUCATION

Prof (Dr) Tosendra Dwivedi

Professor, Department of Psychology, School of Liberal Arts, University-Alliance University, Anekal, Bengaluru

Dr. Vikas Prajapati

Assistant Director, Department of Physical Education, The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat

Prof. Chirag H Jariwala

Assistant Professor, Department of Accountancy/ Commerce Shri I V Patel College of Commerce,

Nadiad (Dist : Kheda), Gujarat

Prof. Aakansha Prajapati

Professor, Swarnim Gujarat Sports University, Ta: Desar, Dist: Vadodara, Gujarat G V K Murthy

Professor, Department of EEE, PACE Institute of Technology and Sciences, Ongole

Article History

Volume 6,Issue Si2, 2024

Received:22 Mar 2024

Accepted: 23 Apr 2024

doi: 10.33472/AFJBS.6.Si2.2024.1115-1125

Abstract

There are both positive and negative aspects associated with the rise of online learning in higher education, which can be experienced by students, teachers, and educational institutions alike. There has been a change in the field of education brought about by the broad adoption of digital technology, which has made previously unimaginable possibilities for distant learning and the availability of instructional materials an available alternative. The purpose of this study is to investigate the many advantages and disadvantages of online learning in the context of higher education. Students have the ability to access course materials and lectures in a convenient manner through online learning, which offers an incredible degree of flexibility. Non-traditional learners, such as working professionals or individuals with familial duties, who may have trouble attending conventional, face-to-face sessions, can benefit tremendously from the adaptability of online education. This is especially true for individuals who are non-traditional learners. It is also possible for students from a wide variety of backgrounds to pursue higher education through the use of online learning, which provides increased accessibility by bypassing regional geographical barriers.

Keywords: Benefits, Drawbacks, Online, Higher Education, Learning

Introduction

Online learning has gained popularity in higher education, providing advantages and disadvantages to students, professors, and institutions. The widespread adoption of digital technology has revolutionized the educational domain, offering unparalleled possibilities for distance learning and the availability of instructional materials. This study will examine the diverse benefits and drawbacks of online learning in higher education. Online learning provides exceptional flexibility, enabling students to conveniently access course materials and lectures. The adaptability of online education is particularly advantageous for non-traditional learners, such as employed professionals or persons with familial obligations, who may have difficulties in attending conventional, face-to-face classes. In addition, online learning offers enhanced accessibility, overcoming geographical limitations and allowing students from many backgrounds to pursue higher education.

In addition, online courses frequently include a wide range of varied learning materials, such as multimedia presentations, interactive simulations, and virtual laboratories. These resources accommodate various learning styles and improve the overall learning experience for pupils. Furthermore, online learning can be economically advantageous, as it eliminates the necessity of incurring costs associated with transportation, accommodation, and purchasing textbooks. This cost-effectiveness is advantageous for both students and institutions, since it enables the more efficient use of financial resources. Nevertheless, online learning is not without its disadvantages. A major obstacle is the absence of direct engagement between students and instructors. Lack of in-person interaction can result in a sense of isolation and impede the growth of interpersonal abilities. In addition, technological difficulties such as challenges with internet connectivity or flaws in the platform can interrupt the learning experience and lead to frustration for both students and educators. In addition, specific disciplines, especially those that necessitate practical application or laboratory experimentation, may pose more difficulties in terms of delivering good instruction through an online medium. This constraint can impede the advancement of applied expertise in disciplines such as research, engineering, and healthcare. Moreover, online learning necessitates a considerable degree of self-discipline and proficiency in time management. In the absence of the conventional framework of classroom settings, certain students may encounter difficulties in maintaining organization and motivation to timely complete their homework.

A Snapshot of Advantages and Disadvantages of Online Learning in Higher Education Advantages:



Figure 1: Advantages of Online Learning in Higher Education

Videos, interactive simulations, and digital laboratories are just a few examples of the multimedia materials available on the web. All students benefit from these materials since they accommodate various learning styles. Students have the freedom to access course materials and lectures whenever it is most convenient for them with online learning. Students who do not fit the typical student profile, such as those with jobs or families, would appreciate this flexibility the most. Because of the elimination of physical distance, more and more people from all walks of life are able to pursue higher education through online programs. More people have the chance to get a degree since students can take classes from any location with an internet connection. Both individuals and schools can save money by taking classes online. Institutions can cut back on facility and administrative expenditures, while students can save money on things like housing, textbooks, and commute. Students enrolled in online classes typically have the flexibility to work through course materials at their own speed. This pacing flexibility allows for rapid learning or extra review as needed, and it supports varied learning paces.

Disadvantages:

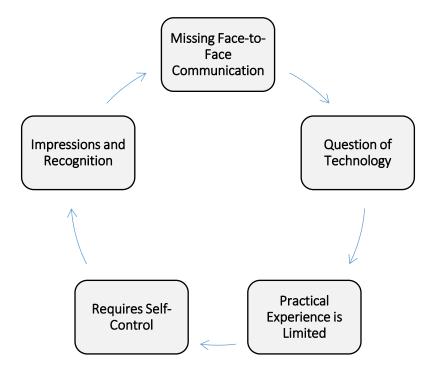


Figure 2: Disadvantages of Online Learning in Higher Education

One of the main disadvantages of online learning is the lack of in-person connection with lecturers and students. This might create feelings of isolation, making it difficult for certain students to stay motivated and involved. Technical concerns like as internet access, program compatibility, and platform flaws can all disrupt the learning process and frustrate both students and teachers. Certain disciplines, particularly those requiring hands-on experience or laboratory work, may be more difficult to teach effectively in an online setting. This can hinder students' ability to build practical skills in specific fields. Online learning necessitates a great level of self-control and time management. Without the framework of typical classroom environments, some students may struggle to stay organized and motivated to finish their coursework on time. Despite increased

acceptance of online education, some businesses and institutions may still believe that online degrees are less rigorous or valuable than traditional degrees. Furthermore, certification for online programs varies, so students must confirm that their selected school is recognized and respected in their profession.

Review Literature

The patterns and trends of distant education enrollment in higher education institutions are insightfully discussed in (Allen, et.al., 2017). The enrollment trend in distant education has been steadily increasing, according to the survey. Online classes and programs are becoming increasingly popular among students, who are looking for more versatile ways to get their education. The survey notes that more and more universities are providing online degree programs. Online learning platforms are becoming increasingly important as institutions realize the need of meeting the demands of non-traditional students. Many different fields and academic levels are covered by distance education programs. Online learning alternatives are many for students in all levels of education, from bachelor's to master's. The report delves further into the subject, investigating what is driving the increase in enrollment for distant education. Among these considerations may be the importance of affordable, easily accessible, and adaptable higher education. While there are many advantages to offering courses remotely, there are also some disadvantages, such as the need to solve technological impediments, keep students engaged, and guarantee quality. The study by Allen et al. (2017) sheds light on the pros and cons of online education and makes a significant addition to our understanding of the state of distant learning enrollment in universities.

On behalf of the United States Department of Education, Means et al. (2010) performed a metaanalysis that thoroughly assesses evidence-based methods in online learning. Online learning is compared to traditional face-to-face training in the meta-analysis to determine its effectiveness. It found that, generally speaking, online students did somewhat better than their face-to-face counterparts. The study recognizes that online learning's efficiency differs depending on the setting and the manner of education. Results from online education are conditional on a number of factors, including course delivery methods, instructional design, and learner characteristics. The meta-analysis emphasizes the significance of active participation and interaction in virtual classrooms. Better learning results are often seen in courses that encourage active engagement and include interactive features. The efficacy of both real-time (synchronous) and self-paced (asynchronous) online learning styles is investigated in the study. This finding provides more evidence that. depending on the goals of instruction and individual preferences of students, any approach can be fruitful. As it was said by Means et al. (2010), The results of the meta-analysis provide educators and legislators with suggestions for how to improve the efficiency of online education. Among these suggestions are the following: making online courses interesting and engaging to students; giving them enough help when they need it; and using technology to make group projects easier. According to Means et al. (2010), the metaanalysis sheds light on the possibility for online learning to improve student learning outcomes when applied properly, and it offers an important contribution to evidence-based practices in this area. To get the most of online learning, though, it's crucial to have well-thought-out lessons and consistent feedback from teachers.

An up-to-date analysis of learning science and its practical implementation in classrooms is presented by the National Research Council (2018). It draws on findings in cognitive science, neurology, psychology, anthropology, and education research to provide an interdisciplinary view of learning. In order to have a whole picture of how people learn, it stresses the significance of looking at things from many angles. An approach to education that is learner-centered is fundamental, as "How People Learn II" argues. It stresses that the learning process is influenced by the learners' background, motivation, culture, and social

connections. This book delves into the ways in which social, cultural, and environmental factors impact learning (National Research Council, 2018). It stresses the significance of making classrooms welcoming, inclusive, and culturally sensitive places to study. The capacity to apply one's information and abilities acquired in one setting to another is called "transfer of learning," and it's a central idea in the book. Approaches to facilitating knowledge transfer and removing obstacles to it are discussed. "How People Learn II" provides educators, legislators, and practitioners with a practical interpretation of research results. It offers advice on how to create productive classrooms, how to encourage students to go deeper into topics, and how to help them become better thinkers. Building environments that facilitate meaningful learning experiences while addressing the different needs and backgrounds of learners is emphasized.

The effects of blended learning on graduate students' feelings of belonging are investigated in Rovai and Jordan's (2004) research. Blended, entirely online, and conventional, in-person graduate courses are all compared by the researchers. The focus here is on creating an educational environment where students and teachers have a sense of community, which they define as a sense of belonging, support, and connection. Blended learning, which incorporates both online and in-person components, can accomplish the same goal of creating a feeling of community as more conventional, in-person classes, according to the research. Compared to completely online courses, mixed courses had more active students who were more likely to connect, collaborate, and participate. Having said that, the feeling of community in blended courses was quite similar to that in conventional, in-person classes. According to research by Rovai and Jordan (2004), blended learning has the ability to combine the best features of online and in-person education in a way that fosters student engagement and growth. In designing and implementing blended learning experiences, it is crucial to consider the significance of social interaction and community-building.

A theory that incorporates self-efficacy, self-regulation, and the establishment of communities of inquiry in online and mixed learning settings is proposed in an article by Shea and Bidjerano (2010). The concept of "learning presence" is also introduced in the same article. In order to facilitate meaningful and successful learning experiences in various circumstances, the authors propose that learning presence is necessary. This paper explores the relationship between students' self-efficacy—their confidence in their own capacities to learn and their capacity to self-regulate their learning behaviors—and their level of engagement and participation in online and hybrid classrooms. Additionally, the writers go into the ways in which learners are able to work together and build their own knowledge through the formation of communities of inquiry. These communities are defined by cognitive, social, and teaching presences. Successful learning outcomes in online and blended learning settings can be better understood and promoted by using the framework provided by the eamined theory of learning presence by Shea and Bidjerano (2010). Learners should feel empowered to take control of their learning and engage in meaningful interactions with instructors and peers in a supportive and engaging learning environment.

An exhaustive review of the ideas, concepts, and methods supporting remote learning is presented in (Simonson, et.al., 2018). It delves into the fundamental ideas of distant learning, including its background, pedagogical approaches, instructional design principles, technology developments, and technological improvements. The authors (Simonson, et.al., 2018) trace the history of distant learning from its beginnings to the present day, focusing on significant events and advancements along the way. Emphasizing the significance of effective instructional design, learner support systems, and technology integration, they address the specific problems and opportunities connected with teaching and learning at a distance. For those working in the fields of education, training, and administration who are associated with distant learning, "Teaching and Learning at a Distance" is an invaluable resource. In order to meet the varied demands and preferences of online students, it offers advice on how to create and implement efficient distance learning programs.

A special issue of the journal "The Internet and Higher Education" devoted to the Community of Inquiry (CoI) framework is introduced by Swan and Ice's (2010) study. The components of cognitive, social, and pedagogical presence in online learning settings are investigated using the CoI framework, which was created by Garrison, Anderson, and Archer (2000). The introduction gives a brief history of the CoI framework and how it has changed and affected online education research and practice in the last ten years. The framework's ongoing usefulness and significance in comprehending and improving online learning experiences are emphasized. The CoI framework has made significant contributions to online education, as discussed in Swan and Ice's (2010) work. One of its key roles is to encourage student involvement, interaction, and deep learning. Additionally, they stress the importance of conducting additional studies and investigations into the framework's potential uses in other educational environments. By placing the CoI framework in the context of online education as a whole and demonstrating its value as a theoretical foundation for comprehending and enhancing online learning experiences, the essay prepares the reader for the special issue.

Online homework as a formative assessment method in organic chemistry classroom is examined in the study by Zhu, Kaplan, Dershimer, and Bergom (2012). Within the framework of organic chemistry education, the authors assess the pros, cons, and possible difficulties of assigning assignments online. The article goes over some of the benefits of online homework, including the fact that students may get feedback right away, that it encourages active learning, and that it gives teachers more leeway in how and when they grade their assignments. Another benefit of online homework is that it lets teachers see how their students are doing and where they might need further help. On the other hand, there are a number of problems and possible downsides to using online homework that are brought up by Zhu, Kaplan, Dershimer, and Bergom (2012). These include problems with technology, students cheating, and worries about the quality of the questions and feedback given by online platforms. In order to overcome these obstacles, they stress the significance of proactive steps to preserve academic integrity, thorough instructional design, and continuous support for teachers and students. The study by Zhu, Kaplan, Dershimer, and Bergom (2012) offers a detailed analysis of online homework as a tool for formative assessment in organic chemistry classes, drawing attention to the advantages and disadvantages of the practice. It provides helpful information and suggestions for teachers who want to include online homework into their lessons.

Research Methodology

This study is characterized by its descriptive nature. In order to conduct research, randomly approached 130 students and professionals who are currently enrolled in online classes for a certain course or degree, and asked them to complete a questionnaire. All questions are rated on a 5-point Likert scale. The theoretical content has been gathered from several internet sources, including government websites, private educational platforms, published research publications, and books. Descriptive statistics were utilized for analysis purposes, with the standard deviation and mean values obtained using SPSS following a pilot research.

Objective of the study

- To study benefits & drawbacks of online learning in higher education.
- To identify variables related to benefits & drawbacks of online learning in higher education.
- To suggest findings & conclusion.

Table 1: Demographic Profile of the Respondents

Age-	Respondents	Gender-wise	No. of	Courses	No. of
wise			respondents		respondents
20-24	22 (16.92%)	Male	71 (54.61%)	Graduation	18 (13.84%)
25-29	39 (30.00%)	Female	59 (45.38%)	Post-	31 (23.84%)
				Graduation	
30-34	28 (21.53%)			Doctorate	35 (26.92%)
35-37	22 (16.92%)			Diploma/	19 (14.61%)
				Certificate	
38-42	11 (8.46%)			Other	27 (20.76%)
				Professional	
				Courses	
>41	08 (6.15%)				
Total	130 (100%)		130 (100%)		130 (100%)

Table 1 provides a comprehensive overview of the demographic composition of the respondents, helping to understand their characteristics and preferences in relation to the study or survey being conducted. The majority of respondents fall within the age groups of 25-29 and 30-34. There are slightly more female respondents compared to male respondents. Post-Graduation is the most common educational background among the respondents, followed by Doctorate and Graduation. Other Professional Courses also have a significant number of respondents, while Diploma/Certificate courses have the fewest respondents.

Table 2: Descriptive Statistics: Benefits of Online Learning in Higher Education

S.No.	Techniques/Variables	N	(M).	(M).	M.Values	S.Deviation
		(Freq.)	Minimum	Maximum		
1.	Flexibility	130	1	5	6.01	.115
2.	Accessibility	130	1	5	3.15	.623
3.	Diverse Learning	130	1	5	2.78	.574
	Resources					
4.	Cost-Effectiveness	130	1	5	5.97	.217
5.	Self-Paced Learning	130	1	5	3.79	.499
Valid N (listwise)		130		1		

Table 2 presents an analysis of data on several approaches or variables associated with online learning in higher education. It includes information on their frequencies, minimum and maximum values, and standard deviations. On average, respondents rated flexibility the highest among the listed variables, with a mean rating of 6.01 out of 10. The standard deviation is relatively low (0.115), suggesting that ratings were fairly consistent around the mean. Accessibility received an average rating of 3.15 out of 5, indicating moderate satisfaction or importance. The standard deviation is higher (0.623) compared to flexibility, suggesting more variability in respondent ratings. This aspect received an average rating of 2.78 out of 5, indicating lower satisfaction or importance compared to flexibility and accessibility. The standard deviation (0.574) suggests moderate variability in respondent ratings. Respondents rated cost-effectiveness the highest among the listed variables, with an average rating of 5.97 out of 10. The standard deviation is relatively low (0.217), indicating consistent ratings around the mean. Self-Paced Learning: Self-paced learning received an average rating of 3.79 out of 5, indicating moderate satisfaction or importance. The standard deviation (0.499) suggests moderate variability in respondent ratings. Overall, flexibility and cost-effectiveness appear to be the most highly valued aspects of online learning among respondents, while diverse learning resources received relatively lower ratings. However, it's essential to consider the context and specific demographics of the respondents when interpreting these findings.

Table 3: Descriptive Statistics: Drawbacks of Online Learning in Higher Education

S.No.	Techniques/Variables	N	(M).	(M).	M.Values	S.Deviation
		(Freq.)	Minimum	Maximum		
1.	Lack of Personal	130	1	5	5.13	.651
	Interaction					
2.	Technical Issues	130	1	5	3.94	.249
3.	Limited Hands-On	130	1	5	6.11	.203
	Learning					
4.	Self-Discipline	130	1	5	2.45	.458
	Required					
5.	Perception and	130	1	5	5.68	.219
	Accreditation					

Table 3 presents an analysis of data on several approaches or variables associated with online learning in higher education. It includes information on their frequencies, minimum and maximum values, and standard deviations. Lack of Personal Interaction, on average, respondents rated the lack of personal interaction as a significant concern, with a mean rating of 5.13 out of 5. The standard deviation is relatively high (0.651), indicating a considerable variability in respondent ratings. Technical issues received an average rating of 3.94 out of 5, indicating moderate concern or impact. The standard deviation (0.249) suggests some variability in respondent ratings but less than that of lack of personal interaction. Limited Hands-On Learning, this aspect was rated as a significant concern, with an average rating of 6.11 out of 5. The standard deviation (0.203) is relatively low, indicating that respondent ratings were consistent and clustered around the mean. Respondents rated the need for self-discipline as moderately concerning, with an average rating of 2.45 out of 5. The standard deviation (0.458) suggests some variability in respondent ratings. Perception and accreditation received an average rating of 5.68 out of 5, indicating a considerable concern among respondents. The standard deviation (0.219) is relatively low, suggesting consistent ratings around the mean. Finally, lack of personal interaction, limited hands-on learning, and perception/accreditation appear to be the most significant concerns or challenges associated with online learning, based on the average ratings provided by respondents. However, it's essential to consider the context and specific demographics of the respondents when interpreting these findings.

Findings of the study:

While online learning offers numerous benefits such as flexibility and accessibility, it also presents challenges related to engagement, technical issues, and the development of practical skills. Effective online education requires careful design, robust support systems, and active engagement from both students and instructors.

- Online learning provides students with the flexibility to access course materials and courses at their practicality, allowing them to effectively manage their studies alongside their work, family responsibilities, or other commitments.
- Online courses offer students the ability to access education from any location with an internet connection, hence increasing accessibility for those who may be unable to attend traditional physical institutions owing to geographical, economical, or physical constraints.
- Online platforms frequently provide a diverse range of multimedia resources, including movies, interactive simulations, and virtual labs. These tools enhance the learning experience and accommodate various learning styles.
- Online programs offer a more economical option for both students and universities. Students can reduce their expenses by avoiding fees such as transportation, accommodation, and textbooks, while educational institutions can cut down on expenditures related to facilities and administrative tasks.

- Online courses frequently offer students the flexibility to advance through the content at their preferred speed, enabling them to engage in accelerated learning or undertake additional study when necessary.
- One of the main disadvantages of online learning is the absence of direct personal interaction with lecturers and students. This might result in a sense of seclusion and pose difficulties for certain students in maintaining their motivation and involvement.
- Technical concerns, such as problems with internet access, program compatibility, or platform flaws, can interrupt the learning experience and lead to irritation for both students and instructors.
- Some subjects, especially those that include practical experience or laboratory work, may pose greater difficulties in terms of successful online instruction. This can impede the acquisition of practical skills among students in specific disciplines.
- Online studying necessitates a considerable degree of self-discipline and proficiency in managing one's time. In the absence of the conventional framework of classroom settings, certain students may encounter difficulties in maintaining organization and motivation to timely complete their homework.
- Despite the increasing acceptance of online education, certain employers and institutions
 may still perceive online degrees as less rigorous or value compared to traditional degrees.
 Furthermore, the accreditation of online programs can differ, and it is imperative for
 students to verify that their selected school is acknowledged and esteemed within their
 specific sector.

Conclusion

In brief, online learning has various advantages, such as adaptability, availability, a wide range of educational materials, and cost-efficiency. Nevertheless, online learning also poses difficulties like limited face-to-face communication, technical glitches, constraints on practical learning, and the requirement for self-motivation. Notwithstanding these disadvantages, online learning remains an essential component of higher education, offering prospects for continuous learning and academic progress. Some employers and organizations may perceive online degrees as less rigorous or valuable compared to traditional degrees. Moreover, the certification of online programs can differ, which gives rise to worries regarding the caliber and acknowledgement of online education.

References

- Allen, I. E., & Seaman, J. (2017). Digital Learning Compass: Distance Education Enrollment Report 2017. Babson Survey Research Group.
- Deepak Som, A. Udaya Shankar, Kirti Agarwal, Tosendra Dwivedi, Gunjan Bhutani. (2023). Psychological Outcomes of Online Education in Lieu of Faculties Mental Perspective. Journal for ReAttach Therapy and Developmental Diversities, 6(10s(2), 1411–1421. Retrieved from https://jrtdd.com/index.php/journal/article/view/1769

- Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2010). Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies. US Department of Education.
- National Research Council. (2018). How People Learn II: Learners, Contexts, and Cultures. National Academies Press.
- Rovai, A. P., & Jordan, H. M. (2004). Blended learning and sense of community: A comparative analysis with traditional and fully online graduate courses. The International Review of Research in Open and Distributed Learning, 5(2).
- Shea, P., & Bidjerano, T. (2010). Learning presence: Towards a theory of self-efficacy, self-regulation, and the development of a communities of inquiry in online and blended learning environments. Computers & Education, 55(4), 1721-1731.
- Simonson, M., Smaldino, S., Albright, M., & Zvacek, S. (2018). Teaching and learning at a distance: Foundations of distance education. Information Age Publishing.
- Swan, K., & Ice, P. (2010). The community of inquiry framework ten years later: Introduction to the special issue. The Internet and Higher Education, 13(1-2), 1-4.
- Zhu, E., Kaplan, M., Dershimer, R. C., & Bergom, I. (2012). Use of online homework as a formative assessment tool for organic chemistry instruction: The good, the bad, and the ugly. Journal of Chemical Education, 89(6), 710-714.