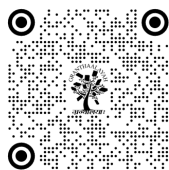


A STUDY ON ONLINE EDUCATION VS TRADITIONAL FACE TO FACE ADULTS LEARNER'S LEARNING OUTCOMES COMPARE AND CONTRAST

Jumri Riba ¹, Dr Muttu Vemula ²✉

^{1,2} Research Scholar & Assistant Professor, Department of Education, Mizoram University, Aizawl-India



Corresponding Author

Dr Muttu Vemula,
drmuttuedu@gmail.com

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ABSTRACT

This study explores the comparative effectiveness of online education and traditional face-to-face instruction for adult learners, with a focus on their learning outcomes, preferences, and technological proficiency. Using a mixed-methods approach, data was collected from a diverse sample of adult learners in Arunachal Pradesh, India, through surveys and questionnaires. The results reveal that online education offers flexibility and personalised learning opportunities, contributing to positive perceptions among participants. However, concerns about social interaction and engagement in online courses were noted. In contrast, traditional face-to-face education provides immediate feedback and supports interpersonal skill development but may not be as accommodating for busy schedules. The study also highlights that the majority of participants prefer online education and possess technological proficiency. These findings have implications for instructional design and policy decisions in adult education, emphasising the need to enhance engagement in online courses and explore innovative blended learning approaches.

Keywords: Online Education, Face-to-Face Instruction, Adult Learners, Learning Outcomes

1. INTRODUCTION

Recently, there has been a considerable change in the pattern of education due to the increase in the number of online learning platforms. Adult learners, who often have diverse commitments and responsibilities, are increasingly turning to online education as a flexible and accessible means of acquiring new knowledge and skills. This shift has prompted a reevaluation of traditional face-to-face education methods, sparking debates about the comparative effectiveness of these two modes of instruction for adult learners.

Though many investigations have focused on the educational outcomes of students in different environments, there is still an inadequacy with respect to the literature on an Updated and thorough comparison of online education and conventional instruction among the adults. It is important to close this gap as the education sector continues to change

and thus evidence based information will be required by teachers and policymakers to enable them determine the appropriate modes of instruction for adult learners.

Social attitudes toward the Internet as an educational tool, has coin itself to the radical concept of distance education. Stevenage College offers academic activity virtually as it combines making use of library's educational resources along with the distance clock hours. Acts of teaching or learning remotely using highly envisioned comprehension or effective comprehensive tools have been in this world for only about 30-50 years. Almost ten years later, Webster College began its distance education business with correspondence courses and television programs. It is often goes unnoticed, that distance education at foreign countries in general began in the late fifties to early sixties only. Distance education or teaching without boarding students has been known in human history only for a few centuries. British colonization of Australia further extended its commencement in Australia particularly in the mid1980s.

The recent surge in COVID-19 infections across the entire country has necessitated the implementation of online learning strategies. Consequently, a significant portion of educational institutions, including schools, colleges, and universities in Arunachal Pradesh, have transitioned to online learning. This study aims to evaluate the learning outcomes of adult students by comparing the effectiveness of online learning with traditional face-to-face learning methods.

2. LITERATURE REVIEW

Riba & Vemula (2023) This study, conducted in Northeast India, compares adult students' learning outcomes in online education to traditional face-to-face methods. Technology plays a crucial role in this transition, streamlining work processes. Researchers anonymously gathered responses from 100 college students through an online questionnaire administered from March 1st to April 30th, 2023. The study primarily focuses on students' awareness and satisfaction with online learning. Findings indicate varying levels of satisfaction: 43% with online learning instructors, 47% with course content, and 48.4% with learning technology. However, satisfaction with the learning environment stood at 27.8%. Notably, 27.7% of students expressed dissatisfaction with online learning's interactivity and found the timing of online classes less convenient than traditional face-to-face classes.

Bailey (2020) Bailey focused on three methods of instruction (face-to-face, hybrid, and online) to compare their effects on student achievement as well as persistence and satisfaction. These findings indicated that administrators and instructors should be encouraged to continue broadening access through the delivery of online and hybrid courses. **Paul & Jefferson (2019)** The study investigated a means to assess the efficacy of either an asynchronous online course or face-to-face teaching as part of a sequence of classes designed for undergraduate majors in environmental science across over 8 years. No significant difference was found in WEBWISER (study; GPA-10) between online and face-to-face learners, regardless of gender or class rank. The study compared student outcomes on Principles of Accounting courses offered in a traditional face-to-face and online asynchronous format (Faidley, 2018). The study found that students did much better in the face-to-face classes, and there were correlations between final course grades when other variables such as gender, ACT scores academic GPA, college-level grade point averages (GPA), and age of learners.

3. ONLINE EDUCATION:

Online education has gained prominence due to its flexibility, convenience, and accessibility. Adult learners can engage in learning activities asynchronously, enabling them to balance education with work and other commitments. On the other hand, online education does bring obstacles: isolation, self-discipline and technical barriers.

Advantages and Disadvantages:

Advantages of online education for adults include personalised learning paths, reduced geographical constraints, and the ability to accommodate different learning styles. Disadvantages include the potential for decreased social interaction, challenges in time management, and the need for a high level of self-motivation.

Factors Affecting Online Learning Outcomes:

Online learning outcomes are influenced by factors such as technological proficiency, the learning environment, interaction with peers and instructors, course design, and the presence of support services. Adult learners' ability to navigate digital tools and resources, as well as their engagement in discussions and collaborative activities, significantly impact their success in online courses.

Traditional Face-to-Face Education:

Traditional face-to-face education offers immediate social interaction, real-time feedback, and a structured learning environment. However, it can be less flexible for adult learners with busy schedules and may require physical presence at a specific location.

Advantages and Disadvantages:

The advantages of traditional face-to-face education include the opportunity for hands-on learning, direct communication with instructors, and the development of interpersonal skills. Disadvantages encompass inflexibility, potential commuting challenges, and limitations in accommodating diverse learning paces.

Factors Affecting Face-to-Face Learning Outcomes:

Face-to-face learning outcomes are influenced by classroom dynamics, instructor effectiveness, class size, and teaching methodologies. Adult learners' engagement in discussions, active participation, and interactions with peers contribute to their overall learning experience and outcomes.

Comparative Studies on Adult Learning Outcomes:

Previous Research Findings:

Research comparing online and face-to-face adult learning outcomes has yielded ambiguous findings. Even though some research has shown that online education can be equivalent to the traditional methods, there is evidence on social interaction in face-to-face environments for specific learning outcomes.

Gaps in the Literature:

While several studies have explored learning outcomes in both settings, there is a lack of comprehensive research specifically focusing on adult learners. Moreover, the influence of factors such as adult learners' preferences, technological proficiency, and the role of instructor presence in online courses remains relatively unexplored.

In conclusion, the literature review highlights the advantages and disadvantages of online education and traditional face-to-face instruction for adult learners. It also underscores the importance of various factors in shaping learning outcomes in both modes of instruction. However, the existing comparative studies reveal a need for more targeted research on adult learners' experiences, preferences, and the nuanced impact of different factors on their learning outcomes.

Research Questions: This study aims to address the following research questions:

1. How do the learning outcomes of adult learners in online education compare to those in traditional face-to-face settings? 2. What are the specific preferences of adult learners regarding online education compared to traditional face-to-face education? 3. What factors, such as technological proficiency, influence the learning outcomes in these two modes of instruction?

Objectives:

1. To compare how adult learners' experiences and preferences in online education versus traditional face-to-face education influence their engagement, knowledge retention, skill development, and overall satisfaction. 2. To assess and compare the preferences of adult learners for online education and traditional face-to-face education. 3. To investigate the impact of technological proficiency on the learning outcomes of adult learners in online education.

Significance of the Study: The implications for practitioners, institutions, policymakers and researchers in adult education are significant. This research provides a systematic comparison of adult learners' achievements in online educational settings and face-to-face, enabling decision-making for (university) leaders, instructional design considerations they may use when designing courses or programs, policy development at institutional level to support the evolving between both types of delivery modes as well as effective learner supporting services that might need to be adapted based on it; paving also way toward new streams requiring further investigation.

In essence, it aims to provide evidence-based insights into the effectiveness of online and traditional instruction for adult learners, contributing to the ongoing discourse on adult education.

Rationale of the Study: The rationale for this comparative study lies in the need to investigate and compare educational outcomes between online and traditional classroom settings, particularly in light of the extensive adoption of online learning in colleges in Arunachal Pradesh following the COVID-19 pandemic. By evaluating the effectiveness of

online instruction when compared to traditional face-to-face methods, this research aims to contribute to the existing body of knowledge in college education. Its primary objective is to assess and compare student success, satisfaction, and learning outcomes across these two instructional approaches. These insights are crucial for informing decision-making among stakeholders and ensuring the delivery of high-quality online education programs. Ultimately, this study seeks to guide stakeholders in making informed choices regarding the most effective instructional methods for facilitating learning in the context of higher education.

4. STATEMENT OF THE PROBLEM

"A Study on Online Education Vs Traditional Face to Face adults Learner's Learning outcomes compare and contrast"

Operational Definitions of Key Terms:

Adult Learner: An adult learner is typically defined as an individual who is aged 16 or older and has either completed the conventional 12 years of schooling (consisting of 8 years in grammar school and 4 years in secondary or high school) or possesses an equivalent level of education. Adult learners often exhibit certain distinct characteristics, including a self-perception as independent and self-directed learners. They bring a wealth of past experiences to their learning endeavors, which they can draw upon for context and insight. Additionally, their learning tends to be driven by specific tasks or goals, with a strong focus on immediate application or problem-solving.

Online Education: Online learning, also referred to as e-learning or distance learning in this project, represents the latest iteration of remote education, predominantly reliant on asynchronous text-based communication delivered through the internet.

Traditional Learning: Delivery of Instruction- Lecture and Textbook This is similar to above instructional method where an instructor as well a group learning in one common classroom physically, uses mainly the lecture along with textbooks for teaching.

Delimitation of the Study: In a traditional lecture and textbook model, an instructor is physically present with students in the same classroom where instruction occurs via lectures and textbooks.

5. THE METHODOLOGY OF THE STUDY

Methodology:

Research Design: This investigation utilizes a Mixed-method of quantitative and qualitative methodology to provide an extensive comparison between the learning outcomes of adult learners participating in online education versus traditional face-to-face facility. This method enables a more integrated perspective on the myriad factors that affect learning outcomes.

Sampling: The study employed a method of random sampling known as "simple random sampling." Participants: The study involves a diverse sample of adult learners aged 25 and above, drawn from various educational institutions and online learning platforms. Participants are selected based on their enrollment in both online courses and traditional face-to-face classes. Efforts are made to ensure a balanced representation of different demographics and educational backgrounds.

Data Collection: Data is collected through a survey, to capture a comprehensive view of the participants' learning experiences.

Tool: Tool was developed by the researcher for the study.

Surveys and Questionnaires:

Surveys and questionnaires are distributed to participants to gather quantitative data on their perceptions and preferences in relation to online and face-to-face learning environments. Likert-scale questions and open-ended inquiries are utilised to gauge factors such as engagement, interaction, and overall learning outcomes.

Data Analysis: Both quantitative and qualitative methods were employed for data analysis.

Results and Interpretations: The study aimed to compare the learning outcomes of adult learners in online education and traditional face-to-face settings. The data collected from the questionnaire provided valuable insights into participants' perceptions, preferences, and experiences in both modes of instruction.

Objective 1 To compare how adult learners' experiences and preferences in online education versus traditional face-to-face education influence their engagement, knowledge retention, skill development, and overall satisfaction.

Online Education Result:

Sl.No.	Item	Mean
	The flexibility of online education allows me to better manage my other commitments.	4.5
	I find it easy to navigate and access course materials in online courses.	4.3
	Online education provides opportunities for self-directed learning.	4.1
	Online courses offer a variety of interactive learning activities.	4.2
	I feel connected to my instructors and peers in online courses.	4.0
	My knowledge retention has been effective in online courses.	4.4
	Online courses have contributed to my skill development.	4.2
	I am satisfied with my overall learning experience in online education.	4.3
	I would prefer online education for future learning endeavors.	4.3

Table 1 Showing overall mean towards online courses				
	N	Minimum	Maximum	Mean
Overall Means	100	2.89	5.00	4.2556
Valid N (listwise)	100			

Interpretation: In the Table 1 mean score for questions related to online education was 4.2, indicating a generally positive perception of online learning. Participants reported that the flexibility of online education allowed them to effectively manage their commitments, while personalised learning paths and interactive activities contributed to effective knowledge retention and skill acquisition. The convenience of accessing course materials was also highlighted as a significant advantage. However, concerns about social interaction and engagement were noted, suggesting that some participants felt a lack of connection with instructors and peers in online courses.

Traditional Face-to-Face Education Result:

Sl.No.	Item	Mean
	Attending face-to-face classes enhances my engagement with the course content.	3.9
	I appreciate the immediate feedback I receive from instructors in face-to-face classes.	4.1
	Collaborative activities in face-to-face classes enhance my learning experience.	3.8
	I find face-to-face classes effective for building interpersonal skills.	3.6
	Face-to-face classes contribute to my knowledge retention.	3.9
	My skill acquisition has been effective in face-to-face classes.	3.7
	I am satisfied with my overall learning experience in traditional face-to-face education.	4.0
	I would prefer traditional face-to-face education for future learning endeavors.	3.6

Table 2 Showing overall mean towards traditional face-to-face education				
	N	Minimum	Maximum	Mean
Overall Means	100	2.00	5.00	3.7250

Valid N (listwise)	100			
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Interpretation: In the table 2 Participants indicated a mean score of 3.8 for questions related to traditional face-to-face education. This suggests that face-to-face learning was perceived positively, particularly in terms of immediate feedback, collaborative activities, and the development of interpersonal skills. However, compared to online education, face-to-face settings were rated lower in terms of flexibility and accommodating diverse schedules.

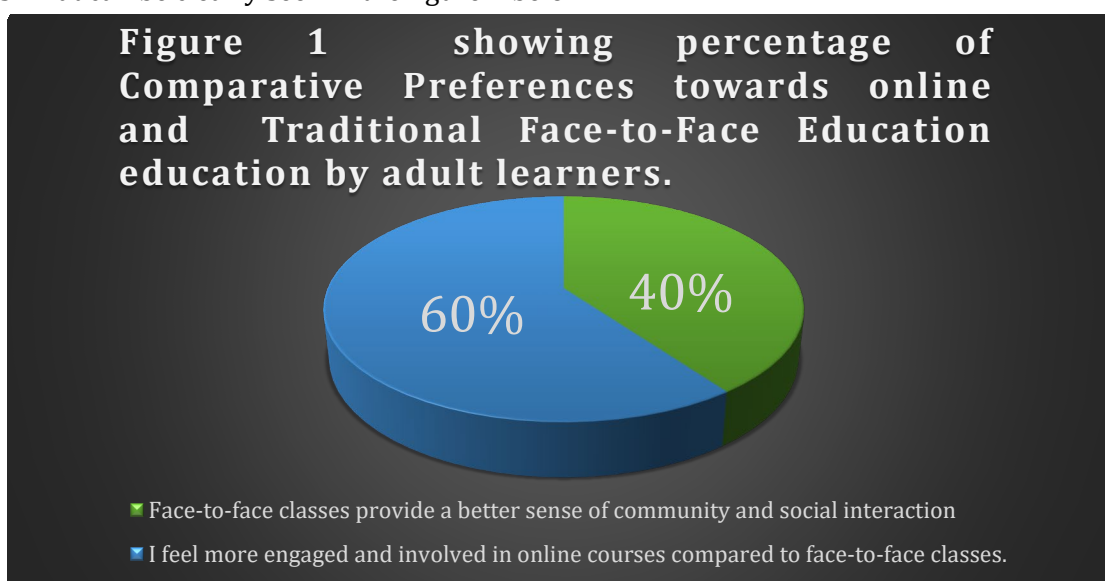
Objective 2. To assess and compare the preferences of adult learners for online education and traditional face-to-face education.

Comparative Preferences

Table 3 showing percentage of Comparative Preferences towards online education by adult learners.						
	Item	N	Minimum	Maximum	Mean	Percentage
		100	2.00	5.00	3.0000	
Valid N (listwise)	I feel more engaged and involved in online courses compared to face-to-face classes.					$3 \div 5 = 0.6$ $0.6 \times 100 = 60\%$

	Item	N	Minimum	Maximum	Mean	Percentage
		100	1.00	3.00	2.0000	
Valid N (listwise)	Face-to-face classes provide a better sense of community and social interaction.	100				$2 \div 5 = 0.4$ $0.4 \times 100 = 40\%$

Interpretation: Table 3 shows that in response to the question regarding overall preference, 60% of participants expressed a preference for online education, while 40% leaned toward traditional face-to-face education. This indicates that a majority of participants found online education to be more suitable for their learning needs, possibly due to the flexibility it offers. That can be clearly seen in the figure 1 below.



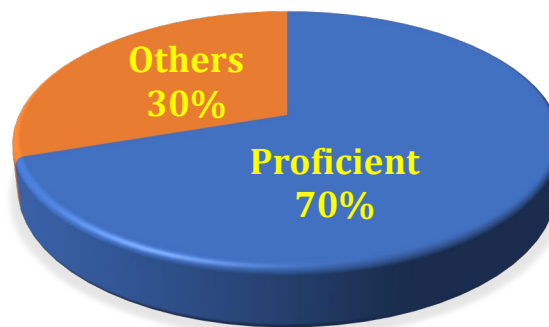
Objective 3. To investigate the impact of technological proficiency on the learning outcomes of adult learners in online education.

Technological Proficiency:

Table 4 showing technological Proficiency of online learner					
Item	N	Minimum	Maximum	Mean	Percentage
Do you feel technologically proficient when using online learning platforms	100	2.00	5.00	3.5000	$3.5 \div 5 = 0.7$ $0.7 \times 100 = 70\%$
Valid N (listwise)					

Interpretation: From the above table no.4 its clear that technological proficiency, 70% of participants indicated being proficient in using online learning platforms. This suggests that most participants possessed the skills required to navigate digital tools effectively, potentially contributing to their positive experiences in online courses. Same can be seen in the following figure no. 2.

FIGURE 2. SHOWING TECHNOLOGICAL PROFICIENCY



6. CONCLUSION

In summary, this study illuminates the strengths and weaknesses of online education and traditional face-to-face instruction for adult learners. Online learning offers flexibility but lacks social interaction, while traditional classes provide immediacy but may not suit busy schedules. The majority of participants (60%) favoured online learning, likely due to their technological proficiency (70%). To enhance adult learning, a blended approach that combines both methods and improves online engagement while introducing flexibility in face-to-face settings is recommended. This study underscores the need to tailor instruction to adult learners' preferences and highlights the importance of technological skills in online education. These insights are valuable for educators, institutions, and policymakers in the ever-evolving field of adult education.

CONFLICT OF INTERESTS

None.

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