

A Comparative Study of Students' Preferences for Online and Offline Learning Methods

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Abstract-- The study titled “A Comparative Study of Students' Preferences for Online and Offline Learning Methods” aims to examine students' preferences, perceptions, and experiences regarding online and offline learning in the contemporary educational environment. With the increasing use of digital technologies alongside the continued relevance of traditional classroom teaching, understanding students' choices and learning experiences is essential for developing effective educational strategies. The study focuses on five major dimensions: students' preferences for online and offline learning, factors influencing their preferences, perceived academic outcomes, challenges encountered in both modes, and access to learning resources. Online learning offers flexibility, convenience, digital accessibility, and opportunities for self-paced learning, whereas offline learning facilitates direct teacher–student interaction, peer engagement, classroom participation, and immediate feedback. The study adopts a quantitative research methodology and uses a structured questionnaire to collect primary data from students. A comparative approach is employed to assess students' perceptions of the effectiveness and suitability of both learning modes. The study also examines technological, academic, personal, and environmental factors that influence learning preferences and identifies the challenges associated with online and offline learning. The findings are expected to provide useful insights for educational institutions in developing learner-centered, flexible, and effective learning strategies and in determining the appropriate integration of online and offline learning methods to enhance students' overall learning experience and perceived academic outcomes.

Keywords-- Online Learning, Offline Learning, Student Preferences, Academic Outcomes, Learning Resources

I. INTRODUCTION

Education plays a vital role in shaping an individual's knowledge, skills, attitudes, and overall development. It serves as a foundation for personal growth, social development, and future career opportunities. With the growing use of digital technologies alongside the continued importance of traditional classroom-based education, understanding students' learning experiences and preferences has become increasingly important for developing effective teaching and learning strategies.

In recent years, online learning has become an integral part of the educational system, particularly following the COVID-19 pandemic, which led educational institutions to adopt digital modes of teaching on a large scale. As a result, many students have experienced both online and offline learning, enabling them to compare the advantages and limitations of the two modes.

Online learning offers flexibility, convenience, accessibility, and the opportunity to learn from any location. It can also provide students with access to a wide range of digital learning resources. However, it may be associated with challenges such as limited face-to-face interaction, distractions, technical difficulties, and difficulties in maintaining concentration. In contrast, offline learning provides direct interaction with teachers and peers, immediate feedback, better classroom engagement, and a structured learning environment. At the same time, it may involve limitations related to time, travel, and flexibility. These differences can influence students' perceptions and preferences regarding the mode of learning they consider more suitable for their educational needs.

Against this background, the present study, titled “A Comparative Study of Students' Preferences for Online and Offline Learning Methods,” aims to compare students' preferences towards online and offline learning methods. The study focuses on identifying the factors influencing students' preferences, their perceived academic performance, the challenges experienced in each mode, and their access to learning resources.

The findings of the study are expected to provide useful insights into students' learning preferences and experiences and help educational institutions and teachers in designing more effective, flexible, and student-centred teaching and learning strategies.

II. OBJECTIVES

- ✓ To examine students' preferences for online and offline learning methods
- ✓ To identify the factors influencing students' preferences for online and offline learning methods
- ✓ To assess the perceived impact of online and offline learning methods on students' academic performance

- ✓ To analyze the challenges faced by students in online and offline learning methods
- ✓ To evaluate students' access to learning resources in online and offline learning methods

III. REVIEW OF LITERATURE

1. Anamika Babu (2026) - Comparative Study of Online and Offline Education

This paper conducted a comparative study of online and offline education focusing on flexibility, cost, teacher-student interaction and access to learning resources. Offline learning offers face-to-face interaction, practical experience, although it may involve higher costs and less flexibility. Online learning provides flexibility and convenience but may create difficulties in maintaining close interaction between teachers and students. This study suggested that mixed or blended learning could be adopted in future. The study is relevant to the present research because it compares online and offline learning and examines factors related to students learning experiences

2. Adhitya Daffa and Ali Djamuhuri (2026) – Differences in the Effectiveness of Online Learning Methods Compared to Offline Learning

This study examined the effectiveness of on-site and online learning among accounting students during the COVID-19 pandemic. It found that on-site learning was more effective for students than online learning. This study aims to determine whether on-site learning is more effective than online one based on learning theory. This study is relevant to the present research because both focus on comparing online and offline learning methods and understanding students' learning preferences.

3. Benediktus Rolando (2025) - ZOOM OR ROOM? A SYSTEMATIC REVIEW ON THE EFFECTIVENESS OF ONLINE VERSUS OFFLINE LEARNING

This study reviewed research on online, offline, and blended learning in formal education using the PRISMA methodology. The review combined studies published between 2019 and 2025 and found that online learning provides flexibility and broader access, but it also creates challenges such as reduced student engagement, limited digital literacy, and unequal access to technology. Offline learning was found to encourage face-to-face interaction and immediate feedback, while blended learning emerged as an effective approach that combines the strengths of both modes. This study is relevant to the present research because it compares learning modes and student experiences.

4. Syeda Sharaban Tahura, Md Abdus Shabur, Tasnuva Jahan Nuva(2025) - Evaluating the online and offline learning effectiveness in Bangladesh using Analytic Hierarchy Process

In this paper, compared online and offline learning among engineering students in Bangladesh using AHP. Eight critical criteria—cost, flexibility, learning effectiveness, interaction, concentration, pace of learning, technological challenges, and practicality—were analyzed to understand their impact on these modalities. This paper showed that concentration and technological issues were major factors in online learning, while cost, time and flexibility were important in offline learning. The study is related to the present research as both compare online and offline learning methods.

5. Fatima Riaz, Syed Esam Mahmood, Tahmina Begum, Mohammad Tauheed Ahmad, Ayoub A Al-Shaikh, Ausaf Ahmad, Ayed A Shati, Mohammad Suhail Khan(2023) - Students' preferences and perceptions regarding online versus offline teaching and learning post-COVID-19 lockdown

This study is about students' preferences and perceptions regarding online versus offline teaching and learning after the COVID-19 lockdown. The study was conducted among 480 female students at King Khalid University, Saudi Arabia. The findings showed that many students experienced difficulties with offline classes, including time management, concentration, tiredness, and unhappiness, while online learning was perceived as more comfortable, satisfying, and helpful for gaining knowledge. About 72% of students preferred to continue online learning in the future. This study is relevant to the present research because both studies examine students' preferences and perceptions towards online and offline learning methods.

6. R Kumari, Deepak Kumar (2023) - A comparison of the effectiveness of online and offline learning

This paper compared the effectiveness of online and offline learning among students who had experienced both learning methods during the COVID-19 pandemic. The effectiveness of both physical classrooms and online programs might be improved with input from students. The study used an online survey to collect students' feedback and examined the factors affecting the effectiveness of online and offline learning. The study is relevant to the present research because both studies compare online and offline learning methods and consider students' experiences and preferences.

7. Jinfa Liu (2023) - *From offline learning to online learning: moderating effect of relationship inertia and satisfaction*

The study examined the factors influencing students' intention and behavior to switch from offline learning to online learning during the COVID-19 pandemic. This paper uses the questionnaire method and structural equation model to analyze the influencing factors of switching intention and behavior from offline learning to online learning. The study also found that switching intention positively affected switching behavior. This study is relevant to the present research as it highlights factors influencing students' preferences for online learning.

8. Deepti Sharma, Ajay K Sood, Preethi SH Darius, Edison Gundabattini, S Darius Gnanaraj, A Joseph Jeyapaul (2022) - *A study on the online-offline and blended learning methods*

This paper conducted a study on the online-offline and blended learning methods. The purpose of this study is to understand students' perspectives on the different modes of learning. The advantages, challenges, and requirements for conducting classes through online, offline, and blended learning methods are discussed. The findings provided insights into students' choices and the factors influencing their preferred learning methods. This study is closely related to the present research because both examine students' preferences for different learning methods.

9. Veerasamy, S., & Goswami, S. (2022) - *Is online learning better than offline learning?*

This paper compares whether online learning provides better academic performance than traditional offline, face-to-face learning during the COVID-19 pandemic. This study found that offline learning had a marginally positive impact on academic performance, while there were no significant gender-based differences in online learning performance. This study is relevant to the present research as it compares online and offline learning and examines their impact on students' academic performance.

10. Padmalini Singh, Rupesh Sinha, Wei Lun Koay, Kok Ban Teoh, Prajna Nayak, Chung Hong Lim, Avinas Kumar Dubey, Abhijit Das, Iqbal Faturrahman, Dwi Nita Aryani (2021) - *A comparative study on effectiveness of online and offline learning in higher education*

This paper shows a comparative study on the effectiveness of online and offline learning in higher education. This study revealed that students faced difficulty adapting to online learning and preferred offline learning as the more effective mode of education. This study is relevant to the present research because it examines students' preferences toward online and offline learning.

IV. RESEARCH GAP

The review of existing literature reveals that previous studies have largely focused on the effectiveness, preferences, academic performance, advantages, challenges, and factors influencing students' choice of online and offline learning methods. However, limited studies have examined these aspects comprehensively by considering students' preferences, learning experiences, perceived effectiveness, challenges, and accessibility of learning resources across both modes.

Furthermore, although several studies have independently examined online and offline learning or compared their overall effectiveness, there remains a need to understand students' preferences in relation to their actual learning experiences and academic needs. Hence, the present study attempts to address this research gap by providing a comparative assessment of students' preferences for online and offline learning methods, with specific focus on the factors influencing their choice, perceived academic impact, challenges encountered, and accessibility of learning resources.

V. RESEARCH METHODOLOGY

Population

The population for this study comprises students from different educational levels.

Sample Size

The sample size for the study is **115 respondents**.

Sampling Technique

The study adopts the **Simple Random Sampling Technique**, wherein each student in the identified population has an equal and independent chance of being selected for the study.

Data Collection

The study is based on **primary data** collected directly from the respondents.

Primary Data

Primary data was collected using a **structured questionnaire administered through Google Forms**.

VI. RESULTS

TABLE 1: PROFILE OF THE RESPONDENTS

S. NO	QUESTIONS	OPTIONS	RESPONSES	RESPONSES IN %
1.	What is your age group?	Below 18 years	8	6.95 %
		18–20 years	70	60.86 %
		21–23 years	18	15.65 %

		24 years and above	19	16.52 %
2.	What is your gender?	Male	38	33.04 %
		Female	76	66.08 %
		Other	0	-
		Prefer not to say	1	0.8 %
3.	What is your current level of education?	Undergraduate	82	71.30 %
		Postgraduate	22	19.13 %
		Diploma	2	1.73 %
		Others	9	7.44%
4.	What is your current year of study?	First Year	15	13.04 %
		Second Year	17	14.78 %
		Third Year	65	56.52 %
		Fourth Year	1	0.86 %
		Others	17	14.8%
5.	What is your field of study?	Arts/Humanities	16	13.91 %
		Science	35	30.43 %
		Commerce/Management	42	36.52 %
		Professional/Technical	15	13.04 %
		Others	7	6.1%
6.	What is the main device you use for online learning?	Smartphone	83	72.17 %
		Laptop	53	46.08 %
		Desktop computer	15	13.04 %
		Tablet	8	6.95 %
		Shared device	3	2.6 %
7.	Have you previously experienced online learning?	Yes	103	89.56 %
		No	12	10.43 %
8.	Have you experienced both online and offline learning?	Yes	104	90.43 %
		No	11	9.56 %
9.	Which mode of learning do you prefer overall?	Completely online	9	7.82 %
		Mostly online	6	5.21 %
		Both equally	51	44.34 %
		Mostly offline	30	26.08 %
		Completely offline	19	16.52 %

TABLE 2 STUDENTS' PREFERENCES FOR ONLINE AND OFFLINE LEARNING

Preferences	Strongly Disagree	Disagree	Neither Agree Or Disagree	Agree	Strongly Agree
I prefer online learning for my studies.	13.91 %	18.2 %	36.52 %	25.21 %	6.08 %
I prefer offline learning for my studies.	5.21 %	7.82 %	21.73 %	41.73 %	23.47 %
I find online learning more convenient than offline learning for my studies.	9.56 %	31.30 %	32.17 %	20 %	6.95 %
I find offline learning more effective than online learning for my studies.	8.69 %	10.43 %	21.73 %	37.39 %	21.73 %
I would prefer to continue with the learning mode I currently use most often	6.08 %	7.82 %	20 %	46.95 %	19.13 %

Table 2 indicates that students show a higher preference for offline learning than online learning. Similarly, 59.12% (Agree + Strongly Agree) of students agreed or strongly agreed that offline learning is more effective than online learning

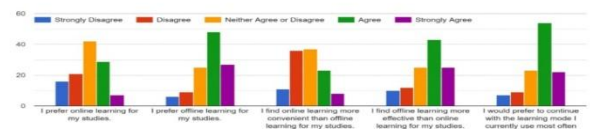


Fig 2. STUDENTS' PREFERENCES FOR ONLINE AND OFFLINE LEARNING

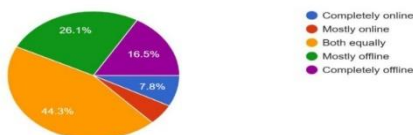


Fig 1. MODE OF LEARNING PREFERENCE

TABLE 3 FACTORS INFLUENCING STUDENTS' PREFERENCES

Factors	Not at All	To a Small Extent	To a Moderate Extent	To a Great Extent	To a Very Great Extent
Internet connectivity influences my preference for online or offline learning.	15.65 %	22.60 %	38.26 %	15.65 %	7.98 %
Availability of suitable devices influences my preference for online or offline learning.	9.56 %	20.86 %	38.26 %	22.60 %	8.69 %
The level of teacher support influences my preference for online or offline learning.	8.69 %	19.13 %	40.86 %	22.60 %	8.69 %
Interaction with teachers and peers influences my preference for online or offline learning.	12.17 %	15.65 %	39.13 %	23.47 %	9.56 %
Self-discipline and motivation influence my preference for online or offline learning.	6.95 %	16.52 %	37.39 %	23.47 %	15.65 %
Flexibility of class timings influences my preference for online or offline learning.	7.98 %	18.26 %	38.26 %	25.21 %	10.43 %
Time and cost involved in traveling to attend classes influence my preference for online or offline learning.	6.08 %	21.73 %	36.52 %	25.21 %	10.43 %

Table 3 shows that most factors have a moderate influence on students' learning preferences, especially teacher support and interaction

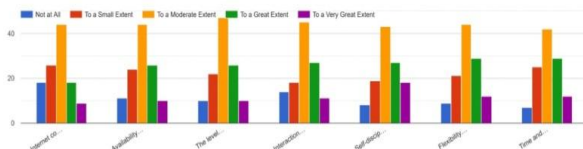


Fig 3. FACTORS INFLUENCING STUDENTS' PREFERENCES

TABLE 4 PERCEIVED ACADEMIC PERFORMANCE

Perceived Academic Performance	Online Much Better	Online Better	About the Same	Offline Better	Offline Much Better
Which learning mode helps you achieve better academic results?	14.78 %	12.17 %	26.95 %	21.73 %	24.34 %
Which learning mode helps you perform better in examinations?	6.08 %	22.60 %	25.21 %	25.21 %	20.86 %
Which learning mode helps you understand concepts better?	9.56 %	18.26 %	26.95 %	22.60 %	22.60 %
Which learning mode helps you retain information better?	12.17 %	17.39 %	27.82 %	26.08 %	16.52 %
Which learning mode improves your ability to learn independently?	11.30 %	21.73 %	26.08 %	25.21 %	15.65 %
Which learning mode do you find more effective for your overall academic performance?	10.43 %	15.65 %	29.56 %	25.21 %	19.30 %

Table 4 shows that students have mixed perceptions of academic performance, with the highest response being "About the Same" (29.56%), indicating no clear preference for either learning mode.

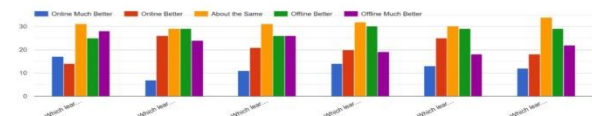


Fig 4. PERCEIVED ACADEMIC PERFORMANCE

TABLE 5 CHALLENGES IN ONLINE AND OFFLINE LEARNING

Challenges	Never	Rarely	Sometimes	Often	Very Often
I face technical problems such as poor internet connectivity or power interruptions during online classes.	8.69 %	23.47 %	48.69 %	11.30 %	7.82 %
I get distracted easily during online learning at home.	10.43 %	24.34 %	39.13 %	14.78 %	11.30 %
I experience difficulties due to the time and effort required to travel to attend offline classes.	14.78 %	21.73 %	46.08 %	13.04 %	4.34 %
Lack of practical or laboratory facilities is a challenge in online learning.	7.82 %	24.34 %	40 %	20.86 %	6.95 %
Large class sizes in offline learning reduce individual attention from teachers.	13.91 %	21.73 %	41.73 %	13.04 %	9.56 %
Fixed schedules of offline classes make it difficult for me to manage my study time.	14.78 %	26.95 %	40.86 %	9.56 %	7.82 %

Table 5 shows that students occasionally face challenges in both online and offline learning, with technical issues, distractions, travel difficulties, and limited practical facilities being the major challenges.

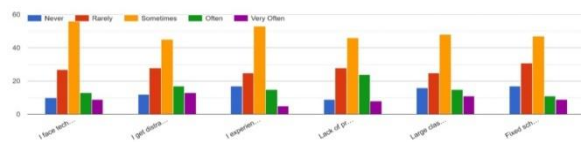


Fig 5. CHALLENGES IN ONLINE AND OFFLINE LEARNING

TABLE 6 ACCESS TO LEARNING RESOURCES

Access to Learning Resources	Very Poor	Poor	Moderate	Good	Very Good
Access to reliable internet for online learning	10.43 %	10.43 %	50.43 %	24.34 %	4.34 %
Access to a suitable device for online classes	1.73 %	13.91 %	50.43 %	27.82 %	6.08 %
Accessibility of online learning materials and digital resources when needed.	6.95 %	12.17 %	42.60 %	30.43 %	7.82 %
Access to the online platforms required for my studies.	3.47 %	14.78 %	43.47 %	23.47 %	14.78 %
Availability of library and printed learning materials.	9.56 %	13.91 %	36.52 %	32.17 %	7.82 %
Availability of laboratory and practical facilities.	5.21 %	18.26 %	40.86 %	23.47 %	12.17 %
Overall access to the learning resources required for my studies.	5.21 %	13.91 %	32.17 %	28.69 %	20 %

Table 6 shows that most students have moderate access to learning resources, while some face challenges with internet, devices, online materials, and practical facilities

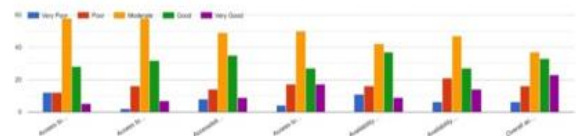


Fig 6 ACCESS TO LEARNING RESOURCES

VII. CORRELATION BETWEEN GENDER AND MODE OF LEARNING PREFERENCE

	Gender	mode of learning preference
Gender	1	
mode of learning preference	-0.05444	1

Interpretation

The value of **-0.05444** indicates a **very weak negative correlation** between **gender and learning preference**.

- **r = -0.05444** → negative direction
- The value is **very close to 0**
- Therefore, the relationship is **negligible/very weak**

The correlation coefficient (r) between gender and learning preference is -0.05444, indicating a very weak negative relationship between the two variables. This suggests that gender has negligible association with students' preference for online or offline learning.

VIII. CORRELATION BETWEEN AGE GROUP AND MODE OF LEARNING PREFERENCE

	<i>Age Group</i>	<i>Learning Mode</i>
Age Group	1	
Learning Mode	0.073633007	1

This indicates a **very weak positive correlation** between **age group and learning preference**.

- **r = +0.0736** → positive relationship
- Since it is very close to **0**, the relationship is **negligible/very weak**
- This suggests that **age group has very little association with students' learning preference**.

The correlation coefficient (r = 0.0736) indicates a very weak positive relationship between age group and learning preference. This suggests that there is negligible association between the age of the respondents and their preference for online or offline learning.

IX. CONCLUSION

The study concludes that students show a higher preference for offline learning compared to online learning. Although online learning provides greater flexibility, convenience, and accessibility, students tend to prefer offline learning due to its interactive, engaging, and structured learning environment. The findings also indicate moderate variations in students' perceptions regarding influencing factors, academic outcomes, challenges, and accessibility of resources across the two learning modes. Therefore, adopting a blended learning approach, which combines the strengths of both online and offline learning, can provide a more effective and enriching learning experience while supporting improved academic outcomes.

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