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Evaluation of the Perceptions of University Students and Teachers Regarding Hybrid Teaching Methodology in Higher Education

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ABSTRACT

This study aims to investigate hybrid teaching methodology from the point of view of students and faculty members at the university level. Hybrid education, which integrates online and in-person learning, has been more popular in recent years due to the inherent advantage that it offers a more flexible and diverse learning experience with the flexibility to withstand unforeseen contingencies. To research the perspectives of both students and teachers about the efficacy, difficulties, and impacts of hybrid teaching on the results of an educational experience, this study aims to investigate the perspectives of both groups. To collect information, questionnaires were sent to two hundred students and fifty professors enrolled in a wide range of academic programs. In order to discover perspectives and recurring themes that are widespread throughout the investigation, the study carries out quantitative analysis. According to the results, hybrid teaching is generally held in very high esteem, even though the assessments vary substantially based on characteristics such as familiarity with technology and years of experience in the teaching profession. The consequences are being discussed in relation to educational institutions such as colleges and universities, with special emphasis on the requirement of providing customized assistance.

Keywords- Hybrid teaching, higher education, student perceptions, teacher perceptions, blended learning

INTRODUCTION

Over the last several years, the higher education sector has seen significant changes due to the rapid advancement of technology and the worldwide impact of the COVID-19 pandemic. These developments have been caused by a confluence of events. These changes have been substantial and extensive, and they have transformed the way education is delivered and received worldwide. The onset of the pandemic precipitated an abrupt shift from traditional in-person instruction to online learning methods, marking a pivotal moment in the evolution of education. The unexpected shift prompted educators and institutions worldwide to explore alternative teaching and learning methods to ensure the continuity of education amidst significant disruptions.

Compared to other teaching approaches that emerged during this time period, the hybrid education model has gained considerable attention and acceptance. The notion of combining conventional classroom instruction with online distribution is often referred to as blended learning. This approach creates a learning environment that is more adaptive and dynamic. Hybrid education combines the advantageous aspects of traditional classroom settings with the advantages of online education to cater to diverse learning needs and preferences. This pedagogical approach has been extensively embraced by higher education institutions because to its ability to effectively tackle the major obstacles arising from the epidemic. These problems include the need of maintaining a safe physical distance from others and the demand for education to be conducted remotely. Moreover, this paradigm provides enduring advantages such as enhanced educational opportunities and the capacity to cater to diverse learning preferences.

Hybrid education is attractive because it offers a learning environment that is both flexible and adaptable to the constantly evolving needs of higher education. Hybrid education offers students more autonomy in managing their schedules and obtaining educational resources. This is achieved by integrating synchronous (occurring in real-time) and asynchronous (allowing self-paced progress) learning sessions. This flexibility is particularly crucial in a world where students often need to juggle many responsibilities, such as caring for their families, working, and

attending school. Furthermore, the hybrid paradigm enables a heightened level of individualized learning. This is because it affords students the chance to engage with the course content at their own pace and in alignment with their own learning preferences.

Despite the many advantages it provides, the journey to hybrid education has encountered some challenges. Both students and instructors must make significant adaptations to effectively transition to this novel mode of education and learning. In order to excel in the hybrid model, students must exhibit heightened self-discipline, motivation, and adeptness in time management. Although the asynchronous components of hybrid courses allow students to engage with course information at their own pace, this flexibility may also result in procrastination and disengagement if not managed well. Moreover, the digital divide, marked by unequal access to technology and the internet, poses a significant obstacle to the successful implementation of hybrid education, hence worsening the existing disparities in educational achievement.

However, educators have the challenge of designing and implementing effective hybrid courses that can engage students, foster meaningful engagement, and achieve the desired learning outcomes. This regularly recurring circumstance typically necessitates both the implementation of new technological tools and the reassessment of old teaching methods, both of which may be demanding in terms of time and resources. Teaching in both face-to-face and virtual settings may impose more responsibilities on educators, potentially resulting in a heavier workload and an increased risk of burnout. The availability of technological infrastructure not only impacts the effectiveness of hybrid teaching, but also influences the level of support provided by institutional authorities. This assistance include training and tools aimed at assisting instructors in adjusting to this novel teaching paradigm.

Understanding the perspectives of both students and instructors is crucial in hybrid education due to its complex and varied nature. The input and viewpoints of these crucial stakeholders are vital for the effectiveness of hybrid education, since their opinions on hybrid teaching may significantly influence the success of hybrid education. Students' perspectives about hybrid learning may significantly influence their degree of engagement, motivation, and overall academic performance. For the successful implementation of this technique, educators must exhibit a strong inclination to employ hybrid teaching methods and possess the ability to proficiently elucidate the course material.

This research aims to examine the viewpoints of students and instructors on hybrid teaching methods in the context of higher education. The study aims to enhance understanding of the efficacy of hybrid education by analyzing the viewpoints of these two cohorts. Furthermore, the research aims to identify places where enhancements might be implemented. The main objective of this study is to analyze the advantages and disadvantages of hybrid education from the perspectives of students and teachers. The aim is to highlight the practical challenges encountered and propose recommendations for enhancing the hybrid learning experience.

The findings of this study have significant ramifications for policymakers, educators, and institutions seeking to implement or alter hybrid teaching methodologies. These consequences pertain to the context of higher education. Amidst the ongoing global challenges caused by the epidemic and the need to prepare for future disruptions, hybrid teaching offers a practical solution to ensure the uninterrupted progress of education in an increasingly uncertain world. Nevertheless, for hybrid teaching to establish itself as a sustainable and equitable learning framework, it is imperative to address the identified concerns of students and educators, and implement strategies that facilitate the effective delivery of hybrid courses.

This research contributes three unique elements to the growing body of literature on hybrid teaching, now being generated. Initially, it illuminates the factors that influence the perspectives of students and instructors towards hybrid education by offering valuable observations into the attitudes and encounters of both parties. Furthermore, it delineates the pragmatic concerns associated with hybrid education and proposes evidence-based strategies to address these obstacles. This article serves as a reference for policymakers, educators, and institutions that are interested in developing or improving hybrid teaching methods. The ultimate goal is to transform hybrid education into a paradigm that is both effective and inclusive.

1.1 OBJECTIVE'S-

1. To evaluate university students' perceptions of the effectiveness of hybrid teaching in enhancing their learning experience.
2. To assess faculty members' views on the effectiveness of hybrid teaching, focusing on the influence of their familiarity with technology and years of teaching experience.

1.2 HYPOTHESIS-

H1: University students perceive hybrid teaching as an effective approach that enhances their learning experience compared to traditional face-to-face instruction alone.

H2: Faculty members' perceptions of hybrid teaching effectiveness are positively correlated with their familiarity with technology and their years of teaching experience.

2. LITERATURE REVIEW

The development of hybrid teaching in higher education has resulted in a substantial change in pedagogical techniques. This movement involves combining the benefits of digital learning environments with the more conventional classroom training. This integration has the potential to revolutionize educational experiences by

making learning more adaptable, accessible, and individualized to meet the requirements of each student separately. Recently conducted studies, such as the one conducted by Graham (2023), have highlighted the flexibility that hybrid teaching provides. This flexibility enables students to exercise a larger degree of control over their educational path. Taking this approach not only allows for a variety of learning styles to be accommodated, but it also offers a more customized learning experience, which is becoming more important in the rapidly changing contemporary educational scene.

Blended learning, which is another phrase that is sometimes used interchangeably with hybrid teaching, has gained popularity as a result of its capacity to combine the most beneficial qualities of face-to-face contact with the accessibility and convenience of online learning. According to Zhao et al. (2023), hybrid education improves academic success by combining synchronous (real-time) and asynchronous (self-paced) learning possibilities. This allows students to study at their own speed. This dual approach gives students the opportunity to participate in real-time conversations with their classmates and teachers, while simultaneously allowing them the freedom to study at their own speed. As a result, students are better able to comprehend and remember the information that they are learning. Due to the fact that it caters to both rapid feedback and deep, reflective learning processes, the combination of both learning modes has been found to enhance the results for students.

The success of hybrid teaching, on the other hand, is contingent upon their ability to overcome a number of obstacles, notably those that are associated with instructional design and technology. There are a number of technological challenges that can impede the efficiency of hybrid models. These include unreliable internet connections and the requirement for platforms that are easy to use. In their study, Moore and Kearsley (2022) emphasize the significance of incorporating digital technologies into traditional teaching methods in a methodical manner. Their study demonstrates that the effectiveness of hybrid education is heavily dependent on a number of criteria, including the quality of the information that is available online and how well it aligns with the teaching that is provided in person. To guarantee that the digital components of hybrid teaching are not only engaging but also smoothly linked with face-to-face pedagogical practices, it is vital to have an instructional design that is effective.

Smith and Oliver (2023), building on the problems, claim that the efficacy of hybrid teaching is also contingent on the desire of faculty to accept new educational approaches and the constant improvement of technology. This statement expands upon the previously presented issues. To successfully implement hybrid models, educators must be prepared to experiment with new teaching methods and integrate technology into their classrooms. For the successful implementation of hybrid models, faculty participation is essential. Without this zeal and willingness to adapt to new circumstances, we may not fully realize the potential advantages of hybrid education. Furthermore, Johnson et al. (2024) provide evidence that a variety of academic disciplines can successfully employ hybrid teaching strategies. This highlights the flexibility of this approach to diverse fields of study within the curriculum. However, they caution that introducing hybrid techniques requires careful attention to address concerns about student involvement and equal access to technology.

The problem of fair access is especially important since hybrid teaching has the potential to worsen the disparities that already exist in the educational system. For instance, students who come from economically disadvantaged families may have difficulty gaining access to dependable internet or digital equipment, both of which are necessary for fully engaging in hybrid learning settings. In order to guarantee that all students, regardless of their socioeconomic situation, are able to benefit from hybrid education, research conducted by Van Dijk (2005) and more recent studies highlight the significance of tackling the digital divide. Educational institutions have a duty to offer the appropriate resources and assistance to offset these gaps, therefore ensuring that hybrid teaching is inclusive and accessible to all students.In addition to technical obstacles, the research also analyzes the influence of hybrid teaching on student motivation and self-regulation. According to Dabbagh and Kitsantas (2012), hybrid learning environments have the potential to encourage more student autonomy than traditional classroom settings. This is because learners are encouraged to assume greater responsibility for their own education. Because of this enhanced autonomy, one may feel more empowered, which may result in improved levels of motivation and engagement. On the other hand, it may also be difficult for kids who do not possess good self-regulation abilities, which may lead to a decrease in their academic performance. In hybrid learning, the requirement for self-regulation underscores the need of giving students with the tools and assistance required to develop these abilities. This ensures that students are able to flourish in an educational environment that is hybrid.

The literature places a significant amount of emphasis on the role that faculty members play in hybrid teaching. According to research conducted by Shea, Pickett, and Li for the year 2005, the amount of institutional support that faculty members get is directly related to the degree to which they are satisfied with hybrid teaching. As part of this support, you will have access to tools for professional growth, receiving technical help, and having opportunity to collaborate with other individuals. It is more probable that faculty members who are provided with

enough assistance would embrace hybrid teaching techniques and successfully incorporate them into their courses. On the other hand, a lack of support might result in resistance or inadequate implementation, which undermines the potential advantages that hybrid education could provide.

The success of hybrid teaching is not only reliant on the efforts of individual faculty members; rather, it also needs a wider institutional commitment to innovation and constant improvement if it is to be successful. According to Garrison and Vaughan (2008), educational institutions that place a higher priority on the creation of hybrid teaching models and invest in the infrastructure that is required to support them are in a better position to produce favorable results. The provision of sufficient resources for instructional design, the guarantee that technology is both up-to-date and dependable, and the promotion of an environment within the academic community that encourages experimentation and creativity are all included in this process. The question of whether or not hybrid instructional models can be maintained throughout the course of a lengthy period of time is warranted by additional research. As hybrid teaching becomes more common, it is vital to investigate the influence that it has on different areas of the educational experience. These factors include the retention of students, the workload of professors, and the overall cost-effectiveness of this method. The findings of a study conducted by Means and colleagues (2013) indicate that hybrid education, despite the fact that it has the potential to result in enhanced learning outcomes, may need substantial expenditures in terms of capital, resources, and infrastructure. In order to ensure that hybrid teaching models are not only successful but also sustainable over the long term, it is imperative that educational institutions give careful consideration to the aforementioned issues while building and implementing these models.

The research conducted on hybrid teaching in higher education has shown the revolutionary potential of this teaching method, while also drawing attention to the challenging issues that need to be addressed to guarantee that it is successful. In addition to enhanced flexibility, tailored learning experiences, and higher academic achievements, hybrid education provides several other major advantages. However, to reap these advantages, educational institutions and teachers must be ready to make investments in instructional design that is both effective and efficient, to ensure that all students have equal access to technology, and to actively assist faculty members in their attempts to adopt innovative teaching approaches. As the hybrid teaching model continues to develop, there is a pressing need for continued study to investigate the influence that it has on many parts of higher education and to determine the most effective methods for putting it into reality. Higher education institutions have the ability to unleash the full potential of hybrid teaching by tackling these obstacles and expanding on the current body of knowledge. This will allow them to create learning environments that are more adaptive, inclusive, and successful in fulfilling the different requirements of today's students.

3. METHODOLOGY

1. Participants

The survey was administered to a total of 250 participants, including one hundred and twenty students from a variety of fields and fifty instructors with diverse degrees of teaching experience. The selection of participants was carried out via the use of a stratified random sampling technique in order to guarantee adequate representation from a variety of academic disciplines and teaching experiences.

2. Data Collection

A questionnaire that was administered online and included both closed- and open-ended questions was used to gather the data. The purpose of the survey was to collect responses about the efficacy of hybrid teaching, the obstacles it presents, and the influence it has on learning outcomes. For the purpose of maintaining anonymity, the survey was carried out via the use of a protected internet platform, and the replies were anonymised

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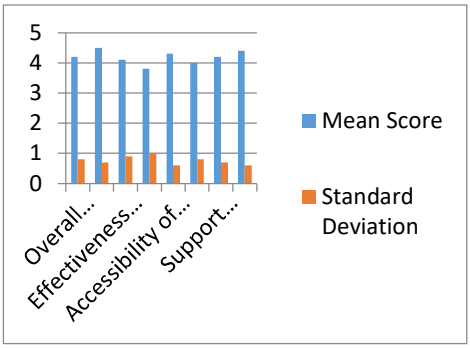


3. Data Analysis

The statistical software was used to do an analysis on the quantitative data in order to obtain the mean scores and standard deviations for each survey question. For the purpose of identifying recurring themes and patterns, qualitative answers were categorised using a thematic approach. A comparison of views based on demographic parameters was carried out using descriptive statistics and inferential analysis.

4. RESULT AND DISCUSSION-

Student Perception: Students, on the whole, had favorable opinions on hybrid instructional methods. Students' replies to the most important survey questions are summarised in Table 1.

Table 1: Summary of Student Perceptions

Item	Mean Score	Standard Deviation
Overall satisfaction with hybrid teaching	4.2	0.8
Flexibility in scheduling	4.5	0.7
Effectiveness of online resources	4.1	0.9
Interaction with peers and instructors	3.8	1.0
Accessibility of course materials	4.3	0.6
Quality of instructional design	4.0	0.8
Support provided by instructors	4.2	0.7
Ease of use of digital	4.4	0.6

platforms		

Figure 1. illustrates the distribution of students' satisfaction levels with various aspects of hybrid teaching.

Figure 1: Students' Perceptions of Hybrid Teaching

Teacher Perceptions: Positive opinions were also recorded by teachers, however, there were some worries about technology challenges and student participation in the situation. Table 2 presents a summary of the comments received from the educators.

Table 2: Summary of Teacher Perceptions

Item	Mean Score	Standard Deviation
Satisfaction with hybrid teaching	4.0	0.9
Effectiveness of online teaching tools	3.9	1.1
Student engagement	3.7	1.2
Ease of integrating online and face-to-face	3.8	1.0
Support provided to students	4.1	0.8
Access to reliable technology	3.5	1.1
Quality of professional development	3.8	0.9
Flexibility in instructional methods	4.2	0.7

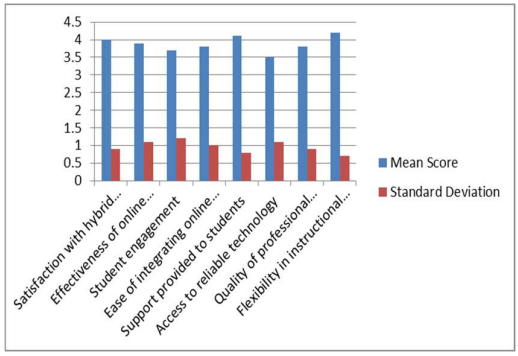


Figure 2: Teachers' Perceptions of Hybrid Teaching

Figure 2. shows the distribution of teachers' satisfaction levels with hybrid teaching components.

The poll results indicate that considerable number of students and teachers have a favorable outlook on hybrid teaching and learning. However, their experiences and worries vary significantly from each other. The students particularly valued the adaptability and convenience of hybrid learning, specifically praising the flexibility in scheduling and the user-friendly digital platforms. The positive reviews about the ease of accessing course materials and the overall support offered by professors are a valuable contribution to the inclusive environment

that has been established. These elements of hybrid education align with students' demand for a flexible learning environment that allows them to efficiently handle their academic duties alongside other commitments. Pupils expressed lower levels of satisfaction in their interactions with both their peers and instructors. This implies that hybrid education, although beneficial in offering flexibility and accessibility, may not effectively foster meaningful engagement and cooperation in comparison to conventional teaching techniques. In a hybrid environment, when there are restrictions on in-person interactions, this might be associated with the challenges of sustaining dynamic and effective communication despite these limitations. Conversely, instructors had a mostly favorable disposition towards hybrid education, acknowledging its versatility and the assistance it offered due to its adaptability. However, there were concerns raised over the complexities of technology and the limitations of effectively including youngsters. The challenges faced by instructors are underscored by the decline in assessments of the efficacy of online educational resources and the reliability of available technology. These hurdles may impede their capacity to interact with pupils and impart knowledge as effectively as they would in a regular classroom environment. An illustration of the intricacy involved in overseeing a hybrid learning environment is the difficulties that emerge while endeavoring to integrate components those are present both in physical settings and via online platforms.

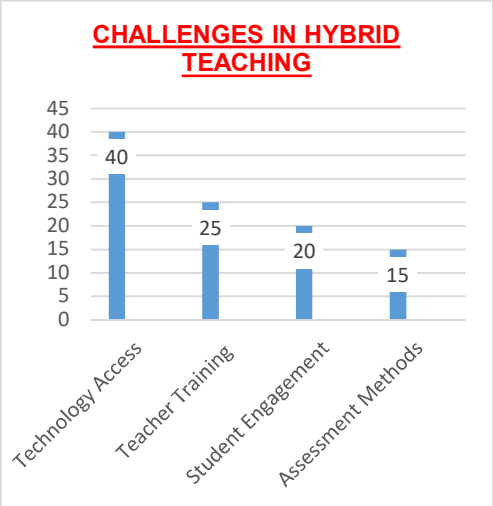
4. Challenges and Solutions in Implementing Hybrid Teaching-

Implementing hybrid teaching presents a range of challenges that may hinder its effectiveness and acceptance among educators and students alike. One significant hurdle is the unequal access to technology and reliable internet resources, which disproportionately affects marginalized communities and creates a digital divide. This disparity can lead to disengagement or underperformance among students who lack the necessary tools for success, emphasizing the need for institutions to invest in infrastructure and support systems. Additionally, the dual demands of managing both in-person and online learners can overwhelm educators, as they must facilitate interaction and provide meaningful feedback across diverse teaching modalities. Training teachers to navigate this complex environment is crucial; thus, professional development programs must be strategically designed to equip them with the skills needed (Kathryn E. Linder). Addressing these challenges is essential for fostering an inclusive and effective hybrid learning experience.

5.1 Addressing Technological Barriers and Accessibility Issues.

The transition to hybrid teaching has illuminated the critical need to address technological barriers and accessibility issues that learners face in digital environments. Many educational institutions have adopted tech-based solutions, such as virtual training and collaborative platforms, to enhance learning experiences, yet these innovations often exacerbate existing accessibility challenges rather than alleviate them (Ricardo Mendoza-González). Effective implementation of accessible educational practices requires a tailored approach that considers each institutions unique constraints and capabilities. Similarly, the integration of advanced technologies like artificial intelligence and machine learning presents both opportunities and hurdles; while they can streamline decision-making and enhance operational efficiency, their adoption is often hampered by technical and historical barriers within the nuclear power industry, which can serve as a cautionary parallel for education (Anna Hall). Thus, addressing these barriers not only enhances the effectiveness of hybrid teaching models but also ensures a more inclusive learning environment for all students.

Figure 3. illustrates the distribution of various challenges in the aspects of hybrid teaching.



6. CONCLUSION-

The study's results indicate that hybrid education is highly esteemed by both students and instructors because to

its flexibility and ease. Although students appreciate the convenience of accessing course materials and managing their schedules, they also acknowledge the challenge of staying connected and engaged with the subject matter. Although faculty members have a good perspective on the adaptability of hybrid education, they encounter difficulties in dealing with technological challenges and integrating online and in-person elements. The data indicate that several crucial areas need more advancement. The primary objective of educational institutions should be to enhance the level of involvement in hybrid environments. One approach to do this is by introducing a wider range of interactive tools and tactics, which will ultimately lead to improved engagement between students and instructors. Furthermore, it is crucial to tackle any technical challenges that may occur, since hybrid learning requires the use of reliable and efficient software that benefits both students and instructors. By investing in professional development programs focused on using technology and hybrid teaching methods, instructors might get support to overcome challenges and improve their teaching skills. The research demonstrates the need of consistently evaluating and enhancing hybrid teaching methods to effectively meet the expectations of both students and instructional personnel. This is a factor that should be kept in mind when considering all aspects. Educational institutions may enhance the efficacy of hybrid teaching by directly addressing recognized concerns and applying focused improvements. Furthermore, this will result in the creation of a learning atmosphere that is both engaging and motivating for all those involved.

7. SUGGESTIONS-

1. Analyze the enduring impacts of hybrid teaching on student learning outcomes, engagement, and academic achievement.
2. Evaluate the relative efficacy of various hybrid teaching approaches in comparison to standard teaching techniques.
3. Investigate the influence of different digital tools and technologies on the efficacy of hybrid education.
4. Examine the impact of specialized training programs for students and instructors on their experiences and effectiveness in hybrid teaching.
5. Conduct research on cutting-edge teaching methods and instructional designs that are tailored for hybrid learning settings.
6. Examine the impact of institutional policies, resources, and support systems on the implementation and effectiveness of hybrid teaching.
7. Evaluate the effects of hybrid teaching on varied student populations, including individuals from various socio-economic backgrounds, students with impairments, and foreign students.
8. Perform qualitative research on the experiences of faculty members with hybrid teaching in order to have a comprehensive understanding of the issues they face and the techniques they use.
9. Investigate the impact of hybrid instruction in several academic fields to determine the distinctive advantages and requirements of each subject.
10. Evaluate the impact of hybrid education on students' preparedness for their careers and their ability to get employment.

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