

## ATTITUDE TOWARDS USE OF BLENDED LEARNING TECHNIQUES AMONG HIGHER EDUCATION TEACHERS IN KOZHIKODE

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### **Abstract**

This study investigates higher education teachers' attitudes toward the usage of blended learning, an instructional strategy that combines traditional face-to-face teaching with online learning tools. The study uses a thematic analysis to identify four major topics that influence instructors' perceptions: perceived effectiveness and advantages, technology preparedness and support, obstacles and barriers, and demographic and experience-based attitudinal variations. The findings show that, while teachers generally recognize the flexibility, engagement potential, and pedagogical benefits of blended learning, their perspectives are heavily influenced by technological infrastructure, institutional support, and personal digital ability. Barriers such as increased workload and unwillingness to change are identified, emphasizing the importance of personalized professional growth and strong support systems. A SWOT analysis contextualizes these views by highlighting strengths and possibilities for blended learning adoption, as well as weaknesses and threats that need to be addressed strategically. The study continues with educational implications that highlight the significance of investing in infrastructure, training, and customized support to improve teacher acceptance and efficacy of blended learning in higher education settings. These findings provide significant recommendations for institutions seeking to encourage positive teacher attitudes and the successful adoption of blended learning pedagogy.

**Keywords:** Blended Learning, higher education.

### **1. INTRODUCTION**

Blended learning, sometimes referred to as hybrid or mixed-mode instruction, is an educational strategy that blends interactive digital activities and online learning resources with conventional in-person classroom techniques. Due to its promise to offer a flexible, student-centered learning experience that strikes a balance between the benefits of in-person interaction and the accessibility and adaptability of online learning environments, this instructional technique has grown in popularity in higher education.

The demand for more adaptable educational delivery models, the variety of learning demands of today's students, and advancements in educational technology have all contributed to the rise of blended learning. It allows students to interact with the material asynchronously while taking advantage of in-person interactions with classmates and instructors. Blended learning therefore encourages students to learn actively, work together, and practice self-control.

Teachers' attitudes toward blended learning are crucial to its uptake and successful execution in this changing environment. How well blended learning techniques are incorporated into curriculum and how issues like technology use, task management, and pedagogical modifications are handled depends on teacher perspectives. Examining the attitudes of instructors in higher

education offers recommendations for institutional policy and professional development as well as insight into the factors that encourage and hinder the use of blended learning.

The purpose of this study is to examine how higher education instructors feel about blended learning, identifying the major themes that influence their opinions and the consequences for instructional strategies and practice. In order to create a conducive climate where educators and institutions may use blended learning to improve educational outcomes, it is essential to comprehend these views.

## **2. OBJECTIVES OF THE STUDY**

1. To compare the attitude of college teachers for using Blended Learning Techniques based on
  - i. Gender
  - ii. Locale
  - iii. Types of colleges
  - iv. Year of experience
2. To identify the challenges faced by college teachers for using Blended Learning Techniques
3. To identify the importance of Blended Learning in
  - i. Socialization process
  - ii. inclusive education

### **Hypothesis of the Study**

1. There is significant difference in the mean scores of attitude of college teachers towards using Blended Learning Techniques based on
  - i. Gender
  - ii. Locale
  - iii. Types of colleges
  - iv. Year of experience

## **3. MATERIALS AND METHODS**

A mixed methodological design that adheres to the sequential explanatory technique was employed in order to accomplish the goals and verify the viability of the hypothesis. A representative sample of 384 instructors from various colleges in the Kozhikode area made up the study sample. Here, stratified random sampling is the method of sampling. Purposiveness was the basis for conducting interviews.

### **Instrument**

In order for an idea, hypothesis, or generalization that is tentatively held to be recognized as legitimate, confirmed as right, or dismissed as untenable, data collecting is fundamentally a crucial component of the research processes. Koul (1984). For every research project to be successful, the right tools must be chosen. Two instruments were utilized to gather participant data. Both were designed with the study's aims in mind.

### **Process**

The Attitude scale was administered both online and offline as the first step in the investigation process. This was followed by an interview to enable the respondents to provide a detailed point

of view. The ethical precepts of objectivity and anonymity were followed when collecting the data. Accessibility, Satisfaction, Usefulness, Interest, and Responsiveness are the five aspects of the 26 elements that make up the five-point attitude scale about the use of blended learning. After testing the scale, item analysis was done. Also, the reliability and validity were proven. Ten items were included in the interview schedule, which covered a wide range of topics related to integrating learning approaches. After pilot testing of the instrument, the interview was conducted and analysis were done according to the objectives put up.

### Data Analysis

After the data collection was finished, the data was exported and ready to be entered into the Statistical Package for Social Sciences (SPSS) v.26. There, statistics like average (AV) and standard deviation (SD) were calculated, along with instrument validation and reliability tests, analysis of variance (ANOVA), and post hoc analysis.  $p < 0.05$  was used to determine the statistical differences at a significant level.

### Results and Findings

The main conclusions of the study are intended to be presented in this section, arranged for best presentation as figures and tables. Depending on the method of analysis, the results are divided into two portions.

## 4. SECTION A: QUANTITATIVE ANALYSIS

### Comparison of Attitude Towards use of Blended Learning According to Gender:

The results obtained for the comparison of attitude towards use of blended learning according to gender are reflected in Table 1

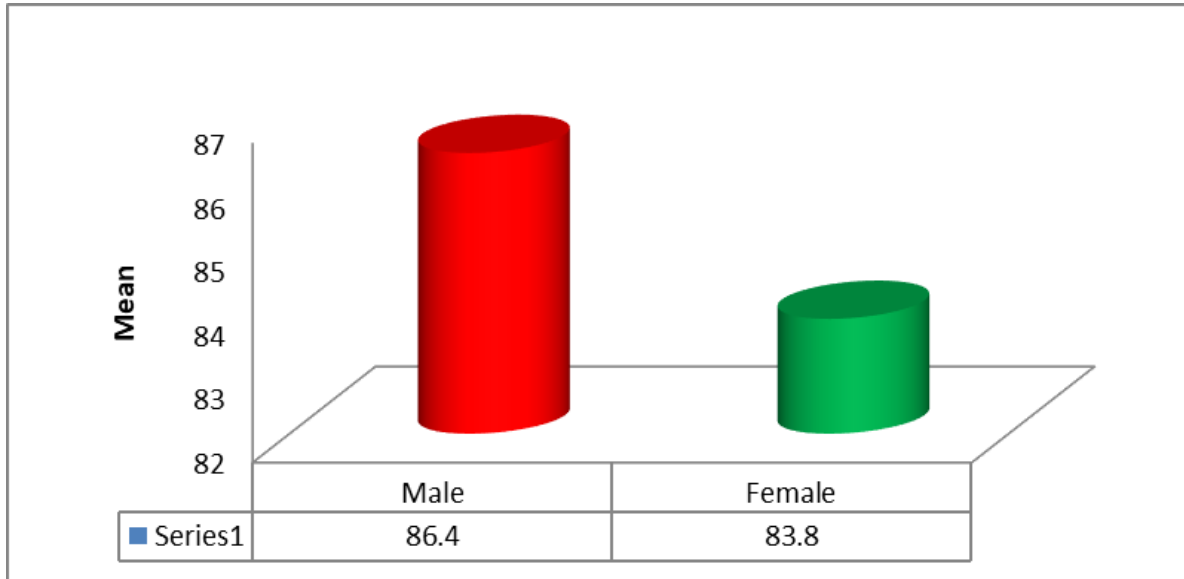
**Table 1: t-test for gender differences for attitude towards use of blended learning**

Group	N	Mean	SD	t value	p-value
Male	219	86.4	9.8	2.3	0.05
Female	167	83.8	11.5		

The mean of attitude scores for male and female teachers is found to be Mean=86.40 & SD = 9.8 and Mean = 83.81 & SD = 11.5 respectively. It indicates that male and female teachers have a high attitude towards the use of blended learning, although male teachers possess higher attitude towards AI usage than their female counterpart does.

t- value is found to be  $t = 2.3$  at significance level of 0.05, which is statistically significant. Therefore, there is a significant difference in attitude towards use of blended learning between male and female teachers.

The graphical representation of the data is given in the figure 1.



**Figure 1. Graphical representation of means of attitude towards use of blended learning among teachers according to gender**

**Comparison of Attitude Towards use of Blended Learning According to Locale**

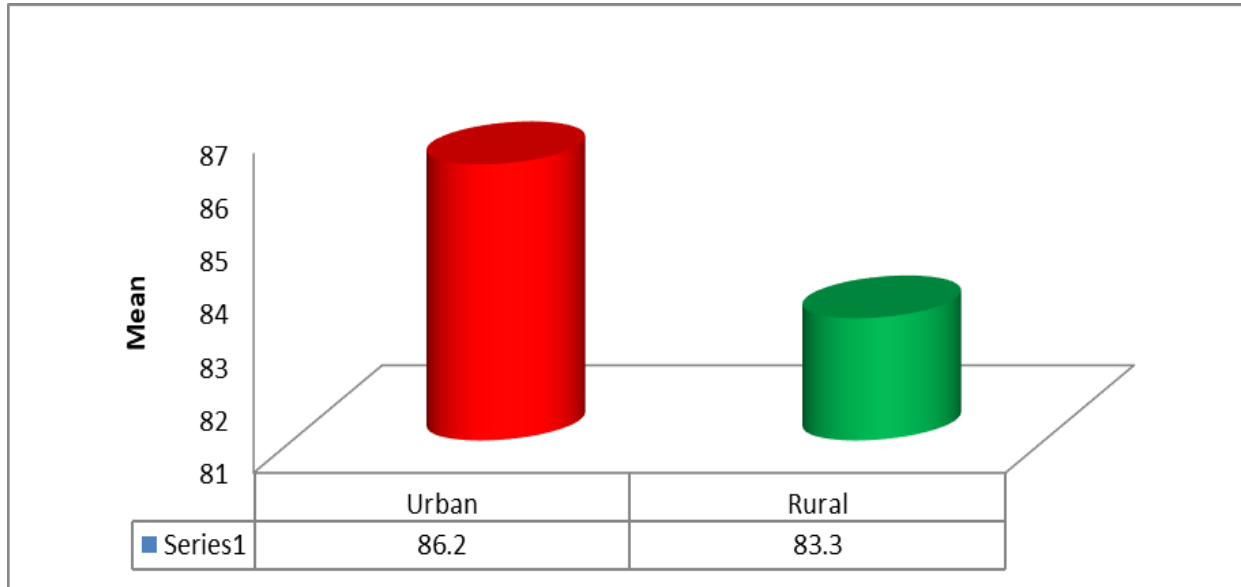
The results obtained for the comparison of attitude towards use of blended learning according to locale are reflected in Table 2

**Table 2: t-test for locale differences for attitude towards use of blended learning**

Group	N	Mean	SD	t value	p-value
Urban	257	86.27	10.5	2.58	0.01
Rural	127	83.37	10.1		

The mean of attitude scores for teachers from urban and rural areas is found to be Mean=86.27 & SD = 10.6 and Mean = 83.37 & SD = 10.2 respectively. It indicates that the teachers from rural and urban areas have a high attitude towards the use of blended learning although the teachers from rural areas possess lower attitude towards blended learning usage than those from urban areas.

t-value is found to be  $t = 2.58$  at significance level of 0.01 which is statistically significant. Therefore, there is a significant difference in attitude towards use of blended learning, between teachers from urban and rural areas.



**Figure 2. Graphical representation of means of attitude towards use of blended learning among teachers from different locale**

**Comparison of Attitude Towards use of Blended Learning According to Experience in Years.**

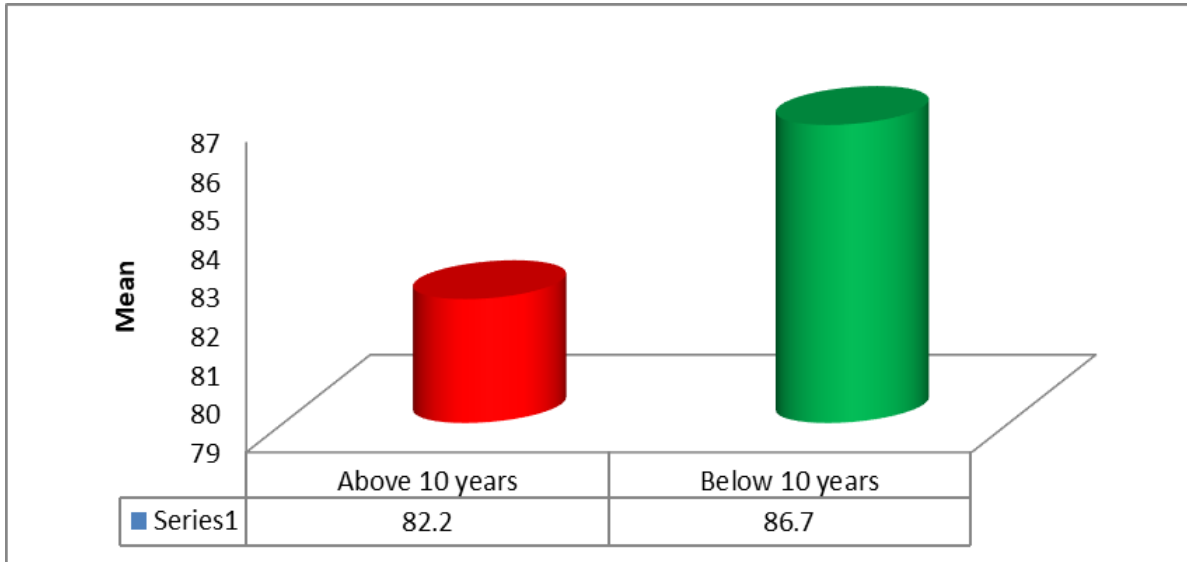
The results obtained for the comparison of attitude towards use of blended learning according to years of experience are reflected in Table 3.

**Table 3: t-test for years of experience differences for attitude towards use of blended learning**

Group	N	Mean	SD	t value	p-value
Above 10 years	184	82.21	9.9	4.24	0.01
Below 10 years	200	86.71	10.8		

The mean of attitude scores for teachers who have experience below 10 years and above 10 years are found to be Mean=86.71 & SD = 10.8 and Mean = 82.21 & SD = 9.96 respectively. It indicates that regardless of experience the attitude towards use of blended learning is high among teachers. The attitude seen among less experienced teachers is comparatively more than for the experienced teachers.

t-value is found to be  $t = 4.24$  at significance level of 0.01 which is statistically significant. Therefore, there is a significant difference in attitude towards use of blended learning, between teachers who have experience below 10 years and above 10 years.



**Figure 3. Graphical representation of means of attitude towards use of blended learning among teachers according to years of experience**

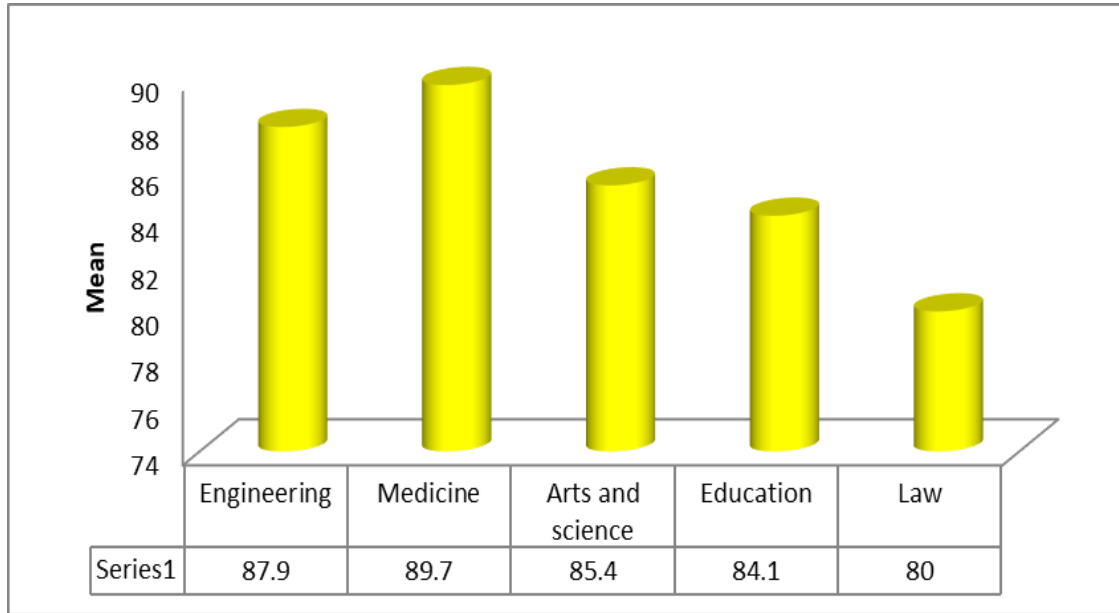
**Comparison of Attitude Towards use of Blended Learning Based on Types of Colleges**

The results obtained for the comparison of attitude towards use of blended learning according to types of colleges are reflected in Table 4. One way Analysis of Variance was used here.

**Table 4: One way ANOVA on types of colleges for attitude towards use of blended learning**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	3128	4	781.05		
Residual	44237.88	379	115.71	6.6	.000
Total	47366.21	383			

A one-way ANOVA revealed a statistically significant difference between the groups ( $F(4,379) = 6.6, p = .000$ ). A Tukey HSD post hoc test was used to determine the importance of teachers from various college kinds' attitudes toward the use of blended learning. Teachers in engineering colleges and law colleges ( $p < 0.01$ ), medical colleges and colleges of education ( $p = 0.049$ ), medical colleges and arts and science colleges ( $p < 0.01$ ), and medical colleges and law colleges ( $p < 0.01$ ) had significantly different attitudes regarding the use of blended learning. The other groups did not differ statistically significantly. Figure 4 shows the results graphically.



**Figure 4. Graphical representation of means of attitude towards use of blended learning on types of colleges**

**5. SECTION B: QUALITATIVE ANALYSIS**

Although it is typically more challenging to interview on a meaning level, a qualitative research interview aims to address both a factual and meaning level (Kvale, 1996). A qualitative interview is the preferred strategy when a researcher wishes to gain a thorough insight of the interviewee's thoughts and emotions in their own words. The goal of the current study was to find out how higher education instructors felt about using blended learning. Twenty higher education instructors from various colleges participated in the interview.

Structured open and closed ended questions on different aspects of using blended learning techniques which included attitude towards usage, use of blended learning to enhance inclusive education and in the process of machine-based socialization evoked responses of the experts.

It is encouraging to see that every expert agreed that blended learning is now the best way to teach. If properly cared for, the many resources available can undoubtedly take the position of professors in some higher education areas. Also, several of the computer science department's professionals highlighted the issues that still exist online and offered solutions. According to all of the experts, integrating classes could minimize human inputs that have a significant impact on emotions and probabilities. Also, psychology experts were hesitant to replace professors with other electronic information.

**Data Analysis**

Examining these initial codes constituted the second degree of investigation. The investigator then focused on how to create overarching aspects and higher level sub-themes while maintaining the diversity of the original codes. In the third stage, the investigator's research revealed quotes that aligned with the main themes. The themes were then reviewed before being defined and given names. The report's writing started after the subjects were decided.

Data analysis on the difficulties instructors have when implementing blended learning strategies

- throughout the socialization process
- in the context of inclusion

Thematic analysis and SWOT analysis techniques were used and the data and results are presented below:

**Thematic Analysis**

- 1. Perceived Effectiveness and Benefits:** Due to its potential to improve learning outcomes and pedagogical abilities, blended learning is typically seen favourably by educators. They acknowledge that combining in-person and virtual learning enhances adaptability, engagement, and the creation of innovative teaching strategies. Teachers' perspectives on how blended learning supports varied instruction, accommodates a variety of learning styles, and enhances student autonomy and teamwork are captured in this theme.
- 2. Technological Readiness and Support:** Teachers' opinions regarding the accessibility and usability of technology, such as Learning Management Systems (LMS), digital tools, and institutional assistance, are reflected in this theme. Teachers' acceptance of blended learning is influenced by their comfort level with technology and the preparedness of the institutional infrastructure. Their attitude toward using mixed models is greatly influenced by the availability of technical assistance and professional development.
- 3. Challenges and Barriers:** Teachers describe obstacles include poor connectivity, a lack of technical expertise, an increased workload, and trouble efficiently managing both online and offline components. Teachers' attitudes are affected by these obstacles, which might occasionally result in resistance or anxiety regarding the complete integration of blended learning. Concerns around internet dependability, inadequate training, and striking a balance between the needs of traditional and digital education are all included in this issue.
- 4. Attitudinal Differences Based on Demographics and Experience:** Age, gender, academic discipline, and prior blended learning experience are some of the variables that influence teachers' perspectives. For instance, compared to older or less experienced educators, younger or more tech-savvy teachers typically have more positive views. Differences depending on years of teaching experience and gender also show up as significant influences on attitudes.

**SWOT Analysis**

Analysis and interpretation of the experts' comments, of the present study are presented below: This SWOT analysis reflects the complex attitudes of higher education teachers toward blended learning, showing where strengths can be leveraged, weaknesses addressed, opportunities tapped, and threats mitigated for successful adoption.

	Features
Strengths	<ul style="list-style-type: none"> <li>• Adaptability in teaching strategies that integrate online and in-person instruction.</li> <li>• More chances for contact and student involvement.</li> <li>• The capacity to support self-paced learning and accommodate a variety of learning styles.</li> </ul>

	<ul style="list-style-type: none"> <li>• Opportunities for professional development enhance teachers' proficiency with digital abilities.</li> <li>• The availability of technical infrastructure and institutional assistance, if any.</li> </ul>
Weaknesses	<ul style="list-style-type: none"> <li>• The disparities in teachers' technical preparedness and digital literacy.</li> <li>• More work because of organizing and overseeing blended learning.</li> <li>• Inadequate or inconsistent institutional technical support.</li> <li>• Difficulties in successfully striking a balance between online and offline education components.</li> <li>• Teachers who are skeptical or new with blended learning may be resistant or apprehensive.</li> </ul>
Opportunities	<ul style="list-style-type: none"> <li>• The expansion of digital platforms and tools that support blended learning.</li> <li>• Following the epidemic, there is a growing need for adaptable, hybrid educational paradigms.</li> <li>• The possibility of improved student results and creative teaching methods.</li> <li>• Institutional programs to assist and train educators in blended learning techniques.</li> <li>• Expanding blended learning to include more remote and diverse student populations.</li> </ul>
Threats	<ul style="list-style-type: none"> <li>• Technological obstacles like unreliable platforms or inadequate internet connectivity.</li> <li>• Opposition to altering conventional teaching methods.</li> <li>• Equity issues, such as instructors' and students' access to technology.</li> <li>• Concerns about data security and privacy with online learning resources.</li> <li>• Teachers may experience burnout as a result of their increased workload and demands for adaptation.</li> </ul>

To summarize, Strengths need to be maintained, built upon or leveraged, Weaknesses need to be remedied, changed or stopped, Opportunities need to be prioritized, captured, built on and optimized and Threats need to be countered or minimized and managed.

## 6. DISCUSSIONS

The results show that higher education instructors generally have a favourable opinion of blended learning because they see its potential to improve student engagement and teaching efficacy. The concept of perceived efficacy and advantages is consistent with other research emphasizing blended learning's capacity to integrate the advantages of both online and in-person modalities. Teachers appreciate the flexibility it provides, which enables them to support active, self-directed learning and adapt lessons to a variety of student requirements. This implies that in higher

education settings, blended learning can support pedagogical innovation and better learning results.

Concerns regarding technology support and preparedness temper the optimistic outlook. Teachers' acceptability is greatly influenced by the availability of strong infrastructure, dependable internet, and easy-to-use digital tools. Building teachers' confidence and competence requires institutional support in the form of technical aid and professional training. Teachers may become frustrated without this kind of assistance, which could affect their desire to fully implement blended learning strategies.

Increased workload, gaps in digital skills, and juggling two teaching modalities are just a few of the real-world issues that educators face, which are reflected in the obstacles and barrier's theme. These problems may encourage opposition to the adoption of blended learning, particularly among educators who have a lot on their plates or are less tech-savvy. Maintaining excitement and productive practice requires addressing these obstacles with focused instruction and task management techniques.

Differentiated assistance techniques are necessary since attitudes vary according to demographic and experiential characteristics. While older or less experienced instructors may need more support and resources, younger, tech-savvy teachers are more likely to adopt blended learning. Institutions can create more inclusive professional development programs that promote positive attitudes among varied teacher groups by taking these characteristics into consideration.

By emphasizing advantages like flexibility and engagement chances, as well as opportunities brought about by the expanding role of technology and the need for hybrid education models, the SWOT analysis supports these discussion points. At the same time, it highlights concerns like opposition to change and technological impediments, as well as vulnerabilities like unequal digital literacy. These observations offer practical recommendations for institutional behavior and policy to improve teacher attitudes and the uptake of blended learning.

In order to foster positive attitudes about blended learning, the study emphasizes the significance of a supportive infrastructure, continuous professional development, and consideration for the requirements of individual teachers. Leveraging the full potential of blended learning will require cultivating positive teacher perceptions as higher education continues to change in response to technological advancements and shifting student expectations.

## **7. CONCLUSION**

According to the study's findings, instructors in higher education typically have a favourable opinion of blended learning, valuing its adaptability, capacity to improve student involvement, and capability to successfully include a variety of teaching techniques. The majority of educators acknowledge blended learning as an effective teaching strategy that supports student-centered learning and takes into account various learning requirements. In order to maintain and enhance these favourable views, the study also emphasizes the vital significance of professional growth, sufficient institutional support, and technical readiness. To optimize the advantages of blended learning, issues including workload, technological obstacles, and resistance from some faculty members must be carefully addressed.

The results imply that blended learning can be extensively adopted by higher education instructors with sustained investment in infrastructure, training, and support, improving student outcomes and instructional quality in today's digital education environments.

### **Educational Implications of the Study**

The study's conclusions about higher education instructors' opinions of blended learning have a number of significant educational ramifications.

- **Professional Development:** To improve instructors' digital proficiency and pedagogical competency in blended learning, institutions must give priority to continuing training programs. Faculty members with varying degrees of experience can be empowered to confidently and successfully integrate technology through customized training.
- **Institutional assistance and Infrastructure:** Reliable technology infrastructure, such as dependable internet connection, user-friendly learning management systems, and technical assistance, should be invested in by higher education institutions. Sufficient resources lower obstacles and create an atmosphere that is favorable for mixed learning.
- **Curriculum and Instructional Design:** Innovative curriculum design that strikes a balance between online and in-person modalities is necessary for blended learning. In order to promote active and collaborative learning, educators should be assisted in developing courses to capitalize on the advantages of both modalities.
- **Handling Teacher Workload:** Policies must take into account the extra time and effort that blended learning demands. Teacher resistance and burnout can be reduced with proper task management, acknowledgment, and rewards.
- **Differentiated Support:** Teachers' ages, levels of expertise with technology, and attitudes should all be taken into account in educational initiatives. Inclusive adoption of blended learning strategies can be ensured through individualized mentoring and support systems.
- **Access and Equity Considerations:** It is essential to guarantee that teachers and students have equal access to technology. In order to encourage inclusive participation in mixed learning environments, institutions must devise strategies to close the digital gap.

By incorporating these implications, higher education institutions can foster positive teacher attitudes and effective implementation of blended learning, ultimately enhancing educational quality and learner outcomes in the digital age.

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