Stakeholder-Driven Conceptual Framework for Blended Learning Implementation in Higher Educational System

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ABSTRACT

The study aimed to develop conceptual framework for the higher education institutions for adopting blended learning approach for the enhancement of access to education. For developing proposed framework, the mixed-methods research study was conducted on higher education institutions in Islamabad, stakeholders for the study were students, teachers, and administrators, their perceptions and suggestions were considered to propose a framework. For that reason, the quantitative data was collected through self-developed questionnaires for teachers and students and for qualitative data collection self-developed interview guidelines were used to collect the data, before that pilot testing and reliability checked which was sufficient to conduct the survey and interviews. The purposive on random sampling techniques was to collect data from four hundred and thirty-five students, fifty-eight teachers, and thirty administrators. The findings of the study revealed that on the basis of assessing readiness and challenges faced to implement blended learning five main factors number one was access to technology, administrative support, motivation, content knowledge, and self-efficacy, is very important. Secondly, innovative teaching technique, teachers' professional development, third physical infrastructure like, internet broadband facility and strong digital information, fourth, for implementing blended learning higher education institutions policies need to be defined clearly, lastly, remove challenges, like; connectivity issues, untrained teachers, and poor instructional design capacity. The recommendation of the study was to expand blended learning programs across universities. It may be done with the balance of online and face-to-face instructions.

Keywords: Blended learning, readiness, stakeholders, framework, higher education institutions

INTRODUCTION

Blended learning combines face-to-face and online instructions in education with digital and online resources to increase student engagement and flexibility (Mahmood & Noor, 2020). Individualized learning is promoted, and it follows students-centered approach as it fosters the growth of twenty first century abilities soft skills such as good communication skills, creativity, collaboration and digital literacy (Shea, 2019). Likewise, Students may access content at any time, and teachers have more autonomy designing their content according to the need of the learner, and pedagogical approach (Jafri et al., 2019; Erol, 2021). Similarly, for the implementation of blended learning approaches all the stakeholder's involvement may significantly impact the application of framework in higher education institutions (Embo et al., 2021; Antwi-Boampong, 2022). For that reason, higher education institutions may invest in faculty training, students' readiness, and access to digital content effectively (Wahid et al., 2022). Mirriahi et al., (2015) shared their views that for the professional development blended learning framework adopted by the institution will help the teachers as well as the students, professional development and assistance are crucial for teachers, strategic frameworks like the Blended Learning Framework address managerial, technological,

and pedagogical aspects.

Because of its long-term educational advantages, blended learning is becoming more and more popular. It has been demonstrated to exceed traditional approaches in terms of academic achievement and efficiency (Owston et al., 2019). (Ibrahim & Nat, 2019). To increase student happiness and performance, research highlights assessing students' preparedness, including their technical proficiency and attitudes toward blended learning, and utilizing continuous evaluation (Adams et al., 2018; Yeom et al., 2021). Including administrators, teachers, and students, by looking at things like motivation, conceptual understanding, resource availability, and technological proficiency (Ghimire, 2022). The need for focused training and assistance for educators and administrators is highlighted by differences in self-efficacy and real readiness (Uzun & Kilis, 2022). One research conducted in Uganda emphasizes the significance of evaluating administrative and institutional readiness (Nurrijal et al., 2023). Academic engagement, awareness and support, technology availability, learner desire for self-directed learning, and continuous research and evaluation are important aspects that impact stakeholders' readiness (Noorbhai & Ojo, 2023).

The research paradigm for this study is guided by a constructivist-interpretivist framework that places an emphasis on examining and understanding the subjective experiences of stakeholders (Szabó & Csépes, 2023). Strategic elements like implementing cutting-edge teaching methods (like flipped classrooms and online virtual laboratories), offering faculty professional development opportunities, making sure the infrastructure is strong, and creating explicit institutional policies are crucial for the successful implementation of blended learning in Pakistani higher education institutions (Puttasem, 2022). Personalized learning experiences, the development of 21st-century skills, and expanded educational access are just a few benefits of blended learning (Mahmood & Noor, 2020; Shea, 2019). To guarantee successful adoption, however, obstacles like poor teacher preparation, problems with internet connectivity, and issues with instructional design must be resolved. The needs and viewpoints of important stakeholders, such as instructors, students, administrators, and IT support personnel, should be considered in a conceptual framework for blended learning at higher education institutions. Their cooperation can ensure the framework's application and viability while also assisting in its development (Embo et al., 2021). It is crucial to give faculty members opportunities for professional growth, to have a solid infrastructure for blended learning, and to have clear guidelines for online exams and data privacy (Seraji et al., 2019).

Objectives of the study

The objective of the study was to develop a framework of blended learning by identifying the challenges that stakeholders experience and refrain them from adopting blended learning at Higher Education Institutions.

Research Questions

To which extent do university administrators provide essential facilities to the teachers and students for adopting a blended learning approach at higher education institutions.? How can a blended learning approach be implemented effectively at higher education institutions?

The study assessed the attitudes of participants towards blended learning using a five-point Likert-type scale. The questionnaires were validated for content and construct validity by an expert. Data were collected through closed-ended and open-ended questionnaires from students and teachers,

and analyzed using SPSS and Atlas. Ti software.

RESEARCH METHODOLOGY

Purposive sampling technique was used, and data were collected in the form of survey conducted to get perception of students and for teachers and administrators' in-depth interviews were conducted. The study evaluated the readiness of stakeholders for blended learning in Islamabad's public and private universities using a proportionate sampling technique. Data were collected through self-developed questionnaire for the teachers and students, and interview guide after taking validity certificates from the field experts, after the pilot testing and reliability checked which was sufficient to administer the instruments, data were collected from the teachers, students, and administrators of the higher education institutions for the perception about blended learning personal visits and online interviews. Data were entered and cleaned through SPSS; revealing patterns and themes, contributing to the credibility of the findings.; descriptive and inferential tests were employed. Themes were generated through codes using the Atlas.ti software. Both quantitative and qualitative data were integrated at the findings stage. Online interviews were conducted with 30 administrators, 58 teachers and 435 students surveyed.

Delimitations and Ethical Consideration of the Study

The study aims to explore the perceptions, attitudes, and experiences of stakeholders in higher education institutions regarding blended learning. It will use a mixed methods approach, combining quantitative surveys and qualitative interviews, to provide a comprehensive analysis of factors influencing stakeholders' readiness for blended learning adoption. However, the study may face limitations such as potential sampling bias, reliance on self-report data, and potential challenges in data collection due to time constraints or lack of willingness to participate. To address these issues, the study will ensure a diverse sample and adhere to ethical guidelines, ensuring the privacy and confidentiality of participants' data. This study was delimited to all four higher education institutions from Islamabad, Pakistan International Islamic University, National University of Modern Languages, Federal college of education, and Muslim youth University. Data were gathered from educators, administrators, and students.

Significance of Study

The study objective was to develop the framework for adopting blended learning at the higher education institutions based on the perception of stakeholders about the practices and awareness in higher education institutions in Islamabad. It highlighted the significance of pedagogical, technological, organizational and personal context in mind. The framework was designed on the suggestions and findings of stakeholders involved in the study for institutional decision making and support. Training opportunities and assistance for faculty members are essential. The study reveals that almost every administrator in their institution has sufficient facilities for conducting a blended learning approach. Most administrators use Microsoft Teams, Google Classroom, Zoom, Campus Management System, WhatsApp, Vivo, and Google Suite communication tools to adopt blended learning. Most administrators agree that they have full support, and HEC has provided funds for Covid-19 to move on to blended learning. However, many administrators are not using technology due to insufficient resources. Most administrators believe blended learning is an excellent approach for efficient, effective, and result-oriented teaching and learning for nonmedical faculty, but not medical and health sector faculty. Transitioning to online teaching requires proper training, including upgraded teaching methodology, new pedagogy, and designing

curriculum and teaching materials that are easy to teach online and for students to grasp concepts outside the class. Administrators have received training during the pandemic and after with coaching and capacity building for their faculty, students, and staff. The study explores the adoption of blended learning in higher education institutions, revealing its benefits in personalized learning, flexibility, and the 21st-century technology-oriented environment. Administrators believe their institutions have adequate facilities for online classes, and teachers find it positively affects student engagement and achievement. However, transitioning to online teaching requires proper training in advanced teaching methodology, new pedagogy, and designing curriculum for online learning. Challenges include inadequate infrastructure, slow internet connectivity, high technology costs, and inadequate training. Despite this, administrators have full support and HEC funds for blended learning. Higher education institutions should focus on training teachers and students with necessary technology and network tools for successful implementation.

DATA ANALYSIS AND INTERPRETATION

Table 1

Students' Perceptions, Practices, Facilities, and Challenges in Blended Learning

Section	S. No	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Perception	1	BL Training for Teachers and Students	34.5%	49.7%	10.1%	2.3%	3.4%
	2	Blended learning reinforces learning	23.4%	52.0%	14.0%	6.2%	4.1%
	3	BL encourages self-directed learning	18.2%	47.8%	19.5%	11.5%	3.0%
	4	Useful material is used in BL	17.0%	52.9%	20.7%	6.7%	2.8%
	5	BL improves integration skills	12.0%	33.3%	22.1%	25.3%	7.4%
	6	BL more effective than conventional mode	12.0%	31.0%	22.8%	26.7%	7.6%
	7	Academic tasks more efficiently done in BL	14.0%	43.2%	20.7%	18.2%	3.9%
Practices	1	BL makes responsible for self-learning	23.2%	50.3%	19.1%	6.2%	1.1%
	2	BL helps get self-knowledgeable	19.8%	55.9%	15.2%	6.7%	2.5%
	3	Students experienced in exploring information from web	14.0%	39.8%	23.0%	18.4%	4.8%
	4	BL easier than conventional method	14.0%	46.2%	21.4%	14.7%	3.7%
	5	BL helps in mastery of subject matter	15.4%	36.6%	21.8%	21.6%	4.6%
	6	BL classes more interesting than conventional	10.8%	46.0%	21.4%	18.6%	3.2%
	7	University provides satisfactory BL services	10.8%	46.0%	21.4%	18.6%	3.2%
	8	Learners satisfied with BL activities	12.2%	49.4%	22.1%	13.3%	3.0%

	9	Time efficiently managed with BL	16.1%	49.7%	15.4%	13.6%	5.3%
Facilities	1	Online learning tool satisfaction	14.0%	54.3%	16.1%	12.4%	3.2%
	2	Additional learning material provided in BL	2.5%	53.6%	23.0%	8.3%	12.6%
	3	LMS is user-friendly	12.4%	53.6%	20.7%	9.7%	3.7%
	4	Teachers provide technical support	14.0%	43.0%	23.9%	12.6%	6.4%
	5	Essential resources available at institution	37.0%	40.2%	11.5%	6.4%	4.8%
Challenges	1	Slow internet connectivity	14.3%	38.6%	29.7%	13.6%	3.9%
	2	Outdated material	18.2%	46.0%	22.5%	9.9%	3.4%
	3	Creates anxiety among students	15.6%	45.3%	23.0%	13.1%	3.0%
	4	BL more challenging than face-to-face	9.4%	46.4%	26.4%	15.2%	2.5%
	5	Issue in course designing	11.7%	34.5%	22.5%	25.3%	6.0%
	6	Superficial deadlines	15.4%	39.3%	24.4%	17.9%	3.0%
	7	Only lecture method used	50.8%	18.9%	11.3%	9.4%	9.7%

Table 2

Two-Way ANOVA Results for Awareness and Practices of Blended Learning

| Dependent Variable	Source	Type III Sum of Squares	df	Mean Square	F	Sig.	R² (Adj. R²)
Mean Awareness of BL	Corrected Model	.305	3	.102	.225	.879	.002 (-.005)
	Intercept	2264.435	1	2264.435	5012.515	.000	
	Gender	.114	1	.114	.251	.616	
	Institution	.023	1	.023	.051	.821	
	Gender * Institution	.198	1	.198	.439	.508	
	Error	194.707	431	.452			
	Total	2563.679	435				
	Corrected Total	195.012	434				
Mean Practices of BL	Corrected Model	.311	3	.104	.221	.882	.002 (-.005)
	Intercept	2501.922	1	2501.922	5333.649	.000	
	Gender	.268	1	.268	.571	.450	
	Institution	.070	1	.070	.148	.700	
	Gender * Institution	.023	1	.023	.048	.826	
	Error	202.175	431	.469			
	Total	2831.160	435				
	Corrected Total	202.485	434				

Findings

The study focuses on the awareness and practices of blended learning among students. Quantitative data analysis revealed that 84.2% of students strongly agree that teachers and students need training to effectively use a blended learning approach, and most students feel that the material used in blended learning is more effective and personalized than conventional learning. Practices of blended learning were found to be successful, with 73.3% of respondents having essential resources for practicing blended learning at their institutions. Most respondents also reported that experiencing blended learning improved their integration skills and helped teachers efficiently manage their time tasks in blended learning mode.

The two-way ANOVA tested the effect of gender and institution type (public/private) on students' awareness of blended learning. The **interaction effect** between gender and institution was not significant $(F (1, 434) = .439, p = .508)$. The main effect of gender was also not significant $(p = .616)$. The main effect of institution type was not significant $(p = .821)$. The overall model explained almost no variance $(R^2 = .002, Adjusted\ R^2 = -.005)$. There are no significant differences in mean awareness of blended learning between male and female students, or between public and private university students. All groups reported similarly low awareness levels. The two-way ANOVA tested the effect of gender and institution type on students' practices of blended learning. The interaction effect between gender and institution was not significant $(F (1, 434) = .048, p = .826)$. The main effect of gender was not significant $(p = .450)$. The main effect of institution type was also not significant $(p = .700)$. The model again explained very little variance $(R^2 = .002, Adjusted\ R^2 = -.005)$. There are no significant differences in blended learning practices based on gender or institution type. Both male and female students, across public and private universities, reported similar practices of blended learning. Facilities for adopting blended learning were satisfactory, with 70% of respondents satisfied with the technology and software they use for online blended learning. Multiple challenges connectivity issues, internet issues, outdated learning outcomes, and lack of support form administrators were identified as substantial challenges. However, teachers also faced challenges such as internet/network issues, technology expense, and inadequate training. Findings from the research facilities theme recommendation suggested the need for standards for all blended learning activities and good practices of successful blended learning at universities. Most teachers practiced a blended learning approach using the Pedagogical content knowledge approach, which emphasized the importance of personalization in the 21st century. Practical challenges included internet connectivity issues, technological issues, network issues, electricity issues, and teachers' and students' readiness issues. Faculty members recommended the need for standards for all blended learning activities and the need for teachers to be equipped with skills and knowledge to effectively use blended learning.

Figure 1

Proposed Framework to Implement Blended Learning at HEIs
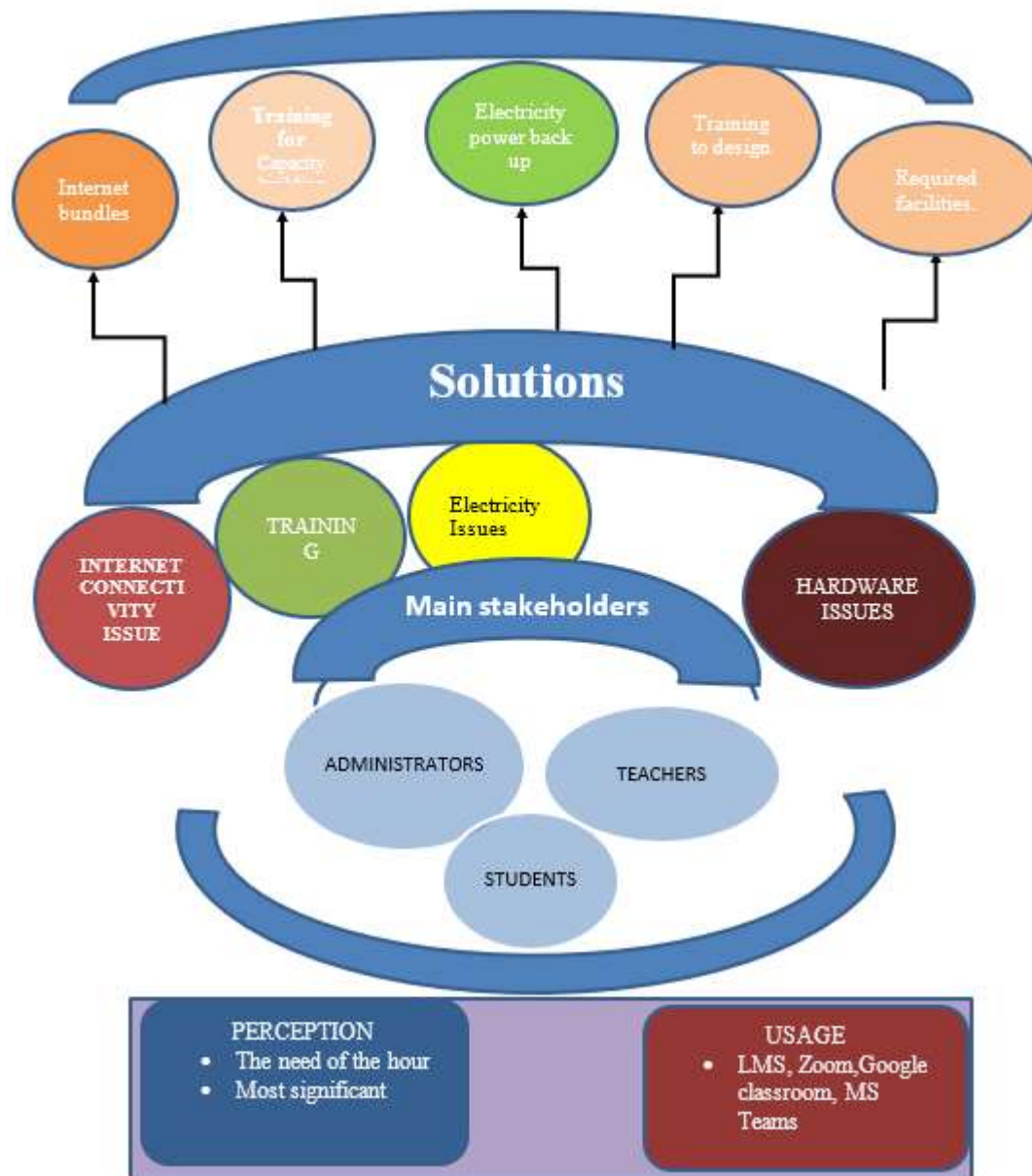
This framework has been created to enhance the blended learning programs that relevant authorities are providing. Experts claim that the effective application of this type of framework can be very beneficial for every stakeholder. Previous research investigations carried out by prominent educational professionals and scholars have provided support for the findings of this study such as, (Modise, 2023; Achahbar & Khoumssi, 2023; Ghimire, 2022; Girgis et al., 2022; Uzun & Kilis, 2022) also suggest that Universities can effectively implement blended learning by addressing challenges, providing suitable training programs, and incorporating technology. Key resources include high-speed internet, electricity, and technological support, teaching technique, professional growth and infrastructure opportunity.

CONCLUSION AND RECOMMENDATIONS

Based on the findings of the study conducted on students, teachers and administrators in Islamabad based universities' it is concluded that students were fully aware of the concept of blended learning, and they found it best for student-centered approach of learning. Despite those challenges also prevail in those institutions such as lack of communication skills, unavailability of funding, security issues, and required digital infrastructure for conducting blended learning programs effectively. Teachers believe in a constructive process, parental involvement, and autonomous structure for blended learning. However, they often lack the necessary teaching capacity to effectively implement this approach. Institutions have adequate facilities for blended learning, but faculty members often use communication tools like Microsoft Teams, Google Classroom, and Google Suite. The study aims to boost blended learning awareness in higher education institutions by offering more programs and training for students and teachers. However, students lack resources for these programs, and more research is needed to understand their impact on engagement. In this fast pest life, teachers need to refine their teaching methods, it may be students-centered with the technological advancement and the use of technology for the matter of content sharing, personal guidance, self-directed learning it proves a significant result.

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