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The Factors Affecting the Blended Learning in Students Perspective

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Abstract: This study looks into the variables affecting blended learning from the viewpoint of the learners. A number of possible advantages of blended learning, which combines online and conventional classroom education, including enhanced student engagement, support for a variety of learning styles, and more freedom in terms of accessing resources and finishing work. These benefits improve pupils' autonomy, self-control, and time management. However, a number of important variables, including the caliber of the online materials, the degree of student-teacher and peer engagement, and the students' technological aptitude, affect how successful blended learning is. This study uses questionnaires that are given to students enrolled in different professional programs at DAVV, Indore, using a descriptive research methodology. A sample size of 466 people was chosen via purposive sampling. The study is divided into two stages: factor analysis is used in the second phase to determine the major components influencing the blended learning experience, and reliability testing is done in the first phase. The purpose of the research is to offer guidance on how to best optimize blended learning settings in order to improve student happiness and educational outcomes.The most important implication of this research is that policy and decision makers in business educational schools are requested to consider factors that had a significant effect on the adoption of blended learning. In doing that, the research contributes to the blended learning knowledge via highlighting the key variables that encourage or hinder the adoption of blended learning strategy.

Keywords: Blended Learning, Education, Students

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INTRODUCTION

A blended learning strategy, also known as hybrid learning, blends traditional in-person classroom instruction with virtual learning resources and activities. The term "blended learning" refers to an educational approach in which students participate in both synchronous, in-person instruction and asynchronous, online learning activities. This strategy combines the best features of traditional and online learning to produce a more adaptable and customized learning environment. Blended learning seeks to give chances for personalized instruction, improve learning outcomes, and increase student engagement by combining many instructional modes (Graham, 2006).

In recent decades, there has been a notable evolution of the notion of blended learning. The original purpose of blended learning in educational institutions was to add online resources, such lecture recordings and digital readings, to traditional classroom instruction. Blended learning, however, has become a more dynamic and engaging method with the introduction of improved technology and the expanding accessibility of the internet. An easy way to include online elements into the curriculum has been made possible by the widespread use of LMS, including Moodle and Blackboard (Bonk & Graham, 2012). Blended learning has also been made possible by innovations like flipped classrooms, in which students

participate in interactive activities in class and study instructional content at home (Bishop & Verleger, 2013). In order to preserve instructional continuity during lockdowns and social distancing measures, educators were compelled by the COVID-19 epidemic to adopt and improve blended learning approaches. Blended learning, which provides a flexible framework that can adjust to a variety of learning demands and contexts, has consequently become a crucial part of contemporary education (Dhawan, 2020).

It is important to comprehend how students see blended learning for a number of reasons. First and foremost, students are the main recipients of educational endeavors, and evaluations of any pedagogical strategy must take into account their experiences and input. Teachers and administrators can discover what features of blended learning are effective and what still needs to be improved by looking at the opinions of the students (Garrison & Kanuka, 2004). The creation of more interesting and successful blended learning techniques that meet the various demands of students might be influenced by this understanding. Second, student viewpoints can draw attention to the obstacles and problems that students encounter in a mixed learning setting, such as problems with technology, a lack of drive, or trouble managing their time (Means et al., 2014). A welcoming and encouraging learning atmosphere must be established by addressing these issues. And last, allowing students to participate in the evaluation process empowers them and gives them a sense of ownership over their education. Finally, knowing how students view blended learning contributes to the development of a more student-centered learning environment that fosters both academic achievement and personal development (Harris et al., 2009). This led us to identify the factors affecting the blended learning from the student's perspective.

LITERATURE REVIEW

Abdulrahman (2016). Using a random sample consisting of 73 students divided into a control group taught by a traditional method and an experimental group learned by blended learning The positive impact of blended learning strategy on students' educational performance was documented in the literature.

Al-Zu'bi and Bani-Domi (2012) investigated the effect of blended learning on the achievement of fourth grade students in mathematics. Their results showed significant differences between students in favor of the experimental group, which instructed using a blended learning strategy.

Eman Alqurashi (2019) examines the factors that influence student happiness and perceived efficacy of learning in online learning environments in her paper "Predicting Student Satisfaction and Perceived Learning within Online Learning Environments." Alqurashi uses a quantitative method to identify important determinants, including self-efficacy, interaction (between learners, between learners and instructors, between learners and material), and instructor presence. In line with Bandura's (1997) hypothesis on self-efficacy and academic accomplishment, the study finds a substantial correlation between higher levels of self-efficacy and better pleasure as well as perceived learning results. Additionally, it is clear that student-teacher interaction is essential for raising satisfaction, highlighting the need of active teacher participation and feedback. The presence of the instructor, which includes organization and accessibility, is also crucial for promoting successful learning outcomes. In order to maximize educational results in digital learning settings, Alqurashi's findings highlight practical implications for online course design and advocate for tactics that support meaningful engagement, strengthen student self-efficacy, and guarantee a strong teacher presence.

In a systematic study published in 2015, Broadbent and Poon emphasized the value of self-regulated learning (SRL) practices in online higher education for improving student success. Goal-setting, time management, self-monitoring, and self-evaluation are some of the SRL methods that entail taking active control over learning. The review emphasizes that students who use SRL techniques have higher academic achievement because they are more motivated, manage their time well, actively interact with the content, and make greater use of available resources. A thorough database search and selection of pertinent research published between 2000 and 2014 were part of the process. Important results show that SRL methods are positively correlated with academic achievement; time management, goal-setting, and self-monitoring are especially important. In addition, the analysis highlights the necessity of assistance and training for the development of SRL abilities, recommending that educational institutions incorporate these tactics into their course designs and offer strong support networks. In the end, the research conducted by Broadbent and Poon highlights the important influence that SRL tactics have on student motivation, engagement, and academic achievement in online learning settings.

The dynamics of computer-mediated communication in higher education, especially through computer conferencing, are examined by Garrison, Anderson, and Archer (2000), along with how it might promote critical inquiry. The Community of Inquiry (CoI) framework, which identifies cognitive presence, social presence, and instructional presence as the three essential elements for effective online learning, was developed in large part because to their study. Critical thinking requires cognitive presence, which is the ongoing development and validation of meaning via conversation and reflection. Collaborative learning is supported by social presence because it allows individuals to establish interpersonal relationships, communicate effectively, and engage with the community. In order to create meaningful learning results, teaching presence involves the design, facilitation, and direction of both cognitive and social processes. The research analyzes online course transcripts qualitatively to see how these presences appear and affect learning. The results highlight the following: social presence fosters collaborative contexts, instructional presence is essential for sustaining social and cognitive engagement, and cognitive presence advances through stages of practical inquiry. Therefore, by combining these three components, the CoI framework provides a comprehensive approach for improving online education and encouraging critical inquiry and meaningful learning.

Cognitive presence is examined in online learning by Garrison and Cleveland-Innes (2005), who stress that contact by itself, is not enough to promote successful learning. In the context of the Community of Inquiry (CoI) paradigm, their study highlights the importance of cognitive presence, which is reinforced by social and instructional presences. The four steps of the Practical Inquiry Model-triggering event, investigation, integration, and resolution are utilized by them to elucidate cognitive presence. Their results show that without organized assistance from teachers, interactions frequently fall short of deeper learning phases. Collaborative environments supported by excellent instruction and social presences, as well as clear guidelines and prompt feedback, are necessary for effective online learning. A balanced approach is necessary to provide educational experiences that are transformational and meaningful.

The 2007 paper "Surveying instructor and learner attitudes toward e-learning" by Liaw, Huang, and Chen examines the viewpoints of educators and students with relation to e-learning scenarios. The study, which was published in Computers & Education, looks into people's perceptions of e-learning's advantages,

difficulties, and efficacy. In order to ascertain the attitudes and opinions of a varied sample of instructors and learners, the authors gather data using a survey approach. The study reveals that educators have a generally good perception of e-learning, acknowledging its capacity to improve instructional flexibility and support learner-centered methods. Instructors are worried about the need for proper training and assistance, as well as technical challenges. Conversely, learners exhibit contradictory sentiments, acknowledging the ease of use and availability of e-learning but also drawing attention to drawbacks like loneliness and the necessity of an instructor's presence for a productive learning environment. All things considered, the study offers insightful information on how teachers and students view online education, pointing out areas for development and stressing the necessity of enabling frameworks to optimize its advantages.

Martin and Bolliger (2018) explore the vital role that engagement tactics play in improving online learning experiences from the viewpoint of students in their paper "Engagement Matters: Student Perceptions on the Importance of Engagement Strategies in the Online Learning Environment." The study explores the relationship between student perceptions and satisfaction in online courses and several engagement tactics, including multimedia materials, interactive activities, and teacher presence. In order to promote student motivation and learning outcomes, Martin and Bolliger emphasize the need of developing an interesting and dynamic online learning environment. They contend that well created multimedia components and interactive exercises, such discussion boards and quizzes, improve student involvement and comprehension of the material covered in the course. The study also highlights the critical role that teacher presence plays in enabling successful online learning experiences, emphasizing the value of prompt feedback, transparent communication, and active discussion engagement. For educators and instructional designers looking to maximize the design and delivery of online courses, Martin and Bolliger's study offers insightful information on the elements that affect student engagement and satisfaction in online learning.

Shea, Li, and Pickett (2006) explore the dynamics of teaching presence and its influence on the feeling of learning community in entirely online and web-enhanced college courses. The Community of Inquiry (CoI) concept is at the heart of their inquiry. It asserts that the interaction of instructional, social, and cognitive presences is critical to the effectiveness of online learning settings. In order to investigate how teaching presence which is defined as the planning, directing, and facilitation of cognitive and social processes contributes to students' perceptions of a supportive learning community, the study uses a mixed-methods approach that combines quantitative surveys and qualitative analysis of course discussions. According to their results, teaching presence plays a crucial role in helping online learners develop a feeling of community. They also emphasize the need of clear instructional design, prompt feedback, and active participation in promoting meaningful interactions. The study shows how these elements of teaching presence improve students' feeling of community and teamwork while also having a major positive impact on their general well-being and academic achievement in web-enhanced and online courses. For educators hoping to foster successful online learning communities, Shea, Li, and Pickett's study offers insightful information on the complex dynamics of teaching presence in virtual learning settings.

Posthumously released in 1978, Vygotsky's groundbreaking book "Mind in Society: The Development of Higher Psychological Processes" remains a fundamental component of educational theory and developmental psychology. Vygotsky investigates how social interactions, cultural resources, and historical context influence cognitive development by drawing on the ideas of socio-cultural theory. The zone of

proximal development (ZPD), where learning happens via encounters with more experienced people, like instructors or peers, who give scaffolding to encourage learners in attaining tasks beyond their existing ability, is central to his approach. Vygotsky emphasizes the value of discussion and group learning contexts in his argument that language is essential for cognitive growth as well as a tool for communication. His knowledge of the relationship between social and cognitive processes has had a significant impact on educational practices. In particular, it has helped to clarify how social interactions and teaching may support academic accomplishment and higher-order thinking skills. Research from a variety of fields is still influenced by Vygotsky's work, which provides insightful insights into the dynamic interplay between learning and cognitive development on an individual basis and in socio-cultural situations.

There is a substantial research vacuum in the area of student views on the complex aspects driving blended learning in the Indian educational setting. Although studies conducted worldwide have examined blended learning's efficacy in general, little particular study has been done on how India's distinct cultural, infrastructure, and pedagogical characteristics affect students' experiences and results in blended learning settings. Comprehending these variables is crucial, given the heterogeneous nature of India's educational terrain, which encompasses differing degrees of digital literacy, technological accessibility, socioeconomic origins, and geographical inequalities. Thus, the study might concentrate on examining how various areas and kinds of Indian educational institutions' blended learning programs impact students' perspectives on it. By creating blended learning programs that are specifically targeted to the needs and circumstances of Indian students, this research would offer crucial insights that would eventually improve educational quality and fairness in the nation.

Mozelius and Hettiarachchi (2017) mentioned other critical factors for the implementation of blended learning included technology, instructional design, and teacher’s role, learning outcomes and learner satisfaction, social interactions between learning participants, course design, and synchronous and asynchronous features of course activities. Factors that affect the successful implementation of S. I. Al-Ayed and A. A. Al-Tit / International Journal of Data and Network Science 5 (2021) 269 blended learning were divided into three categories, i.e., human, instructional and learning factors.

OBJECTIVE

- Identify the factors affecting the blended learning in student’s perspective

RESEARCH METHODOLOGY

The objective of this descriptive study is to understand the variables influencing blended learning from the student's perspective. Using a purposive sampling technique, the self structured 14-items questionnaire is specifically given to students enrolled in professional programs at DAVV, Indore. The sample size selected for the study is 466, which is more than ten times the total number of items. The study is conducted in two phases: the first phase consist of reliability testing, while the second phase involves performing factor analysis.

RELIABILITY STATISTICS

This is also known as Reproducibility in statistics refers to consistency in measurement. From the Table-1,

the scale has a reasonably low variability (SD = 0.33) and an average score of 3.89. Cronbach's alpha, which gauges internal consistency dependability, comes in at 0.729 (greater than 0.69), indicating a modest level of reliability for the scale's components and appropriate for data collection and further use (Nunnally, 1978).

Table-1: The calculated value of Cronbach's α

Mean	SD	Cronbach's α	No of Items
3.89	0.33	0.729	14

Source: Created by researcher

Factor Analysis: The Principal Component Analysis and Varimax rotation was performed to identify the factor affecting the blended learning in student's perspective. **Table 1** exhibits Kaiser-Meyer-Olkin (KMO) Test which measures how the data is suited for Factor Analysis. Values nearer 1 in the KMO measure indicate that the data is appropriate for factor analysis. The KMO measure goes from 0 to 1 and the value of KMO should not be less than 0.50 and in this case, the KMO value is more than 0.8, it is deemed "meritorious," meaning that the sample size is sufficient for factor analysis. Given that there are significant correlations between the variables and the correlation matrix is not an identity matrix, the use of factor analysis is supported by the results of Bartlett's Test of Sphericity ($p < 0.05$).

Table-2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.811
Bartlett's Test of Sphericity	Approx. Chi-Square	998.000
	Df	91
	Sig.	0.000

Source: Created by researcher

Table-3: Total Variance Explained

Component	Initial Eigen values			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.526	25.183	25.183	1.949	13.920	13.920
2	1.245	8.895	34.078	1.878	13.415	27.335
3	1.191	8.509	42.587	1.784	12.745	40.080
4	1.099	7.851	50.438	1.417	10.119	50.200
5	1.035	7.395	57.833	1.069	7.634	57.833
6	.875	6.246	64.080			
7	.793	5.663	69.742			
8	.745	5.323	75.065			
9	.682	4.874	79.940			
10	.678	4.843	84.783			
11	.607	4.337	89.120			
12	.549	3.924	93.044			
13	.514	3.670	96.715			
14	.460	3.285	100.000			

Source: Created by researcher

Further through analysis in total variance explained, **Table-3** revels that five components are relevant for more investigation as the factor analysis shows that they account for a considerable amount (57.833%) of the overall variation. By dispersing the variation among these components more fairly, the rotation enhances interpretability. **Table-4 is** showing the loadings of variables on different components as given below.

Table-4: Component Loadings

Item Number	Factor Loadings	Item Description
		Tech-centric
Q2	0.756	Current teaching environment encourages the integration of technology
Q1	0.709	Sufficient technological knowledge is required to adapt the blended learning
		Technophilia
Q5	0.671	Willingness to use computers as a tool in learning is required to adapt the blended learning
Q6	0.67	Opportunities to explore new technologies is required to adapt the blended learning
Q4	0.617	Belief that technology is important part of student learning is a must.
Q3	0.531	Willingness to spend extra time on learning use of technology is required to adapt the blended learning
		Resilience
Q8	0.866	Self Confidence is required to adapt the blended learning
		Facilitators
Q10	0.749	Support/encouragement from administration has an important role in adaptation of the blended learning
Q9	0.698	Previous success with technology has an important role in adaptation of the blended learning
Q12	0.623	Access to technical support has an important role in adaptation of the blended learning
		Prerequisites
Q14	0.788	Access to quality software has an important role in adaptation of the blended learning
Q13	0.608	Access to the Internet has an important role in adaptation of the blended learning
Q11	0.589	Support from parents has an important role in adaptation of the blended learning
Q7	0.589	Support of teachers/ faculty is required to adapt the blended learning

Source: Created by researcher

CONCLUSION

Students may gain a lot from blended learning, such as enhanced interaction with multimedia resources, support for different learning styles, and flexibility in how they access materials and turn in assignments. By granting students responsibility over their learning process, this strategy improves time management, self-regulation, and student autonomy. The incorporation of technology enhances the whole educational process by offering prompt feedback and support. From the viewpoint of the students, a number of factors affect how successful blended learning is—that is, learning that blends traditional classroom instruction with online learning. These variables include the caliber of online materials, the degree of communication between students and teachers, and the students' own technical aptitude. Achieving educational objectives

and optimizing learning outcomes need an understanding of these components. Teachers may establish a mixed learning environment that is more productive and enriching by taking these things into consideration.

SECTION TITLE 7

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