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Teacher-Educators' Perspectives towards Blended Learning: A step Towards Futuristic Trend in Education

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Abstract:

Amalgamating traditional in-person instructions with online learning modalities, Blended learning has emerged as a significant approach in contemporary educational paradigms, for its potential to cater to current students' need and enhance learning outcomes. As educators have a pivotal role in the effective execution of blended learning, understanding their perspectives towards this pedagogical approach becomes crucial. Quantitative survey method was employed among 54 randomly selected teacher-educators, from different educational institutions in Jamshedpur, Jharkhand, to assess their awareness and attitude levels towards blended learning, and also investigate the relationship between the two measured variables, thereby illuminating pathways towards the future of education. The researchers meticulously designed valid and reliable survey instruments to elicit insights into the teacher-educators' understanding and perception of blended learning concepts and its potential impact on learning outcomes. With a heightened awareness and optimistic attitude on blended learning among the participants, the outcome of Pearson correlation showed a significant favorable association between awareness and attitude levels, shedding light on the interplay between cognitive understanding and disposition of blended learning. The findings hold significant implications for educational policymakers, curriculum developers and professional development practitioners. By discerning the relationship between awareness and attitude towards blended learning among teacher-educators, tailored interventions can be devised to enhance both intellectual comprehension and constructivist attitudes towards this innovative pedagogical approach, catalyzing a paradigm shift towards a more inclusive, adaptive, and technology enriched educational ecosystem.

***Keywords**: Perspectives, Awareness, Attitude, Blended Learning, Teacher-educators.*

1. Introduction:

The trajectory of education has been fundamentally altered by the tide of technological innovations, each wave bringing new possibilities and reshaping traditional pedagogical paradigms. From the inception of the printing press to the advent of the digital media, technological advancements have continuously revolutionized the acquisition and dissemination of knowledge. In recent decades the digital revolution has propelled education into a realm of unprecedented connectivity, accessibility, and customization. Online platforms and digital resources have democratized access to educational materials, empowering learners of all

backgrounds, irrespective of geographical and socio-economic barriers, to engage together, and advance towards a lifelong learning and skill development. However, the most profound shift in education occurred in response to the COVID-19 pandemic, which necessitated a rapid transition to blended learning modalities. With widespread school closures and social distancing measures, traditional modes of instruction became untenable overnight. Pandemic acted as a catalyst accelerating the adoption of blended learning and highlighted its potential to enhance educational resilience and flexibility. In the aftermath of the pandemic, the educational paradigm has shifted towards the blended mode-synthesis of traditional and digital learning environment, which proved itself to be an effective weapon to combat further such further crisis (Almahasees et al., 2022)[1]. This shift underscored the importance of digital literacy, technological infrastructure, and innovative pedagogical practices. Asghar et al., (2022)[2], operationalized the term blended learning as an integration of offline, online, and in-person instructional methods. So, the fusion of conventional classroom instructions with digital materials and internet-based platforms characterizes the essence of blended learning.

2. Literature Review:

Blended learning combines face-to-face traditional teaching along with online and other forms of learning activities (Hannafin and Land, 2004)[3], which is being considered by Norberg et al. (2011)[4] as "the new normal" of the education system. In the dynamic landscape of education, where traditional pedagogical methods intersect with cutting-edge technological advancements, the idea of blended learning has arisen as a symbol of innovation in education. It embodies a pedagogical approach that not only acknowledges the diverse learning needs of students (Sharma e al., 2022)[5], but also harnesses the power of technology to enhance educational experiences (Garnham and Kaleta, 2002)[6]. However, the successful implementation of blended learning hinges not only on the technological infrastructure but also on the mindset and readiness of educators to embrace this paradigm shift. Perceived as more effective than

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traditional or pure online learning (Singh, 2003[7]; Almahasees and Qassem,2021) [8], this innovative learning approach improves students' achievement scores (Lin et al., 2016)[9] as well as attitude and interest towards learning (Twigg, 2003)[10].

Perspectives of teachers and students on blended learning have been explored in many studies, highlighting the effectiveness and acceptance of blended learning (Ramli et al., 2022[11]; Le and Pham, 2021)[12]. And teachers' perspectives play significant role in implementation of any educational reform like blended learning (Merwe and Pedro,2022) [13]. Student satisfaction with blended courses is influenced by their blended learning abilities, teachers' competency and course practices (Chen, 2022)[14]. Students' perspectives on blended learning were assessed by Waha and Davis (2014)[15], where it was found that the students preferred the flexibility and convenience of online mode and also the chance of direct interaction promised by the face-to-face component of blended learning. The respondents anticipated consistency in the standard of educational delivery but raised concerns on the effectiveness of online engagement and recorded lectures. Positive perceptions of blended learning have been reported among accounting teachers and students, highlighting the impact on student motivation and independent learning (Wardoyo et al., 2022)[16]. At the heart of this discourse lies the concept of awareness – the cognitive recognition and understanding of blended learning modalities among teacher-educators. Proper knowledge serves as the foundation upon which positive attitudes

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are built (Malina et al., 2021)[17], further shaping the perceptions, beliefs, and predispositions towards anything. Further studies revealed that teachers' blended teaching competency plays a pivotal role in students' willingness to engage in blended courses (Jeffrey et al., 2014)[18]. And awareness without the accompanying attitudes is insufficient to influence behaviors supporting implementation of blended learning. The attitudes of teacher-educators towards blended learning encompasses a spectrum of sentiments ranging from enthusiasm and adaptability to skepticism and resistance. Several studies have reported a good level of awareness and positive perceptions on blended learning among different stakeholders of education (Alharthi, 2016[19]; Aladwan et al., 2018)[20]. While perceptions of educators play a pivotal role towards technology adoption (Krishnakumar and Rajesh, 2011)[21], but at the same time unfavorable attitudes pose significant barriers to the incorporation of technology in educational settings (Khalid, 2009)[22]. Understanding the nuances of the relationship between awareness and attitude is crucial for fostering a culture of innovation and continuous improvement within the educational institutions.

3. Rationale of the Study:

Teacher-educators greatly influence the pedagogical practices and beliefs of future educators. Their awareness and attitude towards blended learning can significantly impact the integration of blended learning approaches into teacher training programs and, by extension, the practices of preservice and in service teachers. There are limited studies on the perspectives or perceptions of teacher-educators on blended learning, though the teacher-educators hold a pivotal role in shaping the teacher education system. In view of this, the study aims to investigate the level of awareness and understanding of blended learning among teacher-educators, gauge their attitude towards using of blended learning approach in their teaching and also explore how the awareness and attitudes of the teacher-educators are correlated that can

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influence the adoption of blended learning approaches in educational settings and also the education of the future teachers.

4. Objectives of the study:

1) To assess teacher-educators' awareness on blended learning methodologies.
2) To assess teacher-educators' attitude towards using and adopting blended learning in their classroom.
3) To study the relationship between awareness and attitude of teacher-educators towards blended learning.

5. Methodology:

The study was descriptive in nature, adopting a quantitative survey, to understand the perspectives of teacher-educators towards blended learning. The study focused on teacher-educators from different teacher education colleges in Jamshedpur, Jharkhand. 80 questionnaires were distributed, out of which the return rate was 67.5 percent, making the sample size = 54, which was accepted as per Babbie (1990)[23].

5.1. Research Tool and its Scoring:

Researcher developed the data collection instruments herself and validated them with the help of experts from different universities. According to their recommendations some questions were deleted, while some were modified. The value of Cronbach's alpha reliability test of the awareness scale came as α=0.72, and that of attitude scale came as α=0.79, so the internal consistency of the tool was accepted (Hair et al., 2006)[24].

The questionnaire consisted of 3 sections, first one for knowing the demographics and personal details, one for Awareness and one for Attitude assessment. The awareness scale included 10 statements and were assessed on a 3-point rating scale- Yes, Maybe and No, which were scored as 3, 2 and 1 respectively. The attitude section included a 5-point Likert-type response scale of 25 items, which were scored as "5=Strongly agree (SA)", "4=Agree (A)", "3=Neutral (N)", "2=Disagree (D)" and "1=Strongly disagree (SD)" for positive statements, while in reverse for negative statements.

5.2. Statistical Analysis:

The collected data was analyzed using SPSS statistical software for the social sciences version 20 (IBM Corp, 2011)[25]. The general characteristics of the participants as well the first two objectives

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were analyzed using descriptive statistics like frequency count, percentage, means (M) score and standard deviation (SD). To investigate the relationship between awareness and attitude towards blended learning, inferential statistic like Pearson's Product Moment Correlation Coefficient was used.

6. Data Analysis and Interpretation:

Teacher-educators in the study consisted of 37% male participants and 63% female teacher-educators (depicted in Table 1). And representatives were equal from government and private teacher education colleges.

Table 1: Demographic status of the participants

Variables	Categories	Frequency	%
Gender	Female	34	62.96
	Male	20	37.04
Type of college	Government	27	50
	Private	27	50

6.1. Teacher-educators' awareness on blended learning:

Examining the participants' awareness-related responses on the 10 items on awareness scale that are scored on 3-point rating scale, Table 2 reveals that the calculated Mean score (M) came as 25.74 and Standard deviation (SD) as 2.99, out of the total score of 30 (10 X 3=30; 10 items and 3 was the highest score for each item as per scoring on a 3-point rating scale). Thus, the resulted awareness level was 85.8%, which is considered a high score of the variable measured. Therefore, most teacher-educators had a proficient level of awareness on blended learning.

Table 2: Descriptive data of awareness of teacher-educators towards blended learning

Category	N	Mean	SD
Teacher-educators' awareness towards blended learning	54	25.74	2.99

Total Score = 30

6.2. Teacher-educators' attitude towards using and adopting blended learning:

To ascertain the significance of the participants' attitude towards blended learning, item analysis was done. The decision point was put at $\bar{x}$ = 3.61, which was the average mean calculated from the total given responses against each item of the attitude scale (Table 3). Thus, a mean rating equal to or more than 3.61 will be considered to imply a positive attitude towards the statement.

Table 3: Teacher-educators' responses on their attitude towards blended learning approach

Items	Measuring Items	SA	A	N	D	SD	M	Std. D
BLAP1	Blended Learning offers diverse opportunities in teaching.	14	30	3	2	5	3.87	1.11
BLAP2	Blended Learning will improve quality of teaching.	12	35	3	1	3	3.96	1.02
BLAP3	Blended Learning is likely to reduce dropout rates.	6	28	14	5	1	3.61	0.96
BLAP4	Blended Learning may improve learning outcomes/ examination scores.	10	33	7	2	2	3.87	0.89
BLAP5	Blended Learning provides learning anywhere anytime.	9	30	9	4	2	3.74	0.95
BLAP6	Posting and sharing of course material will be easier in blended learning classes.	13	36	3	0	1	4.07	0.79
BLAP7	Blended Learning will enhance monitoring and grading of students.	9	29	10	6	0	3.75	0.86
BLAP8	Blended Learning will make teaching easier.	10	30	9	4	1	3.81	0.89
BLAN9	Insufficient internet access can impact the platform of Blended Learning.	14	31	5	2	2	2.02	0.92
BLAN10	Giving feedback in the context of Blended Learning takes time.	3	20	15	12	4	2.89	1.05
BLAP11	Blended Learning is a good strategy for Inclusive education.	18	26	5	3	2	4.02	1.00
BLAP12	Blended Learning will lead to increased user engagement.	10	36	7	0	1	4.00	0.70
BLAP13	Blended Learning is a flexible process.	16	28	7	0	2	4.06	0.88
BLAP14	Blended Learning is a constructivist approach of teaching.	18	27	8	0	1	4.13	0.80
BLAN15	Teacher's authority over the teaching learning process will be compromised by blended learning.	5	12	8	23	5	3.20	1.19
BLAN16	Teachers are poorly motivated to adopt modern technology in teaching.	1	24	7	15	7	3.06	1.15
BLAN17	Blended Learning is a confusing process.	4	1	6	32	11	3.83	1.05
BLAN18	Blended Learning is more time consuming than traditional method.	5	14	9	17	8	3.17	1.25
BLAP19	Blended Learning is cost effective.	6	24	20	3	0	3.62	0.90
BLAN20	Implementing Blended Learning requires IT training.	10	25	5	12	3	2.52	1.19
BLAN21	I will not adopt Blended Learning mode of teaching in teacher education course.	1	6	7	27	12	3.81	0.98
BLAN22	Students will get unruly in Blended Learning course.	0	4	23	16	11	3.62	1.09
BLAP23	With blended learning, a teacher can use a range of communication options.	8	36	7	1	1	3.92	0.73
BLAN24	Combining formal (offline) and non-formal (online) methodologies of learning is not possible.	0	8	6	27	11	3.78	0.96
BLAP25	I am interested in using Blended Learning approach in my class.	19	27	5	1	1	4.16	0.82
Average mean = 3.61, $\bar{x} \geq 3.61$ is significant								

BLAP *= Blended learning Attitude Positive (Denotes positive sentences on assessing attitude towards blended learning).* ***BLAN*** *= Blended learning Attitude Negative (Denotes negative sentences on assessing attitude towards blended learning)*

Scrutinizing the responses, we found that all the 15 positive items had their mean scores greater than the average mean, implying a significant attitude level on all positive sentences on blended learning. And out of the 10 negative attitude items, responses on 4 items were significant with mean scores greater than the weighted average mean, while 6 negative items had mean scores less than the weighted mean, thus were insignificant. Analyzing the responses on table 4 revealed that, the participants gave 19 out of 25 sentences a higher end response i.e., voted 76% of the cases as significant, thus proving that teacher-educators have an optimistic attitude towards the use of blended learning in their instruction and learning process.

6.3. Relation between awareness and attitudes of the teacher-educators on blended learning:

The relationship between the two variables viz. awareness and attitude of the teacher-educators towards blended learning, was examined using the Pearson Product Moment Correlation test. The achieved response scores on the awareness and attitude scales measured on 3-point rating scale and 5-point Likert scale respectively were used to calculate the correlation co-efficient. This test only explains the strength of the relationship and whether or not the two variables have a significant relationship.

Table 4: Relation between awareness and attitude on blended learning among teacher-educators

Result relationship	N	Correlation "r"	p-value
Awareness and Attitude	54	0.422	0.014

Level of significance (p<0.05)

The significance level was kept at a confidence level of $p \leq 0.05$. As shown in table 4, the achieved correlation co-efficient ($r = 0.42$) was positive and the p value was lesser than 0.05, so it indicates a substantial positive association between the level of awareness and attitude towards blended learning among teacher-educators, and the relationship strength was moderately high (Akoglu, 2018)[26].

7. Findings and Discussions:

The study's findings offer insightful information about the attitudes and awareness of teacher-educators towards the adoption of blended learning in teacher education programs. The data reveals that majority of the teacher-educators (72.86%) had a high level of awareness about blended learning, with an overall mean awareness of 85.8%. This suggests that teacher-educators in the sample have a strong foundational understanding of the key concepts and benefits associated with blended learning approaches. The results are consistent with study

[26] Akoglu, H. (2018). User's guide to correlation coefficients. *Turkish Journal of Emergency Meduicine, 18*(3). https://doi.org/10.1016/j.tjem.2018.08.001

conducted by Olusanjo et al. (2017)[27], which found that college lecturers had a good understanding and perception on blended learning. Further, Claudio (2003)[28] underscored that teachers generally exhibit high self-efficacy, positive attitudes, and readiness towards adapting to blended learning, which are crucial for successful implementation.

The teacher-educators' attitudes towards blended learning showed a largely positive stance. The analysis of the attitude scale responses found that the respondents had mean scores above the decision threshold ($\bar{x} \geq 3.61$) on 19 out of the 25 statements. Further the participants had significant high mean scores on all the positive sentences about blended learning, indicating that the positive aspects of blended learning are much powerful and significant in bringing up the futuristic trend in education. Other studies align with this finding where it had been found that teachers' attitude and self-efficacy towards blended learning were highly positive, indicating a strong inclination towards adopting this approach (Alconis, 2023)[29]. Additionally, study conducted on high school teachers in Philippines, revealed that these educators are equipped for blended learning with technical literacy and activity plannings, further emphasizing their awareness of and preparedness for this instructional method (Vergonia and Mombas, 2002)[30]. Educators perceive blended learning as offering diverse opportunities, improving teaching quality, enhancing learning outcomes, facilitating convenient access, and promoting student engagement. Notably, our findings also revealed some areas of potential concern, like the teacher-educators expressing reservations about the potential challenges of blended learning such as Internet connectivity issues, the time-consuming nature, and the possibility of teachers losing control over the teaching learning process. These attitudes should be considered while developing and putting into practice blended learning initiatives in teacher education programs.

Additionally, the study found a positive and moderately strong correlation ($r = 0.42$) between the teacher-educators' awareness and their attitudes towards blended learning. This suggests that as awareness and understanding of blended learning approaches increase, the teacher-educators are more likely to develop positive attitudes and a willingness to adopt this method in their teaching practices. Other studies though in other contexts had found high positive

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correlation between awareness and attitude among secondary school students for environmental education (Amirad et al., 2013)[31], and a positive relation between content knowledge skills and attitudes towards technology among Turkish EFL teachers (Kozikoğlu and Babacan, 2019) [32]. This underscores the need to provide comprehensive professional development and training opportunities, so as to ensure that teacher-educators are well equipped to navigate the transition to blended learning environments.

8. Conclusion:

In spite of limitation with a small sample size, this study on the relationship between awareness and attitude of teacher-educators towards blended learning reveals promising insights into the evolving landscape of education. With high levels of awareness and positive attitudes observed among teacher-educators, it is evident that the groundwork for embracing blended learning as a futuristic trend in education has been laid. The robust cognitive recognition and understanding of blended learning modalities among educators, coupled with their enthusiastic disposition towards its adoption, signal a significant paradigm shift towards innovative pedagogical practices. Further research into the relationship between awareness and attitude towards blended learning is recommended for gaining deeper insights into the factors influencing educators' perceptions and behaviors. Longitudinal studies, comparative analysis, and qualitative enquiries can give a more sophisticated explanation of the nuances related to the adoption and execution of blended learning initiatives. By recognizing the symbiotic relationship between awareness and attitude towards blended learning and implementing targeted intervention to enhance both, educational stakeholders can set the path for a future, where technology would promote educational excellence and equity. Through strategic investments in professional development, institutional support, collaboration, and ongoing research, we can collectively advance towards realizing the transformative potential of blended learning in education.

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