SWOC (Strengths, Weaknesses, Opportunities and Challenges) Analysis: Perceptions of Teachers in the Garhwal Region about Blended Learning

Rashmi Nautiyal[1]* • Prashant Dabral[2]

[1]*Department of Education, Pauri Campus, HNB Garhwal University, Uttarakhand, India,*
[1]*Department of Education, Pauri Campus, HNB Garhwal University, Uttarakhand, India*

*Corresponding Author Email Id: rashminautiyal9@gmail.com

Abstract: In this modern era, prioritizing innovations in the education system is essential to meet the needs and aspirations of students. Blended learning combines technology and traditional teaching methods. This study aims to investigate teachers' perceptions of blended learning's SWOC (Strengths, Weaknesses, Opportunities and Challenges) and provide guidelines for its formal implementation. This study used a qualitative research methodology, with data collected through semi-structured interviews using a prepared interview guide. A purposive sampling technique was employed, resulting in the selection of 30 teachers. The qualitative data were analyzed using thematic analysis. The key themes identified were teachers' perceptions of blended learning, teaching flexibility, available facilities, geographic conditions and factors influencing blended learning implementation. These perceptions suggest that independent learning, flexibility, accessibility and student engagement are hallmarks of blended learning. However, challenges such as distractions, difficulties in designing blended learning and online assessment persist. The study emphasizes the importance of blended learning in higher education for better academic achievement, personalized learning, diverse learning environments and easily accessible learning platforms.

Key Words: SWOC • Blended Learning • Perceptions • Garhwal Region

Introduction

The National Education Policy (NEP) 2020 supports blended learning as one of the tool to achieve its core principles of access, equity, quality, affordability and accountability. Blended learning bridges geographical barriers by combining online learning with limited face-to-face instruction. It provides equal learning opportunities for marginalized groups, enabling flexible study times and multilingual content. It enhances teaching and learning standards by integrating interactive content, video lectures, AI-based adaptive learning and online assessments. Additionally, it makes education financially accessible by reducing costs related to commuting, textbooks and physical infrastructure. Furthermore, blended learning holds institutions and educators accountable for learning outcomes through real-time data collection and self-paced learning. Blended learning, also known as web-enhanced instruction, technology-mediated instruction or mixed-mode instruction, is a teaching method that combines traditional classroom learning with online educational content and interaction opportunities. Alison and Rebecca (2019) stated blended learning as a method that integrates formal and informal learning, face-to-face and online experiences and emphasizes guided paths, self-management and digital context through collegiate connections.

Blended learning has gained significant global recognition as a future-forward approach to education, particularly in the wake of the COVID-19 pandemic. OECD (2021) report assesses the role of technological innovations

and blended learning in post-pandemic education systems, emphasizing how blended models can contribute to educational continuity and quality across multiple contexts. At the national level, NITI Aayog (2021) provides a comprehensive review of the evolution of EdTech in India. It outlines how technology supported blended learning models, enhance flexibility, accessibility and learner engagement. NCERT (2021) contributes to this discourse by presenting a detailed roadmap for implementing blended learning in India. It introduces a behavioral model that accounts for the diverse social and geographical contexts of the country, making the blended approach more contextually relevant and adaptable. Complementing this, the Ministry of Education, Government of India (2022), has laid out a vision to develop an integrated digital educational ecosystem. This initiative aims to support and promote blended learning nationwide by leveraging digital infrastructure, teacher capacity building and inclusive policy frameworks. The UNESCO (2022) report emphasizes the critical role of blended learning in shaping the future of education and the incorporation of digital technologies into teaching methodologies to ensure inclusivity, resilience and adaptability. Together, these reports form a strong foundation advocating for the structured implementation of blended learning as a sustainable and equitable model of education in the 21st century.

A SWOC analysis is a tool for developing business or organizational strategies that involves creating a structured model that considers resources, capabilities and environmental requirements. It evaluates an organization's internal strengths, weaknesses, opportunities and challenges while also analyzing the positive and negative factors that influence its success. This evaluation aids in formulating a systematic strategy for the organization. SWOC (Strengths, Weaknesses, Opportunities, Challenges) analysis is a

management tool that categorizes strengths (S) and weaknesses (W) as internal factors, while opportunities (O) and challenges (C) are considered external factors beyond the organization's control. SWOC analysis is well-known for assessing a business's strategic situation and its environment (Panagiotou, G. 2003; Shen L. Y., Zhao Z. Y. and Drew D. 2006). SWOC Analysis is a continuous assessment of the business environment, allowing organizations to anticipate and predict changing trends, which can then be integrated into the decision-making process (Weirich, H., 1982). SWOT analysis is a commonly used management and administration technique for evaluating the strengths and weaknesses of a program, institution or business strategy, as well as anticipating potential opportunities and threats. This analysis applies not only to businesses but also to individuals and team building. SWOC analysis, the McKinsey 7S framework, PEST analysis, the ICDT model and Porter's Five Forces model are some of the techniques available for analyzing individual characteristics or organizational effectiveness in a specific environment. These models and techniques facilitate the systematic identification of various factors influencing individuals or organizational systems, allowing for greater improvement.

Research Objectives

A SWOC (Strengths, Weaknesses, Opportunities and Challenges) analysis of blended learning has not yet been conducted at the three affiliated campuses of Hemvati Nandan Bahuguna University, Uttarakhand—specifically, Birla Campus, Tehri Campus and Pauri Campus. Therefore, this study aims to analyze teachers' perspectives on the strengths, weaknesses, opportunities and challenges of blended learning at the Pauri campus of HNB Garhwal University, Uttarakhand . The research also seeks to assess the acceptance and readiness of teachers toward blended

learning. To achieve this objective, the study addresses the following research questions:

RQ1: What are the strengths of blended learning at HNB Garhwal University's Pauri campus?

RQ2: What are the weaknesses of blended learning at HNB Garhwal University's Pauri campus?

RQ3: What are the opportunities for blended learning at HNB Garhwal University's Pauri campus?

RQ4: What are the challenges to blended learning at HNB Garhwal University's Pauri campus?

These research questions relate to existing literature on factors influencing teachers' perspectives on using blended learning, as well as the SWOC analysis itself. The report will cover the materials and methods used in the study, followed by an analysis of the results and a detailed discussion of the findings, limitations and conclusions. The outcomes of this study will assist all educational stakeholders in identifying the strengths of blended learning, enhancing them, discovering new opportunities and addressing the challenges.

Research Methodology

The qualitative research method was utilized for this study, aiming to gain a deeper understanding of teachers' feelings and perceptions regarding blended learning. The research was conducted at the Pauri Campus of Hemvati Nandan Bahuguna Garhwal University, which was established in 1973. To systematically implement a blended learning program in the university and its affiliated institutes in the future, the perceptions of teachers at the Pauri Campus were examined in relation to the strengths, weaknesses, opportunities and challenges (SWOC) of blended learning. Conclusions were drawn by analyzing the feedback received from faculty members across various departments of the Pauri Campus.

Population and Sample: One of the three campuses affiliated with HNB Garhwal University (a central university) in Uttarakhand—specifically the Pauri campus—was selected using purposive sampling. Thirty teachers from various departments at the Pauri campus were then chosen through a random sampling technique.

Tools: The researcher utilized an answer writing format, semi-structured interviews and empirical observation to gather insights from the teachers.

Results and Discussion

The qualitatively collected data was analyzed using the SWOC analysis method. The investigator categorized the data into four major components. The analysis of the teachers' responses was tabulated through the creation of a SWOC matrix (Table 1)

SWOC Matrix: The researcher first organized the identified factors into a SWOC matrix—a four-quadrant grid that visually represents both internal and external factors. Strengths and weaknesses are located in the internal factor quadrant, while opportunities and challenges are located in the external factor quadrant.

Table 1: Key responses on Strengths, Weaknesses Opportunities and Challenges of BL

Blended learning at HNB Garhwal University, Pauri campus	
Analysis of Strengths and Weaknesses of Blended Learning in SWOC (RQ1 and RQ2) Internal factors	
Strengths of Blended Learning	**Weaknesses of Blended Learning**
- Increased classroom interaction, - Availability and Efficient Use of Teaching Resources - Promoting independent learning, - Enhanced Student Engagement, - Flexibility in Teaching,	- Uneven geographical conditions, - Access to resources and expensive resources, - Conservative attitude towards traditional education process, - Poor infrastructure,

• Immediate results and feedback • Data-Driven Insights • Opportunities for collaboration • Improved accessibility	• Inadequate internet connectivity, • Lack of concentration of students
Analysis of Opportunities and Challenges of Blended Learning in SWOC (RQ3 and RQ4) **External factors**	
Opportunities of Blended Learning	**Challenges of Blended Learning**
• Convenient platform for teaching, • Improved learning and academic achievement • Equal access to content • Can solve teacher shortages. • The content is understandable. • Suitable for international students. • User-friendly • Useful for diverse learner needs • Improves instruction with technology. • Personalizes learning • Technology-enabled assessments • Receive help and professional development.	• Resistance to change • Chat sessions and other distractions • Plagiarism • Challenges in training teachers • Difficulty in designing blended learning • Lack of infrastructure and institutional support hinders implementation • Difficulty in online assessment • Struggle to invest time in blended learning along with teachers' existing responsibilities.

Strength (Fig 1): Teachers believe that blended learning improves classroom interaction and student engagement through diverse teaching methods. According to teacher 2, "*Blended learning transforms traditional face-to-face classroom teaching into an interactive learning environment*."The availability and efficient use of teaching resources encourage a variety of learning styles, while teaching flexibility enables teachers to adapt content delivery as needed. It encourages independent learning in students and provides immediate results and feedback, allowing for quick adjustments. According to teacher 6, "*Blended learning promotes an independent learning platform for students*". Data-driven insights help students track their progress, while collaboration opportunities encourage peer learning. Overall, it improves access to education for a diverse range of learners. According to Bergman (2012), educational institutions have used online resources to increase student access to their courses, allowing for online assessments. Blended learning boosts student engagement, performance and perceptions while also increasing cost-effectiveness, flexibility and overall learning outcomes (Cai et al., 2015).
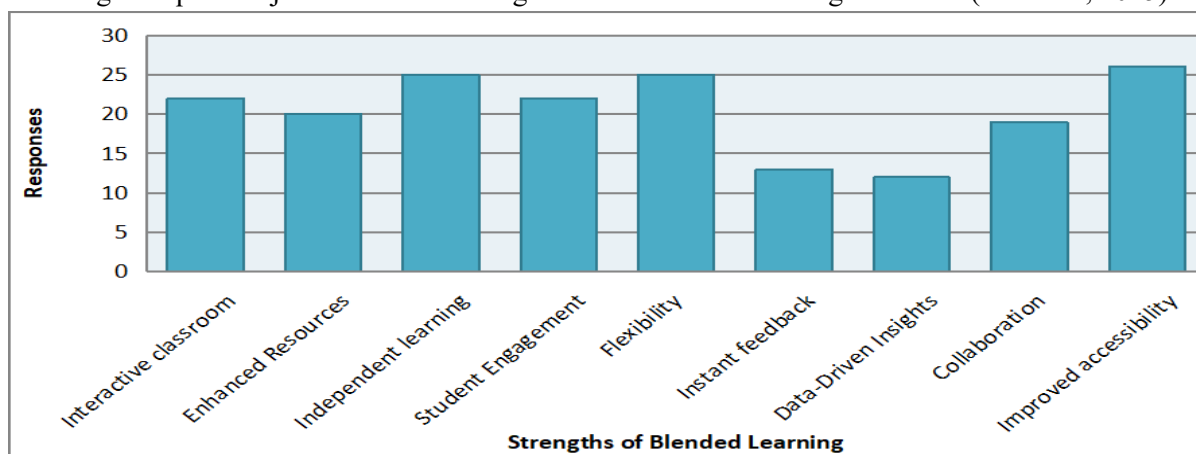

Fig. 1. Graph of strength of blended learning

Weaknesses (Fig 2): While blended learning offers various strengths, it also has some weaknesses that should be acknowledged, although these are minor compared to its

advantages, particularly in regions like Uttarakhand. According to teacher 3, "*Unreliable internet in remote areas hampers students' consistent participation*". These include uneven geographical conditions and limited access to essential resources, many of which are also expensive. A conservative mindset favoring traditional teaching methods further resists its adoption. Additionally, poor infrastructure, inadequate internet connectivity and a noticeable lack of student concentration during online sessions contribute to its limited effectiveness. According to teacher 9 "*During online class sessions, I've seen distraction among students by using social media and other sites*".
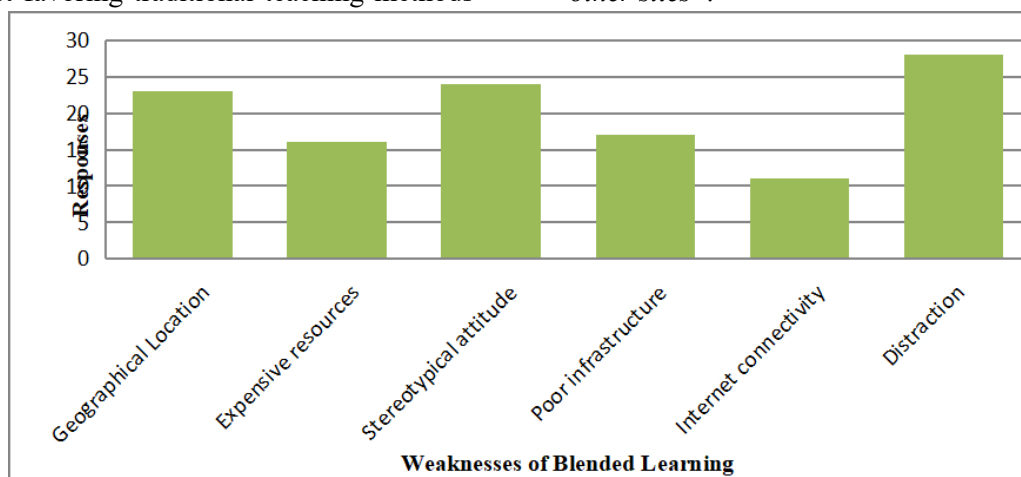

Fig. 2. Graph of weaknesses of Blended Learning

Opportunities (Fig 3): Blended learning can provide a convenient and user-friendly platform for teaching, enhancing both instructional quality and academic achievement. According to teacher 21, "*The use of blended learning in classroom teaching can have a positive impact on academic achievement.*" It ensures equal access to educational content, making it particularly effective for diverse needs of learners. Teachers believe it can address teacher shortages by supplementing instruction with digital resources. The content is generally easy to understand and supports personalized learning, tailored to individual student needs. According to teacher 15 "*Blended learning can help in personalize instruction to meet the needs of each student.*" Additionally, it facilitates technology-enabled assessments and offers educators timely support and opportunities for professional development.
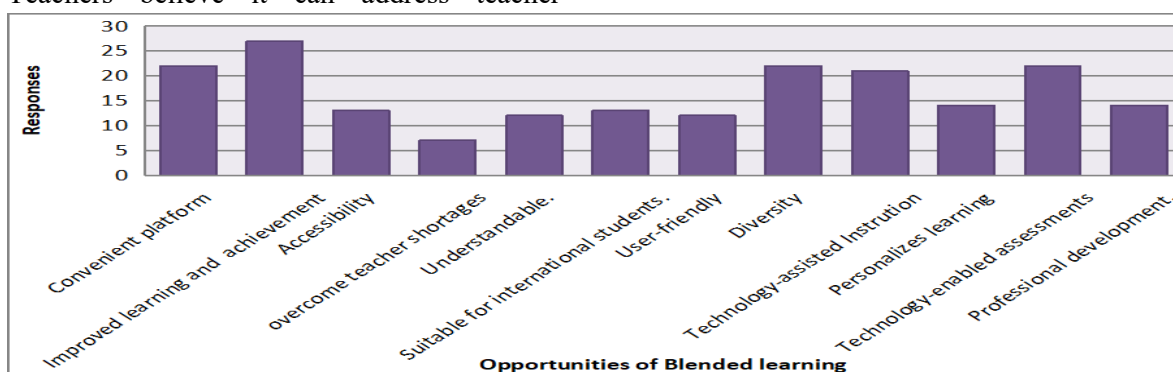

Fig. 3. Graph of Opportunities of Blended learning

Challenges (Fig 4): Blended learning faces several practical challenges in its implementation. Teachers express resistance to change, often finding it difficult to adapt to new teaching methodologies. Distractions like chat sessions and other online interruptions can reduce student focus. Plagiarism is another serious concern that has arisen as a result of

easy access to online content. A major challenge is training teachers, many of whom are unfamiliar with digital tools and pedagogies. Furthermore, creating effective blended learning models that balance online and offline components remains difficult. The situation is exacerbated by a lack of infrastructure and institutional support, especially in rural or underfunded areas. According to teacher 26 *"Blended learning* *works best in a team setting, but most institutions lack collaborative structures."* Online assessments pose another difficulty, as ensuring fairness and reliability remains problematic. Teachers struggle to devote time to blended learning due to current workload and responsibilities. According the teacher 15, *"Teaching both online and in-person under blended learning increases my workload."*
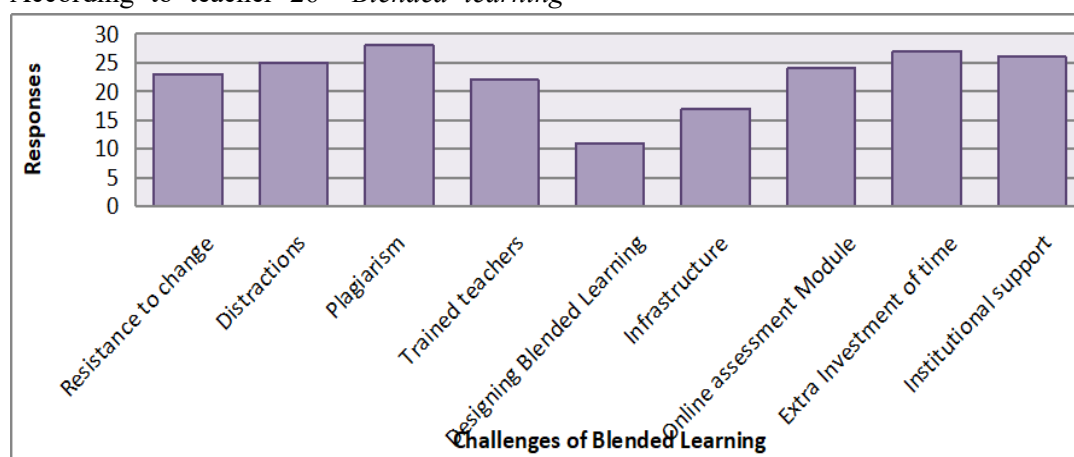

Fig. 4. Graph of Challenges of Blended Learning

Conclusion and Discussion

Blended learning is an innovative approach that enhances the effectiveness of teaching and learning by offering a wide range of possibilities. It accommodates different teaching methods, learning styles and environments to meet the diverse needs and expectations of teacher and student. According to Saunders and Werner (2002), no single teaching strategy can maximize learning for a variety of learners. Instead, a combination of methods provides variety and leads to desired outcomes. Nautiyal and Khanduri (2023) found a positive attitude of B.Ed. trainees towards blended learning. Klein et al. (2007) state that blended learning is capable of developing innovative learning formats to meet both perceived and unanticipated learning needs in a supportive environment. The present study indicates positive perception of teachers towards blended learning approach. The study indicates that blended learning has more strengths than weaknesses.

The challenges encountered in implementing blended learning can be addressed through the active cooperation of various stakeholders involved in the education process. Additionally, it holds various opportunities and possibilities within the education process. The findings of the study also indicates that the teachers are willing to adopt it, they encounter significant obstacles. Key issues include the need for improved infrastructure, specialized training for both teachers and students, increased awareness of innovative teaching and learning strategies, a shift from conservative attitudes and access to educational resources at reasonable costs.

By making radical changes to geo-specific infrastructure development across the country, including Uttarakhand, the possibilities of blended learning can be explored. An experimental research conducted regarding blended learning at HNB Garhwal University Uttarakhand finds a positive impact on the academic achievement of students, Nautiyal

and Khanduri, (2025). The present study supports the principles of NEP 2020 (National Education Policy) and is helpful in achieving the set objectives of NEP. Therefore, it is suggested that extensive research should be done in the future for its better implementation. To successfully implement blended learning, it is recommended that teachers receive customized training courses, online component management tools, technical support and frequent assessment.

Thus, this analysis is not limited to HNBGU Pauri campus alone but it can also serve as a guide for developing blended learning strategies in other rural, marginalized and resource-constrained areas of the country. It will help enhance the quality, accessibility, inclusivity and flexibility of education.

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