



Exploring the Perception of Secondary Level Students Towards Blended Learning After the COVID-19 Pandemic: A Qualitative Study

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ABSTRACT

The COVID-19 pandemic fundamentally disrupted conventional pedagogical practices worldwide, compelling educational institutions to adopt emergency remote teaching and, subsequently, blended learning modalities. This qualitative study explores the perceptions of secondary level students towards blended learning in the post-pandemic educational landscape in West Bengal, India. Employing a phenomenological research design, the study engaged 20 purposively selected Class IX and Class X students from government-aided schools affiliated with the West Bengal Board of Secondary Education (WBBSE). Data were collected through in-depth semi-structured interviews and focus group discussions and analysed using thematic analysis. Findings reveal five major themes: (a) perceived flexibility and accessibility of blended learning environments, (b) challenges related to digital infrastructure and connectivity, (c) shifts in social and peer-learning dynamics, (d) modifications to students' self-control and motivation, and (e) the function of teacher facilitation in mixed learning environments. The study is theoretically founded in the Community of Inquiry (CoI) framework and Self-Determination Theory (SDT). Results suggest that while students broadly recognise the pedagogical benefits of

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blended learning, persistent inequities in digital access continue to undermine its effective implementation. The paper concludes with implications for policy, pedagogy, and future research in the Indian secondary education context.

INTRODUCTION:

As society evolves, there is an increasing demand for an educational system that aligns with contemporary needs, particularly through "Blended Learning." Today's learners, who are more tech-savvy, approach knowledge acquisition and problem-solving differently than previous generations (Ayala, 2009). The shift towards blended learning is not just innovative but a necessary adaptation to integrate digital resources with physical education in response to the changing landscape of higher education (Bailey, et.al., 2013). The global outbreak of the COVID-19 pandemic in early 2020 constituted an unprecedented disruption to educational systems across the world (Chew, 2009). In India, the closure of schools mandated by central and state governments under successive lockdowns abruptly terminated face-to-face instruction for millions of learners, including those enrolled at the secondary level. The Government of West Bengal, in compliance with national directives, shut all educational institutions, compelling schools affiliated with the West Bengal Board of Secondary Education (WBBSE) to pivot to remote and online modes of instruction almost overnight (Dhawan, 2020; Mishra et al., 2020).

As the immediate crisis of the pandemic gradually receded and schools resumed physical operations, a hybrid or blended approach to learning emerged as a pragmatic and educationally enriching alternative to either pure online or purely face-to-face instruction. Blended learning, broadly defined as the intentional integration of online digital media with traditional classroom methods (Graham, 2006; Garrison & Vaughan, 2008), gained renewed academic and policy attention in the post-pandemic period. Institutions began recognising that the infrastructural investments made during the pandemic—in learning management systems, digital content creation, and teacher digital literacy—could be leveraged within blended pedagogical frameworks.

Secondary level education in India, particularly within the WBBSE framework, is characterised by high-stakes assessment environments, heterogeneous student populations, and significant urban-rural disparities in digital access. Against this backdrop, understanding how secondary students perceive and experience blended learning environments is of considerable theoretical and practical importance. Students'



perceptions are widely acknowledged as influential determinants of engagement, learning outcomes, and the successful adoption of instructional innovations (Dziuban et al., 2018; Oliver & Trigwell, 2005).

Despite growing scholarly attention to blended learning in higher education, empirical research examining student perceptions at the secondary level, particularly in the Indian context and specifically in the post-COVID-19 phase, remains sparse. Most available studies are quantitative in nature and focused on higher education settings in Western contexts (Boelens et al., 2017; Halverson et al., 2014), leaving a substantial gap in the qualitative, experience-centred exploration of secondary learners in emerging economies. The present study addresses this lacuna by adopting a qualitative phenomenological approach to investigate the lived experiences and subjective perceptions of Class IX and X students in West Bengal towards blended learning in the aftermath of the pandemic.

The study is guided by the following research questions: (1) How do secondary level students in West Bengal perceive blended learning in the post-COVID-19 context? (2) What challenges and opportunities do students identify in blended learning environments? (3) How do students' self-regulatory behaviours and motivational orientations interact with blended pedagogical structures?

REVIEW OF LITERATURE:

Conceptualising Blended Learning

Blended learning has been conceptualised variously in the scholarly literature, ranging from simple combinations of online and offline instruction to sophisticated pedagogical models that reconceptualise the roles of teachers and learners. Graham (2006) described blended learning as the convergence of face-to-face and computer-mediated instruction, whereas Garrison and Vaughan (2008) positioned it as a fundamental reconceptualisation of education that achieves significant learning through the thoughtful integration of physical and virtual learning environments. More recent conceptualisations have emphasised the importance of intentionality, where the blend is purposefully designed to leverage the strengths of each modality rather than simply combining them (Horn & Staker, 2014; Picciano, 2017).

The Community of Inquiry (CoI) framework, originally developed by Garrison et al. (2000), provides a widely used theoretical lens for analysing blended learning environments. The framework identifies three interdependent presences—cognitive presence, social presence, and teaching presence—as constitutive of meaningful educational experiences. Several researchers have applied the CoI framework to blended contexts and confirmed its utility in explaining student engagement and learning depth (Garrison & Akyol, 2013; Swan et al., 2009).

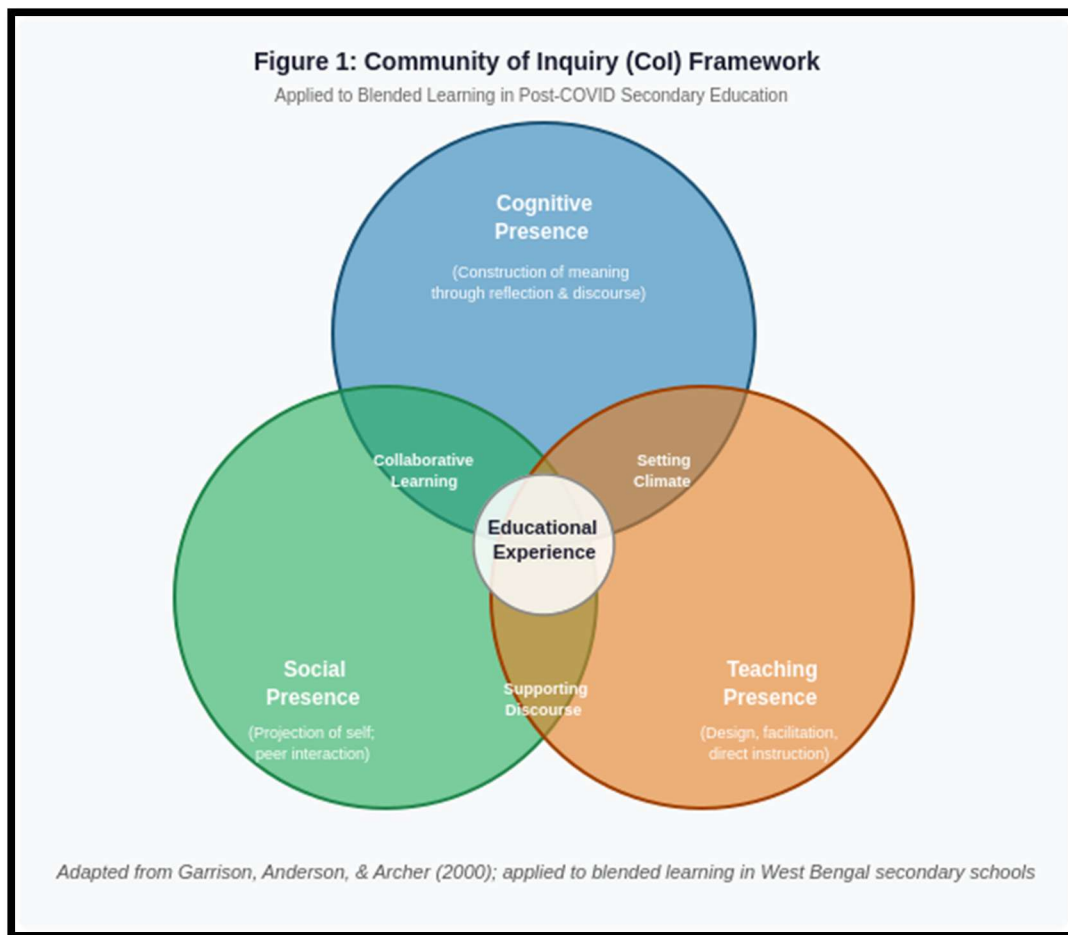


Figure 1: Community of Inquiry (CoI) Framework Applied to Blended Learning in Post-COVID Secondary Education

Student Perceptions of Blended Learning

Research on student perceptions of blended learning has consistently identified both affordances and constraints of the modality. Studies such as those by Dziuban et al. (2018) and Means et al. (2013) suggest that students generally value the flexibility and self-pacing opportunities afforded by blended environments, while simultaneously expressing concerns about reduced face-to-face interaction and the self-discipline required for effective online engagement. In Asian educational contexts, students have been found to exhibit stronger preferences for structured, teacher-directed instruction, leading to ambivalent attitudes towards the autonomy demands of blended learning (So & Brush, 2008; Vo et al., 2017).

In the Indian context, studies on blended learning have primarily focused on higher education. Researchers such as Bansal and Sharma (2019) and Kumar and Nanda (2019) found that undergraduate students perceived blended learning positively in terms of access to resources and learning flexibility, but



reported challenges in terms of self-motivation and digital literacy. Research at the secondary level remains limited, with most available studies being descriptive or confined to specific urban settings.

COVID-19 and the Reconfiguration of Learning

The COVID-19 pandemic catalysed a massive, involuntary shift to remote learning that exposed deep structural inequities in access to digital infrastructure, particularly in rural and semi-urban India (Dhawan, 2020; UNESCO, 2020). Studies conducted during the pandemic period revealed that a significant proportion of secondary students in West Bengal lacked reliable internet connectivity and personal devices, severely limiting their ability to participate in online instruction (Roy & Ghosh, 2021; Sarkar, 2021). Post-pandemic educational recovery efforts have sought to consolidate the gains of digital adoption while reinstating the benefits of physical schooling, with blended learning emerging as a key strategic approach (NITI Aayog, 2021; NEP 2020).

Self-Determination Theory (SDT), proposed by Deci and Ryan (1985, 2000), provides a complementary theoretical lens through which to examine student motivation within blended contexts. SDT posits that human motivation is energised by three fundamental psychological needs: autonomy, competence, and relatedness. The extent to which blended learning environments satisfy or frustrate these needs has significant implications for student engagement and persistence (Vansteenkiste et al., 2009; Black & Deci, 2000).

Research Gap

A review of the available literature reveals a significant gap in qualitative, phenomenologically grounded investigations of secondary students' perceptions of blended learning in the Indian post-pandemic context. Existing studies are predominantly quantitative, conducted in higher education settings, or focused on Western institutional environments. The present study fills this gap by foregrounding the lived experiences of WBBSE-affiliated secondary students, offering insights that are both contextually specific and theoretically grounded.

OBJECTIVES OF THE STUDY:

1. To exploring secondary students' perceptions of blended learning in West Bengal post-COVID-19.
2. To examine associated flexibility and accessibility, identifying challenges with digital infrastructure and connectivity.

3. To investigate shifts in social interaction and peer learning, and understanding the impact on self-regulatory behaviour using Self-Determination Theory.
4. To assess the role of teacher facilitation through the Community of Inquiry framework and derive implications for policy and pedagogy regarding effective blended learning implementation in West Bengal.

METHODOLOGY:

Methodological Diagram-

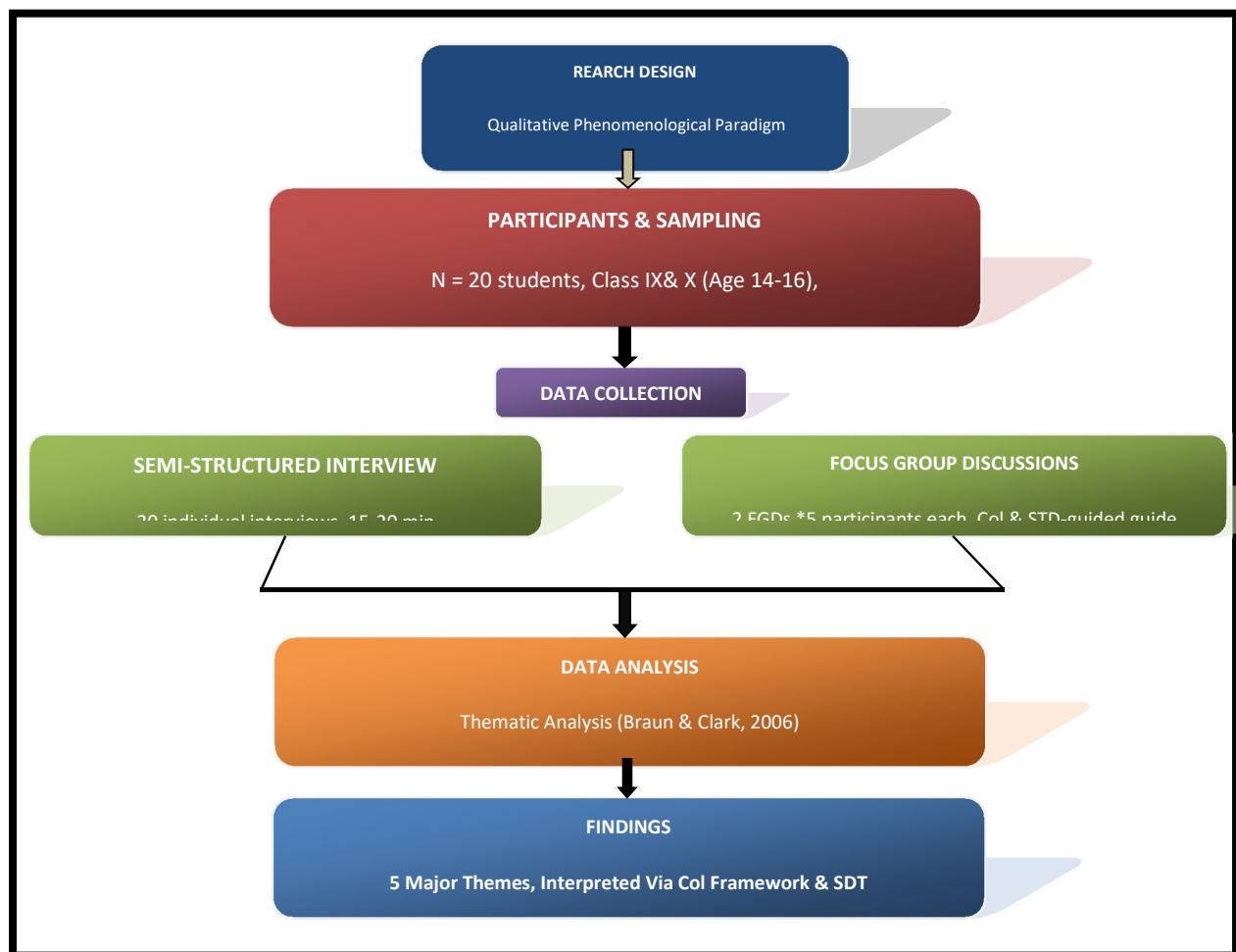


Figure 2: Research Methodology Flowchart

Research Design

This study adopts an interpretive, qualitative research paradigm rooted in the phenomenological tradition. Phenomenology, as elaborated by Husserl (1913) and later applied in educational research by van



Manen (1990), seeks to describe and interpret the structures of lived experience from the perspective of those who inhabit them. This design is particularly appropriate given the study's aim to understand how secondary students experience and make sense of blended learning in the post-pandemic environment, a phenomenon that is inherently subjective and context-dependent.

Participants and Sampling

Participants were drawn from three government-aided secondary schools located in urban, semi-urban, and rural settings within the North 24 Parganas district of West Bengal. A purposive sampling strategy was employed to ensure maximum variation in terms of gender, socioeconomic background, and access to digital devices. A total of 20 students from Class IX and Class X (aged 14–16 years) participated in the study. Informed consent was obtained from both students and their parents or guardians. Institutional ethical clearance was secured prior to data collection.

Data Collection

Data were collected using two primary instruments: (a) in-depth semi-structured interviews of approximately 15-20 minutes duration, conducted individually with each participant, and (b) two focus group discussions (FGDs), each comprising five participants, designed to elicit collective perceptions and facilitate peer-reflexive dialogue. Interview and FGD guides were developed based on the CoI framework and SDT, and were piloted with three students not included in the main study. Data collection was conducted in Bengali, with transcripts translated into English for analysis. Back-translation was employed to ensure semantic fidelity.

Data Analysis

Thematic analysis, as outlined by Braun and Clarke (2006), was employed to analyse the data. The analytical process involved six iterative phases: (1) familiarisation with the data through repeated reading of transcripts; (2) initial code generation; (3) searching for themes across codes; (4) reviewing candidate themes in relation to the data corpus; (5) defining and naming themes; and (6) producing the final thematic account. MAXQDA 2022 software was used to manage and organise coding. To enhance trustworthiness, member-checking, peer debriefing, and reflexive journaling were employed as credibility measures (Lincoln & Guba, 1985). Participants were assigned pseudonyms to ensure anonymity.

FINDINGS AND DISCUSSION

Thematic analysis of the data yielded five major themes, each supported by participant narratives and interpreted in light of the study's theoretical frameworks.

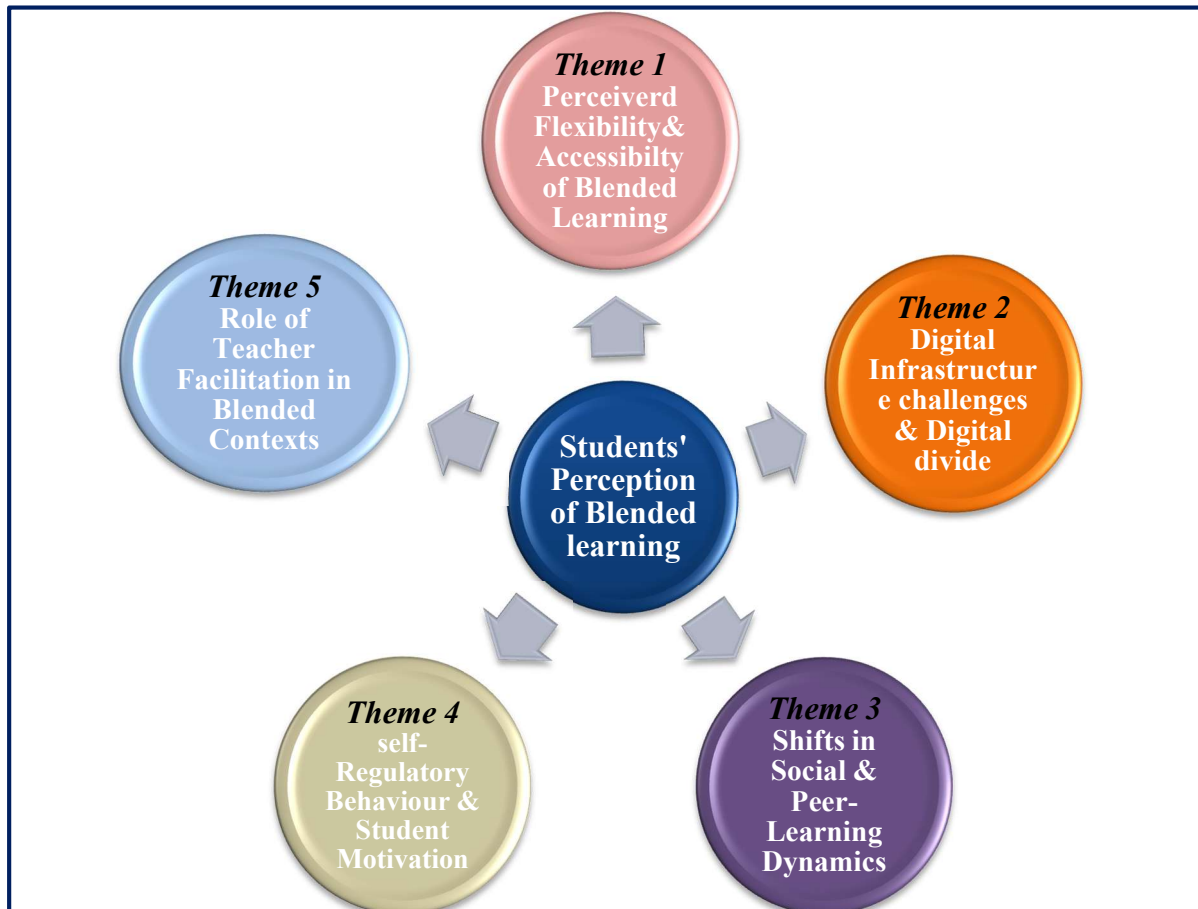


Figure 3: Thematic Map of Findings – Five Major Themes Emerging from Thematic Analysis

Theme 1: Perceived Flexibility and Accessibility of Blended Learning

The most consistently expressed perception among participants related to the flexibility that blended learning afforded in terms of time, pace, and access to learning materials. Students noted that the availability of recorded video lessons, digital notes, and online assignments allowed them to revisit content at their own pace, an affordance not available in exclusively face-to-face settings.

Participant Debjani (Class X, urban school) observed: "When the teacher explains something in class and I do not understand, I feel shy to ask again in front of everyone. But when we have the video at home, I can watch it three or four times until I understand." This finding aligns with Picciano's (2017) assertion that



asynchronous online components in blended environments can function as equalising mechanisms by enabling repeated exposure to instructional content.

However, the perception of flexibility was not uniformly positive. Participants from rural settings expressed frustration at the uneven availability of digital content, noting that flexibility was meaningful only when accompanied by reliable technological access. Participant Raju (Class IX, rural school) stated: "The teacher sends notes on WhatsApp, but our internet goes off every evening. By the time it comes back, the class group has fifty more messages and I cannot find the notes." This resonates with findings by Roy and Ghosh (2021), who documented significant connectivity challenges among rural secondary students in West Bengal during and after the pandemic period.

Theme 2: Digital Infrastructure Challenges and the Digital Divide

A significant proportion of participants, particularly those from rural and semi-urban schools, identified persistent challenges related to device access, internet reliability, and electricity supply as major barriers to equitable participation in blended learning. Thirteen of the twenty participants reported sharing mobile devices with parents or siblings, limiting their independent access to online components of the blended curriculum.

Participant Sanchita (Class X, semi-urban school) articulated the structural dimension of this challenge: "My father uses the phone for his work during the day. I can only use it at night, but then the network is slow or there is no light. So, I miss the online classes and then I fall behind." Such narratives point to the entrenched socioeconomic determinants of digital inclusion, corroborating findings by Dhawan (2020) and UNESCO (2020) regarding the differential impact of digital transitions on marginalised learner populations.

From the perspective of SDT, inadequate digital infrastructure may be interpreted as a frustration of the need for competence, insofar as students who lack reliable access to online resources are systematically disadvantaged in demonstrating and developing their academic capabilities. The resultant experience of helplessness and falling behind was described by several participants as demoralising and anxiety-inducing.

Theme 3: Shifts in Social and Peer-Learning Dynamics

Participants reported nuanced changes in the social dimensions of learning under blended arrangements. While several students valued the return to physical classroom interaction following the isolation of full online learning during the pandemic, they also noted that the social fabric of the classroom



had been subtly altered. The COVID-19 period had normalised individual, screen-mediated engagement, and some participants described difficulty in reinvesting emotionally in collaborative, face-to-face learning.

Participant Arnab (Class IX, urban school) reflected: "During online classes we were all separate in our houses. Now we are back in school but somehow it feels different. Group activities feel strange because we are used to doing everything alone." This observation is consistent with Garrison and Vaughan's (2008) emphasis on social presence within the CoI framework as a prerequisite for deep collaborative learning.

Conversely, participants described positive experiences of peer-assisted learning through digital channels, particularly WhatsApp groups and informal video-calling arrangements for collaborative homework. Participant Priyanka (Class X, urban school) noted: "We made a group on WhatsApp for our class. When we have doubts at night, we ask there. Sometimes a friend explains better than the teacher because they use words we understand." This finding underscores the pedagogical potential of informal digital peer interaction as a complement to formal blended instruction.

Theme 4: Self-Regulatory Behaviour and Motivation

A recurring theme in participant narratives concerned the demands that blended learning placed on students' capacity for self-regulation. In contrast to the highly structured, externally regulated environment of the traditional Indian secondary classroom, blended learning required students to manage their own time, prioritise tasks, and sustain motivation in the absence of constant teacher oversight.

Several participants, particularly those with lower prior academic achievement, described struggling with these demands. Participant Dilip (Class IX, rural school) stated: "In school, the teacher tells us what to do and we do it. At home, I keep the laptop open but I start watching YouTube. I do not have the habit of studying alone for so long." This narrative aligns closely with the SDT construct of external versus autonomous regulation (Deci & Ryan, 2000), suggesting that many students had internalised external regulatory orientations during years of traditional schooling and found the autonomy demands of blended learning disorienting.

In contrast, academically motivated students expressed a strong sense of agency and self-efficacy in navigating blended environments. Participant Moumita (Class X, urban school) described: "I made my own timetable for online study and offline study. I found that I actually learn more because I can choose when I am most awake and focused." Such findings suggest that the relationship between blended learning and student motivation is moderated by pre-existing motivational orientations and self-regulatory capacity.



Theme 5: The Role of Teacher Facilitation in Blended Contexts

Participants unanimously emphasised the centrality of the teacher in determining the quality of their blended learning experience. However, the nature of the desired teacher role had shifted perceptibly in the post-pandemic period. Students no longer positioned the teacher primarily as a transmitter of content but increasingly valued facilitative, supportive, and technologically responsive teacher behaviours.

Participant Sumi (Class X, semi-urban school) articulated this shift: "The teachers who just put PDFs on the group and say 'read this' are not helpful. The teachers who make short videos, check if we understood, and reply to our messages—those teachers are actually teaching us in a new way." This finding is consonant with Garrison et al.'s (2000) conceptualisation of teaching presence within the CoI framework, which encompasses the design, facilitation, and direct instruction functions required in online and blended learning contexts.

Several participants also noted that teachers varied considerably in their digital competence and willingness to engage with blended modalities, an observation that points to the need for systematic professional development in blended pedagogy. Participant Avinash (Class IX, rural school) observed: "Our class teacher is very good in class but he does not know how to make online classes interesting. He just reads from the book on video. It is boring and we turn off the camera." Such narratives highlight the critical role of teachers' technological pedagogical content knowledge (TPACK) in realising the potential of blended learning (Mishra & Koehler, 2006).

DISCUSSION:

The findings of this study illuminate the complex, multidimensional nature of secondary students' perceptions of blended learning in the post-COVID-19 context in West Bengal. Three overarching insights merit discussion.

First, the study confirms that the potential benefits of blended learning—flexibility, accessibility, and individualised pacing—are experienced unevenly across socioeconomic and geographic contexts. Students with stable digital access and adequate devices tend to perceive blended learning as empowering and academically enriching. Conversely, students in resource-constrained settings experience blended learning as an additional source of educational disadvantage, this finding also is supported by the previous studies of Dhawan (2020), Oliver & Trigwell (2005), Ayala (2009). This finding has significant implications for policy, suggesting that the expansion of blended learning as a post-pandemic educational



strategy must be accompanied by targeted investments in digital infrastructure, particularly in rural and semi-urban areas of West Bengal.

Second, the study's application of SDT illuminates the motivational complexity of blended learning for secondary students. The autonomous regulation required by blended environments represents a developmental challenge for many students who have been schooled in highly externally regulated pedagogical traditions. Educators and curriculum designers must therefore incorporate explicit scaffolding for self-regulatory skill development as an integral component of blended course design, rather than assuming these skills as prerequisites which is quite similar to the work of Bailey, Ellis, Schneider & Ark (2013); Braun & Clarke (2006).

Third, the findings strongly affirm the continued relevance and importance of teacher facilitation in blended learning environments. Contrary to narratives that position blended or online learning as routes to teacher disintermediation, participants in this study articulated a sophisticated and nuanced understanding of effective facilitative teaching. Their accounts suggest that pedagogical skill and relational presence become more, not less, important in blended contexts, with digital communication channels creating new expectations for responsiveness and feedback. This finding also is supported by the previous studies of Halverson, Graham, Spring, Drysdale & Henrie (2014); Picciano (2017) and Roy & Ghosh (2021).

CONCLUSION:

Blended learning is an educational approach that combines traditional face-to-face (f2f) instruction with e-learning. While the concept itself is not new, the term "Blended learning" recently gained prominence in educational discourse. It involves integrating various teaching modalities, leveraging both synchronous and asynchronous formats to enhance learning. This methodology incorporates physical classroom elements like lectures and hands-on activities alongside telecommunication technologies, including virtual communication tools and e-learning systems. As a flexible course design, blended learning aims to improve the overall learning experience by maintaining f2f interactions while providing the conveniences of online education.

This qualitative study explored secondary level students' perceptions of blended learning in the post-COVID-19 educational landscape in West Bengal, India. Using a phenomenological design and thematic analysis, the study identified five key themes: perceived flexibility and accessibility, digital infrastructure challenges, shifts in social and peer-learning dynamics, self-regulatory demands and motivation, and the centrality of teacher facilitation. The findings are theoretically grounded in the CoI framework and SDT,



offering an integrated interpretive account of the blended learning experience from the student's perspective this finding is quite similar to the work of Ayala (2009) and Bailey, et.al. (2013).

The study makes several contributions to the extant literature. Empirically, it provides qualitative evidence from the secondary school context in West Bengal—a setting that has been substantially underrepresented in blended learning research. Theoretically, it demonstrates the complementarity of the CoI framework and SDT in explicating the cognitive, social, and motivational dimensions of blended learning at the secondary level. Pedagogically, it foregrounds the continued and evolved role of teacher facilitation in blended environments supports the previous studies of Boelens, et.al. (2017) and Chew (2009).

Several limitations must be acknowledged. The study was conducted with a relatively small, purposively sampled group of students in a single district of West Bengal, limiting the transferability of findings. The exclusive focus on student perspectives, while appropriate to the study's phenomenological aims, means that teacher and institutional perspectives are not represented. Future research should adopt mixed-methods designs, include larger and more geographically diverse samples, and examine the perspectives of teachers, parents, and school administrators to develop a comprehensive understanding of blended learning dynamics in Indian secondary education.

As India's National Education Policy 2020 envisions a technologically enriched, flexible educational ecosystem, the sustained and equitable implementation of blended learning at the secondary level remains both a promise and a challenge. The voices of students, carefully attended to through qualitative inquiry, must remain central to the design, evaluation, and reform of blended pedagogical practices.

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