Challenges of *Teaching Presence* and SDL *Scaffolding*: A Systematic Literature Review on Dominant Pedagogical Barriers in Blended Learning Implementation in Higher Education

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Abstract

This Systematic Literature Review (SLR) provides an in-depth analysis of pedagogical barriers in Blended Learning (BL) within higher education, specifically focusing on challenges related to Teaching Presence (TP) and the scaffolding of Self-Directed Learning (SDL). While previous reviews have largely focused on infrastructural constraints, there is a scarcity of synthesis regarding design-centric pedagogical barriers. A rigorous PRISMA-compliant SLR protocol was applied to 20 empirically-driven studies published between 2021–2023 across diverse disciplinary contexts. Data were extracted based on predefined criteria and analyzed using qualitative thematic synthesis. Pedagogical barriers were frequently reported (identified in 90% of studies). Key challenges clustered around: (1) Deficient TP in Course Design (failure to cohesively integrate online and face-to-face activities) and (2) Inadequate SDL Scaffolding (failure to provide explicit guidance for student self-monitoring). This synthesis posits that technical constraints are often secondary consequences of foundational pedagogical design flaws. The findings establish that a primary bottleneck in contemporary BL implementation is pedagogical, offering a foundation for institutions to prioritize faculty development in instructional design.

Keywords: *Instructional Design; Pedagogical Barriers; Scaffolding; Self-Directed Learning (SDL); Systematic Review; Teaching Presence.*

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Introduction

The ubiquitous adoption of Blended Learning (BL) has cemented its role as the optimal hybrid instructional model within higher education, effectively leveraging technological flexibility while maintaining the high-impact value of interpersonal interaction. A critical theoretical premise supporting BL's value is its potential to foster complex 21st-century competencies, most notably Self-Directed Learning (SDL). The capacity of BL to strategically integrate asynchronous and synchronous components allows for the promotion of greater student autonomy and metacognitive skill development, positioning BL not merely as a technological compromise, but as a pedagogically superior approach essential for student success and lifelong learning in a dynamic digital world.

The efficacy of BL, however, is fundamentally contingent upon the faculty's instructional design and facilitation capabilities. These skills are theoretically encapsulated by the construct of Teaching Presence (TP) within the established Community of Inquiry (CoI) framework. TP comprises three crucial, interconnected functions: (a) design and organization of the educational experience, (b) facilitating discourse and social interaction, and (c) direct instruction to ensure cognitive progression. Critical evidence suggests that the design and organization component of TP is the most challenging and pivotal aspect of BL implementation, particularly concerning the provision of necessary scaffolding to enable effective Self-Directed Learning (SDL) among students (Bosch & Goede, 2019; Garrison & Kanuka, 2004). Failure in this specific design phase often results in a disjointed learning experience that hinders student autonomy.

While the extant body of literature regarding BL challenges is extensive, it predominantly remains disproportionately fixated on infrastructural and logistical constraints (e.g., technology access and connectivity) (Porter et al., 2014; Rasheed et al., 2020). Consequently, a systematic and methodologically rigorous synthesis dedicated specifically to isolating and categorizing the dominant pedagogical barriers—defined here as the critical failures in Teaching Presence and SDL scaffolding—is currently lacking (Martín-García, 2020). This research gap is significant as it obscures the development of targeted institutional interventions. Unlike previous BL reviews dominated by infrastructural perspectives, this study isolates pedagogical design barriers as primary determinants of implementation failure leaving educators equipped with technology but unprepared for the instructional complexities of hybrid environments.

This research, therefore, pursues the following objectives:

1. To systematically identify and synthesize the pedagogical barriers reported across 20 empirical studies, focusing specifically on challenges related to *Teaching Presence* and *scaffolding* of SDL.
2. To categorize these findings to delineate the most pervasive instructional obstacles impacting BL efficacy in higher educations.

Method

Study Design and Protocol

This investigation adopts a Systematic Literature Review (SLR) design. To ensure the highest standards of reporting quality and to mitigate selection bias, the research protocol strictly adheres to the guidelines set forth by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 statement. This methodological framework provides a transparent, replicable, and scientifically rigorous structure for the identification, screening, and inclusion of relevant studies. The systematic selection process employed in this study is visualized in the PRISMA flow diagram above.

Search Protocol and Timeframe Justification

A comprehensive literature search was conducted using three primary academic indexing databases: Scopus, Web of Science (WoS), and ERIC. These databases were selected for their extensive coverage of high-impact journals in the field of educational technology. The search strategy employed complex Boolean logic to maximize relevance, combining terms related to the intervention, the specific pedagogical problem, and the setting:

Search String: ("Blended Learning" OR "Hybrid Learning") AND ("Pedagogical Challenges" OR "Teaching Presence" OR "SDL Scaffolding" OR "Instructional Design Barriers") AND ("Higher Education" OR "University")

Justification for Timeframe (2021–2023): The temporal scope was strictly delimited to articles published between January 2021 and December 2023. This narrow, purposeful window was selected to exclude studies focused on "Emergency Remote Teaching" characteristic of the early pandemic phase (2020). Instead, this review aims to isolate contemporary implementation barriers in the "new normal" era, ensuring the analysis captures the challenges of mature, intentional BL models rather than the logistical constraints of crisis-response pedagogy.

Selection Criteria and Rigor of Selection

Articles were screened in three sequential stages: (1) Title and Abstract review, (2) Full-text inclusion criteria check, and (3) Quality Assessment.

Criteria	Inclusion (Accepted)	Exclusion (Rejected)
Research Focus	Primary empirical studies (quantitative, qualitative, mixed methods) explicitly focusing on **pedagogical challenges, Teaching Presence, or SDL**	Conceptual papers, non-systematic reviews, meta-analyses, or studies exclusively focused on technical efficacy or student satisfaction.

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	scaffolding within BL implementation.	
Context	BL implementation in **tertiary/higher education institutions**.	Focus on K-12, corporate training, or massive open online courses (MOOCs).
Language & Publication	English-language, peer-reviewed journal articles, with full-text accessibility.	Non-English articles or conference proceedings without subsequent journal publication.

The selection process followed a multi-stage screening protocol. From an initial corpus of 448 records, 428 were excluded during the title and abstract screening phases due to thematic irrelevance. The remaining full-text articles underwent a stringent quality assessment to ensure empirical robustness. Justification for N=20: The final inclusion of 20 high-quality articles represents a purposive sample size justified by the principle of conceptual saturation.

The selected studies encompass a range of geographical regions and disciplines, primarily within social sciences and STEM fields, ensuring a representative overview of contemporary BL contexts. During the iterative thematic coding process, it was observed that no new distinct categories of pedagogical barriers emerged after the analysis of the 15th study. Consequently, the final sample size (N=20) was deemed sufficient to provide a comprehensive, stable, and deeply analyzed synthesis of the specific phenomenon under investigation, prioritizing analytical depth over superficial breadth.

Data Extraction and Thematic Synthesis

Data were systematically extracted using a standardized extraction matrix to ensure o ensure reliability, two reviewers independently screened and coded the articles; discrepancies were resolved through consensus. The extraction fields included bibliographic metadata (author, year, location), research design specifics, and, critically, qualitative excerpts regarding pedagogical constraints, Teaching Presence (TP) deficits, and scaffolding difficulties.

The analysis followed a three-stage Thematic Synthesis approach. First, line-by-line coding was performed on the verbatim descriptions of barriers to generate initial descriptive codes.

Second, these codes were grouped into descriptive themes based on similarity. Finally, through an iterative process of comparison and refinement, these descriptive themes were aggregated into the four analytical categories presented in the results, ensuring that the final findings were directly grounded in the primary data.

Results

The thematic synthesis confirmed the centrality of pedagogical challenges, clustering them into four interconnected categories.

Category	Description of Synthesized Barriers (Focusing on TP & SDL	Frequency of Report (out of 20 Studies)	Percentage
1. **Deficient Teaching Presence (Design)**	Failure to create cohesive learning paths; *copy-pasting* face-to-face content online; and lack of clarity on integrated online activities.	18	90%
2. **Inadequate SDL Scaffolding**	Faculty assume student SDL competence; lack of explicit guidance on self-monitoring, resource management, and reflection necessary for autonomous learning.	17	85%
3. **Student Cognitive and Affective Load**	High instructional confusion and cognitive burden resulting from poor course design, directly impacting motivation and participation.	15	75%
4. **Institutional Disincentives on TP**	Organizational policies (e.g., evaluation metrics, workload assessment) failing to reward or accommodate the significant time required for effective BL course redesign.	12	60%

Dominance of Deficient Teaching Presence (90%)

The most pervasive barrier is the failure in the *design and organization* component of *Teaching Presence*. Studies consistently reported that faculty often treat the online segment as supplemental storage rather than a deeply integrated learning component, leading to a structural dislocation between online preparation and face-to-face application (Bezliudna et al., 2021; Ilieva et al., 2023; Tong et al., 2022)

Challenge of SDL Scaffolding (85%)

Inadequate SDL scaffolding emerged as a powerful secondary barrier. This failure is characterized by insufficient explicit instruction on **how to learn independently**, forcing students to navigate complex technology and varied course

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structures without adequate metacognitive support. This directly correlates with high rates of student procrastination and low-pre-class preparation.

Discussion

Interpretation and Thematic Convergence

The synthesis unambiguously demonstrates that the primary obstacles to successful BL implementation are pedagogical, validating the study's focused objective. The finding that Deficient TP (90%) and Inadequate SDL Scaffolding (85%) are the most cited barriers establishes a clear hierarchy of implementation problems.

This confirms the critical role of Teaching Presence as the foundational bottleneck for BL success. When faculty fail at the fundamental level of design (low TP), the resulting lack of structure makes student self-regulation (SDL) virtually impossible. Furthermore, the high frequency of Student Cognitive Load (75%) directly supports the claim that flawed instructional design, not technology per se, is the primary source of student failure in the BL environment. The chain visual representation of this causal chain underscores the urgency of addressing design-centric issues.
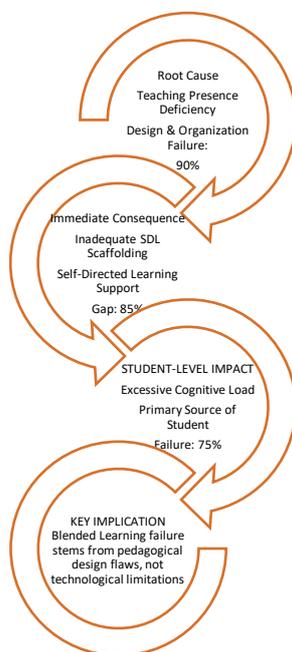
Theoretical and Practical Implications

Theoretical Extension: The findings extend the CoI framework by strongly positioning the Teaching Presence component of design and organization as the necessary precursor for both Social Presence and Cognitive Presence to flourish in a demanding BL context.

Practical Implications:

1. Strategic Faculty Development: Institutions must immediately reorient faculty training budgets away from generic LMS training toward specialized programs in Advanced BL Instructional Design and pedagogical techniques for Explicit SDL Scaffolding.
2. Policy Reform: Organizational policies must be reformed to recognize the high cost of Teaching Presence. Evaluation metrics should reward quality course redesign (focusing on integration and SDL support) rather than simply counting contact hours or relying on student satisfaction metrics alone.
3. Mandatory Student Intervention: Implementation of mandatory, metacognitively-focused orientation modules to explicitly teach students the time management and self-monitoring strategies required by the autonomy of SDL.

Limitations and Future Research

This review is limited to English-language publications from 2021–2023. This may exclude relevant studies published in [Specify Language, e.g., Bahasa Indonesia] or those focusing on different time periods. Future research should prioritize conducting intervention studies that test the effectiveness of specific scaffolding tools (e.g., automated check-ins, guided planning templates) designed to address the pedagogical barriers identified herein.

Conclusion

This systematic literature review concludes that the predominant challenges facing Blended Learning in higher education reside within the domain of Teaching Presence, manifesting specifically as a failure to effectively design and scaffold Self-Directed Learning. For BL to fulfill its promise, institutional resources must be strategically shifted to empower faculty with the necessary pedagogical design expertise, moving the focus from what technology to use to how to instruct in a sophisticated hybrid environment.

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