International Journal of Educational Technology and Learning
Vol. 19, No. 1, pp. 72-82, 2025
DOI: 10.55217/101.v18i3.1009

Revisiting reading and writing pedagogies in the ERA of blended learning: A conceptual BRWIM model for EFL contexts

Nazia Khan[1]
Khalid Hassan[2]

[1]*Bangladesh University of Professionals (Alma Mater), Independent Researcher in Education, Dhaka 1216, Bangladesh.*
[1]*Email: eranazia@gmail.com*
[2]*Segi University, Independent Researcher in Education, Kota Damansara, 47810 Petaling Jaya, Selangor, Malaysia.*
[2]*Email: a.b.m.khalid.hassan@gmail.com*

Abstract

This article develops the Blended Reading-Writing Integration Model (BRWIM), a comprehensive conceptual framework for enhancing literacy instruction in English-as-a-Foreign-Language (EFL) higher education under blended learning conditions. Reading and writing are often taught as separate skills, and in many low-income and middle-income contexts blended learning policies have focused more on technology adoption than on pedagogy. To address this fragmentation, BRWIM integrates reading and writing as mutually reinforcing literacies and stages them systematically across face-to-face, synchronous online, and asynchronous environments. The model is grounded in established theories of reading (schema, interactive, cognitive) and writing (process-oriented, feedback-focused), and is informed by digital pedagogy frameworks including the Community of Inquiry, TPACK, ICAP, Cognitive Load Theory, and multimedia learning principles. These perspectives are translated into reusable design patterns, rubric-aligned assessments, and orchestration strategies that make BRWIM both evidence-informed and practically implementable. To demonstrate contextual applicability, the paper incorporates authentic indicators from UNESCO, OECD, and national policy reports, alongside illustrative datasets and simplified modelling approaches. These show how instructional design variables, such as pre-class activation, interactive discussions, timely feedback, revision cycles, and cognitive load management, which may influence composite literacy outcomes. The unique contribution of BRWIM lies in consolidating fragmented research into a coherent and operational blueprint. By combining theoretical synthesis, policy alignment, and practice-oriented design tools, the model provides curriculum designers, educators, and institutional leaders with a roadmap for advancing reading-writing development in blended EFL contexts.

Keywords:
Bangladesh Policy
Blended Learning
BRWIM
Cognitive Load
Community of Inquiry
EFL
ICAP
Reading
TPACK
Writing.

Publisher:
Scientific Publishing Institute

Received: *27 August 2025*
Revised: *2 September 2025*
Accepted: *22 September 2025*
Published: *8 October 2025*

(▲ Corresponding Author)

Funding: This research received no specific financial support.
Institutional Review Board Statement: Not applicable.
Transparency: The author confirms that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.
Competing Interests: The authors declare that they have no competing interests.
Authors' Contributions: Both authors contributed equally to the conception and design of the study. Both authors have read and agreed to the published version of the manuscript.

1. Introduction

Higher education worldwide is undergoing a rapid transformation, driven by the expansion of access, digitalization of learning environments, and increasing demands for accountability. Global enrolment in tertiary education has surpassed 235 million students, with the gross enrolment ratio estimated at 40 percent (UNESCO Institute for Statistics, 2022). In parallel, universities are experimenting with blended learning approaches that integrate face-to-face and online modalities. This transformation creates both opportunities and challenges for developing foundational academic literacies such as reading and writing, especially in English as a Foreign Language (EFL) context where learners must navigate additional linguistic barriers (Grabe, 2009; Hyland, 2003).

Research shows that literacy development in higher education depends on structured, theory-informed approaches that balance cognitive engagement, feedback mechanisms, and scaffolding strategies across learning spaces (Chi & Wylie, 2014; Zimmerman, 2002). However, many institutions in low- and middle-income countries have implemented blended learning in fragmented ways, focusing primarily on technological access rather than pedagogical coherence (British Council, 2022). This lack of integration often results in disjointed reading and writing instruction, where digital tools are used as add-ons instead of as integral components of literacy development (Means, Toyama, Murphy, Bakia, & Jones, 2010).

The proposed Blended Reading-Writing Integration Model (BRWIM) addresses these gaps by synthesizing established theories of reading and writing with evidence from digital pedagogy and blended learning scholarship. Existing theoretical perspectives, such as schema theory in reading (Carrell & Eisterhold, 1983) the cognitive process model of writing (Flower & Hayes, 1981) and the Community of Inquiry framework for online learning (Garrison & Kanuka, 2004), provide partial insights. Yet there is limited work on orchestrating these perspectives into a unified framework that directly supports literacy instruction in blended EFL contexts. By consolidating these strands, BRWIM offers a coherent grammar for designing, sequencing, and assessing reading–writing integration across modalities.

The problems this model aims to solve are threefold. First, there is a lack of systematic alignment between reading strategies and writing processes in blended learning courses, leading to uneven development of literacy skills (Grabe & Stoller, 2011). Second, most blended learning policies and programs in South Asia and similar contexts emphasize technology adoption rather than pedagogical integration, resulting in minimal impact on student literacy outcomes (CEMCA & UGC Bangladesh, 2021; Hossain, 2023). Third, there is limited guidance on how to translate global evidence from meta-analyses of blended learning (Bernard, Borokhovski, Schmid, Tamim, & Abrami, 2014; Vo, Zhu, & Diep, 2017) into context-specific literacy practices for resource-constrained institutions.

The unique contribution of BRWIM is that it consolidates mature but dispersed bodies of research into an operational design model that is both evidence-informed and policy-aligned. Unlike prior studies that either focused narrowly on technology frameworks (Mishra & Koehler, 2006) or on isolated literacy skills, BRWIM integrates reading and writing as mutually reinforcing processes across face-to-face, synchronous online, and asynchronous online environments. This makes the model adaptable for faculty development, curriculum redesign, and institutional adoption, particularly in settings where blended learning is still at an early stage. By advancing both theoretical synthesis and practical design patterns, BRWIM contributes to the global discourse on how to scale blended literacy instruction in EFL higher education.

2. Literature Review

2.1. Reading Theories in EFL

Research in second language reading has been shaped by multiple theoretical lenses. Schema theory emphasizes that comprehension depends on activating background knowledge, both content and formal schemata (Carrell & Eisterhold, 1983). Psycholinguistic models conceptualize reading as a "guessing game" where learners test hypotheses about meaning based on limited input (Goodman, 1967). Interactive models highlight the coordination of bottom-up decoding with top-down prediction (Grabe, 2009) while cognitive accounts focus on working memory constraints and vocabulary breadth as predictors of fluent comprehension (Grabe & Stoller, 2011). These perspectives directly inform BRWIM's design choices: For example, pre-class annotation tasks can activate schemata, while in-class collaborative inference tasks strengthen predictive processing. By combining these insights, BRWIM ensures that reading pedagogy in blended spaces is not merely about decoding but also about strategy scaffolding and meaning-making.

2.2. Writing Theories in EFL

The field of writing research has shifted from product-oriented correctness to process-oriented cognition. Flower and Hayes (1981) proposed a cognitive process model of writing, emphasizing planning, translating, and reviewing as iterative activities. Hyland (2003) highlighted the role of audience awareness and genre knowledge, while Hyland and Hyland (2006) underscored the complementary functions of teacher, peer, and technology-mediated feedback. These traditions are reflected in BRWIM's integration of asynchronous drafting platforms, rubricized peer review, and analytics-informed feedback loops. Such design elements help learners in EFL contexts to regulate their revision cycles while receiving multi-layered feedback.

2.3. Evidence on Blended and Online Learning

Meta-analyses confirm that blended learning, when carefully designed, produces outcomes equal or superior to traditional instruction (Bernard et al., 2014; Means et al., 2010; Vo et al., 2017). Effects are strongest when digital tools are aligned with cognitive and social aims, not used as add-ons (Schmid et al., 2014; Tamim, Bernard, Borokhovski, Abrami, & Schmid, 2011). Studies of flipped classrooms demonstrate significant benefits for higher-order learning tasks provided workload and interaction are carefully balanced (Garrison & Kanuka, 2004). BRWIM draws from this evidence base by aligning tool selection with literacy outcomes and integrating assessment strategies that avoid cognitive overload.

2.4. Digital Pedagogy Frameworks

Several digital frameworks underpin the orchestration dimension of BRWIM. The Community of Inquiry (CoI) model highlights the interdependence of teaching presence, social presence, and cognitive presence in blended environments (Garrison & Kanuka, 2004). The Technological Pedagogical Content Knowledge (TPACK) framework emphasizes that technology must be integrated with pedagogy and domain content (Mishra & Koehler, 2006). The ICAP framework classifies engagement into passive, active, constructive, and interactive modes, predicting stronger outcomes as learners co-construct meaning (Chi & Wylie, 2014). Cognitive Load Theory (Sweller, 1988) and multimedia learning principles (Mayer, 2009) provide guidelines to minimize extraneous processing and sequence multimodal inputs effectively. BRWIM synthesizes these frameworks by staging reading and writing tasks across modalities with attention to engagement type, presence, and memory load.

2.5. Rationale for BRWIM

Taken together, these strands reveal important but fragmented insights into literacy pedagogy. Reading theories explain comprehension mechanisms; writing theories illuminate composition processes; blended learning meta-analyses establish the efficacy of hybrid delivery; and digital pedagogy frameworks prescribe design principles. However, these insights remain scattered in practice. BRWIM integrates them into a single conceptual grammar that systematically links literacy subskills, delivery modalities, and orchestration strategies. The model thus operationalizes theoretical constructs into design patterns that are both evidence-based and implementable in EFL higher education contexts.

3. The BRWIM Conceptual Framework

The Blended Reading-Writing Integration Model (BRWIM) is designed to coordinate literacy skills across face-to-face, synchronous online, and asynchronous online spaces. It organizes learning around three planes: (a) Literacies (Reading and writing subskills and strategies), (b) Modalities (In-person, synchronous online, asynchronous online), and (c) Orchestration (Task design, feedback, and assessment). This tripartite structure ensures that reading and writing are not treated as isolated activities but as mutually reinforcing processes distributed across different environments.

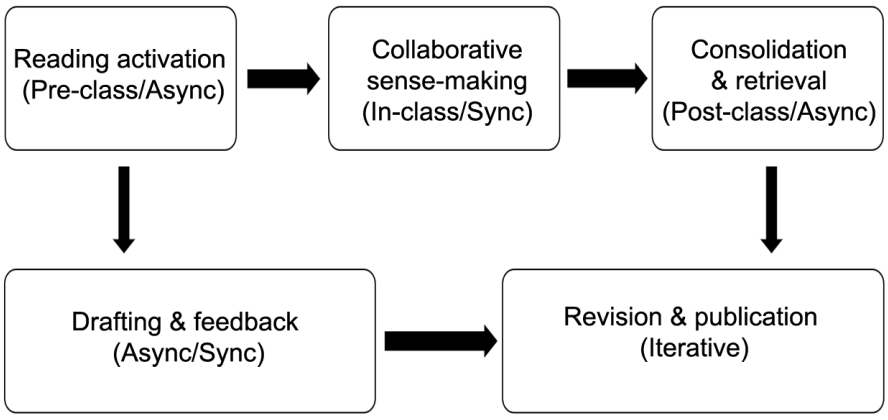

Figure 1. The BRWIM framework aligning reading and writing processes across modalities.

Here, Synchronous and Asynchronous distinguish between real-time collaborative activities (Face-to-face or online) and time-independent, self-paced tasks supported by the LMS. BRWIM deliberately stages these to ensure pre-class activation, in-class interaction, and post-class consolidation. Synchronous activities or the real-time interactions are the activities where teacher and students (Or students with peers) are present at the same time, either in-person face-to-face (e.g., classroom discussion, group debates, instructor-led Q&A), or online real-time (e.g., Zoom/Teams session, breakout room collaboration), featuring immediate interaction & feedback. In Figure 1, synchronous tasks appear in the middle "Modality" plane, linking reading discussions and writing workshops to real-time collaboration.

Asynchronous activities or the time-independent activities are the activities where learners engage individually, at their own pace and time, outside of real-time class, typically delivered via LMS, annotation platforms, discussion boards, or shared documents, featuring flexibility, self-pacing, reflective processing. In Figure 1, asynchronous tasks appear at the left/right ends (Pre-class schema activation, post-class reflective writing, revision cycles).

Figure 1 depicts the overall BRWIM framework. At the centre, reading and writing processes are shown as parallel but interconnected strands. Reading activities such as schema activation, inference-making, and comprehension monitoring are aligned with writing activities such as planning, drafting, revising, and reflecting. These are then mapped onto delivery modalities, demonstrating how tasks shift between pre-class preparation, in-class collaboration, and post-class consolidation. The orchestration layer highlights feedback loops and assessment checkpoints that bind the strands together. For instance, pre-class reading quizzes (Asynchronous) inform in-class discussions (Synchronous), which are then consolidated through reflective micro-writing (Asynchronous).

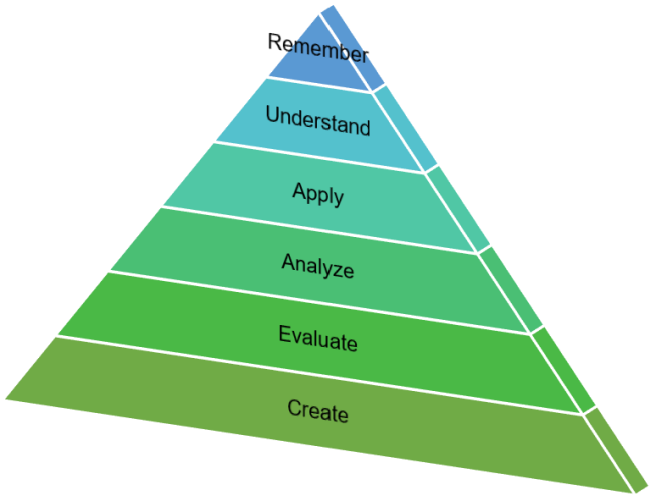

Figure 2. Bloom-aligned progression for reading-writing tasks within BRWIM.

Figure 2 illustrates how BRWIM tasks align with Bloom's revised taxonomy (Krathwohl, 2002). Lower-order skills such as remembering and understanding are addressed primarily through pre-class reading tasks, while higher-order skills such as analysing, evaluating, and creating are embedded in writing-intensive activities and group tasks. This alignment ensures that blended literacy instruction moves learners progressively from surface comprehension to deeper rhetorical performance. Importantly, this Bloom-aligned structure provides a transparent roadmap for course designers to ensure balanced cognitive demand across modalities.

The novelty of BRWIM lies in orchestrating complementary theories and frameworks into a coherent design grammar. While existing models such as CoI (Garrison, Anderson, & Archer, 1999) and TPACK (Mishra & Koehler, 2006) provide valuable principles, they do not explicitly operationalize how reading and writing should be integrated in blended contexts. BRWIM advances the field by embedding literacy-specific processes into these digital frameworks, offering an actionable blueprint for EFL higher education.

To illustrate practical implementation, Patterns A, B, and C (Introduced in Section 6) represent design archetypes that instructors can adapt. Pattern A focuses on schema activation through social annotation; Pattern B structures process writing with staged feedback; and Pattern C integrates reading-to-write tasks for rhetorical development. These patterns will be visualized in additional figures (Figures 5-8), showing task flows across modalities and feedback checkpoints. By linking theory-driven structures with concrete design examples, BRWIM bridges the gap between abstract frameworks and classroom practice.

4. Data for Contextualization

To strengthen the theoretical framing of BRWIM, contextual data are provided through both authentic global indicators and illustrative simulated datasets. The aim is not to present new empirical evidence but to

demonstrate how literacy-oriented blended learning models can be informed, benchmarked, and tested using existing datasets and reported effect sizes.

4.1. Authentic Global Indicators

Table 1 summarizes widely cited global benchmarks relevant to blended higher education. These include UNESCO's estimates of worldwide enrolment, OECD comparative data on attainment and finance, and ICT-readiness reports such as PISA-linked assessments. Such indicators highlight the scale of higher education growth (≈235 million enrolments globally), disparities in digital use, and policy pressures that make blended literacy frameworks increasingly urgent (OECD, 2023; UNESCO, 2023). By situating BRWIM within these global signals, the model is aligned with international trends and accountability frameworks.

Table 1. Selected authentic indicators.

Indicator	Value	Source
Global higher education enrolment (Approx., 2020)	≈235 million; GER ≈40%	UNESCO Institute for Statistics (2022) UIS (Higher Education Global Data Report, 2022)
OECD Education at a Glance 2023	Comparative indicators on attainment, finance, VET	OECD (2023) (2023), DOI: 10.1787/e13bef63-en
PISA-linked ICT/learning report (2015)	Digital use/skills disparities; mixed impact	OECD (2015), DOI: 10.1787/9789264239555-en

4.2. Simulated Illustrative Datasets

To demonstrate how existing evidence can be visualized for policy and design planning, three simulated datasets are included. These are clearly labelled as illustrative, derived from ranges and categories reported in meta-analyses and policy reports.

Figure 3 shows a simulated adoption profile of blended learning across global regions. The MENA (Middle East and North Africa) and LAC (Latin America and the Caribbean) follow common UNESCO and OECD reporting conventions. These percentages are not survey findings but illustrative distributions derived from Bay View Analytics (2017) and British Council (2022) reports. Their purpose is to demonstrate how institutions can benchmark regional adoption trends when planning BRWIM-based programs.

Figure 4 visualizes the range of effect sizes reported in meta-analyses of blended learning (Bernard et al., 2014; Means et al., 2010; Vo et al., 2017). Labels Meta-Analysis A, B, C correspond to these major syntheses, each reporting positive impacts under specific conditions. This figure demonstrates that BRWIM is grounded in evidence showing that blended learning can improve literacy outcomes when designed with cognitive and social alignment.

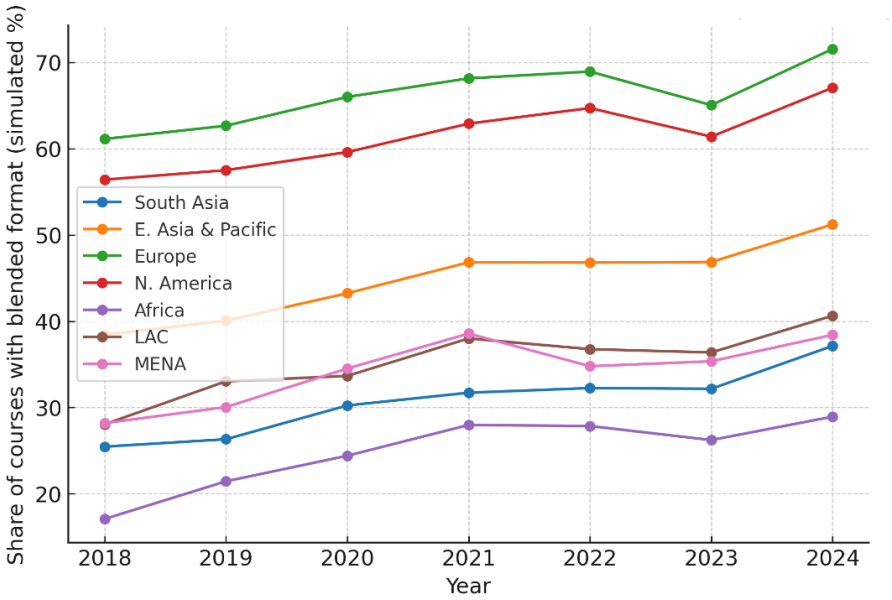

Figure 3. Illustrative regional adoption of blended learning (Simulated percentages).

Figure 5 presents an illustrative readiness profile, derived by coding themes from policy documents in Bangladesh and comparable low- and middle-income countries (CEMCA & UGC Bangladesh, 2021; Shakeel, Haolader, & Sultana, 2023). The bars represent categories such as infrastructure, faculty capacity, and

assessment readiness. These values are simulated to show how policymakers or institutions can construct a readiness index when evaluating conditions for BRWIM implementation. The figure thus serves as a demonstration of how conceptual models can be translated into evaluative tools, not as empirical country-specific findings.

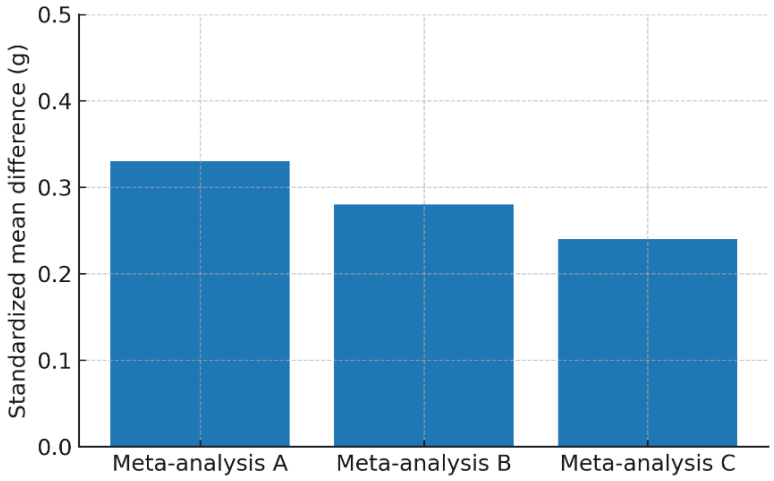

Figure 4. Illustrative effect sizes.

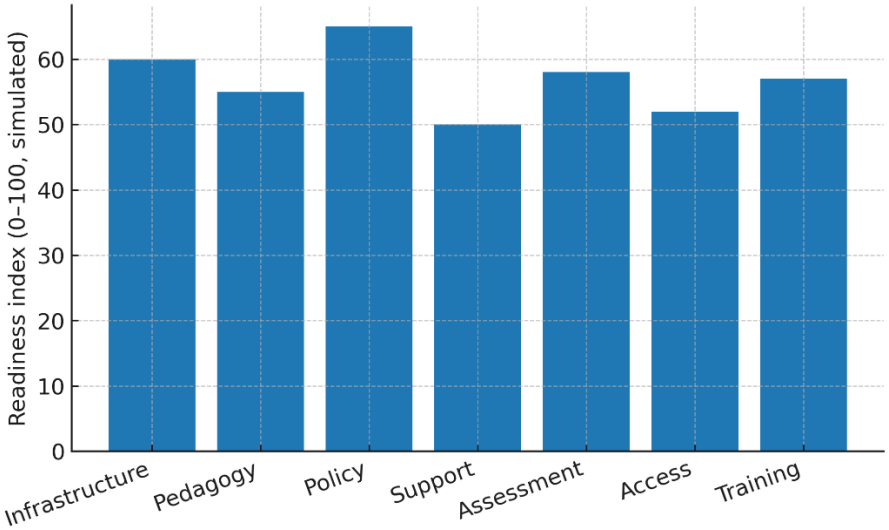

Figure 5. Illustrative readiness profile derived from coding of policy themes (Simulated).

Together, these contextual datasets ensure that BRWIM is positioned at the intersection of global benchmarks and local readiness. They illustrate how course designers, institutional leaders, and policymakers can align literacy-focused blended learning strategies with both international evidence and regional constraints.

5. Modelling Approach

To illustrate how theoretical constructs can be operationalized into evaluative tools, a simplified modelling approach is presented. This approach does not involve new human-subject data but instead demonstrates how course designers and policymakers could structure relationships among instructional variables when applying BRWIM.

The dependent variable is defined as a composite literacy outcome (Y), which could be measured through standardized reading–writing rubrics in practice. Independent variables represent critical design features identified in the literature review:

- P: Pre-class activation quality (Linked to schema theory and reading strategies).
- I: Interactive discussion intensity (Linked to Community of Inquiry and ICAP frameworks).
- F: Feedback timeliness (Linked to writing-process theory and feedback scholarship).
- R: Revision cycles (Reflecting process-oriented writing traditions).
- C: Cognitive load management (Guided by Cognitive Load Theory and multimedia learning).

A baseline additive model is proposed as Equation 1.

$$Y = \beta_0 + \beta_1(P) + \beta_2(I) + \beta_3(F) + \beta_4(R) + \beta_5(C) + \varepsilon \quad (1)$$

Here,

Y = The outcome variable (composite literacy score). It's a single number representing a student's overall performance in reading + writing tasks (Measured, for example, by a rubric).

β (Beta coefficients) = The weights or effect sizes of each predictor. Example: If β_2 (Interactive discussion) is high, it means that more intense/meaningful discussions strongly improve Y. β_0 is the intercept (Baseline score when all predictors are zero).

ε (epsilon) = The error term. It captures everything not explained by the predictors (random noise, unmeasured factors like motivation, prior knowledge, etc.).

Equation 1 presents that the literacy outcomes (Y) depend on the quality of pre-class work, discussion intensity, feedback speed, revision cycles, and cognitive load management, plus some random unexplained factors. This equation is original to the present article, designed as a conceptual demonstration. It shows how the BRWIM framework can be translated into measurable variables for empirical validation. While coefficients are not estimated here, plausible effect ranges can be calibrated from meta-analyses of blended learning (Bernard et al., 2014; Means et al., 2010; Vo et al., 2017).

Additionally, an implementation index can be constructed to reflect contextual readiness. This index aggregates dimensions such as infrastructure (e.g., LMS availability), pedagogy (Faculty expertise in blended design), and student support (Connectivity stipends, access to devices). By scoring these dimensions, institutions can establish minimum conditions for successful BRWIM adoption.

For reference, the pooled standard deviation formula is provided, as it is commonly used when calculating standardized mean differences in meta-analyses as presented in Equation 2.

$$SD_{pooled} = \sqrt{\frac{(n_1-1)SD_1^2+(n_2-1)SD_2^2}{n_1+n_2-2}} \quad (2)$$

Here,

SD_{pooled} = Pooled standard deviation. A way to combine the variability (Spread) of two groups into a single measure. Used when calculating effect sizes (Like Cohen's-D or standardized mean difference).

n_1, n_2 = The sample sizes of the two groups. Example: If Group 1 has 30 students and Group 2 has 40, then n_1 = 30 and n_2 = 40.

SD_1, SD_2 = the standard deviations of each group. Show how spread-out scores are in Group 1 and Group 2.

Equation 2 represents that, to fairly compare two groups, first combine their spreads (SDs) into one average spread, weighted by their sample sizes. This formula is not used for new data analysis in the present article but included to demonstrate how BRWIM-aligned studies could apply standardized effect-size reporting in future empirical work.

Equation 1 should be understood as a conceptual model rather than an empirically estimated regression. It demonstrates how literacy outcomes (Y) can be predicted by a set of instructional design features central to BRWIM, including pre-class activation, interactive discussions, timely feedback, revision cycles, and cognitive load management. The coefficients (β) represent the relative influence of each design element, while the error term (ε) captures other unmeasured factors such as prior knowledge or learner motivation. Equation 2 the pooled standard deviation formula, is included to indicate how future empirical studies can calculate standardized mean differences (Effect sizes) when comparing groups. Together, these formulations signal that BRWIM is not only a theoretical synthesis but also a framework that can be operationalized and validated through established quantitative methods in educational research.

6. Practical Approaches and Design Patterns

The BRWIM framework is translated into reusable design patterns that can be adapted across courses and disciplines. Each pattern specifies the targeted literacy objective, the distribution of tasks across modalities, the feedback mechanisms embedded, and the assessment artifacts produced. By visualizing these patterns, instructors can see how BRWIM operates in practice.

6.1. Pattern A: Schema Activation with Social Annotation

This pattern focuses on pre-class activation of prior knowledge to improve reading comprehension. Students engage with texts asynchronously, supported by guiding questions and low-stakes quizzes. During class, discussions address ambiguities and strengthen inferencing, followed by short reflective writing tasks to consolidate meaning.

Pattern A in Figure 6 illustrates this flow:

- Asynchronous (Pre-class): Students annotate texts using digital platforms (e.g., Perusall, Hypothesis).
- Synchronous (In-class): Groups resolve interpretive conflicts and engage in collaborative problem-solving.
- Asynchronous (Post-class): Reflective micro-writing tasks are submitted.

This design directly operationalizes schema theory and ICAP's emphasis on constructive engagement.

6.2. Pattern B: Process Writing with Staged Feedback

This pattern emphasizes recursive drafting and revision cycles. Students compose initial drafts in a learning management system (LMS), receive rubricized peer comments, and incorporate teacher feedback at key checkpoints. Each cycle is documented through revision plans that encourage metacognitive regulation.

Pattern B in Figure 6 illustrates this flow:

- Asynchronous (Drafting): Students upload first drafts to the LMS.
- Synchronous (Peer review): Structured peer feedback sessions using rubrics.
- Asynchronous (Revision): Targeted instructor feedback on higher-order concerns (Argument, organization).
- Final submission: includes a short commentary on revision choices.

This pattern operationalizes the cognitive process model of writing (Flower & Hayes, 1981) and feedback research (Hyland & Hyland, 2006).

6.3. Pattern C: Integrated Reading-to-Write Task

This pattern connects reading and writing in a task sequence that develops rhetorical awareness. Students analyse exemplar texts to identify rhetorical moves, co-construct outlines in groups, and then produce argumentative responses. The task culminates in an annotated submission reflecting on revision decisions.

Pattern C in Figure 6 illustrates this flow:

- Asynchronous (Analysis): Students highlight rhetorical moves in assigned texts.
- Synchronous (Co-construction): Groups create outlines collaboratively.
- Asynchronous (Writing): Individuals write responses citing sources.
- Final submission: includes self-reflection on rhetorical and revision strategies.

This design aligns with genre-based pedagogy and the CoI framework by integrating social presence with cognitive scaffolding.

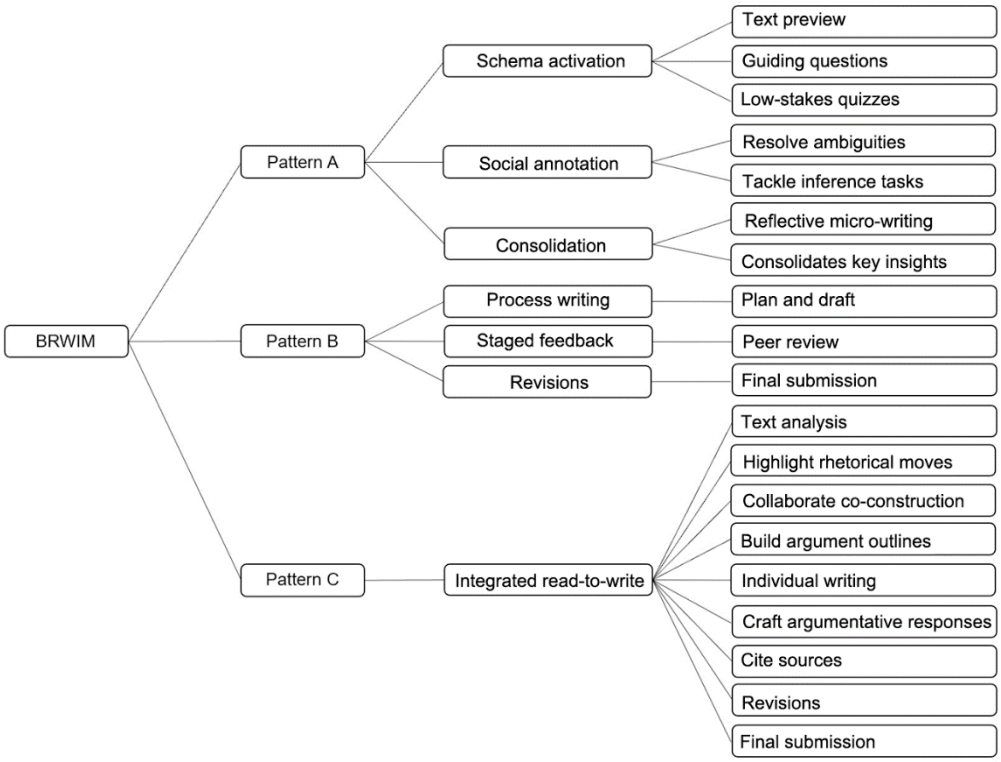

Figure 6. Reusable pattern designs with the proposed BRWIM approaches.

6.4. Contribution of the Patterns to BRWIM

These patterns demonstrate how BRWIM transforms theory into practice. Each illustrates:

- Reading-writing integration (From activation to consolidation).
- Distribution across modalities (Pre-class, in-class, post-class).
- Embedded feedback loops (Peer, teacher, automated).
- Assessment artifacts (Reflective writing, annotated drafts, revision plans).

By combining these patterns, instructors can design balanced courses that develop literacy progressively while leveraging digital affordances. The patterns also provide a starting point for faculty development workshops and institutional adoption of BRWIM.

7. Theory-to-Practice Mapping and Rubric Design

The BRWIM framework is supported by two practical tools that operationalize theoretical constructs into course design. These tools were previously in the appendix but are presented here to strengthen the main argument.

Table 2 maps major theories and frameworks to actionable design implications within BRWIM. For example, schema theory informs pre-class activation tasks such as KWL prompts and social annotation, while Cognitive Load Theory informs segmentation of multimedia resources. This mapping demonstrates how BRWIM translates abstract theoretical principles into concrete instructional strategies.

Table 2. Mapping theories to actionable design elements in BRWIM.

Theory/Framework	Design implication in BRWIM	Illustrative tool/Activity
Schema theory	Pre-class activation tasks; connect prior knowledge	Social annotation; KWL prompts
Cognitive process writing	Iterative drafting with feedback and revision plans	LMS drafts; rubricized peer review
Community of inquiry	Balance teaching/Cognitive/Social presence	Guided discussions; instructor announcements
TPACK	Tech decisions grounded in pedagogy & content	Video mini-lectures; item banks aligned to outcomes
ICAP	Promote constructive/Interactive engagement	Co-author outlines; debate boards
Cognitive load/Multimedia	Limit split attention; segment material	Short videos; dual-channel visuals

Table 3 provides an excerpt of a rubric for reading-to-write assignments. This rubric illustrates how BRWIM principles translate into assessment tools, ensuring alignment between literacy outcomes and instructional design. For instance, criteria such as argument quality, use of sources, and revision analysis correspond directly to BRWIM's emphasis on integrated literacy tasks.

Table 2 demonstrates that BRWIM is not merely a conceptual diagram but a framework with traceable theoretical underpinnings. Each mapping shows how established theories directly inspire course activities. Table 3 illustrates assessment alignment, a critical gap in many blended programs. By including explicit performance descriptors, the rubric ensures that student outcomes are evaluated consistently across modalities. Together, these tables provide evidence of derivation from existing literature and practical tools for adoption.

Table 3. Rubric excerpt for an integrated reading-to-write assignment.

Criterion	Exemplary (A)	Proficient (B)	Developing (C)	Beginning (D)
Argument & organization	Clear, original claim with coherent structure	Clear claim; mostly coherent structure	Claim present; structure uneven	Unclear claim; poor structure
Use of sources	Integrates credible sources with synthesis and citation	Integrates sources with minor issues	Limited integration; summary heavy	Minimal sources; citation errors
Analysis & evidence	Insightful analysis; appropriate evidence	Sufficient analysis; adequate evidence	Surface-level analysis; limited evidence	Little analysis; insufficient evidence
Language & conventions	Accurate EFL usage; appropriate tone	Generally accurate; minor issues	Frequent errors affecting clarity	Persistent errors impede meaning

8. Policy Alignment and Implementation in Resource-Variant Contexts

The successful adoption of BRWIM requires alignment with both global education policies and local institutional capacities. Policy frameworks in Bangladesh and similar contexts highlight three recurring priorities: (a) expanding access through blended learning, (b) ensuring equity of participation, and (c) strengthening instructional quality (CEMCA & UGC Bangladesh, 2021). International reports by UNESCO (2023) and OECD (2023) similarly emphasize the need to link technology use with pedagogical innovation.

BRWIM offers a structured roadmap for institutions seeking to implement blended literacy instruction. The model can be staged across four levels:

i. Infrastructure provisioning: Ensuring baseline access to devices, LMS platforms, and reliable connectivity.
ii. Faculty capacity building: Training instructors in blended pedagogy and literacy-focused course design.
iii. Assessment redesign: Developing authentic, integrity-focused assessments such as reflective writing portfolios and annotated drafts.
iv. Continuous improvement: Using data from digital platforms to monitor outcomes and refine practices.

Equity safeguards must be embedded at every stage, including subsidized connectivity, accessible materials for diverse learners, and structured peer-support systems. These safeguards address common barriers in low- and middle-income contexts, ensuring that BRWIM implementation is not limited to elite institutions.

9. Discussion and Conclusion

The BRWIM framework addresses three central problems in literacy-focused blended education. First, it resolves the fragmentation between reading and writing instruction by integrating them into a single design grammar. This is especially important in EFL contexts where comprehension and composition reinforce each other (Grabe & Stoller, 2011). Second, it addresses the overemphasis on technology adoption by aligning digital tools with cognitive and rhetorical goals (Chi & Wylie, 2014; Mishra & Koehler, 2006). Third, it provides an actionable structure for policy-driven reforms, ensuring that blended learning initiatives move beyond infrastructure provisioning to pedagogy-led implementation.

The unique contribution of BRWIM lies in its synthesis. Unlike prior frameworks that either foreground digital presence (e.g., CoI) or pedagogical knowledge (e.g., TPACK), BRWIM explicitly embeds literacy processes into blended course design. The inclusion of design patterns, modelled equations, and readiness indices further extends its utility, offering a bridge between theoretical research and practical implementation. In this sense, BRWIM is not a new "grand theory" but an operational blueprint that combines robust evidence into a coherent and replicable framework.

This article is conceptual and analytical, relying on simulated datasets and secondary sources rather than new empirical data. While the illustrative figures demonstrate potential applications, they should not be interpreted as actual survey outcomes. Future research should validate BRWIM through quasi-experimental studies, design-based research cycles, and mixed-method approaches across disciplines. Empirical testing will be required to estimate model coefficients, assess effect sizes, and evaluate student experiences of integrated literacy tasks.

Qualitative inquiries, such as discourse analysis of student writing or interviews on reading-writing strategy use, could provide further insights into the mechanisms encoded in BRWIM. Moreover, policy research is needed to assess how institutional readiness indices can be scaled and adapted to different regions.

Reading and writing are foundational literacies that require intentional integration in blended environments. The BRWIM framework demonstrates how theories of reading, writing, and digital pedagogy can be orchestrated into a design model that is simultaneously evidence-based and policy-aligned. By embedding literacy-specific processes into blended learning structures, the model provides educators with a roadmap for improving student outcomes in EFL higher education.

The article contributes both theoretically and practically. Theoretically, it consolidates fragmented strands of research into a coherent framework. Practically, it translates these strands into design patterns, evaluative models, and policy-aligned roadmaps that institutions can adopt. While local validation is essential, BRWIM offers a replicable starting point for advancing literacy development through blended learning worldwide.

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