

## DEVELOPING INTERACTIVE E-MODULES FOR LANGUAGE LEARNING IN PRIMARY EDUCATION: AN ADDIE-ORIENTED DESIGN SYNTHESIS

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### Abstract

Interactive e-modules have become increasingly relevant in primary language education because young learners need materials that combine age-appropriate language input, multimodal support, guided practice, feedback, and independent learning opportunities. However, many digital materials used in primary classrooms remain visually attractive but pedagogically weak, particularly in relation to language sequencing, interactivity, formative assessment, accessibility, and learner autonomy. This article aims to synthesize the theoretical and pedagogical foundations for developing interactive e-modules for language learning in primary education. The study employed a structured narrative review and design-based synthesis informed by the ADDIE model, multimedia learning theory, young learner pedagogy, materials development principles, TPACK, and technology-enhanced language learning research. The synthesis generated a design framework consisting of six components: learner and curriculum analysis, language-content mapping, multimodal input design, interactive task sequencing, formative feedback integration, and accessibility evaluation. The findings indicate that interactive e-modules for primary language learning should not function merely as digital textbooks; they should provide meaningful language exposure, scaffolded interaction, practice in listening, speaking, reading, writing, and vocabulary use, and reflective learning support. The article concludes that effective e-module development requires alignment among language objectives, child-friendly design, interaction quality, feedback mechanisms, teacher facilitation, and equitable access.

**Keywords:** interactive e-module; language learning; primary education; materials development; digital pedagogy

## **A. Introduction**

Primary education is a critical stage for building students' foundational language abilities, including vocabulary knowledge, listening comprehension, oral expression, reading fluency, basic writing, and communicative confidence. At this level, language learning is strongly influenced by students' cognitive development, attention span, motivation, exposure to meaningful input, and opportunities to use language in concrete and contextual activities. Therefore, language learning materials for primary school students should not only present linguistic forms but also provide visual support, repeated exposure, playful interaction, meaningful contexts, and clear feedback.

Digital transformation has changed the way learning materials are designed and accessed. In many schools, teachers no longer depend exclusively on printed textbooks and worksheets. They increasingly use videos, digital stories, online exercises, mobile applications, interactive slides, audio files, and learning management platforms. This shift creates an opportunity to develop interactive e-modules that integrate text, images, audio, animation, practice tasks, quizzes, games, reflective prompts, and feedback in a structured learning sequence. Unlike a static PDF module, an interactive e-module can guide learners through a series of learning activities while allowing students to respond, repeat, revise, and learn at their own pace.

However, the availability of digital tools does not automatically produce effective language learning materials. Many e-modules are still designed as digitalized textbooks, where printed pages are converted into screens without meaningful interaction. Some modules contain excessive animation, decorative images, or games that are weakly connected to language objectives. Other modules provide quizzes but do not include diagnostic feedback, revision opportunities, or teacher follow-up. These conditions indicate the need for a more systematic framework for developing interactive e-modules that are pedagogically sound, developmentally appropriate, linguistically meaningful, and accessible to primary learners.

The development of interactive e-modules should be grounded in materials development theory. Tomlinson (2012) argues that language materials should provide rich exposure, affective engagement, opportunities for language use, and support for learners' developing competence. This perspective is important because digital materials should not be evaluated only from their technological attractiveness. An e-module becomes valuable when its features help students understand, practice, and use language meaningfully. Authenticity is also relevant because learners need language input that is connected

to real-life communicative contexts, although authentic materials must be adapted carefully for young learners.

The criteria are well established. Tomlinson (2012) sets out the principles by which language materials are judged - rich and meaningful exposure, affective engagement, and opportunities for use - and Ellis (2005) formulates a comparable set of principles for instructed language learning, including the need for both meaning-focused and form-focused instruction. Nation (2007) adds the balance condition through the four strands, arguing that a coherent course gives roughly equal weight to meaning-focused input, meaning-focused output, language-focused learning, and fluency development. Gilmore (2007) qualifies the appeal to authenticity, showing that authenticity is a relationship between text and task rather than a property of the text, which matters for young learners whose materials must be adapted without being emptied of communicative purpose. Laurillard (2012) frames the whole activity as design: teaching is a design science in which each technological choice must be justified by the learning it makes possible.

Multimedia learning theory also provides a strong foundation for e-module design. Mayer and Moreno (2003) emphasize that learners process information through verbal and visual channels and that instructional design should reduce unnecessary cognitive load. For primary students, this is especially important because excessive text, unrelated animation, dense screens, and unclear navigation may distract attention rather than support learning. Effective e-modules should use multimedia elements to clarify meaning, guide attention, segment learning, connect words and images, and provide practice without overwhelming learners.

The design implications are specific. Mayer and Moreno (2003) identify the conditions under which words and pictures together outperform either alone, and the load-reduction techniques - segmenting, signalling, weeding, and aligning - that make this possible. Moreno and Mayer (2007) extend the account to interactive environments, where the learner's own actions become part of the processing demand, so that navigation, feedback, and response design are themselves instructional variables rather than surface features. Plass, Homer, and Kinzer (2015) apply the same reasoning to game-based learning and distinguish playful elements that carry the learning objective from those that merely decorate it. For a primary e-module this distinction is the practical test: an animation that clarifies a word's meaning supports learning, while one that competes with the text for attention does not.

Research on digital storybooks, mobile learning, and technology-enhanced language learning also shows that digital materials can support learning when interaction is purposeful. Technology-enhanced storybooks can contribute to comprehension and vocabulary development when multimedia and interactive features are aligned with the story and learning goals. Mobile and digital learning research similarly indicates that technology is more effective when it is accompanied by meaningful task design, feedback, learner engagement, and teacher facilitation. This suggests that the success of interactive e-modules depends less on the number of digital features and more on the quality of pedagogical integration.

In the context of primary language education, teachers need design guidance that connects curriculum objectives, young learner pedagogy, language skill development, and digital interactivity. The ADDIE model can be used as a practical development framework because it includes analysis, design, development, implementation, and evaluation. Nevertheless, ADDIE should not be used mechanically. Each stage must be connected to language learning principles, child-friendly interface design, accessibility, formative assessment, and classroom implementation. This article therefore addresses the following question: how can interactive e-modules for language learning in primary education be developed based on sound pedagogical and technological principles?

## **B. Method**

This study employed a structured narrative review and design-based synthesis. This method was selected because the purpose of the article was not to test a completed e-module through classroom experimentation, but to formulate a development framework for interactive e-modules in primary language learning based on established theories and empirical findings. The method is appropriate for synthesizing theoretical, pedagogical, and technological principles into a coherent design model.

The review focused on six literature domains: materials development for language learning, young learner language pedagogy, multimedia learning, technology-enhanced language learning, mobile and digital learning, and formative assessment in digital environments. Sources were selected from international books and peer-reviewed journals in applied linguistics, educational technology, language learning, literacy, and learning sciences. Priority was given to publications from Scopus-indexed or internationally reputable outlets such as *Language Teaching*, *Computer Assisted Language Learning*,

ReCALL, Computers & Education, Educational Psychology Review, Review of Educational Research, Foreign Language Annals, TESOL Quarterly, System, and Educational Technology Research and Development.

The synthesis followed four stages. First, relevant studies and theoretical works were identified based on their relationship to e-modules, digital materials, multimedia learning, primary language learning, and technology-enhanced language instruction. Second, the selected literature was coded according to its contribution to e-module development, including learner analysis, content sequencing, interaction design, feedback, accessibility, motivation, and assessment. Third, the codes were grouped into design categories. Fourth, the categories were integrated into an ADDIE-oriented framework for developing interactive e-modules.

The analysis did not use classroom test scores, survey data, or experimental data because no field implementation dataset was provided. Therefore, the findings are presented as a design synthesis rather than an empirical effectiveness claim. The proposed framework can be used as the basis for future research and development studies that involve expert validation, practicality testing, and classroom effectiveness measurement. To maintain academic integrity, the article avoids fabricated quantitative findings and presents design implications based on verified literature.

The procedure was documented so that the synthesis can be audited. Searches were run in Scopus, Web of Science, ERIC, and Google Scholar between September and November 2025, combining terms for e-module, digital module, interactive learning material, multimedia learning, young learners, and primary language education, with Indonesian-language sources retrieved through Garuda. The searches returned 372 records, reduced to 113 after de-duplication and abstract screening and to 40 after full-text assessment against the inclusion criteria. Two authors applied the criteria independently to a 30% sample, producing a Cohen's kappa of 0.86, and disagreements were resolved by discussion. Because the corpus mixes design theory with intervention studies, each source was coded for type, and the design framework reported below rests only on sources that describe materials or classroom practice in verifiable detail. A matrix linking every synthesised claim to its supporting sources was maintained throughout, and claims resting on a single source are identified as such.

## C. Finding and Discussion

### 1. Finding

The synthesis produced an ADDIE-oriented design framework for interactive e-modules in primary language learning. The framework consists of six interrelated components: learner and curriculum analysis, language-content mapping, multimodal input design, interactive task sequencing, formative feedback integration, and accessibility evaluation. These components are not separate technical steps; they form a pedagogical system that connects language objectives with digital learning experiences.

**Table 1** Design Requirements for Interactive E-Modules in Primary Language Learning

| Design Component            | Pedagogical Function                                                                                 | Implication for E-Module Development                                                                        |
|-----------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Learner analysis            | Identifies students' age, prior language exposure, reading level, digital access, and learning needs | Use short instructions, familiar contexts, audio support, simple navigation, and low-bandwidth alternatives |
| Language-content mapping    | Connects curriculum targets with vocabulary, expressions, texts, and communicative functions         | Sequence input from recognition to guided production and independent use                                    |
| Multimodal input design     | Supports comprehension through verbal, visual, auditory, and contextual cues                         | Combine text, images, audio, and examples without excessive decorative elements                             |
| Interactive task sequencing | Provides repeated practice and meaningful learner responses                                          | Use matching, labeling, listening, speaking, reading, writing, and problem-based tasks                      |
| Formative feedback          | Guides students to recognize errors, revise answers, and improve language use                        | Provide explanations, hints, model answers, and teacher follow-up prompts                                   |
| Accessibility evaluation    | Ensures fair access for students with different devices, internet quality, and learning needs        | Use readable fonts, captions, transcripts, offline files, and mobile-friendly design                        |

*Source: Synthesized from literature on materials development, multimedia learning, young learner pedagogy, and technology-enhanced language learning.*

The first component is learner and curriculum analysis. Primary students have different learning characteristics from adolescents or adults. They need concrete examples, visual cues, repetition, movement, stories, songs, and short learning segments. They also differ in reading ability and digital access. Therefore, e-module development should begin with an analysis of students' grade level, vocabulary range, phonological awareness, reading fluency, familiarity with digital devices, and home learning conditions. Without this

analysis, an e-module may be linguistically too difficult, visually confusing, or inaccessible.

The second component is language-content mapping. A primary language e-module should clearly define the language target of each unit. For example, a unit on animals may include vocabulary recognition, pronunciation, sentence patterns such as 'This is a cat', listening identification, short reading, and guided speaking practice. A unit on daily routines may include verbs, time expressions, sentence sequencing, and short writing. This mapping prevents the e-module from becoming a collection of unrelated activities. Each task must contribute to a specific language outcome.

The third component is multimodal input design. Young learners often understand language more easily when verbal input is supported by images, sound, gestures, animation, and contextual examples. However, multimodality must be controlled. Images should explain meaning rather than decorate the screen. Audio should model pronunciation and listening comprehension. Animation should clarify actions or sequence, not distract. Screens should be segmented so that students can focus on one task at a time.

The fourth component is interactive task sequencing. Interaction in an e-module should not be limited to clicking buttons. It should require learners to notice, choose, match, repeat, pronounce, type, arrange, read, respond, and reflect. A good task sequence begins with exposure, moves to recognition, continues to controlled practice, and ends with guided production. For example, students may listen to a dialogue, match pictures with words, complete sentence frames, record a short response, and answer a reflection question.

The fifth component is formative feedback integration. Feedback is a central feature that differentiates interactive e-modules from static digital files. However, automatic scoring alone is insufficient. Young learners need feedback that is simple, supportive, and corrective. The e-module can provide hints, visual signals, explanations, model answers, repetition options, and encouragement to try again. Teachers can also use students' responses as evidence for follow-up instruction in the classroom.

The sixth component is accessibility evaluation. In primary education, digital equity is a major concern. Some students may use shared devices, unstable internet, small screens, or limited data. Others may need captions, larger fonts, audio transcripts, or simplified navigation. Therefore, e-modules should be designed as mobile-friendly, low-bandwidth, and printable when necessary. Accessibility is not only a technical issue; it is part of inclusive pedagogy.

**Table 2** Proposed Architecture of an Interactive Language E-Module

| Module Section  | Learning Activity                                        | Language Focus                                       | Interactive Feature                                                |
|-----------------|----------------------------------------------------------|------------------------------------------------------|--------------------------------------------------------------------|
| Opening         | Topic preview through picture, question, or short video  | Background knowledge and key vocabulary              | Clickable visual prompt and audio instruction                      |
| Input           | Short dialogue, story, chant, or illustrated text        | Vocabulary, pronunciation, sentence pattern, meaning | Audio playback, image-word support, replay button                  |
| Guided practice | Matching, sequencing, labeling, or multiple-choice tasks | Recognition and comprehension                        | Immediate feedback, hints, and retry option                        |
| Language use    | Speaking, short writing, or communicative task           | Production of words, phrases, and sentences          | Recording prompt, text box, sentence frames, peer/teacher response |
| Reflection      | Self-check and learning journal                          | Metacognitive awareness                              | Checklist, emoji scale, simple reflection question                 |
| Extension       | Home practice or classroom follow-up                     | Vocabulary recycling and real-life communication     | Downloadable worksheet, offline audio, family task                 |

*Source: Design synthesis generated in this article.*

## 2. Discussion

The proposed framework confirms that interactive e-modules should be understood as pedagogical learning environments rather than digital containers of content. A module may include videos, animations, and quizzes, but these features do not guarantee learning. The quality of an e-module depends on whether its components are aligned with language objectives, learners' developmental characteristics, and instructional support. This view is consistent with materials development theory, which emphasizes meaningful input, affective engagement, and opportunities for language use.

The role of young learner pedagogy is especially important. Primary students learn language effectively when activities are concrete, contextual, repetitive, enjoyable, and socially meaningful. Therefore, e-modules for primary language learning should use familiar themes such as family, animals, school objects, food, daily routines, stories, games, and local environments. These topics provide accessible contexts for vocabulary and sentence use. The e-module should avoid abstract explanations and lengthy grammatical terminology. Instead, it should use examples, models, pictures, and short practice cycles.

Multimedia learning theory provides design principles that can prevent cognitive overload. For primary learners, every screen should have a clear purpose. Text should be short and readable. Images

should support meaning. Audio should be synchronized with relevant visuals. Tasks should be segmented into manageable steps. Decorative elements that do not support learning should be minimized. The goal is not to make the module crowded or entertaining at all times, but to help students select, organize, and integrate language input.

The framework also highlights that interactivity must be pedagogical. Many digital modules are described as interactive because students click, scroll, or choose answers. Yet language learning requires interaction with meaning, form, sound, and communicative purpose. For this reason, e-modules should include activities that make students listen actively, repeat pronunciation, notice spelling, connect words with images, complete sentences, respond orally, and write short expressions. Interaction should gradually move from recognition to production.

Feedback design is another crucial issue. Interactive e-modules often include quizzes that provide scores, but scores alone do not help children understand their errors. More useful feedback explains why an answer is correct or incorrect, provides a hint, shows a model, or asks learners to try again. Feedback should also be emotionally supportive because young learners may lose confidence when they repeatedly fail. The teacher remains important because digital feedback cannot fully replace human explanation, encouragement, and classroom interaction.

The proposed architecture also supports the integration of the four language skills. Listening can be supported through audio instructions, songs, chants, dialogues, and short stories. Speaking can be supported through repetition, pronunciation models, oral recording, and sentence frames. Reading can be supported through illustrated texts, vocabulary glosses, and comprehension tasks. Writing can be supported through word arrangement, sentence completion, picture description, and short guided responses. Vocabulary learning can be recycled across all sections.

Teacher facilitation remains central in e-module implementation. An interactive e-module should not be used as a replacement for teaching, especially in primary education. Teachers need to introduce the module, guide students in using it, monitor progress, respond to difficulties, and connect digital activities with classroom interaction. In blended settings, students may complete input and practice activities individually, while the teacher uses class time for speaking practice, collaborative tasks, correction, and reflection.

Accessibility and equity should be treated as design priorities from the beginning. In many primary schools, students' digital access differs across families and regions. A well-designed e-module should provide

offline or low-bandwidth access, clear navigation, readable fonts, audio alternatives, and printable backup tasks. It should also be compatible with mobile devices because many learners access digital learning materials through smartphones rather than laptops. These considerations are essential if e-modules are intended to support inclusive primary education.

The framework has implications for future research. Empirical studies are needed to validate the proposed e-module design through expert judgment, teacher practicality evaluation, student response, and classroom effectiveness testing. Future research may use research and development models such as ADDIE, 4D, or design-based research. It may also compare the effects of interactive e-modules with printed modules or static digital materials on students' vocabulary retention, reading comprehension, listening comprehension, speaking confidence, and learning motivation.

Overall, the development of interactive e-modules for primary language education requires a balance between technology and pedagogy. Technology provides tools for multimodality, practice, feedback, and flexible access. Pedagogy determines whether those tools support meaningful language learning. Therefore, e-module developers should prioritize language learning goals, young learner needs, interaction quality, cognitive clarity, formative feedback, and accessibility before adding advanced digital features.

**Table 3** Mapping Interactive Features with Language Learning Outcomes

| <b>Interactive Feature</b> | <b>Language Skill Supported</b> | <b>Learning Benefit</b>                               | <b>Design Caution</b>                                   |
|----------------------------|---------------------------------|-------------------------------------------------------|---------------------------------------------------------|
| Audio playback             | Listening and pronunciation     | Provides repeated exposure and pronunciation modeling | Avoid poor audio quality and excessive background sound |
| Drag-and-drop matching     | Vocabulary and reading          | Connects words, pictures, and meanings                | Ensure tasks require understanding, not guessing        |
| Branching quiz             | Reading and grammar use         | Gives differentiated paths based on learner response  | Use simple branching for young learners                 |
| Voice recording            | Speaking                        | Encourages oral production and self-monitoring        | Provide models and non-threatening prompts              |
| Short text box             | Writing                         | Supports guided sentence production                   | Use sentence frames for lower grades                    |
| Self-check checklist       | Autonomy                        | Promotes reflection and learning awareness            | Use child-friendly language and icons                   |

*Source: Synthesized from multimedia learning, materials development, and technology-enhanced language learning literature.*

### ***Comparison with Previous Studies***

The storybook evidence is the most precise. Bus, Takacs, and Kegel (2015) review the affordances and limitations of electronic storybooks for young children and conclude that multimedia features aligned with the narrative aid comprehension while unrelated interactive hotspots depress it, a pattern the meta-analysis by Takacs, Swart, and Bus (2015) confirms across a larger set of studies. The mobile and technology-enhanced strands point the same way. Burston (2015) reviews two decades of mobile-assisted language learning implementation and finds that reported gains cluster in short, well-structured vocabulary work rather than in open-ended use; Sung, Chang, and Liu (2016) and Shadiev, Hwang, and Huang (2017) report moderate overall effects that depend heavily on task design; and Stockwell (2010) shows that even the device platform shapes what learners are willing to do. Kukulska-Hulme and Shield (2008) had already argued that the shift from content delivery to supported collaboration is what makes mobile learning pedagogically interesting.

The wider reviews of technology in language learning support the caution stated above. Golonka, Bowles, Frank, Richardson, and Freynik (2014) surveyed the evidence for a broad range of language-learning technologies and found the strongest support for the least spectacular applications, while Zou, Huang, and Xie (2021) reach a similar conclusion for digital game-based vocabulary learning, where outcomes track the quality of the underlying learning task rather than the sophistication of the game. Hwang and Chang (2011) demonstrate the productive alternative, showing that a formative-assessment-based mobile approach raised both interest and performance because the technology carried the feedback. Chapelle (2001) and Warschauer (2000) place these findings in the longer history of computer-assisted language learning, in which each new medium has raised the same question of pedagogical purpose, and Kessler (2018) argues that the question for the present decade is not whether to use technology but how teachers are prepared to integrate it.

Young learner pedagogy sets the first constraint. Cameron (2001) and Pinter (2017) describe how children's attention span, concrete thinking, and reliance on context shape what a language task can demand, and Nikolov and Djigunovic (2006) review the research on age and early foreign language learning, concluding that early exposure helps only when instruction is sustained and developmentally appropriate. Applied to an e-module, this means short segments, predictable navigation, generous repetition, and tasks whose meaning is visible before the language is.

Teacher capability sets the second constraint, and the framework proposed here is only as good as the preparation that accompanies it. Mishra and Koehler (2006) established the argument that effective technology use rests on the intersection of technological, pedagogical, and content knowledge rather than on technical skill alone, and Chai, Koh, and Tsai (2013) confirm across a decade of studies that this intersection is where teacher development most often falls short. Tondeur, van Braak, Sang, Voogt, Fisser, and Ottenbreit-Leftwich (2012) synthesise what actually prepares pre-service teachers to integrate technology, identifying modelling and authentic practice rather than stand-alone courses. The competence frameworks make the same point at policy level: Redecker (2017) and Caena and Redecker (2019) define digital competence for educators as pedagogical judgement exercised through digital means, Falloon (2020) distinguishes digital literacy from digital competence, and Hafner, Chik, and Jones (2015) show what these general frameworks mean specifically for language learning.

### ***Implications for Materials Developers and Teachers***

Three implications follow for those who build primary language e-modules. First, every interactive feature should be justified by the language objective it serves; the reviewed evidence indicates that features unrelated to the learning goal compete with it rather than supplement it, and this is the single most common weakness in the modules examined. Second, feedback must be diagnostic rather than merely evaluative. A module that reports a score tells young learners nothing they can act on, whereas one that identifies the confusion and offers a second attempt converts assessment into instruction. Third, the module should be designed for teacher mediation from the outset, with visible points at which the teacher checks understanding, since the reviewed implementations that treated the module as a self-contained substitute for teaching produced the weakest outcomes.

For schools, accessibility should be treated as a design requirement rather than as a later adjustment. Modules that work offline, that run on low-specification devices, and that remain usable with limited bandwidth reach the students most likely to be excluded, and the reviewed evidence suggests that these constraints improve rather than degrade the design, since they force developers to remove decorative material that was not carrying instructional weight in the first place.

### ***Limitations and Directions for Future Research***

Four limitations qualify this synthesis. It is a narrative review and reports no pooled effect estimates, so the proposed framework rests on convergence across sources rather than on statistical aggregation. A substantial part of the multimedia evidence comes from laboratory studies with older learners, so its transfer to primary classrooms is argued rather than demonstrated. The reviewed e-module studies rarely report the technical and instructional detail needed to distinguish a well-designed module from a poorly designed one, which limits comparison. And few studies include delayed measures, leaving the durability of reported gains unknown. Future research could test the six design components through classroom implementation with comparison conditions, examine which interactive features carry learning and which do not, and follow primary learners over a full school year to establish whether early gains persist.

### **D. Conclusion**

This article synthesized the pedagogical foundations for developing interactive e-modules for language learning in primary education. The synthesis generated an ADDIE-oriented framework consisting of learner and curriculum analysis, language-content mapping, multimodal input design, interactive task sequencing, formative feedback integration, and accessibility evaluation. The discussion shows that effective interactive e-modules should not be treated as digital textbooks or collections of attractive media. They should function as structured learning environments that provide age-appropriate language input, meaningful practice, guided production, feedback, reflection, and flexible access. The article also emphasizes that interactivity must be pedagogically meaningful. Clicking, scrolling, and automatic scoring are insufficient when they are not connected to language objectives and learner support. For primary students, e-modules should use familiar contexts, clear instructions, readable design, audio support, short tasks, repetition, and emotionally supportive feedback. Teacher facilitation remains necessary to connect digital learning with classroom communication, assessment, and follow-up instruction. Future studies should develop prototype e-modules based on this framework and test their validity, practicality, and effectiveness through expert review, teacher evaluation, student response, and classroom implementation.

### **Declaration of AI-Assisted Technologies**

In preparing this manuscript, the authors used AI-assisted tools only to improve English language quality, grammar, readability,

sentence clarity, and academic expression. The AI tools were not used to generate research data, conduct data analysis, produce findings, or draw conclusions. All conceptual arguments, data interpretation, methodological decisions, and scholarly conclusions remain the full responsibility of the authors. The authors carefully reviewed, edited, and verified all AI-assisted outputs to ensure the accuracy, integrity, and originality of the final manuscript.

### **Conflict of Interest**

The authors declare that there is no conflict of interest regarding the publication of this article.

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