

Designing Supplementary Phonics Materials for Ethnic Minority First-Grade Learners: A Design Model from Vietnam

Thi Le Tam Dang¹, Thi Chuc To²

^{1,2}Thai Nguyen University of Education

ABSTRACT: Developing foundational literacy is widely recognized as a prerequisite for children's later learning and educational success. For learners who study the language of schooling as a second language, acquiring early reading and writing skills is particularly challenging because they must simultaneously learn a new language while developing literacy. Research has shown that learning materials play an important role in supporting this process, especially when they are responsive to learners' linguistic, cultural and experiential backgrounds (UNESCO, 2022; World Bank, 2023). Consequently, the design of culturally responsive literacy materials has become an important issue in multilingual education.

1. INTRODUCTION

Developing foundational literacy is widely recognized as a prerequisite for children's later learning and educational success. For learners who study the language of schooling as a second language, acquiring early reading and writing skills is particularly challenging because they must simultaneously learn a new language while developing literacy. Research has shown that learning materials play an important role in supporting this process, especially when they are responsive to learners' linguistic, cultural and experiential backgrounds (UNESCO, 2022; World Bank, 2023). Consequently, the design of culturally responsive literacy materials has become an important issue in multilingual education.

Vietnam provides a representative context for this challenge. As a multilingual country with 54 ethnic groups, many ethnic minority children begin formal schooling with limited exposure to Vietnamese, which is primarily used in the classroom rather than in their homes or communities. During grade 1, particularly in the phonics stage, these learners are expected not only to master letter-Fsound correspondences but also to develop vocabulary, comprehend meaning and use Vietnamese for learning and communication. These demands often exceed their existing linguistic resources, creating barriers to the development of foundational literacy.

Although a growing body of research has examined early literacy instruction, second-language learning and educational support for ethnic minority learners, most studies have focused on instructional strategies or the effectiveness of particular interventions. Comparatively less attention has been given to how supplementary phonics materials should be systematically designed to address the linguistic and cultural characteristics of second-language learners. A coherent design model that integrates curriculum requirements, learner characteristics and pedagogical principles remains insufficiently discussed in the literature.

To address this gap, this study **proposes a design model for supplementary phonics materials** for Grade 1 ethnic minority learners learning Vietnamese as a second language. Drawing on educational design principles and the Vietnamese educational context, the model consists of five design principles and a four-step development process and is illustrated through a sample learning unit. Rather than introducing a specific teaching resource, the study aims to provide a transferable framework for designing supplementary phonics materials that may inform literacy education in multilingual contexts beyond Vietnam.

2. THEORETICAL BACKGROUND AND RESEARCH METHOD

2.1. Supplementary materials in early phonics instruction

Supplementary learning materials are increasingly recognized as an important component of early literacy instruction, particularly for learners acquiring the language of schooling as a second language. Beyond supporting the acquisition of letter-sound correspondences, well-designed materials create opportunities for learners to expand vocabulary, develop reading comprehension and gradually use language in meaningful communication. Research on early literacy emphasizes that learning materials are most effective when they connect new linguistic knowledge with learners' prior experiences and provide multiple opportunities for language use in authentic contexts.

In this study, supplementary phonics materials refer to learning resources developed to support phonics instruction alongside the core textbook. These materials include reading texts, visual illustrations and learning tasks designed to foster foundational literacy

Designing Supplementary Phonics Materials for Ethnic Minority First-Grade Learners: A Design Model from Vietnam

rather than merely reinforce phonics knowledge. For Grade 1 ethnic minority learners learning Vietnamese as a second language, supplementary materials also serve as linguistic and cultural scaffolds, helping learners bridge the gap between their home language and the language of schooling.

Accordingly, supplementary materials are viewed not simply as additional teaching resources but as an integral component of instructional support, enabling beginning readers to develop vocabulary, phonological awareness and early reading–writing skills through meaningful learning experiences.

2.2. Designing supplementary materials for multilingual learners

The design of supplementary learning materials should extend beyond selecting appropriate texts. Contemporary instructional design highlights the importance of aligning learning materials with learners' linguistic background, cognitive characteristics and learning context. For multilingual learners, effective materials should not only support literacy acquisition but also reduce linguistic barriers, strengthen connections with learners' cultural experiences and promote active engagement in learning.

From this perspective, designing supplementary phonics materials involves organizing texts, illustrations and learning activities into a coherent instructional sequence that gradually supports vocabulary growth, phonics development and the meaningful use of language. Rather than functioning as isolated reading exercises, the materials should provide integrated opportunities for listening, speaking, reading and writing while remaining accessible to learners with different levels of language proficiency.

This perspective provides the theoretical foundation for the design model proposed in this study, in which design decisions are guided simultaneously by curriculum expectations, learner characteristics and the goal of developing foundational literacy.

2.3. Research method

This study adopts a design-oriented research approach, drawing on the principles of Design-Based Educational Research (DBR) to develop a design model for supplementary phonics materials. Rather than evaluating a particular instructional intervention, the study focuses on generating design knowledge through the synthesis of theoretical perspectives, curriculum requirements and the learning characteristics of Grade 1 ethnic minority learners learning Vietnamese as a second language.

Based on this synthesis, the study proposes a design model consisting of three interconnected components: design principles, a development process and an illustrative learning unit. The model is intended to provide a transferable framework that may inform the development of supplementary phonics materials in multilingual educational contexts beyond Vietnam.

3. RESEARCH CONTENT

3.1. Design model for supplementary phonics materials for ethnic minority first-grade learners

To support the development of foundational literacy among Grade 1 ethnic minority learners acquiring Vietnamese as a second language, this study proposes a design model for supplementary phonics materials. Rather than focusing solely on compiling additional reading texts or supplementary resources, the model adopts a systematic instructional design approach in which all components of material development are organized into an integrated framework. The model aims to ensure pedagogical coherence while addressing the linguistic and cultural characteristics of ethnic minority learners in multilingual educational contexts.

The model is developed from the integration of three complementary foundations: **(1)** curriculum expectations for phonics instruction and foundational literacy development in Grade 1; **(2)** the linguistic, cultural and cognitive characteristics of ethnic minority learners learning Vietnamese as a second language; and **(3)** contemporary perspectives on instructional design, multilingual education and foundational literacy development. Together, these foundations provide the theoretical and practical basis for designing supplementary materials that are both pedagogically sound and contextually appropriate.

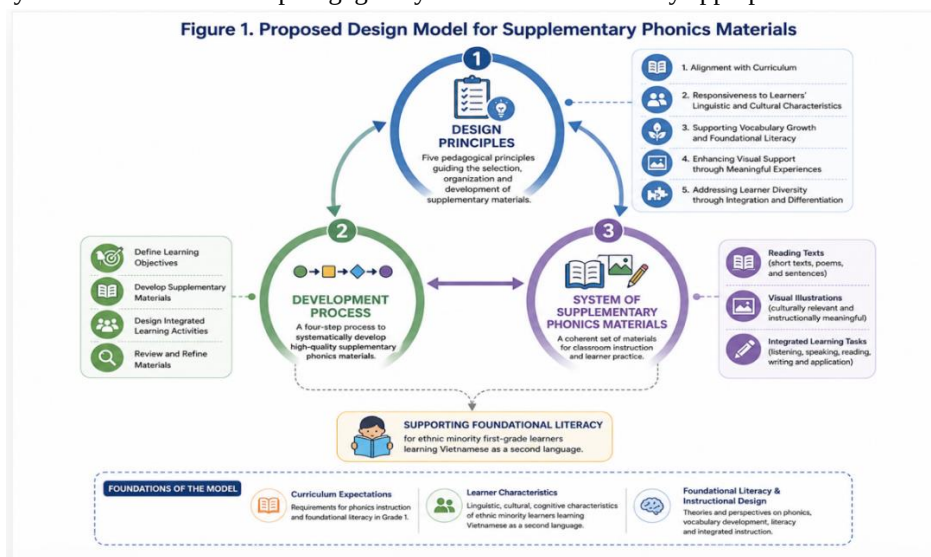


Figure 1 presents the overall structure of the proposed model. The model consists of three interrelated components: **(1) design principles**, which provide pedagogical guidance for selecting and organizing learning materials; **(2) a development process**, which operationalizes these principles into a systematic sequence of design activities; and **(3) a system of supplementary phonics materials**, including reading texts, visual illustrations and integrated learning tasks designed to support learners' literacy development.

The three components function as an integrated system rather than independent elements. The design principles guide decisions throughout the development process; the development process translates these principles into practical instructional materials; and the resulting learning materials represent the concrete application of the proposed model. This interconnected structure ensures consistency between theoretical foundations, instructional design and classroom implementation.

A distinctive feature of the proposed model is that it conceptualizes supplementary materials not simply as additional reading resources but as an integrated instructional system in which texts, illustrations and learning activities are purposefully designed to support vocabulary growth, phonics learning and meaningful language use. By reducing linguistic barriers and creating culturally responsive learning experiences, the model provides a practical framework for supporting the development of foundational literacy among ethnic minority learners while offering guidance for designing supplementary literacy materials in comparable multilingual educational settings.

3.2. Design principles for supplementary phonics materials

3.2.1. Alignment with curriculum expectations

The first principle is to ensure that supplementary materials remain fully aligned with curriculum expectations. Supplementary materials are intended to extend learning opportunities rather than replace the core curriculum. Therefore, every design decision should contribute to achieving the intended learning outcomes of phonics instruction while maintaining consistency with curriculum content and learner expectations.

For grade 1 ethnic minority learners, curriculum alignment is particularly important because it guarantees equitable access to learning opportunities. Instead of introducing additional knowledge beyond the curriculum, supplementary materials should provide alternative pathways for learners to achieve the same learning outcomes through more accessible texts, illustrations and learning activities. Accordingly, the selection of phonics content, vocabulary, learning tasks and visual resources should consistently support the curriculum goals for foundational literacy.

3.2.2. Responsiveness to learners' linguistic and cultural characteristics

Effective supplementary materials should be responsive to learners' linguistic background, cultural identity and everyday experiences. For learners acquiring Vietnamese as a second language, unfamiliar vocabulary, contexts and cultural references may become barriers to comprehension, reducing both engagement and learning effectiveness.

This principle therefore emphasizes the use of familiar themes, culturally meaningful contexts and high-frequency vocabulary that are closely connected with learners' daily lives. Visual illustrations should reflect the environments and cultural practices of ethnic minority communities, enabling learners to relate new language to prior knowledge and experiences. Such responsiveness reduces linguistic barriers while creating learning experiences that are meaningful, inclusive and culturally relevant.

3.2.3. Supporting vocabulary growth and foundational literacy development

Within the proposed model, phonics instruction is viewed as the starting point for developing foundational literacy rather than as an isolated process of learning letter-sound correspondences. Consequently, supplementary materials should integrate phonics learning with vocabulary development and meaningful language use.

Target vocabulary should simultaneously satisfy two criteria: containing the focus phonics patterns and possessing communicative value in learners' daily lives. Rather than presenting words in isolation, new vocabulary should appear in meaningful sentences, short texts or poems that enable learners to infer meaning from context. Learning tasks should further encourage learners to use newly acquired vocabulary through listening, speaking, reading and writing activities, thereby supporting the gradual development of foundational literacy.

3.2.4. Enhancing visual support through meaningful learning experiences

Beginning readers, particularly second-language learners, benefit from learning experiences that combine visual support with active participation. Visual resources should therefore function not merely as illustrations but as instructional tools that facilitate vocabulary learning, text comprehension and language production.

Accordingly, supplementary materials should integrate illustrations with observation, discussion, storytelling, role-play and other experiential learning activities. These activities enable learners to connect new language with their own experiences while creating opportunities to use Vietnamese in authentic communicative situations. For ethnic minority learners, such experiences also help bridge the gap between the language of schooling and their everyday linguistic environment.

3.2.5. Addressing learner diversity through integration and differentiation

Learners differ considerably in language proficiency, learning pace and educational experience, particularly in multilingual classrooms. Supplementary materials should therefore be sufficiently flexible to accommodate these differences while maintaining common learning objectives.

This principle is reflected through two complementary strategies. First, learning activities are integrated across listening, speaking, reading and writing so that learners experience language as a coherent communication system rather than as separate skills. Second, learning tasks are differentiated by varying levels of complexity, participation formats and response options, allowing teachers to adapt instruction to different learner needs. Such flexibility enables all learners to participate meaningfully while supporting teachers in managing linguistically diverse classrooms.

The five principles constitute an integrated design framework rather than a collection of independent recommendations. Curriculum alignment establishes the instructional boundaries of the materials; responsiveness to learner characteristics ensures linguistic and cultural appropriateness; vocabulary growth and foundational literacy define the intended learning outcomes; visual support through meaningful experiences shapes instructional organization; and integration with differentiation enhances adaptability across diverse classrooms. Together, these principles guide every stage of material development—from selecting learning content and designing instructional activities to producing supplementary materials that are pedagogically coherent and contextually responsive.

Building upon the five design principles, the proposed model incorporates a four-step development process (Figure 2) that translates pedagogical principles into practical instructional materials. The process provides a systematic framework for developing supplementary phonics materials for Grade 1 ethnic minority learners learning Vietnamese as a second language and may also be adapted to comparable multilingual educational contexts.



The first step is to establish clear learning objectives for each instructional unit. These objectives are derived from curriculum expectations while taking into account learners' linguistic characteristics and existing Vietnamese proficiency. Particular attention is given to identifying the target phonics content, expected literacy outcomes, vocabulary development and the integration of listening, speaking, reading and writing. Clearly defined objectives provide the foundation for all subsequent design decisions.

Output: A set of explicit learning objectives for the instructional unit.

Based on the defined objectives, supplementary materials are developed to ensure both curriculum alignment and learner relevance. This step involves selecting appropriate themes, developing vocabulary containing the target phonics patterns, composing reading

Designing Supplementary Phonics Materials for Ethnic Minority First-Grade Learners: A Design Model from Vietnam

texts and designing visual illustrations that reflect learners' cultural backgrounds and everyday experiences. The materials should be linguistically accessible while providing meaningful opportunities for vocabulary expansion and literacy development.

Output: A coherent set of supplementary materials, including reading texts, visual illustrations and supporting instructional resources.

Step 3. Designing integrated learning activities

The selected materials are then transformed into learning opportunities through an integrated sequence of instructional activities. Activities are organized progressively from phonics recognition and decoding to vocabulary development, reading comprehension, oral communication, writing practice and meaningful language use. Listening, speaking, reading and writing are integrated throughout the learning process, while differentiated tasks are incorporated to accommodate learners with different levels of Vietnamese proficiency.

Output: A complete instructional unit integrating learning materials, visual resources and literacy activities.

Step 4. Reviewing and refining the materials

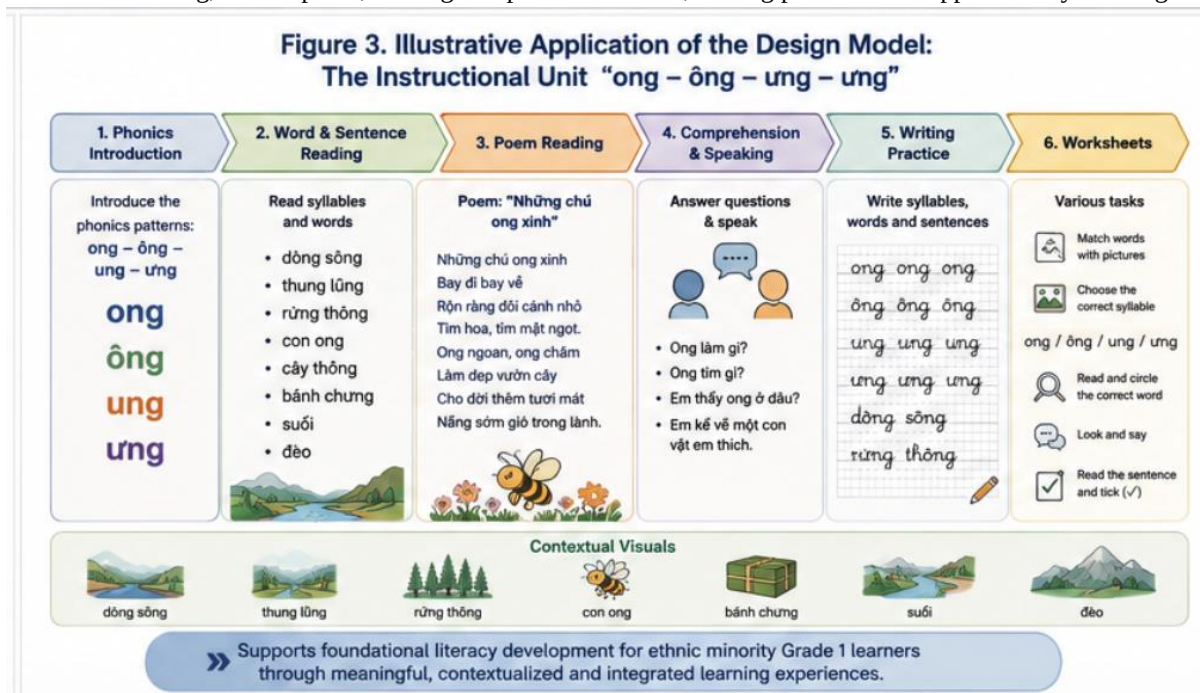
The final step involves reviewing the instructional materials to ensure their pedagogical quality, linguistic accuracy and appropriateness for ethnic minority learners. Feedback from experts and classroom practitioners may be used to revise the materials before implementation. This iterative refinement process enhances both the quality and practical usability of the final product.

Output: A finalized system of supplementary phonics materials ready for classroom use.

The proposed development process represents more than a sequence of material development steps. It provides a systematic mechanism through which the five design principles are consistently translated into instructional practice. The close alignment between learning objectives, instructional materials and learning activities ensures that each instructional unit contributes to learners' foundational literacy development while remaining responsive to the needs of multilingual classrooms.

3.4. Illustrative application of the proposed design model

To demonstrate the applicability of the proposed design model, this study presents an instructional unit focusing on the Vietnamese phonics patterns /ong/, /ông/, /ung/, and /ung/ developed as part of the supplementary phonics materials for Grade 1 ethnic minority learners (Figure 3). The unit follows a thematic approach centered on nature, integrating phonics instruction with vocabulary development, reading, writing and oral language activities. The instructional sequence includes phonics introduction, word and sentence reading, a short poem, reading comprehension tasks, writing practice and supplementary learning worksheets.



A key feature of the unit is the selection of learning materials closely related to the everyday experiences of ethnic minority learners living in mountainous areas. Vocabulary and reading texts incorporate familiar concepts such as rivers, valleys, pine forests, bees, streams, mountain passes and traditional rice cakes, enabling learners to connect new Vietnamese vocabulary with their existing knowledge and lived experiences. Such contextualized materials reduce linguistic barriers and allow learners to focus on phonics learning within meaningful communicative contexts.

Rather than limiting instruction to phonics practice, the unit systematically extends newly introduced vocabulary through a short poem, comprehension questions, speaking activities and writing tasks. This integrated organization enables learners to encounter

Designing Supplementary Phonics Materials for Ethnic Minority First-Grade Learners: A Design Model from Vietnam

the same vocabulary in multiple contexts, thereby reinforcing vocabulary acquisition while gradually developing foundational literacy. The combination of listening, speaking, reading and writing activities also provides frequent opportunities for meaningful language use, which is particularly important for learners acquiring Vietnamese as a second language.

Visual illustrations constitute another essential feature of the instructional unit. Instead of serving merely decorative purposes, the illustrations represent familiar natural environments and cultural contexts of mountainous communities, helping learners infer word meanings, comprehend texts and participate more actively in classroom activities. In addition, the accompanying worksheets include differentiated tasks—such as picture–word matching, phonics completion, sentence reading and picture-based speaking—that allow teachers to adapt instruction to learners with varying levels of Vietnamese proficiency.

This illustrative unit demonstrates how the proposed design model can be translated into a coherent instructional resource. By integrating culturally responsive learning materials, meaningful literacy activities and visual support within a systematic instructional sequence, the model provides a practical approach to supporting foundational literacy development among ethnic minority learners while remaining adaptable to similar multilingual educational contexts.

4. DISCUSSION

The proposed model contributes to the literature by providing a systematic framework for designing supplementary phonics materials for Grade 1 ethnic minority learners learning Vietnamese as a second language. Unlike approaches that focus primarily on teaching strategies or isolated learning resources, the model integrates design principles, a structured development process and supplementary materials into a coherent instructional system. This integration strengthens the alignment between curriculum expectations, learner characteristics and classroom implementation.

The illustrative learning unit demonstrates how culturally relevant vocabulary, visual support and integrated literacy activities can be organized to reduce linguistic barriers while promoting vocabulary growth and foundational literacy. The model therefore extends the role of supplementary materials beyond phonics practice to support meaningful language use through listening, speaking, reading and writing.

Although the study focuses on model development rather than empirical evaluation, the proposed framework offers practical guidance for teachers and material developers working in multilingual educational contexts. Future research should examine its effectiveness through classroom implementation across different phonics units, learner groups and educational settings.

5. CONCLUSION

This study proposes a design model for supplementary phonics materials to support Grade 1 ethnic minority learners acquiring Vietnamese as a second language. The model integrates five design principles, a four-step development process and an illustrative instructional unit into a coherent framework for developing culturally responsive literacy materials. By connecting curriculum requirements with learners' linguistic and cultural characteristics, the model provides practical guidance for designing supplementary resources that support foundational literacy development. Although further classroom validation is needed, the model has the potential to inform the development of supplementary literacy materials in Vietnam and other multilingual educational contexts.

REFERENCES

- 1) Ministry of Education and Training. (2018). General education curriculum for Literature. Issued with Circular No. 32/2018/TT-BGDĐT dated December 26, 2018, of the Minister of Education and Training.
- 2) Bui, M. H. (2020). Vietnamese Language Grade 1. Volume 1. Vietnam Education Publishing House.
- 3) Bui, M. H. (2014). Innovation in Literature Teaching: Outline of the Literature Curriculum based on competency development.
- 4) Dinh, T. T. T. (2018). Analysis of the structure and methods of exploiting reading teaching materials in the US Grade 2 English textbook. Master's thesis in Educational Science specializing in Education (Primary Education). Ho Chi Minh City University of Education.
- 5) Hoang, T. T. (2005). How to teach reading and writing in phonics in a fun and effective way? The World Within Us. Special Issue on Innovation in General Education, November-December 2005 issue.
- 6) Nguyen, T. X. Y. (2018), in the article "On the concept of Literacy and teaching reading and writing to primary school students in Vietnamese language according to the new general education curriculum"
- 7) Butcher, K. R., & Kintsch, W. (2003). Text comprehension and discourse processing. Handbook of psychology.
- 8) Cunningsworth, A. (1984). Evaluating and Selecting EFL Teaching Materials. Heinemann. Education Books: London
- 9) Narvaez, D. (2002). Individual differences that influence reading comprehension. Comprehension instruction: Research-based best practices. Nhận từ: <https://www3.nd.edu/~dnarvaez/documents/IndividualDifferences02.pdf>.
- 10) Schallert, D. L. & MartiN, D. B. (2003). A psychological analysis of what teachers and students do in the language arts classroom. Handbook of research on teaching the English language arts.