

Designing VIERSERY (Virtual English interactive book for nursery) as a digital flipbook at Stikes Bahrul Ulum Jombang

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Abstract. The study used the Research and Development (R&D) method adapted from the ADDIE model, consisting of Analysis, Design, Development, Implementation, and Evaluation phases. The product, VIERSERY, integrates text explanations, pictures, instructional videos, games, and interactive quizzes to create a more engaging learning experience. Data were collected using questionnaires, validation sheets, and student response surveys. The material expert provided a score of 92%, and the media expert gave 94%, both categorized as very good based on the Likert scale, indicating that VIERSERY is appropriate and ready for use. Student responses also showed high enthusiasm, stating that the digital flipbook was easy to access, visually clear, and helpful for understanding nursing-related English vocabulary and expressions. The results indicate that VIERSERY is a feasible and effective digital learning media that supports students' comprehension through interactive features, improves learning motivation, and aligns with the current need for technology-based English learning in higher education, especially in health sciences.

Keywords: VIERSERY; Digital Flipbook; Interactive Learning Media; English for Nursing Students

1 Introduction

Education is a fundamental process that supports students' holistic development, including intellectual, moral, and professional competencies (Intan Amalia & Nurharini, 2025). In Indonesia, higher education institutions are increasingly challenged by the demands of the Industrial Revolution 4.0, which emphasizes the integration of digital technology into teaching and learning processes to improve educational quality and prepare graduates with twenty-first-century skills (Komikesari et al., 2020). Consequently, educators are encouraged to adopt technology-enhanced learning approaches that promote flexibility, learner autonomy, and active engagement. However, conventional classroom instruction that relies heavily on teacher-centered methods still limits students' access to learning resources and reduces opportunities for independent learning (Astra et al., 2015).

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English for Nursing, as a branch of English for Specific Purposes (ESP), plays an essential role in preparing nursing students to communicate effectively in professional healthcare settings. Nursing students are expected to acquire English competencies related to medical terminology, patient interaction, clinical documentation, and professional communication (Ardiel et al., 2023). Effective ESP instruction should therefore provide authentic, contextualized, and learner-centered learning materials that reflect real workplace communication. Nevertheless, many existing English learning resources for nursing students remain text-oriented, provide limited opportunities for interaction, and are insufficiently aligned with students' professional communication needs.

The growing use of educational technology has opened new opportunities to improve language learning through interactive digital media. Previous studies have reported that multimedia-based learning resources can increase students' motivation, participation, and learning outcomes by presenting information through various formats, such as text, images, audio, and interactive activities (Richard E Mayer, 2021). Likewise, recent studies have highlighted that technology-supported learning environments promote learner engagement and independent learning, particularly in higher education Svenja (Melissa Bond et al., 2021). Despite these advantages, most existing digital flipbooks mainly function as electronic versions of printed books and provide only limited opportunities for interaction. Moreover, studies specifically developing interactive digital learning media for English for Nursing remain relatively scarce, especially those integrating authentic nursing communication with multimedia features. This gap suggests that further development of digital learning media tailored to nursing students' specific language needs is still required.

Despite these advantages, previous studies on digital flipbooks and interactive multimedia have primarily focused on general education subjects or have merely converted printed materials into digital formats without providing contextualized learning experiences. Only a limited number of studies have developed digital learning media specifically designed for English for Nursing courses, particularly those integrating authentic nursing communication, interactive exercises, multimedia elements, and self-paced learning into a single platform. This indicates a significant research gap in developing ICT-based ESP learning media tailored to nursing students' professional communication needs.

Based on a needs analysis conducted at STIKES Bahrul Ulum Jombang, the learning media currently used in the English for Nursing course remain conventional and provide limited opportunities for interactive learning. To address this gap, this study develops VIERSEY (Virtual English Interactive Book for Nursing), an ICT-based digital flipbook specifically designed to support nursing students' English learning through interactive multimedia, contextual nursing materials, integrated learning activities, pronunciation audio, quizzes, and self-paced access.

The main contribution of VIERSEY lies not only in converting printed materials into digital format but also in integrating interactive multimedia with nursing-specific English content within a single learning platform. By combining contextual learning materials and interactive features, VIERSEY is expected to better support students' engagement and learning effectiveness than conventional digital learning resources. Therefore, this study aims to develop and evaluate the feasibility of VIERSEY as an ICT-based learning medium for English for Nursing at STIKES Bahrul Ulum Jombang.

2 Method

2.1 Design

This study employs the Research and Development (R&D) method using the ADDIE model to design the VIERSERY flipbook as a learning media. The product developed is a Heyzine-based digital flipbook containing English materials tailored for nursing students. The ADDIE model consists of five phases: Analysis, Design, Development, Implementation, and Evaluation, which provide a systematic and flexible framework for developing instructional materials (Cahyadi, 2019).

During the Analysis phase, a needs analysis was conducted to identify students' learning needs, existing learning resources, and challenges encountered in English for Nursing classes. Data were collected through interviews with the Head of the Nursing Study Program and questionnaires administered to fourth-semester nursing students at STIKES Bahrul Ulum Jombang. The findings revealed that students experienced difficulties in understanding nursing-related English vocabulary and lacked engaging digital learning media. These findings became the basis for determining the learning objectives, content selection, and features of the digital flipbook.

In the Design phase, the structure and layout of the VIERSERY flipbook were planned based on the needs analysis results. The learning objectives, instructional materials, visual design, navigation, and interactive components were organized to support independent learning. The materials were aligned with the English syllabus for nursing students and integrated with relevant nursing contexts to enhance students' comprehension and learning motivation.

During the Development phase, the digital flipbook was created using the Heyzine platform. The learning materials, illustrations, hyperlinks, and interactive features were incorporated into the flipbook. After the initial product was completed, it underwent expert validation to evaluate its content accuracy, language appropriateness, instructional design, and media quality. Suggestions from the validators were used to revise and improve the product before classroom implementation.

The Implementation phase involved a limited trial with fourth-semester nursing students at STIKES Bahrul Ulum Jombang. The students used the VIERSERY flipbook during English learning activities, after which they completed questionnaires to evaluate the usability, attractiveness, and effectiveness of the developed learning media.

Finally, in the Evaluation phase, the data obtained from the implementation and validation processes were analyzed to determine the quality and feasibility of the VIERSERY flipbook. Feedback from experts and students was used to identify aspects requiring improvement and to produce the final version of the learning media.

2.2 Participant/ Population and Sample

The participants of this study consisted of 22 fourth-semester nursing students from the Nursing Study Program at STIKES Bahrul Ulum Jombang. These participants were selected because they were enrolled in English for Nursing courses and represented the target users of the developed learning media.

2.3 Instrument/ Data collection

The research employed interviews and questionnaires as the primary data collection instruments. A semi-structured interview was conducted with the Head of the Nursing Study

Program to explore the current condition of English learning, students' learning needs, and the availability of instructional media. The interview findings served as the primary source for the needs analysis stage.

Questionnaires were administered to the students during the needs analysis and product implementation stages. The questionnaires used a five-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree) to measure students' perceptions of the developed flipbook in terms of content quality, design, usability, and overall satisfaction.

2.4 Data Analysis

The data from questionnaires were analyzed using percentage calculations based on the Likert scale. The formula used is:

$$P = \frac{\text{score obtained}}{\text{ideal score}} \times 100$$

The ideal score is calculated by multiplying the highest score by the number of respondents and the number of items (Sugiyono et al., 2018).

The resulting percentages were interpreted using predetermined feasibility criteria to determine the quality and appropriateness of the developed learning media. Higher percentage scores indicated a higher level of feasibility and user acceptance of the VIERSERY flipbook.

3 Results and Discussion

3.1 Results

The expert validation results indicated that the VIERSERY flipbook met the criteria for use as an English learning medium for nursing students. The material expert evaluation produced an overall feasibility score of 92%, while the media expert evaluation reached 94%. Based on the predetermined feasibility criteria, both scores were categorized as "very good", indicating that the developed product is appropriate for implementation in the learning process. The detailed results of the material and media validation are presented in Table 1 and Table 2.

Table 1. Material Validation Results

No	Validator	Score (%)	Category
1	Validator 1	95	Very Good
2	Validator 2	90	Very Good
Mean Score		92.5	Very Good

Table 2. Media Validation Results

No	Validator	Score (%)	Category
1	Validator 1	92	Very Good
2	Validator 2	100	Very Good
Mean Score		96	Very Good

Based on the experts' feedback, several revisions were made before the implementation stage, including improving grammatical accuracy, refining learning instructions, and adjusting the layout to enhance readability and user experience. These revisions ensured that the final version of the VIERSEY flipbook met the expected quality standards before being implemented with students.

Furthermore, the implementation results showed a questionnaire score of 88%, which is also categorized as "Very Good." This indicates that the VIERSEY flipbook is feasible and effective to use. Students stated that the flipbook helped them understand the material more easily, was interesting, and increased their learning motivation. The summary of the students' questionnaire results is presented in Table 3.

Table 3. Students Questionnaire Result

No	Description	Value
1	Total Score Obtained	783
2	Highest Score	4
3	Number of Respondents	22
4	Number of Questionnaire Items	10
5	Ideal Score	880
6	Final Percentage	88%
7	Category	Very Good

Most students gave scores of 3 and 4 for several aspects, including the clarity of the material, ease of use, and effectiveness in supporting learning. However, a few students reported minor difficulties related to the layout and technical issues. Overall, students responded positively to the use of VIERSEY in learning English for Nursing.

3.2 Discussion

The findings indicate that VIERSEY is an effective and appropriate learning medium for English for Nursing, as demonstrated by the high validation scores from the material and media experts, as well as the positive responses from students. These findings suggest that

integrating digital learning media into English instruction can better accommodate students' learning needs by providing more engaging and accessible learning experiences.

The clarity and organization of the learning materials indicate that the content was successfully designed to match the learning objectives and the characteristics of nursing students. The integration of nursing-related contexts and multimedia elements, including text, images, and interactive features, may have contributed to students' improved understanding and learning motivation. This finding is consistent with Saputri et al., (2025), who reported that multimedia-based learning media facilitate students' comprehension by presenting information in a more attractive and meaningful way.

The positive responses obtained during the implementation stage also demonstrate that students readily accepted the VIERSEY flipbook as a digital learning medium. This indicates that technology-supported instructional materials have the potential to promote independent learning while increasing students' engagement in the learning process.

In terms of design, most students found the flipbook easy to use, although minor improvements in layout are still needed. This finding implies that, besides content quality, usability and interface design also influence students' learning experiences when using digital instructional media. A simple and clear layout can enhance user comfort and reduce confusion when accessing digital learning media, as reported by Perdana et al., (2025).

Overall, the findings demonstrate that the development of VIERSEY successfully addressed the need for interactive English learning media for nursing students. Therefore, the flipbook can serve as an alternative instructional medium to support English learning in higher education, particularly in nursing education.

4 Conclusion

This study concludes that the VIERSEY (Virtual English Interactive Book for Nursery) flipbook is a feasible and effective digital learning medium for English for Specific Purposes (ESP) instruction in nursing education. The results of the material and media expert validation indicated that the content, instructional design, and technical quality met the criteria of a "very good" learning medium. Furthermore, the implementation results demonstrated positive student responses, suggesting that VIERSEY supports students' understanding of nursing-related English materials while increasing their learning motivation and classroom engagement.

Beyond its effectiveness as a learning medium, this study contributes to the development of digital instructional media by demonstrating how an interactive flipbook integrated with multimedia elements can support ESP learning in higher education. The findings also provide practical implications for nursing educators by offering an accessible and technology-enhanced learning resource that aligns English instruction with students' professional needs.

Although several minor limitations related to technical features and layout were identified, these did not significantly reduce the overall quality and usability of the media. Future research is recommended to evaluate the effectiveness of VIERSEY with larger and more diverse participant groups, as well as to examine its long-term impact on students' English proficiency and professional communication skills in nursing contexts.

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