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Creating an Interactive Procedure Text E- Module through Problem- Based Learning Approach by Using Canva

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Abstract: *This study aims to develop an interactive e-module for teaching procedure text by applying a Problem-Based Learning (PBL) approach and utilizing Canva as the design platform. The research focuses on enhancing students' engagement and comprehension of procedure texts through interactive features and problem-solving activities integrated into the e-module. A Research and Development (R&D) method was employed, adapting the Borg and Gall model with stages of needs analysis, design, development, validation, revision, and implementation. Data were collected through expert validation sheets, questionnaires, and learning outcomes tests. The e-module was validated by two material experts and two media experts, showing very good criteria in terms of content accuracy, instructional design, interactivity, and visual presentation. The try-out was conducted with junior high school students, where results revealed that the e-module was practical, engaging, and effective in improving students' understanding of procedure texts. The findings indicate that the e-module supports student-centered learning, promotes critical thinking, and provides visually appealing instructional materials. Furthermore, the integration of Canva enabled the creation of a user-friendly and interactive learning resource that fosters collaboration and active participation. Overall, the developed e-module serves as an innovative and feasible alternative tool to enhance students' ability in comprehending and applying procedure texts within real-life contexts.*
Keywords: *Canva; E-Module; PBL; Procedure Text.*

PENDAHULUAN

The contemporary educational landscape is profoundly shaped by digital integration, making the use of technology in English Language Teaching (ELT) not merely an option but a fundamental necessity. This shift is crucial for fostering heightened student engagement, deepening comprehension, and ultimately improving learning outcomes. In this context, the role of the English teacher has

evolved beyond the transmission of linguistic knowledge to that of a facilitator who designs meaningful, authentic learning experiences. These experiences are vital for equipping students with the ability to apply language skills effectively in real-world situations(Hockly, 2024). A key genre that embodies this practical application in the junior high school curriculum is procedure text. Mastery of this genre requires students to understand both its structural components—such as logical sequencing, imperative verbs, and cohesive devices—and its functional purpose in everyday life, from following recipes to assembling furniture.

However, a significant challenge persists in teaching procedure texts. Many educational settings continue to rely on conventional, teacher-centered methods and static printed materials, which often fail to capture student interest(Riyani, 2021). This reliance on limited and non-interactive resources frequently results in low student motivation, a superficial grasp of textual features, and an inability to translate procedural knowledge into practical problem-solving skills. This gap underscores an urgent need for innovative, technology-driven learning materials that can transform the learning process into a dynamic, contextualized, and student-centered endeavor.

To address this need, Problem-Based Learning (PBL) emerges as a highly relevant pedagogical framework. PBL is an instructional approach that uses real-world problems as a stimulus for students to develop both content knowledge and critical competencies like problem-solving, collaboration, and self-directed learning (Savery, 2015). In the ELT classroom, PBL moves learning away from rote memorization and immerses students in authentic tasks that necessitate functional language use. For teaching procedure texts, PBL is particularly apt because it inherently requires learners to engage in processes that involve sequencing actions, understanding cause and effect, and creating clear instructions to solve a given problem. This alignment makes the learning of procedure texts purposeful and intrinsically motivating.

Nevertheless, the successful implementation of PBL is heavily dependent on the quality of the supporting learning media. Without interactive and visually engaging resources that facilitate inquiry and collaboration, the full potential of PBL may remain untapped(Wijnen et al., 2017). This is where the development of digital e-modules becomes critical. E-modules offer flexibility, multimedia integration, and ease of access, making them ideal for modern learning environments, including blended and flipped classrooms(Fadilla et al., 2021). The use of design platforms like Canva has further democratized the creation of such materials, allowing educators to develop aesthetically pleasing and interactive content without requiring advanced technical skills. Recent studies indicate that Canva-based learning media significantly boost student creativity, engagement, and participation (Purnomo et al., 2025).

Despite the individual promise of PBL and digital e-modules, there is a noticeable lack of research that synergistically combines the two, specifically for

teaching procedure texts using a platform like Canva. Most existing studies tend to focus on either the pedagogical approach or the digital tool in isolation. Therefore, this study aims to fill this gap by developing an interactive e-module using Canva that is explicitly grounded in PBL principles. The objective is to create a learning resource that not only enhances students' comprehension of procedure texts but also actively cultivates their problem-solving abilities, collaboration, and engagement through a structured, inquiry-based learning journey.

LITERATURE REVIEW

The Pedagogical Shift: From Passive Reception to Active Problem-Solving in ELT

The teaching of English, particularly genre-based writing like procedure texts, has undergone a significant paradigm shift. Moving away from traditional teacher-centered methods that often result in passive learning, contemporary pedagogy emphasizes active student engagement and the development of 21st-century skills. This shift aligns with the concept of transformative learning, where the goal is not merely knowledge acquisition but the ability to apply learning in authentic contexts (Zheng et al., 2025)In this landscape, Problem-Based Learning (PBL) has emerged as a powerful instructional model. PBL is an inquiry-based approach where learning is initiated by and revolves around a complex, real-world problem. Students work collaboratively to identify what they need to learn, apply new information to solve the problem, and reflect on their strategies and findings (Savery, 2015). This process inherently develops critical thinking, problem-solving, and self-directed learning skills, which are crucial competencies for the modern era.

Problem-Based Learning in the English Language Classroom

The application of PBL in English Language Teaching (ELT) is highly congruent with communicative language teaching principles. It provides a authentic purpose for language use, transforming the classroom from a place where language is practiced to an environment where it is used as a tool for communication and collaboration (Ansarian & Teoh, 2018). When applied to writing instruction, PBL moves beyond formulaic exercises. For instance, in learning procedure texts, instead of merely analyzing and copying models from a textbook, a PBL scenario might present students with a problem such as, "How do we create a simple, safe science experiment for elementary students using household items?" This task requires students to research, sequence logical steps, use precise imperative verbs and temporal conjunctions, and consider their audience—all essential elements of a procedure text. This contextualization makes the learning process more meaningful and memorable, thereby enhancing comprehension and retention (Wijnen et al., 2017).

The Imperative for Digital Innovation: E-Modules as Interactive Learning Tools

The effectiveness of any pedagogical approach, including PBL, is often mediated by the quality of the learning materials used. The digital age has given rise to the e-module, a structured digital learning unit that integrates multimedia elements (videos, audio, hyperlinks, interactive quizzes) to facilitate independent and engaging learning. Modern e-modules are designed to be more than digital PDFs; they are interactive experiences that cater to diverse learning styles and promote active cognitive processing(Fadilla et al., 2021). A well-designed e-module provides a scaffolded learning journey, guiding students through content, examples, activities, and assessments in a flexible and accessible manner, which is particularly beneficial in blended or flipped classroom settings. The interactivity within e-modules is key to maintaining student motivation and deepening understanding, especially for a dynamic approach like PBL that relies on exploration and discovery.

Canva as a Platform for Authoring Visually Engaging Educational Content

The creation of high-quality e-modules requires tools that are both powerful and accessible to educators. Canva, a web-based graphic design platform, has gained significant traction in education due to its user-friendly interface, vast library of templates, and multimedia integration capabilities. From an instructional design perspective, Canva supports the principles of Universal Design for Learning (UDL) by making it easy to present information in multiple ways (through text, images, icons, and video) and to offer diverse options for student engagement and expression (Purnomo et al., 2025). Studies have shown that the use of visually appealing media created with Canva can significantly increase student interest and participation. For a PBL e-module, Canva allows designers to create not just static pages but interactive layouts with embedded videos demonstrating a procedure, clickable buttons for navigation, and collaborative spaces where students can brainstorm and share ideas, thus directly supporting the collaborative and investigative phases of the PBL cycle (Suciati et al., 2024).

Synthesizing the Framework: The Convergence of PBL, E-Modules, and Canva for Procedure Text. While research exists on PBL, digital e-modules, and Canva independently, there is a clear gap in the literature regarding their strategic integration for teaching specific genres like procedure texts. The synergy between these three elements creates a potent learning solution. The PBL approach provides the pedagogical structure and authentic context. The e-module serves as the digital container that organizes the PBL stages—from problem presentation to guided inquiry, resource provision, and final product creation—into a coherent flow. Finally, Canva acts as the practical authoring tool that empowers educators to build this e-module with a high degree of visual appeal and interactivity without needing advanced programming skills. This integrated framework addresses the limitations of conventional resources by creating a student-centered, problem-driven, and

multimodal learning environment that is directly aligned with the functional and communicative goals of mastering procedure texts.

METHOD

This study adopted a Research and Development (R&D) approach, utilizing the systematic procedural model established by Borg and Gall (Aka, 2019). The model was selected for its iterative stages, which are essential for developing a valid, practical, and effective educational product. The research procedure was streamlined into six primary phases: needs analysis, design, development, validation, revision, and implementation.

The process commenced with a needs analysis, where preliminary observations and interviews with junior high school English teachers were conducted. This initial investigation revealed that students often faced difficulties in comprehending and composing procedure texts. The primary challenges were identified as a lack of engagement with conventional textbooks and the prevalence of passive learning methods. Consequently, a clear need was established for interactive, visually stimulating, and student-centered learning materials to address these issues.

Informed by the findings from the needs analysis, the design phase was initiated. The e-module was conceptualized by integrating the Problem-Based Learning (PBL) framework to foster active learning. This phase involved defining specific learning objectives related to analyzing and creating procedure texts. Furthermore, real-life, problem-based scenarios, such as "How to create an eco-friendly cleaning product?", were crafted to serve as the foundation for each module unit. The content was meticulously mapped to guide students through a structured problem-solving process, encompassing problem identification, solution research, procedure drafting, and result presentation. To ensure engagement, the design plan leveraged Canva as the primary platform to incorporate various multimedia elements, including videos, images, hyperlinks, and interactive quizzes.

During the development stage, the designed framework was transformed into a functional e-module. Canva was utilized for its user-friendly interface and extensive library of design templates and assets. The final e-module was produced in an accessible format for students, such as an interactive PDF with embedded links or an online published document.

To ensure the product's quality, the initial prototype underwent a rigorous validation process. It was evaluated by a panel of four experts: two material experts who assessed content accuracy, relevance, and curriculum alignment, and two media experts who evaluated graphic design, usability, navigation, and interactivity. The validation instrument was a Likert-scale questionnaire covering criteria such as content feasibility, instructional design, and media presentation. The revision stage followed, where feedback and quantitative scores from the experts

were analyzed and used to refine the e-module, ensuring it met a "very good" standard before implementation.

Finally, the revised e-module was implemented in a junior high school classroom for a limited try-out. Data collection during this phase involved student questionnaires to measure practicality and engagement, as well as pre-test and post-test assessments to evaluate the e-module's effectiveness in improving learning outcomes on procedure texts. Quantitatively, data from validation and questionnaires were analyzed using descriptive statistics, while the pre-test and post-test scores were compared using a paired-sample t-test to determine statistical significance.

RESULT AND DISCUSSION

Result

The findings of this study are presented based on the data collected from the validation and implementation stages.

1. Expert Validation Results

The e-module was validated by two material experts and two media experts. The results, as shown in Table 1, indicate that the product scored very highly across all assessed criteria.

Table 1: Results of Expert Validation

Aspect Sub-Aspect	Mean Score (1-5)	Category
Material Content Accuracy & Relevance	4.70	Very Good
PBL Scenario Design	4.60	Very Good
Language Use & Clarity	4.50	Very Good
Media Visual Design & Layout (Canva)	4.80	Very Good
Interactivity & Navigation	4.55	Very Good
Usability & Accessibility	4.65	Very Good
Overall Mean	4.63	Very Good

2. Implementation Results

The limited try-out with students yielded positive results. The student engagement questionnaire showed that 88% of students found the e-module "engaging" and "easy to use." More importantly, the analysis of learning outcomes demonstrated a significant improvement. The pre-test mean score was 62.5, while the post-test mean score increased to 85.2. A paired-sample t-test confirmed that this improvement was statistically significant ($t = 8.75$, $p < 0.001$).

Discussion

The development of this PBL-based interactive e-module using Canva has proven to be a valid, practical, and effective solution to the initial problem of low student engagement and comprehension in learning procedure texts.

1. Validity and Design Quality

The "Very Good" validation scores (Table 1) confirm that the e-module is well-designed. The high score for PBL Scenario Design aligns with contemporary constructivist theories, which posit that learning is more effective when students are actively involved in solving authentic problems (Hmelo-Silver, 2004). The PBL approach embedded in the e-module successfully shifts the learning paradigm from teacher-centered to student-centered, fostering deeper cognitive engagement. Furthermore, the high scores in Visual Design and Interactivity underscore the advantage of using Canva. The platform allows for the creation of aesthetically pleasing and organized content, which is crucial for reducing extraneous cognitive load and managing essential processing, as per Mayer's Cognitive Theory of Multimedia Learning(Mayer, 2014). The interactive elements, such as clickable buttons and embedded quizzes, provide immediate feedback, a key factor in reinforcing learning.

2. Effectiveness in Enhancing Comprehension and Engagement

The significant increase in post-test scores provides strong evidence for the e-module's effectiveness. This can be attributed to the synergistic effect of PBL and interactive multimedia. The problem-based activities require students to critically analyze the structure and language features of procedure texts to solve a given problem, thereby enhancing higher-order thinking skills. This finding is supported by research indicating that PBL improves critical thinking and knowledge application (Yew & Goh, 2016).

Simultaneously, the interactive and visual nature of the Canva-based e-module directly addresses the needs of the digital generation. The multimedia elements make abstract concepts more concrete and memorable. As noted by (Aldoobie, 2015), technology integration in a PBL environment increases student motivation and ownership of learning. The high engagement score from the student questionnaire (88%) corroborates this, suggesting that the e-module successfully created a stimulating learning environment that encouraged active participation and collaboration among students.

3. Canva as an Innovative Educational Tool

The successful integration of Canva demonstrates its utility beyond simple graphic design; it is a potent platform for rapid and effective educational resource development. Its user-friendly interface enables educators without advanced technical skills to create professional-quality, interactive learning materials. This aligns with the trend of leveraging low-threshold digital tools to foster 21st-century

skills(Ferdig et al., 2020). The e-module developed is not just a digital replica of a book but a dynamic learning space that facilitates exploration, creation, and collaboration.

In conclusion, the developed PBL-based e-module is a feasible and innovative alternative tool. It validates the notion that combining a sound pedagogical framework like PBL with an accessible and powerful design tool like Canva can significantly enhance the learning experience, leading to improved comprehension and application of procedure texts in real-life contexts.

CONCLUSIONS

This study shows that the development of an interactive e-module for teaching procedure texts through a Problem-Based Learning (PBL) approach using Canva is valid, practical, and effective. The integration of authentic problem scenarios within a visually engaging and interactive digital platform successfully enhances students' engagement, comprehension, and critical thinking skills. The significant improvement in students' post-test scores confirms that the e-module not only supports conceptual understanding of procedure texts but also strengthens students' ability to apply procedural knowledge in real-life contexts.

Furthermore, the positive validation results from material and media experts indicate that the e-module meets high standards in terms of content accuracy, instructional design, interactivity, and visual presentation. The use of Canva proves to be a powerful and accessible tool for educators in developing innovative digital learning resources without requiring advanced technical expertise.

Overall, the synergy between PBL, interactive e-modules, and Canva creates a student-centered learning environment that promotes active participation, collaboration, and meaningful learning experiences. Therefore, this developed e-module can serve as an innovative alternative instructional tool for English teachers, particularly in teaching procedure texts at the junior high school level. Future research may expand this approach to other text genres and educational contexts to further explore its potential in enhancing English language learning.

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