

Development of Flipbook Based E-Books as Teaching Materials for Biography Texts at SMK Kesehatan Cianjur

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ABSTRACT

Objective: Education plays a strategic role in enhancing personal quality and national development. This research aims to develop flipbook-based electronic books (e-books) for biographical text instruction targeted at grade X students of vocational high schools. The study employed the Research and Development (R&D) method using the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation). Results from expert validation indicated that the e-book was highly feasible in terms of material content (mean score = 5.0), feasible in media design (mean score = 4.1), and moderately feasible in linguistic aspects (mean score = 3.2). Student response questionnaires (n=25) revealed positive reception with an overall mean score of 3.96, particularly in language comprehension (mean = 4.32) and visual engagement (mean = 3.96). The flipbook-based e-book effectively facilitated students' understanding of biographical texts through contextual examples, interactive features, and structured scaffolding based on the Genre-Based Approach. This digital teaching material demonstrates potential for enhancing student engagement and writing competency in vocational education contexts.

INTRODUCTION

Education serves as a fundamental pillar for personal development and national progress (Abidin, 2015). Governments worldwide continue implementing various strategies to achieve educational goals, particularly through enhancing the quality of teaching and learning processes. Teachers play crucial roles in fostering creative thinking and facilitating knowledge construction among students (Hammond et al., 2020). To support effective learning, educators must create instructional materials that streamline the learning process and promote comprehensive understanding of each topic. An evaluation of the learning process at SMK Kesehatan Cianjur revealed significant challenges in biographical text instruction. Many students experienced difficulty comprehending biographical text materials presented in standard textbooks. Limited availability of diverse teaching resources prevented students from accessing varied instructional materials. Furthermore, insufficient technology integration in learning environments compounded these issues (Basilaia & Kvavadze, 2020). Current textbooks often fail to adequately consider students' contextual conditions and environments, remaining overly general and insufficiently specific for biographical text instruction.

The Indonesian government has established comprehensive frameworks to improve education quality through Law No. 20 of 2003 concerning the National Education System. Government Regulation No. 19 of 2005 Article 19 Paragraph 1 mandates that learning processes in educational units must be conducted in interactive, inspiring, enjoyable, challenging, and motivating manners to encourage active student participation. To realize these objectives, educators are expected to utilize methods and

media that actively engage students while creating dynamic and interactive learning environments (Schunk & DiBenedetto, 2020).

The selection of appropriate instructional media significantly affects learning processes, fostering student enthusiasm and active participation (Mayer & Pilegard, 2014). One promising teaching material for facilitating biographical text learning is flipbook-based e-books. Previous research has demonstrated the effectiveness of flipbook-based e-books in educational contexts. Digital flipbooks present teaching materials in engaging virtual formats with several advantages: ease of use, accessibility through multiple devices (mobile phones, laptops, and other electronic media), and flexibility for anytime, anywhere learning (Hwang et al., 2020). Additionally, biographical text materials can be enriched with contextual examples from students' environments and presented with attractive, interactive designs. Recent studies have shown that digital learning materials enhance student engagement and learning outcomes. Research by Rodríguez et al. (2021) demonstrated that interactive digital textbooks significantly improved comprehension and retention compared to traditional printed materials. Similarly, Cakir and Yildirim (2019) found that multimedia-enhanced e-books positively influenced students' motivation and achievement in language learning. These findings support the development of technology-integrated instructional materials that align with contemporary educational needs.

This research aims to develop flipbook-based electronic books (e-books) for biographical text instruction targeted at grade X students of SMK Kesehatan Cianjur. The developed e-book teaching material is expected to facilitate students' understanding of biographical text material through contextual examples familiar to students, packaged in attractive and interactive presentation formats that support 21st-century learning competencies.

RESEARCH METHOD

This research employed the Research and Development (R&D) method to develop flipbook-based e-book teaching materials for biographical text instruction among grade X vocational school students. The development model adopted was ADDIE, which consists of five stages: Analysis, Design, Development, Implementation, and Evaluation (Branch, 2009). This model was selected due to its systematic approach and proven effectiveness in instructional design (Aldoobie, 2015).

The Analysis stage was conducted to identify learning needs through observations and interviews at SMK Kesehatan Cianjur. Findings revealed that learning relied solely on inadequate printed books, with no available teaching materials in flipbook e-book format. Student characteristics, learning preferences, technological readiness, and curriculum requirements were systematically examined to establish the foundation for media development (Dick et al., 2015). The Design stage involved creating an initial prototype of the flipbook e-book. This media encompasses biographical text material enhanced with images, audio, and video links to support student comprehension. The e-book structure includes a title page, foreword, table of contents, material chapters, learning reflections, and bibliography. The design incorporated principles of the Genre-Based Approach (GBA), which emphasizes scaffolded language learning through stages of Building Knowledge of the Field, Modeling of the Text, Joint Construction of the Text, and Independent Construction of the Text (Rose & Martin, 2012). The initial design underwent expert validation to obtain improvement recommendations.

The Development stage included the collection of supporting materials, images, and audio resources. The product was subsequently validated by three experts: an Indonesian language teacher (material expert), a media lecturer (design expert), and a language lecturer (linguist). The flipbook was developed using HTML5 based platforms that support responsive design and multimedia integration. Expert suggestions were incorporated to refine the final product according to established quality standards (Richey & Klein, 2014). The Implementation stage involved testing the e-book with 25 grade X students from SMK Kesehatan Cianjur. Students utilized the e-books in their learning process and subsequently provided feedback through questionnaires. The implementation process followed structured learning sequences, with teachers guiding initial usage while allowing students opportunities for independent exploration and practice (Reiser & Dempsey, 2018). The Evaluation stage assessed the feasibility and effectiveness of the e-book based on expert validation results and student responses. Both formative and summative evaluations were conducted throughout the development process to ensure continuous improvement and quality assurance (Morrison et al., 2019).

This research was conducted at SMK Kesehatan Cianjur from June 2024 to May 2025. The research population comprised all grade X students, while the sample consisted of 25 students purposively selected based on their lack of prior experience with flipbook e-books. It is important to acknowledge that this sample size (n=25) represents a significant limitation of the study, as the relatively small number of participants restricts the generalizability of findings to broader populations. Despite this limitation, the purposive sampling approach enabled focused investigation of the e-book's effectiveness among students with no previous exposure to this format. Research subjects included validators (two lecturers and one teacher) and students as respondents.

Data collection employed multiple methods: questionnaires, observations, and interviews. Instruments included observation sheets, expert validation questionnaires, and student response questionnaires. Data analysis utilized both qualitative and quantitative approaches (Creswell & Creswell, 2018). Qualitative analysis examined expert inputs and observational data, while quantitative analysis employed a Likert scale (ranging from 1 = strongly disagree to 5 = strongly agree) to measure feasibility levels and student responses to the flipbook e-books. The validation criteria established for categorizing the media's suitability were as follows: a mean score of 4.01-5.00 = Very Feasible, 3.01-4.00 = Feasible, 2.01-3.00 = Moderately Feasible, 1.01-2.00 = Less Feasible, and 1.00 = Not Feasible. A minimum mean score of 3.01 was required for the e-book to be categorized as feasible for instructional implementation.

RESULTS AND DISCUSSION

Results

Flipbook Based Ebook Development

This research uses the Research and Development (R&D) method with the aim of developing flipbook-based e-book teaching materials for Biography Text materials in grade X vocational school students. The development model used is ADDIE which consists of five stages, namely Analysis, Design, Development, Implementation, and Evaluation.

1. Analysis Stage

The analysis stage revealed critical information about learner characteristics and instructional needs. Students demonstrated strong interest in biographical text learning when materials connected to their vocational fields and career prospects. The statement "I feel passionate about learning if the material is associated with the world of work" received the highest average score (mean = 3.29) in the interest and motivation category. This finding aligns with situated learning theory, which emphasizes that students are more motivated when they perceive relevance between academic content and real-world applications (Lave & Wenger, 2021).

Regarding learning styles, students exhibited predominantly kinesthetic characteristics. The statement "I enjoy learning through practice or hands-on activities" earned the highest average score in the learning style subcategory (mean = 3.71). This indicates that learners require media that not only inform but also provide opportunities for active exploration through exercises, practical assignments, and case studies (Kolb, 2015). The VARK learning styles model supports this finding, suggesting that kinesthetic learners benefit most from experiential and hands-on learning tools (Fleming, 2018).

Analysis of students' initial abilities revealed that while students generally understood the structure of biographical texts (mean = 3.17) and could distinguish facts from opinions (mean = 3.08), their experience in writing biographical texts remained limited (mean = 2.71). This finding underscores the importance of instructional scaffolding, consistent with Vygotsky's Zone of Proximal Development theory, which posits that students need guided support to progress from declarative knowledge to complex procedural skills (Shabani et al., 2010).

Technology and media access analysis indicated that most students possessed digital devices and internet connectivity (mean = 3.33), providing a solid foundation for implementing digital-based teaching media. However, e-book usage habits remained relatively low (mean = 2.38), and preferences for digital versus printed media varied considerably (mean = 2.54). These findings suggest uneven digital literacy levels among students, necessitating transitional approaches from print to digital media (Spante et al., 2018).

2. Design Stage

The design stage systematically translated analysis findings into concrete instructional solutions. Learning objectives were formulated based on the Independent Curriculum's Learning Outcomes for Indonesian subjects at the vocational school level and needs analysis results. The primary objectives were: (1) Students demonstrate ability to understand the structure and language features of biographical texts, and (2) Students independently compose biographical texts of inspirational figures relevant to their vocational fields. These objectives were operationalized into specific learning indicators, including the ability to identify biographical text structure (orientation, milestone events, and reorientation), distinguish facts from opinions, recognize linguistic characteristics, compose biographical texts, and demonstrate engagement with digital e-book-based learning. This formulation aligns with constructive alignment principles that emphasize coherence among learning objectives, instructional activities, and assessment methods (Biggs & Tang, 2011).

The instructional material was organized using the Genre-Based Approach (GBA), which emphasizes text learning within social contexts through scaffolded instruction (Derewianka & Jones, 2016). The four main GBA stages Building Knowledge of the Field (BKoF), Modeling of the Text (MoT), Joint Construction of the Text (JCoT), and Independent Construction of the Text (ICoT) – were systematically integrated into the e-book design. This pedagogical framework supports gradual development of language competence from supported to independent text production.

The flipbook format was selected based on multiple pedagogical considerations: (1) visual presentation resembling printed books while offering digital accessibility, (2) interactive interface with page-flipping animations, embedded audio and video elements, (3) multi-device compatibility including mobile phones, tablets, and laptops, and (4) offline accessibility through download capabilities. Research indicates that flipbook-based media increases student engagement and accelerates concept comprehension due to attractive and navigable interfaces (Suryani et al., 2020).

The e-book content was organized into six main chapters: (1) Introduction to Biography Text, (2) Reading Biographical Texts, (3) Language Structure and Rules, (4) Writing Collaborative Biographical Texts, (5) Writing Independent Biographical Texts, and (6) Learning Reflection. Each chapter incorporated navigation elements, multimedia components, interactive exercises, and formative assessment tools aligned with active learning principles and differentiated instruction (Tomlinson, 2017).

3. Development Stage

The development stage transformed conceptual designs into functional digital products. The e-book was developed using HTML5 based flipbook platforms (FlipHTML5, AnyFlip, or Publuu) selected for their responsive design capabilities, intuitive interfaces, multimedia embedding support, and online/offline accessibility features. These platforms effectively combine visual appeal with technical functionality, supporting modern pedagogical approaches (Santoso et al., 2018). Following development, the e-book underwent rigorous validation by three expert reviewers to ensure quality and feasibility before field testing. The validation process employed structured questionnaire instruments with Likert scale ratings (1-5) and open-ended questions for qualitative feedback.

Material Validation Results: The material expert evaluation yielded exceptional results with a perfect mean score of 5.0, categorizing the content as "Very Feasible." All substantial aspects received maximum ratings, indicating that the biographical text content aligned excellently with learning objectives and curriculum standards. The material was deemed comprehensive, accurate, contextually relevant, and clearly presented. Examples were judged appropriate for supporting student understanding of biographical text structure. Exercises were assessed as effective for progressively strengthening writing skills. Visual media elements (images, graphs, and tables) were found to effectively support content comprehension. The evaluator recommended adding varied biographical text examples based on different structural patterns to help students more easily distinguish key textual components (orientation, milestone events, and reorientation). This suggestion indicates that while content completeness was excellent, reinforcement through structured exemplars would enhance instructional effectiveness in future revisions.

Media Validation Results, media design evaluation produced positive findings with a mean score of 4.1, categorizing the e-book as "Feasible." The flipbook demonstrated easy to use navigation, excellent accessibility across digital devices (smartphones and computers), and smooth performance. Color schemes and typography were deemed supportive of student readability and sustained attention during learning. The systematic presentation of writing steps was praised for facilitating understanding of writing techniques and providing clear structural guidance. Included exercises were considered relevant and motivating for gradual writing practice.

However, several technical aspects required improvement. The evaluator noted that visual presentation needed optimization to create more enjoyable and dynamic learning experiences. Monotonous and insufficiently varied page designs were identified as concerns. The media was recommended to incorporate additional interactive features such as embedded video content, audio elements, and hyperlinks to external learning resources or online assessments. These suggestions emphasize that effective media development extends beyond good content and neat layouts to maximally utilize flipbook technology's interactive potential. Enhanced interactive elements are believed to increase student engagement, particularly in independent and flexible digital learning contexts (Kazu & Kuvvetli, 2020).

Linguistic Validation Results, linguistic evaluation assessed language quality, particularly regarding support for students' biographical text writing skills development. Assessed aspects included language appropriateness for students' cognitive levels, instruction clarity, sentence and paragraph comprehension, and language style consistency.

The linguistic validation yielded a mean score of 3.2, categorizing language quality as "Moderately Feasible." Highest-scoring aspects included language style consistency, sentence effectiveness in guiding biographical text structure comprehension, and inter-paragraph coherence, indicating logical, consistent, and interconnected language presentation. Aspects receiving scores of 3 (Sufficient) included cognitive appropriateness, instruction clarity for writing practice, sentence and paragraph comprehension, linguistic concept clarity, example appropriateness, vocabulary richness, main idea clarity, writing stage systematics, critical thinking stimulation, and structural writing support.

These linguistic validation results indicate that while the flipbook is generally feasible for instructional use, minor revisions are needed to improve instruction clarity, linguistic concept comprehension, and vocabulary richness to better support students' creative writing skills. This aligns with readability and linguistic appropriateness principles for vocational learning contexts (Martin & Rose, 2020).

Table 1. Overall Validation Summary

Validator	Mean Score	Category	Primary Recommendations
Material Expert	5.0	Very Feasible	Add varied structured biographical text examples
Media Expert	4.1	Feasible	Enhance visual design and multimedia features
Linguist	3.2	Moderately Feasible	Clarify instructions, add vocabulary variations and examples

Based on validation from three competent reviewers, the interactive flipbook-based teaching media was deemed feasible for biographical text learning in vocational schools, requiring several minor improvements. Material content was considered highly

feasible, meeting curriculum standards and supporting gradual writing skill development through contextual, structured presentation. Media aspects were judged suitable due to good accessibility and navigation supporting independent learning, though requiring enhanced visual design variety and multimedia integration. Linguistic aspects were rated as moderately feasible, with strengths in language style consistency and inter-paragraph coherence, but requiring simplified instructions, enriched vocabulary variations, and strengthened linguistic concept explanations.

4. Implementation Stage Results

The implementation stage applied the validated teaching media in authentic learning situations at SMK Kesehatan Cianjur. Implementation aimed to measure initial effectiveness, student acceptance, and media-context fit while identifying strengths and limitations for subsequent evaluation and refinement. The revised flipbook incorporating material, language, and media expert feedback was implemented with grade X students, selected based on material alignment with Indonesian language learning outcomes for biographical text writing and school readiness in providing necessary digital devices. Learning was structured using the flipbook as the primary instructional medium. Teachers guided specific sections while students independently explored media features and completed interactive exercises. Each chapter included formative assessments to progressively measure understanding and support productive biographical text writing.

Observational data revealed high student enthusiasm and engagement. Students actively read materials on personal devices, examined biographical text examples, discussed content and structure with peers, and conscientiously completed exercises. Navigation features resembling printed books combined with digital interactive elements effectively maintained student focus and interest throughout learning sessions. Teachers reported that flipbooks facilitated more concise and engaging material delivery. Writing guides in template and step-by-step formats were particularly helpful for collaborative and independent writing tasks, consistent with GBA's scaffolding principles emphasizing gradual guidance toward independent writing capability (Derewianka & Jones, 2016).

Student response questionnaires distributed after implementation provided quantitative feedback across multiple dimensions including interest, ease of use, material comprehension, writing confidence, and preference for flipbook versus printed media. Analysis revealed: (1) overall mean score of 3.96, indicating majority agreement that flipbooks support biographical text writing learning, (2) highest-rated statement "The language used in the flipbook is easy to understand" (mean = 4.32), demonstrating cognitive-level appropriateness supporting readability and material comprehension principles (Martin & Rose, 2020), (3) "The visual and interactive appearance of the flipbook makes me more focused on learning" (mean = 3.96) and "Writing exercises help me express ideas better" (mean = 3.84), indicating design effectiveness for active learning and productive writing skill development, (4) perceived writing skill improvement (mean = 3.2), showing positive perception while suggesting need for extended practice time and habituation for optimal improvement, and (5) reversed-scored statement "I have difficulty using flipbooks" (mean = 2.96), indicating minimal usage difficulties. Statistical analysis revealed relatively low standard deviations (generally <0.7), indicating homogeneous student perceptions. Mode and median

values consistently at 3 or 4 demonstrated positive response consistency across participants.

5. Evaluation Stage Results

The evaluation stage, final in the ADDIE model, determined overall teaching media effectiveness, efficiency, and quality. Evaluation comprised formative and summative components conducted throughout development and implementation. Formative Evaluation, Conducted continuously throughout development and implementation to refine teaching media before wider dissemination. This included: (1) material and media expert validation during development, resulting in highly feasible content ratings and feasible design ratings with recommendations for strengthened visual and multimedia elements, and (2) student formative assessments at each chapter's conclusion during implementation. Results indicated that most students successfully completed exercises, understood biographical text content, recognized linguistic structures and rules, and produced texts collaboratively and independently. Teachers' direct observations of student responses regarding engagement, interaction, and learning independence showed active material exploration, exercise completion, and discussion participation, indicating successful facilitation of digital learning styles and active participation encouragement. And summative Evaluation, Conducted after complete learning processes with flipbook media to obtain comprehensive effectiveness overview. This evaluation incorporated: (1) student reflections on teaching media through end-of-learning questionnaires, with most students reporting that flipbooks facilitated biographical text comprehension through engaging, accessible presentation with supportive graduated exercises, and (2) independent biographical text writing final assignments showing improved structural quality and language use compared to initial tasks. Students demonstrated ability to compose structurally appropriate texts using characteristic biographical text linguistic elements including material verbs, temporal conjunctions, and complex sentences.

Based on formative and summative evaluation findings, the interactive flipbook-based teaching media proved effective in enhancing students' comprehension, writing skills, and learning motivation, particularly for biographical text learning. Flipbooks functioned not merely as material delivery media but as comprehensive learning tools enriching independent and collaborative learning experiences.

Discussion

Alignment of Teaching Media with Needs Analysis

Analysis results revealed that vocational school students possessed kinesthetic and visual learning style characteristics and demonstrated heightened motivation when materials connected to workplace contexts and vocational majors. The developed interactive flipbook responded to these findings by providing practical activities, collaborative and independent assignments, and presenting biographical figures relevant to the health field. This approach aligns with contextual learning principles emphasizing connections between subject matter and students' lived realities (Berns & Reyes-Sánchez, 2021). By presenting inspirational figures from health professions, the flipbook built connections between biographical texts and students' professional identities, ultimately increasing engagement and learning meaningfulness. The media design also addressed technological readiness findings. While students possessed

adequate device access and internet connectivity, their limited e-book usage habits and varied digital media preferences necessitated thoughtful transitional approaches. The flipbook interface, combining familiar printed book aesthetics with digital functionality, effectively bridged traditional and contemporary learning modalities. This design decision aligns with research on digital transition in education, which emphasizes the importance of user-friendly interfaces that minimize cognitive load during technology adoption (Thurlimann et al., 2022).

Effectiveness of Media Design with Genre Based Approach

The teaching media was designed using GBA stages: Building Knowledge of the Field, Modeling of the Text, Joint Construction of the Text, and Independent Construction of the Text. Each flipbook chapter presented content representing these four stages in gradual, integrated progression. Implementation results demonstrated students' ability to understand biographical text structure, recognize linguistic rules, and produce appropriately scaffolded texts. These findings align with research confirming GBA effectiveness in improving academic literacy skills, particularly for factual text genres including biographies (Martin & Rose, 2020).

The interactive flipbook functioned not only as information delivery medium but as active learning tool. Embedded quizzes, reflective exercises, videos, and audio elements supported visual, auditory, and kinesthetic learning styles in balanced fashion. This multimodal approach aligns with cognitive theory of multimedia learning, which posits that people learn more effectively when information is presented through both verbal and visual channels (Mayer & Pilegard, 2014).

Student response questionnaire results corroborated implementation observations. The overall mean score of 3.96 indicated majority agreement that flipbooks facilitated biographical text writing learning. Highest-scoring statements were "The language used in the flipbook is easy to understand" (mean = 4.32) and "The visual and interactive appearance of the flipbook makes me more focused on learning" (mean = 3.96), demonstrating support for student readability and learning motivation.

However, the statement regarding writing skill improvement received a mean score of 3.2, which, while positive, indicates need for continuous practice and habituation to optimize productive skills. This finding is consistent with writing development research showing that sustained practice over extended periods is necessary for meaningful improvement in writing competence (Graham & Harris, 2019). The relatively short implementation period may have limited observable gains in complex writing abilities.

Media expert feedback highlighted potential design improvements, particularly regarding visual variety and multimedia feature utilization. This represents a focus area for advanced version development. Research on interactive learning materials suggests that well-designed multimedia elements significantly enhance engagement and learning outcomes when thoughtfully integrated to support rather than distract from learning objectives (Clark & Mayer, 2016).

Contribution to Vocational Education

This teaching media has proven effective in supporting learning objective achievement, specifically the ability to understand and write biographical texts progressively and independently. Student writing assignments demonstrated clear textual structure, appropriate language use, and increased content depth compared to pre-intervention

work. The flipbook also provided spaces for independent learning through intuitive navigation, logical content organization, formative exercises, and self-reflection activities. Thus, this media supported not only teacher-centered instruction but also encouraged student-centered learning practices, consistent with 21st-century learning paradigms (Voogt & Roblin, 2020). The contextual relevance achieved by featuring health profession biographical figures proved particularly valuable for vocational education. By connecting language learning with professional identity development, the media addressed the authentic learning needs of vocational students preparing for specific career paths. This approach exemplifies how instructional design can bridge academic skills and vocational competencies, a persistent challenge in vocational education contexts (Jossberger et al., 2021).

Limitations and Future Directions

Several limitations warrant acknowledgment. First, the small sample size ($n=25$) restricts generalizability of findings to broader populations. Future research should implement larger-scale studies across multiple vocational schools and specializations to establish broader applicability. Second, the relatively short implementation period may have limited observable development in complex writing skills. Longitudinal studies tracking student progress over extended periods would provide more comprehensive understanding of media effectiveness for skill development. Third, while expert validation provided valuable quality assurance, the study would benefit from comparative experimental designs examining flipbook effectiveness against traditional instructional approaches. Such research would establish more definitive evidence regarding the added value of interactive digital media. Fourth, the study did not extensively examine individual differences in learning outcomes based on variables such as prior digital literacy, learning style preferences, or initial language proficiency. Future research should investigate how these factors mediate media effectiveness to inform more differentiated instructional approaches.

Technical considerations also merit attention. While flipbook platforms offer numerous advantages, dependency on internet connectivity for full feature access may present challenges in contexts with limited infrastructure. Development of more robust offline capabilities and consideration of bandwidth limitations would enhance accessibility. Additionally, investigation of long-term sustainability regarding media updates, maintenance, and version control would inform practical implementation strategies for schools and educators.

CONCLUSION

This research successfully developed interactive flipbook-based e-book teaching materials for biographical text instruction in grade X vocational school students using the systematic ADDIE development model. The comprehensive development process encompassing analysis, design, development, implementation, and evaluation stages produced instructional media that was validated as highly feasible by material experts (mean = 5.0), feasible by media experts (mean=4.1), and moderately feasible by linguists (mean=3.2), with overall assessment supporting instructional implementation. Student responses demonstrated positive reception (mean=3.96), with particularly strong ratings for language comprehension (mean=4.32) and visual engagement (mean = 3.96). Implementation observations confirmed high student engagement, active participation,

and improved ability to understand and produce biographical texts. The media successfully integrated Genre-Based Approach principles with interactive digital technology, providing scaffolded learning experiences that progressed from guided instruction to independent text production.

The flipbook-based e-book addressed identified needs by connecting biographical text learning with students' vocational contexts, accommodating diverse learning styles through multimodal content presentation, and providing accessible, flexible learning opportunities through digital platforms. By featuring inspirational figures from health professions and incorporating practical, interactive elements, the media enhanced learning relevance and meaningfulness for vocational students. Key strengths included intuitive navigation resembling printed books while offering digital functionality, embedded multimedia elements supporting diverse learning preferences, contextually relevant content aligned with vocational education goals, and systematic scaffolding supporting gradual skill development. The media functioned not merely as information delivery tool but as comprehensive learning environment facilitating both independent and collaborative learning experiences.

Recommendations for future development include enhancing visual design variety and multimedia feature integration as suggested by media experts, expanding vocabulary variations and clarifying linguistic concepts as recommended by linguistic validation, extending implementation periods to allow sustained practice for writing skill development, and conducting larger-scale studies across diverse vocational contexts to establish broader generalizability. This research contributes to the growing body of knowledge on digital learning materials in vocational education, demonstrating that thoughtfully designed, theoretically grounded interactive media can effectively support language learning and writing skill development. The flipbook-based e-book represents a promising approach for modernizing biographical text instruction while maintaining pedagogical rigor and contextual relevance for vocational students preparing for professional careers.

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