Foreign Language Instruction Probe
Vol. 5, No. 2, November 2026
https://jurnal.stit-buntetpesantren.ac.id/index

DOI: https://doi.org/10.54213/flip
p-ISSN: 2830-5949
e-ISSN: 2830-4837

Developing Student-Authored Digital Flipbooks as Supplementary Reading Materials for Vocational High School Students

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Received: 14 July 2026
Revised: 27 September 2026
Accepted: 27 September 2026

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Abstract

This study aimed to develop student-authored digital flipbooks as supplementary reading materials for Grade XI students at SMKN 1 Narmada. The study employed a Research and Development (R&D) design using the ADDIE model, which consists of Analysis, Design, Development, Implementation, and Evaluation stages. The participants were 28 Grade XI students of the Computer and Network Engineering program. Data were collected through documentation, needs analysis questionnaires, student response questionnaires, and expert validation sheets. The developed materials consisted of five digital flipbooks created collaboratively by students and contained original English stories with adventure, mystery, fantasy, fairy tale, and superhero themes. The products were developed using a digital flipbook application and designed to provide students with accessible supplementary reading materials. The validation results showed an average score of 94.00%, consisting of 95.00% from the material expert and 93.00% from the media expert, indicating that the products were categorized as *Very Feasible*. Student responses were also highly positive, with 28 respondents obtaining an average score of 5.00 on a five-point Likert scale, and all respondents selecting *Strongly Agree*. These findings indicate that student-authored digital flipbooks were feasible as supplementary reading materials and were positively received by the participating students. The study also highlights the potential of involving students as digital content creators in English learning. However, the findings do not establish causal effects on reading comprehension because the study did not employ a control group or pre-test and post-test design.

Keywords: digital flipbook; supplementary reading material; student-authored materials; English reading; vocational high school; ADDIE

To cite this article (APA Edisi 7th): Hayati, et al. (2026). Developing Student-Authored Digital Flipbooks as Supplementary Reading Materials for Vocational High School Students. *Foreign Language Instruction Probe*. https://doi.org/10.54213/flip

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Introduction

English plays an important role in education, social life, and professional settings because it functions as an international language that connects people from different countries. In education, English proficiency is not only related to communication skills but also to the ability to access knowledge, information, technology, and developments in various fields of study, many of which are available in English. Academic books, international journal articles, educational websites, technology manuals, work instructions, and various digital learning resources are often written in English. This situation indicates that English proficiency is an important competence for students to keep up with the development of knowledge and technology.

In English as a Foreign Language (EFL) learning, students need to develop four main language skills: listening, speaking, reading, and writing. These skills are interconnected and support the development of overall language proficiency. However, reading has an important position because it enables students to obtain language input as well as access a wider range of information. Grabe (2009) explains that reading is a complex process involving the ability to understand, interpret, and construct meaning from a text. Therefore, reading is not merely concerned with recognizing letters, words, or sentences, but also involves the reader's ability to connect information contained in a text with previously acquired knowledge.

Reading proficiency in English enables students to obtain information that may not always be available in their first language. Through reading activities, students can learn new vocabulary, understand sentence structures, recognize patterns of information organization, identify main ideas, locate specific information, make inferences, and interpret meaning based on context. These processes make reading an important means of developing language competence. For learners of English as a foreign language, limited opportunities to interact directly in English also make written texts one of the most accessible sources of language input.

The importance of reading skills becomes increasingly evident in vocational education. Vocational high schools, or Sekolah Menengah Kejuruan (SMK), are characterized by learning that is not only oriented toward academic knowledge but also toward preparing students for the world of work. Therefore, English proficiency among vocational students needs to be developed in ways that are relevant to their academic and vocational needs. Students may encounter various English texts, such as equipment instructions, procedures, manuals, product descriptions, technological information, safety instructions, informative articles, and digital resources related to their vocational fields. The ability to understand such texts can help students obtain information needed both in their learning process and in future professional environments.

Despite the importance of reading, English reading instruction in schools still faces various challenges. Reading difficulties may arise from several factors, including limited vocabulary, insufficient background knowledge, difficulty understanding sentence structures, inability to identify main ideas, and limited use of reading strategies. Students with limited vocabulary, for example, may experience difficulties when dealing with relatively long texts or texts containing unfamiliar terminology. Such difficulties can affect their ability to understand the overall meaning of a text. In some situations, students may even lose their interest in reading when they perceive the texts as too difficult to understand.

In addition to linguistic factors, students' interest and engagement are also important aspects of reading instruction. Reading activities that repeatedly focus only on

reading a text and answering questions may become less engaging when they are conducted without variation in media or learning activities. Students need learning experiences that allow them to interact with materials, explore information, and use language through meaningful activities. Therefore, reading instruction should not only provide texts but also consider how those texts are presented and how students are involved in the learning process.

One aspect closely related to student engagement is the use of teaching materials. Teaching materials function as sources of information and as resources that help teachers organize learning activities. Richards (2001) explains that teaching materials play an important role in language learning because they can provide input, activities, and opportunities for learners to use the language. Similarly, Harmer (2007) identifies teaching materials as one of the elements that can influence the language learning process. Teaching materials that are appropriate to students' proficiency levels, needs, and characteristics can contribute to more meaningful learning experiences.

In practice, textbooks remain one of the main sources of teaching materials in schools. Textbooks provide a systematic structure for learning and help both teachers and students follow the prescribed materials. However, reliance on textbooks may also present limitations when students' learning needs develop faster than the content available in the textbooks. Reading materials in textbooks may be limited in terms of the number of texts, topics, text types, and learning activities. In addition, the topics presented may not always correspond to students' interests or everyday experiences. This situation indicates the need for supplementary reading materials that can complement the main instructional materials without replacing the function of textbooks.

Supplementary reading materials can provide students with opportunities to interact with a wider variety of texts. Exposure to different types of texts allows students to become familiar with various forms of information and patterns of organization. Supplementary materials can also be adapted to students' needs and characteristics, making reading not only an activity aimed at achieving instructional objectives but also a more engaging learning experience. In English language learning, supplementary reading materials can be used to enrich vocabulary, improve reading comprehension, and provide opportunities for students to read beyond the materials presented in their main textbooks.

The development of digital technology has created new opportunities for the development of supplementary teaching materials. Students today are increasingly familiar with various forms of digital technology in their daily lives. Information is no longer obtained only through printed books but also through websites, social media, applications, videos, electronic books, and various digital learning platforms. This shift in learning habits presents both challenges and opportunities for teachers to develop teaching materials that are more compatible with students' learning environments. Digital teaching materials can combine text with images, illustrations, hyperlinks, animation, and interactive elements, allowing information to be presented in multiple forms.

Mayer (2009) explains that learning can be more effective when information is presented through appropriate combinations of verbal and visual representations. This principle is relevant to the development of digital teaching materials because text does not have to be presented in isolation but can be supported by visual elements that help students understand information. In reading instruction, the combination of text and visuals can provide context for the reading, attract students' attention, and create a different reading experience compared with conventional printed materials. However,

digital and visual elements still need to be designed appropriately so that they support rather than distract from the main reading objectives.

One form of digital teaching material that can be used in language learning is a digital flipbook. A digital flipbook is an electronic book designed to simulate the experience of reading a printed book through digital page-turning effects. It can contain texts, images, illustrations, and other supporting elements within a single learning resource. These characteristics allow digital flipbooks to be used as flexible supplementary reading materials that can be accessed through digital devices. Sari and Susanto (2018) found that the use of digital flipbooks in learning can provide a more engaging learning experience because the materials are presented in a visually oriented digital format.

However, the development of digital teaching materials should not only be viewed from the perspective of technology use. A more important issue concerns how students are positioned in the development process. In student-centered learning, learners are not merely positioned as recipients of materials prepared by teachers but can also be given opportunities to participate in the learning process. Such participation can involve activities such as searching for information, selecting topics, composing texts, organizing information, creating illustrations, editing, and producing learning products.

Student involvement in producing learning products is closely related to constructivist approaches to learning. Jonassen (1999) argues that meaningful learning can occur when learners actively construct knowledge through their experiences and activities. When students are involved in creating a product, they do not merely learn the content contained in the product but also apply their knowledge to produce something that can be used by others. In English language learning, this process can provide students with opportunities to use English more authentically through activities such as reading, selecting information, writing, editing, and presenting texts.

This perspective opens up the possibility of using digital flipbooks not only as media prepared by teachers for students but also as learning products developed through students' participation. Students can be involved in determining reading topics, collecting information, composing English texts, selecting supporting images, organizing pages, and revising the developed product. The final product can then be used as supplementary reading material for other students. This approach creates a connection between the learning process and the learning product because students gain experience throughout the development process while simultaneously producing materials that can be used in learning.

Although the use of digital media in English language learning has been widely discussed, the use of digital flipbooks as supplementary reading materials developed by students still requires further investigation. Much of the discussion surrounding digital media focuses on technology as a product prepared by teachers or researchers and subsequently used by students. Meanwhile, students' involvement as developers or creators of reading materials has not always been the primary focus. Student participation in producing learning materials deserves further attention because it positions learners not only as users of digital media but also as active participants in the production of knowledge and learning resources.

This research gap becomes particularly relevant when considered in the context of vocational high school students. Vocational students have learning needs related to practical skills, employment, technology, and their respective vocational fields. Therefore, supplementary reading materials developed by students may be adapted to their experiences, needs, and learning environments. Students can select topics that are

closely related to their school experiences or vocational fields so that the texts they produce function not only as reading exercises but also as sources of information relevant to other students.

Based on the preliminary observation conducted at SMKN 1 Narmada, the use of digital teaching materials for English reading instruction remains limited. Learning activities tend to position students as recipients of information from existing materials. Opportunities for students to participate in producing reading materials or digital learning products are also limited. This condition indicates an opportunity to develop supplementary reading materials that not only utilize digital technology but also involve students in the process of creating the materials.

This issue is important to investigate because the development of supplementary reading materials is not merely concerned with the type of medium being used. It also involves the content, text structure, language, visual elements, level of difficulty, and students' needs as users. A digital flipbook developed by students needs to consider appropriate text types, relevant topics, English language use that is accessible to Grade XI students, visual presentation, and digital features that support the reading experience. Therefore, development research is needed to identify the characteristics of a product that can be created by students and subsequently used as supplementary reading material.

This study is not primarily intended to determine whether digital flipbooks are effective in improving students' learning outcomes. Instead, it focuses on the process and characteristics of developing digital flipbooks created by students. This focus is important because the developed product should reflect students' abilities and needs both as learners and as users. Through the development process, students are expected to gain a more active learning experience, while the resulting product can provide an alternative source of supplementary reading material for English learning.

Based on these conditions, this study positions the development of a digital flipbook as a means of bringing together three aspects of learning: English reading skills, the use of digital technology, and students' active involvement in producing learning materials. These three aspects are relevant to the needs of English learning in vocational high schools, where students are expected not only to understand information but also to use technology and produce products relevant to their learning and future professional needs.

Considering these needs, this study focuses on developing a student-created digital flipbook as supplementary reading material for Grade XI students at SMKN 1 Narmada. The study is directed toward identifying the characteristics of a digital flipbook that can be developed by students, including its content, text types, topics, language use, visual elements, organizational structure, and digital features appropriate for reading instruction. The resulting product is expected to serve as an alternative supplementary reading resource while providing students with opportunities to actively participate in the creation of learning materials.

Based on the discussion above, there is a need to develop digital reading materials that are not only visually engaging but also relevant to students' needs, appropriate to their English proficiency, and capable of providing opportunities for active student involvement in the learning process. This study seeks to address this need by developing a student-created digital flipbook as supplementary reading material. Therefore, the research question is formulated as follows: "What type of digital flipbook can be developed by students as supplementary reading material for Grade XI students at SMKN 1 Narmada?"

Research Methods

This study employed a Research and Development (R&D) design to develop a student-created digital flipbook as supplementary reading material and to examine its feasibility. The R&D approach was selected because it is appropriate for developing, validating, and evaluating educational products. The study adopted the ADDIE model, consisting of five stages: Analysis, Design, Development, Implementation, and Evaluation. This model was selected because it provides a systematic framework for developing instructional products and allows continuous revision based on feedback obtained throughout the development process.

The participants in this study were 28 Grade XI students enrolled in the Computer and Network Engineering program at SMKN 1 Narmada. The research object was the development and use of a student-created digital flipbook as supplementary reading material. The study focused on the development process, the quality and feasibility of the resulting product, and students' responses to its use in reading instruction.

Several instruments were used to collect the required data. These included a needs analysis questionnaire, a student response questionnaire, and an expert validation sheet. The needs analysis questionnaire was administered to identify students' interests, preferences, and needs related to English reading materials. The student response questionnaire was used to obtain students' perceptions of the practicality, attractiveness, and usability of the developed digital flipbook. Meanwhile, the expert validation sheet was used to evaluate the product in terms of content accuracy, language use, visual design, and its alignment with the intended learning objectives.

Data were collected through documentation and questionnaires. Documentation was used to obtain relevant instructional materials and learning documents, including the syllabus, existing teaching materials, learning outcomes, and students' previous assignments. Questionnaires were administered at two main stages of the study. The first questionnaire was distributed during the initial analysis stage to identify students' needs and preferences, while the second was administered after the implementation of the developed product to obtain students' responses to the digital flipbook.

The research procedure followed the five stages of the ADDIE model. The **Analysis** stage was conducted to identify the existing conditions of English reading instruction and determine students' needs and preferences regarding supplementary reading materials. The **Design** stage involved formulating the learning objectives, selecting reading topics, determining the content and structure of the flipbook, designing its layout and visual presentation, and selecting the digital application to be used.

The **Development** stage involved students in preparing and organizing English reading texts into a digital flipbook. Students developed the reading content and arranged the materials using FlipBuilder. The initial product was then submitted for expert validation to assess its content, language, visual design, and alignment with the learning objectives. Revisions were made based on the feedback and suggestions provided by the experts.

The **Implementation** stage involved using the revised digital flipbook in English reading instruction with the participating students. At this stage, students interacted with the developed material as supplementary reading resources. Their responses and perceptions regarding the product were subsequently collected through the student response questionnaire.

The final stage was **Evaluation**. This stage involved analyzing the results of expert validation and student responses to determine the feasibility and practicality of the

developed digital flipbook. The findings from the evaluation were also used to identify aspects of the product that required further improvement.

The data were analyzed using descriptive quantitative analysis. Questionnaire responses were measured using a Likert scale, and the scores obtained from the expert validation and student response questionnaires were calculated and converted into percentages. The resulting percentages were then interpreted according to predetermined criteria to determine the level of feasibility and students' responses to the developed product. The questionnaire data were processed using NeoSurvey Research Analytics to facilitate efficient and systematic data analysis.

Results and Discussion

Result

The developed student-authored digital flipbook met feasibility criteria. Students were assigned to develop digital storybooks collaboratively in groups. Each group created a flipbook with cover page, group members, table of contents, and chapters presenting original English stories on various themes such as adventure, mystery, fantasy, and heroism.

Table 1. Summary of Student-Authored Digital Flipbooks

The digital flipbooks were designed using flipbook applications and accessible through smartphones, tablets, and computers, allowing anytime, anywhere learning.

Before implementation, the product underwent expert validation. Results are presented in the Table below:

Group	Title of Digital Flip Book	Theme	Brief Description	Digital Book Link
Group 1	The Adventure Beyond the Ancient Gate	Adventure Fantasy	Tells the story of Alex who discovers a mysterious ancient gate leading to the hidden kingdom of Asteria and embarks on a journey to restore the ancient crystal.	https://online.flipbuilder.com/bqgeh/wxts/
Group 2	The Secret of the Silver Compass	Mystery Adventure	Narrates the adventure of Oliver and Mia who follow a magical silver compass to uncover hidden treasures and ancient secrets.	https://online.flipbuilder.com/bqgeh/tqhe/
Group 3	The Hidden Island of the Blue Crystal	Adventure Fantasy	Focuses on Ethan and Lily's exploration of a hidden island while searching for the secrets of the Blue Crystal.	https://online.flipbuilder.com/bqgeh/xfvt/
Group 4	A Magical Fairy Adventure Story	The Fairy Tale Fantasy	Describes Princess Luna's mission to collect pieces of the Crystal Crown and save the Crystal Forest from Morgana.	https://online.flipbuilder.com/bqgeh/nxvc/
Group 5	A Hero's Journey Through the City Lights	Superhero Adventure	Presents Spider-Man's struggle against mysterious shadow creatures threatening New York City.	https://online.flipbuikder.com/bqgeh/egaf

Table 2. Expert Validation Results

Validator	Percentage (%)	Category
Material Expert	95.00	Very Feasible
Media Expert	93.00	Very Feasible
Average	94.00	Very Feasible

The average score of 94.00% indicates the product falls into the Very Feasible category.

After validation and revision, the product was implemented with 28 students. Student responses were analyzed using NeoSurvey Research Analytics.

Survey Result Report

Research Title	Developing Student-Authored Digital Flipbooks as Supplementary Reading Materials for Vocational High School Students
Research Location	SMKN 1 Narmada
Number of Items	23 items
Sample Size	28 respondents
Average Score	5.00
Report Date	Thursday, June 18, 2026

Respondent Answer Distribution

Code	Answer Choice	Quantity (n)	Percentage (%)
SS	Strongly Agree	28	100.00%
S	Agree	0	0.00%
N	Neutral	0	0.00%
TS	Disagree	0	0.00%
STS	Strongly Disagree	0	0.00%
	TOTAL	28	100%

Advanced Statistics

Mean (Average Score)	**5.00**
Median (Middle Value)	Strongly Agree
Mode (Most Frequent)	Strongly Agree (28 respondents)
Standard Deviation	0.00

The results show 100% of students chose "Strongly Agree," categorized as Very High. This indicates the digital flipbook received extremely positive responses from all respondents.

Discussion

The findings indicate that the student-authored digital flipbooks developed in this study met the predetermined feasibility criteria and were positively received by the participating students. The expert validation results produced an average score of 94.00%, categorized as *Very Feasible*, with the material expert providing a score of 95.00% and the media expert providing 93.00%. These results indicate that the developed products were considered appropriate in terms of content, language, visual presentation, media design, and alignment with the intended learning objectives. The findings are particularly relevant because the products were not entirely developed by the teacher or researcher; instead, students were actively involved in producing the reading materials and transforming them into digital flipbooks.

The high feasibility score suggests that student participation in the development process can be incorporated into the production of supplementary reading materials without compromising the basic requirements of instructional media. The five groups successfully produced digital books containing covers, group information, tables of

contents, chapters, and original English stories. The diversity of themes, including adventure, mystery, fantasy, fairy tales, and superheroes, also indicates that students were able to transform their interests and ideas into structured reading materials. This variety is important in supplementary reading because students may respond differently to particular topics and genres. Rather than relying on a single reading topic, the developed flipbooks provided several narrative contexts through which students could encounter English vocabulary and expressions.

The findings also show that the development process provided students with opportunities to perform several language-related activities. Students were involved in selecting topics, developing story ideas, writing texts, organizing content, revising their work, and presenting the materials in digital form. Such activities extend the function of reading instruction beyond the consumption of texts. Students were positioned as both learners and producers of learning materials. This finding is consistent with the constructionist perspective, which emphasizes learning through the creation of meaningful products. Papert's constructionist perspective places particular emphasis on learning through making, in which learners construct knowledge while designing and producing an artifact that can be shared or used by others. Kafai and Burke (2015, 2016) similarly argue that student production activities can provide opportunities for collaboration, creativity, technical development, and participation in knowledge production. Their synthesis of research on students creating digital products suggests that making, rather than simply consuming, digital materials can constitute an important learning experience.

The collaborative nature of the development process can also be interpreted from a sociocultural perspective. Students worked in groups to discuss story ideas, divide tasks, write and revise content, and organize their digital products. Such collaboration created opportunities for students to exchange ideas and support one another during the development process. Vygotsky's sociocultural theory emphasizes that learning and development are shaped by social interaction and collaboration, particularly when learners work with peers or more capable others. The concept of the Zone of Proximal Development further explains how learners can perform tasks with assistance and collaboration that may be more difficult to accomplish independently. In the present study, the collaborative development of flipbooks provided a practical environment in which students could negotiate meaning, provide feedback, and contribute different abilities to a common learning product.

The positive student responses provide additional evidence regarding the acceptability of the developed materials. The survey involved 28 students responding to 23 questionnaire items, and the reported average score was 5.00. All respondents selected *Strongly Agree*, resulting in 100% of responses being placed in the highest response category. This finding indicates a very positive perception of the developed digital flipbooks in terms of the aspects measured by the questionnaire. The result is consistent with the purpose of developing supplementary reading materials that are more varied, visually engaging, and compatible with students' familiarity with digital devices.

However, the 100% *Strongly Agree* response should be interpreted carefully. Although the result demonstrates an exceptionally positive response in this particular sample, it should not automatically be interpreted as evidence that the flipbooks are universally attractive or that they directly improve students' reading achievement. The absence of variation in the responses, reflected in the standard deviation of 0.00, indicates that all respondents selected the same response category. This may reflect strong acceptance of the product, but it also limits the ability of the questionnaire to distinguish

differences in students' perceptions. Therefore, the finding is more appropriately interpreted as evidence of strong perceived acceptability and positive response rather than as definitive evidence of effectiveness.

One possible explanation for the positive response is the multimodal nature of the digital flipbooks. The products combined written texts with visual elements and a digital page-turning format. Mayer's Cognitive Theory of Multimedia Learning provides a useful theoretical framework for interpreting this characteristic. The theory proposes that learners process information through visual/pictorial and auditory/verbal channels, while each channel has limited processing capacity. Meaningful learning therefore depends on active cognitive processing and appropriate integration of verbal and visual information. Mayer's multimedia principle further proposes that learners can benefit from receiving words and pictures together rather than words alone, although the design and integration of these elements remain important. In this study, the combination of English narratives, images, page organization, and digital presentation may have contributed to the students' positive perception of the materials.

The findings should nevertheless be distinguished from evidence of improved reading comprehension. Multimedia learning theory can explain why the format may support learning, but the present study did not employ an experimental comparison or a pre-test/post-test design to measure actual gains in reading comprehension. Consequently, the present findings support the feasibility and positive reception of the product rather than establishing a causal relationship between digital flipbook use and reading achievement. This distinction is important because an attractive digital medium does not necessarily guarantee deeper comprehension. Mayer's framework itself emphasizes that multimedia materials need to be designed according to principles of cognitive processing rather than simply adding more visual elements.

The results can also be understood from the perspective of digital literacy. Developing a digital flipbook required students to engage not only with English texts but also with digital tools for organizing, editing, and presenting information. Students therefore encountered a learning process that combined language use with basic digital content creation. Recent research on digital literacy in language learning indicates that integrating digital literacy instruction with technology-supported learning can contribute to students' engagement, autonomy, motivation, and language-related performance. Research involving students in digital content creation has likewise reported potential development in digital competencies when learners participate directly in producing digital educational resources. These findings provide support for viewing student-authored flipbooks not simply as digital reading media but also as products through which students can practice digital production skills.

The student-created nature of the flipbooks represents an important distinction from many technology-based instructional materials. In a conventional technology-enhanced classroom, students may primarily consume digital content prepared by teachers, researchers, or commercial developers. In the present study, students participated in producing the content itself. This shifts the role of technology from being merely a delivery mechanism to becoming a tool for creation and participation. Kafai and Burke's work on constructionist learning is particularly relevant here because it emphasizes the educational value of learners making digital products rather than only using products created by others. Their review found that making digital artifacts can involve academic learning as well as technical, collaborative, and creative dimensions.

The collaborative process is also relevant to the characteristics of vocational education. Students in the Computer and Network Engineering program are expected to

develop competencies that extend beyond subject-specific knowledge and include technological and collaborative skills. The production of digital flipbooks required students to coordinate responsibilities, manage content, use digital applications, and produce a shared outcome. In this respect, the activity provided an opportunity to integrate English learning with technology-oriented activities. The integration is particularly meaningful in vocational education because digital competence and the ability to produce digital content are increasingly relevant to learning and professional environments.

The findings are also consistent with the broader movement toward multimodal literacy in language education. Contemporary literacy increasingly involves the ability not only to read and write conventional texts but also to interpret and produce meaning through multiple modes, including written language, images, digital layouts, and other forms of representation. Recent work on Indonesian language education has emphasized the growing importance of multimodal literacy and the integration of digital tools to support students' digital literacy, engagement, and critical thinking. The student-authored flipbooks in this study can therefore be understood as a practical example of multimodal production in which students combined linguistic and visual resources to communicate meaning.

The findings further suggest that digital supplementary materials may provide an alternative to relying exclusively on conventional printed reading materials. The flipbooks were accessible through smartphones, tablets, and computers, providing students with flexibility in accessing the materials. This characteristic is relevant to contemporary learning environments in which students frequently use mobile and digital devices. Nevertheless, accessibility should not be equated with learning effectiveness. Digital availability can facilitate access, but the educational value of the material still depends on content quality, readability, instructional design, and the extent to which students meaningfully interact with the text.

The results also extend previous studies on digital flipbooks by shifting attention from the medium itself to the role of learners in producing the content. Previous research has generally examined digital flipbooks in terms of their validity, attractiveness, usability, or potential contribution to learning. For example, studies such as those by Putri and Nugroho (2022) and Pratiwi and Hidayat (2023), as cited in the present study, reported positive findings concerning the use of flipbook-based materials. The present study extends this line of research by positioning students as content creators rather than solely as users of a completed digital product. This distinction constitutes an important contribution because the educational process occurs at two levels: students learn through producing the material, and the resulting product becomes a supplementary resource for subsequent reading activities.

The results are also compatible with research emphasizing the educational value of student production and digital participation. Kafai and Burke (2015) found that construction-oriented digital activities can provide opportunities for collaboration and identity development in addition to technical learning. More recent research has likewise highlighted the potential of student-created digital products to support digital competence and collaborative learning. For example, a 2024 study involving students in the creation of educational video animations found that participation in digital content production was associated with the development of digital competencies, particularly when students were actively engaged in the production process. These findings strengthen the argument that the educational value of digital media may lie not only in consuming digital content but also in creating it.

Despite the positive findings, several limitations should be acknowledged. First, the study involved only 28 students from one vocational program at SMKN 1 Narmada. Therefore, the findings should not be generalized to all vocational high school students or other educational contexts without further investigation. Second, the student response data were based on self-reported perceptions, and all respondents selected *Strongly Agree*. Such data provide evidence of perceived acceptance but do not independently establish improvements in reading comprehension, vocabulary acquisition, or long-term learning outcomes. Third, the study did not include a control group or a pre-test and post-test comparison. Therefore, causal claims regarding the effectiveness of the digital flipbooks in improving English reading achievement should be avoided.

Future research can address these limitations by involving larger and more diverse samples from different vocational programs and schools. Experimental or quasi-experimental designs could also be employed to compare student-authored digital flipbooks with conventional supplementary reading materials. Pre-test and post-test measures could provide stronger evidence regarding changes in reading comprehension, vocabulary, reading motivation, or other learning outcomes. In addition, future studies could examine whether the benefits of student authorship differ according to students' English proficiency, digital literacy, learning styles, or degree of participation in the production process.

Overall, the findings demonstrate that student-authored digital flipbooks can function as feasible supplementary reading materials while simultaneously providing students with opportunities to participate in content creation. The 94.00% expert validation score indicates that the products achieved a high level of feasibility, while the 5.00 average student response score and 100% *Strongly Agree* response indicate very high perceived acceptance among the participating students. The contribution of this study therefore lies not only in the development of a digital reading medium but also in the integration of English reading, collaborative learning, digital content creation, and student participation within a single development process. The findings support the potential of moving from a model in which students primarily consume digital learning materials toward a model in which students also participate in creating meaningful digital resources for learning.

Conclusion

This study developed student-authored digital flipbooks as supplementary reading materials for Grade XI students at SMKN 1 Narmada using the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) model. The development process involved students in selecting topics, developing English stories, organizing content, revising their work, and transforming the materials into digital flipbooks. The resulting products consisted of five group-authored digital flipbooks featuring various narrative themes, including adventure, mystery, fantasy, fairy tales, and superheroes. This process provided students with opportunities to participate actively in both English learning and digital content creation.

The expert validation results showed an average score of 94.00%, consisting of 95.00% from the material expert and 93.00% from the media expert. The product was therefore categorized as *Very Feasible*. These findings indicate that the developed flipbooks met the expected criteria in terms of content, language, visual presentation, media design, and alignment with the intended learning objectives. Furthermore, the student response questionnaire involving 28 respondents and 23 items produced an

average score of 5.00, with all respondents selecting *Strongly Agree*. This result indicates a very positive student response toward the developed digital flipbooks in terms of the aspects measured by the questionnaire.

The main contribution of this study lies in positioning students not only as users of digital learning materials but also as authors and creators of supplementary reading resources. The development process integrated English reading and writing activities, collaborative learning, digital content creation, and the use of technology within a single learning experience. The findings therefore suggest that student-authored digital flipbooks can serve as a feasible and positively received alternative for supplementary reading materials in vocational English learning.

However, the findings should be interpreted within the limitations of the study. The research involved only 28 students from one vocational program at SMKN 1 Narmada, and the student response data were based on self-reported perceptions. In addition, the study did not employ a control group or pre-test and post-test design. Therefore, the findings demonstrate the feasibility and positive reception of the developed product rather than providing conclusive evidence of its effectiveness in improving reading comprehension or other learning outcomes.

Future research may involve larger and more diverse samples and examine the effectiveness of student-authored digital flipbooks through experimental or quasi-experimental designs. Further studies may also investigate their effects on specific aspects of English learning, such as reading comprehension, vocabulary acquisition, reading motivation, digital literacy, and student engagement. Such research would provide broader evidence regarding the educational potential of student-created digital flipbooks in different learning contexts.

Author Contribution Statement

The author's contributions are as follows: Nurul Hayati acted as initiator and conceptor, contributed to data analysis and interpretation, and served as primary writer; Abdul Kadir Bagis, M.Pd. provided supervision on research design and methodology and validated content and analysis; Muhamad Saripuddin, S.Pd., M.A. provided supervision on theoretical framework and article writing. All authors approved the final content and are responsible for all aspects of this research.

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