Mindset :
Jurnal Pemikiran Pendidikan dan Pembelajaran
2026, 6(1), 12-29
https://doi.org/10.56393/mindset.v6i1.4265

Development of An E-Module Flipbook Based on Problem Based Learning: Basic Concept of Local Government Accounting Materials

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Article History
Received: 13 April 2026;
Revised : 21 April 2026;
Accepted: 6 June 2026.

Keywords
E-Module;
Flipbook;
Problem-Based Learning;
Local Government Accounting;
Instructional Material Development.

Abstract
This study aims to develop a Problem-Based Learning (PBL)-based E-Flipbook module for the subject of Basic Concepts of Local Government Accounting for Grade XI Accounting and Institutional Finance students at VHS State 1 Sooko Mojokerto and to evaluate its feasibility and effectiveness in supporting conceptual understanding. The study addresses the limited use of interactive digital teaching materials and students' difficulties in understanding abstract and contextual accounting concepts in vocational education. This research employed the 4D development model (Define, Design, Develop, Disseminate), limited to the Develop stage, with a small-scale trial involving 20 students. Data were collected through expert validation by material experts, media experts, and learning practitioners, as well as student response questionnaires. The data were analyzed using descriptive quantitative techniques. The results showed that the developed module was highly feasible based on expert validation and received very positive responses from students. In addition, the integration of PBL into the digital flipbook format helped increase students' learning motivation and supported deeper conceptual understanding of local government accounting material. Therefore, the module can be used as an innovative and student-centered learning medium in vocational accounting education.

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How to Cite : Handini, A. P., & Rochmawati, R. (2026). Development of An E-Module Flipbook Based on Problem Based Learning: Basic Concept of Local Government Accounting Materials. *Mindset : Jurnal Pemikiran Pendidikan Dan Pembelajaran*, *6*(1), 12–29. https://doi.org/10.56393/mindset.v6i1.4265

Introduction

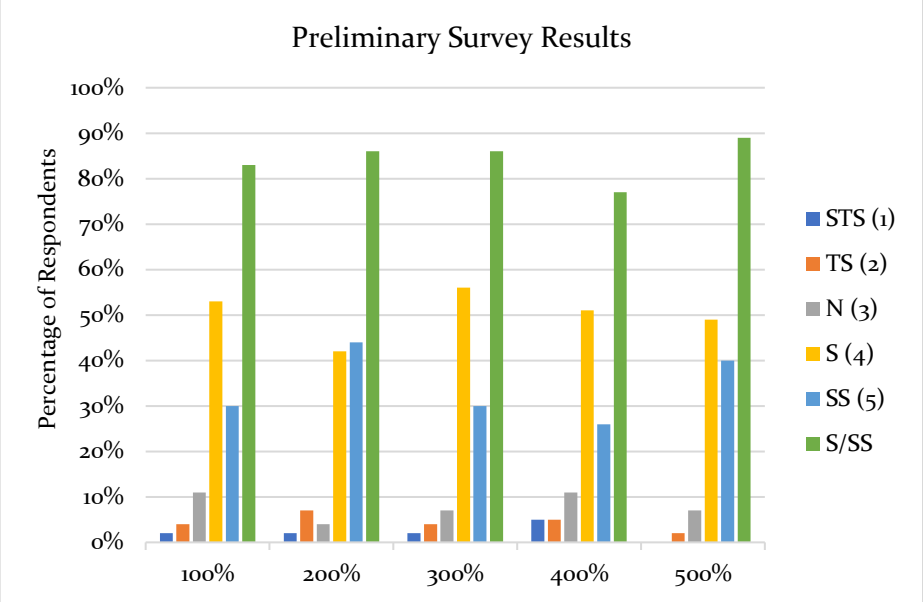
In the field of education in Indonesia, particularly in today's digital age, many challenges are being faced. One of these is the need for change and innovation in teaching methods to become more adaptable to global changes and to enhance students' literacy skills (Prastowo et al., 2025; Utami & Ansori, 2025). The world of education is undergoing a paradigm shift, focusing on improving students' abilities to discover, formulate, think analytically, and collaborate in solving problems. One way to implement problem-solving-oriented education is by designing learning programs including models, methods, and instructional materials specifically aimed at problem-solving (Affriyenni et al., 2020; Ardiansyah et al., 2020; Munzil et al., 2022). Students may be more motivated to learn if the learning approach prioritizes everyday experiences in the learning process and provides exercises based on real-life problems, and recalling problems encountered during the teaching and learning process can improve students' problem-solving skills (Fajriana et al., 2025). With advances in science and technology, learning has become more practical and engaging. This helps improve the quality of education. Students will be able to understand better thanks to innovations and appropriate learning approaches that utilize information encountered in their daily lives. The use of teaching materials or learning aids is an effective way to learn (Sinaga & Sinaga, 2021).

The use of appropriate instructional materials not only makes students more interested in learning but also motivates them to achieve optimal results (Chandra et al., 2024). Instructional materials also play a crucial role during the learning process because they facilitate educators in delivering content to students. There are many teaching materials available; one of the most innovative and creative is the flipbook E-Module, which captures students' interest and inspires their enthusiasm for learning, featuring various engaging photo illustrations (Aliyah & Istiqfaroh, 2022). The use of technology in the classroom allows students to access the resources they need to enhance their knowledge and learning activities. Digital learning materials are part of the use of technology in education (Napoles et al., 2022; Oronce & Manalo, 2021). A flipbook is an application that displays a series of images or documents, from one page to the next, utilizing the illusion of motion whenever a page is flipped quickly and supporting the E-Module display to accommodate interactive learning activities (Juwati et al., 2021; Rahmawati et al., 2023). According to research, flipbook-style E-Modules can improve learning outcomes and engagement in visual, oral, listening, writing, and emotional aspects (Munzil et al., 2022; Situmorang et al., 2020; Yulaika et al., 2020).

Accounting education, which is still dominated by the use of conventional teaching materials such as textbooks, tends to be teacher-centered and focused on one-way information delivery, making it less effective at encouraging active student engagement and the development of higher-order thinking skills such as analysis and problem-solving. This approach is becoming less relevant in the digital age, which demands that students possess 21st-century skills, including critical and creative thinking, and the ability to connect concepts to real-world problems. Therefore, PBL is considered a more appropriate approach because it places students at the center of learning by presenting contextual problems that encourage the process of problem identification, analysis, and solution formulation—both independently and collaboratively. The integration of PBL into digital learning materials such as flipbook e-

modules not only enhances the appeal and interactivity of learning but also contributes to increasing student engagement and conceptual understanding. Thus, this study not only focuses on product development but also contributes to elucidating the role of PBL integration in digital learning materials as an effort to support the enhancement of critical thinking skills and the quality of learning in vocational education.

Preliminary research conducted with 11th-grade accounting students revealed that the majority found the material on the basic concepts of local government accounting to be difficult. Students often struggle to grasp the differences between the corporate accounting they are accustomed to studying and the concepts of local government accounting they must now learn. Another common challenge is the lack of teaching materials that are easy to understand. Students generally have difficulty understanding the material available only in textbooks. Innovation in learning materials is crucial to addressing this issue. The researcher conducted a preliminary study to identify problems in the classroom learning process, particularly regarding the basic concepts of local government accounting. The following are the results of the study.



Picture 1. Diagram of Preliminary Survey Results

Based on this data, it can be concluded that students have a high need for digital learning materials to improve their understanding and motivation to learn. Research on educational development continues to advance, yet the implementation of Problem-Based Learning (PBL)-based flipbook e-modules on the basic concepts of local government accounting remains rare. Several previous studies, such as those cited by Ameriza & Jalinus (2021), indicate that these E-Modules represent a systematic approach to instructional materials, encompassing learning experiences designed and developed to support the achievement of specific learning objectives. This study aims to describe the development process of the flipbook e-module, determine its feasibility, and assess students' responses to the use of the PBL-based flipbook e-module in the Government Agency Accounting Practicum course. The research questions in this study are: what is the development process, the level of feasibility, and the students' response to PBL-

based flipbook E-Module teaching materials on the basic concepts of local government accounting at State Vocational High School (VHS) 1 Sooko Mojokerto.

The use of this instructional material is considered appropriate given the conceptual and contextual nature of the core concepts of local government accounting. This material requires students not only to understand the definitions and principles of government accounting but also to be able to analyze real-world issues that arise in the management of local government finances. Through the presentation of contextual problems in the E-Module, students are guided to align theory with practice. Consequently, the learning process becomes more meaningful and aligns with a curriculum approach that emphasizes active learning and places students at the center. According to observations made during the School Field Introduction (SFI), 11th-grade accounting students still rely on textbooks as their primary learning resource. To date, instruction has not fully leveraged technology to provide more engaging, innovative, and, of course, interactive instructional materials. Instruction is still being conducted by combining different learning models simultaneously: in-person instruction for students on campus and online instruction for those currently participating in Field Work Practice (FWP). As a result, educators are required to develop E-Module-based instructional materials and digital quizzes.

Based on a review of the literature and field conditions, there is a research gap indicating that although numerous studies have been conducted on the development of e-modules and the application of PBL, the implementation of flipbook-based e-modules that specifically integrate PBL into the material on Basic Concepts of Local Government Accounting remains limited. Most previous studies have focused more on general subjects or private sector accounting and have not emphasized the need for conceptual and contextual material in the school environment. Furthermore, the use of interactive digital teaching materials in schools has not been optimal, thus failing to fully support the development of students' critical thinking and problem-solving skills. Therefore, this study aims to bridge that gap by developing PBL-based flipbook e-modules tailored to the characteristics of the material and the needs of the learners, with the hope of making a new contribution to the development of digital teaching materials that are more contextual, interactive, and relevant to the workplace.

The development of this instructional material draws on constructivism and Contextual Teaching and Learning (CTL). The psychologist Lev Vygotsky (1896–1934) supported the theory of constructivism. According to this theory, individuals acquire knowledge and meaning from their experiences. Constructivism is a learning theory that explains how a person acquires knowledge. According to this theory, humans acquire knowledge and meaning from their experiences (Shanmugama et al., 2021; Vygotsky, 1978). One of the key figures is Elaine B. Johnson, who developed the CTL model and authored books that describe this approach in greater detail. CTL is based on the philosophy that what learners acquire can be linked to their prior knowledge and experiences (Johnson, 2002; Nisa & Ma'arif, 2021). The CTL approach is a learning model that focuses on new or contextual materials with students as the primary focus, directly involved in the learning process. This can increase students' attention to the lesson by enhancing their engagement (Ismatunsarrah et al., 2020; Sumiati, 2023).

The integration of constructivism and CTL lies in their shared principle that learning is student-centered and emphasizes the active process of constructing knowledge through real-world experiences. Constructivism holds that students do not merely receive information, but construct their own understanding based on their experiences and interactions with their environment. Meanwhile, CTL reinforces this process by linking learning materials to real-life contexts, making them more meaningful and easier to understand. In practice, this integration encourages teachers to deliver contextual, problem-based learning that involves exploration, discussion, and reflection. As a result, students not only understand concepts theoretically but are also able to apply them in real-world situations, making learning more effective, relevant, and meaningful.

In light of the above phenomenon, the researcher sought to create interactive, creative, and innovative learning materials that are not limited in scope, allowing students to study independently at any time. The issues mentioned above indicate that materials must be developed to help improve students' academic performance. This served as the basis for the author's development of a flipbook e-module on the basic concepts of local government accounting. These learning materials are intended to support the learning process. Preliminary research findings indicate that students generally own and are proficient in using smartphones, laptops, and other electronic devices (Pratiwi & Listiadi, 2021). Therefore, the E-Module will be developed into a PBL-based Flipbook covering the basic concepts of local government accounting for 11th-grade Accounting students.

Method

This study is a research and development (R&D) project aimed at producing a PBL-based flipbook e-module. The development model used is the 4D model proposed by Thiagarajan, Semmel, and Semmel, which consists of four stages: define, design, develop, and disseminate. However, in this study, the process was limited to the develop stage. The disseminate stage was not carried out because this study focused on the development process, determining the level of feasibility, and gauging user response; it did not test the effectiveness of the product. There are four stages in the research procedure. The Define stage consists of a front-end analysis, a student analysis, a task analysis, a concept analysis, and a learning objective analysis. The Design stage includes the development of the E-Module instructional material format and the E-Module format. The subjects in this study were 20 eleventh-grade students in the Institutional Accounting and Finance program at VHS State 1 Sooko Mojokerto, who participated in a limited pilot test. The sample size of 20 students was determined in accordance with the 4D (Define, Design, Develop, Disseminate) development model, which utilizes small groups of 8–20 people; thus, 20 students were deemed capable of accurately reflecting the actual classroom environment. In addition, this study also involved several expert validators, including subject matter experts, language experts, and graphic designers, to assess the suitability of the developed product. The research instruments used included validation sheets for subject matter, language, and graphic experts, as well as a student response questionnaire. The validation sheets were used to assess the suitability of the E-Modules, while the student response questionnaires were used to gauge students' reactions to the use of E-Modules in

learning. The questionnaires and questions underwent validity and reliability testing to ensure they met the necessary standards and quality requirements for use in learning. The validity test was conducted by comparing the calculated r value with the table r value at a significance level of 0.05 based on the degrees of freedom. The validity test determined that the calculated r value exceeded the table r value; therefore, the instrument was deemed valid. The reliability test was conducted on the test items that had been deemed valid. The purpose of this test is to assess the consistency of the items. The results of this reliability test indicate that the Cronbach's Alpha value obtained is greater than 0.60, so the test items are deemed reliable. The data analysis technique used is quantitative descriptive analysis. The data from the validation results and the student response questionnaires were calculated using percentages, then interpreted based on feasibility criteria to determine categories such as highly feasible, feasible, somewhat feasible, and not feasible. Hasil analisis tersebut digunakan sebagai dasar dalam melakukan revisi dan penyempurnaan produk E-Modul yang dikembangkan. Indikator yang dijadikan acuan dalam mengevaluasi respon peserta didik terhadap bahan ajar E-Modul yang telah dikembangkan diukur berdasarkan persentase seluruh jawaban dari angket yang telah disebarkan. E-Modul dikategorikan layak apabila tingkat respon peserta didik lebih dari 61%, sesuai dengan kriteria minimal "Paha The results of this analysis were used as the basis for revising and refining the E-Module products that were developed. The indicators used as a reference in evaluating student responses to the E-Module instructional materials that have been developed are measured based on the percentage of all responses from the distributed questionnaire. An E-Module is categorized as suitable if the student response rate is more than 61%, in accordance with the minimum "Understands" criterion.

Results and Discussion

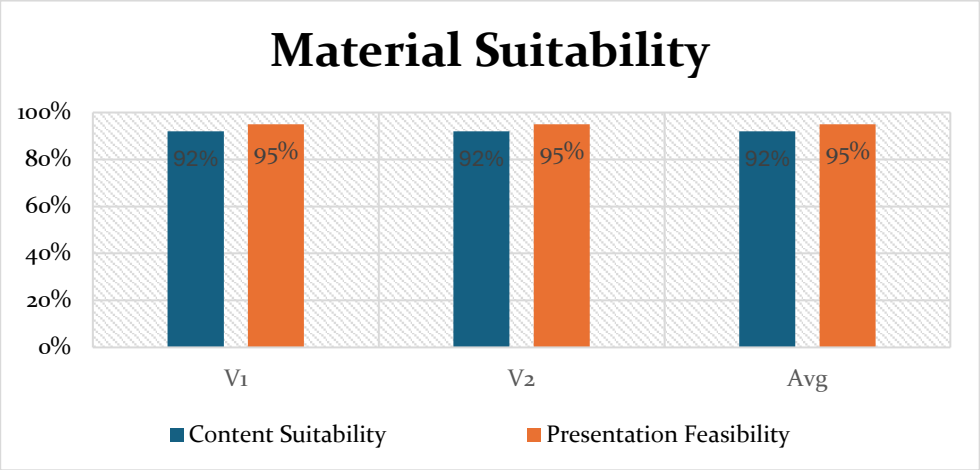
Results

The results of this study describe the development process, as well as the findings of the feasibility test and student responses to the PBL-based Flipbook E-Module on the basic concepts of local government accounting. The E-Module was developed using the 4D model. This model comprises four stages: define, design, develop, and disseminate. This study focuses on development; therefore, development activities are limited to the "develop" phase and do not proceed to the 'disseminate' phase or further evaluation. During the "define" phase, the following analyses were conducted: front-end analysis, learner analysis, concept analysis, task analysis, and learning objective analysis. The analysis results indicate that students need interactive and contextual digital learning materials to help them understand the subject matter. The design phase includes designing the structure of the E-Module, creating a storyboard, and selecting the media to be used. The E-Module is designed in the form of a flipbook containing course content, case studies, and step-by-step exercises. The development phase involves validation by experts and product revisions. Validation was performed by subject matter experts, language experts, and graphic designers to assess the suitability of the developed E-Module before it was pilot-tested with students.

In addition to quantitative data, the students' responses also provided qualitative feedback that supports the study's findings. Some students stated that the PBL-based flipbook

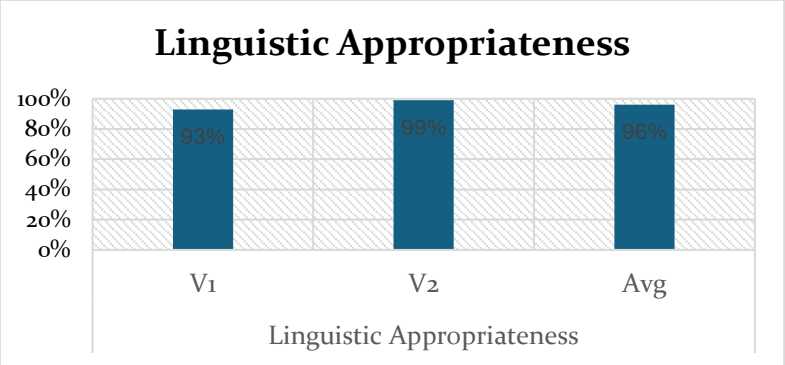
e-module was easier to understand than the textbook because the material was presented with case studies that reflected real-world situations. One student remarked, "The material is clearer because it includes case studies and step-by-step explanations, so it's easier to understand." Another student added, "The interface is engaging and there are videos, so learning isn't boring." In addition, the problem-based practice exercises were found to help students gain a deeper understanding of concepts by encouraging them to think critically and find solutions. This demonstrates that the E-Module is not only technically sound but also effective in increasing student engagement and facilitating understanding.

Hasil validasi E-Modul diperoleh dari penilaian ahli materi, ahli bahasa, dan ahli grafis. The validation results for the E-Module were obtained from evaluations by subject matter experts, language experts, and graphic design experts. Based on the evaluation results, the PBL-based flipbook E-Module received a "highly suitable" rating across all evaluated aspects. The subject matter expert's evaluation indicated that the content aligns with the established competencies and is presented systematically, with a score of 93%. The language expert's evaluation indicated that the language used in the E-Module is communicative, clear, and easy to understand, with a score of 96%. Meanwhile, an assessment by a graphic designer found that the E-Module's design is appealing and fully aligns with instructional design principles, scoring 100%. Overall, the average validation score was 96%, placing it in the "highly satisfactory" category.



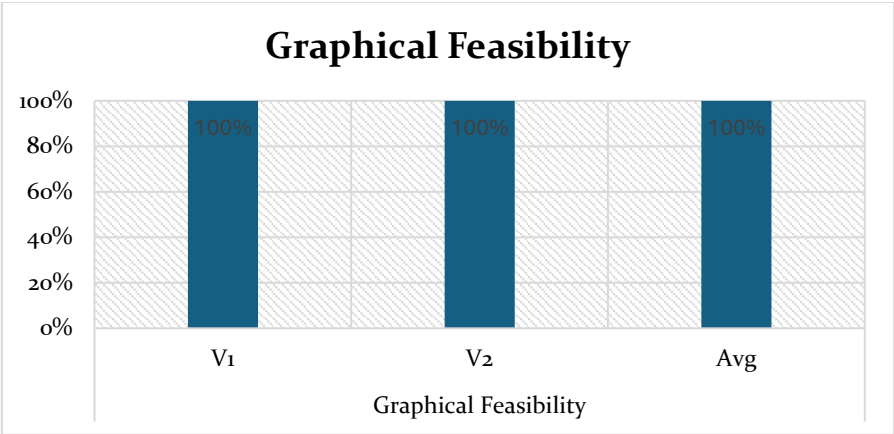
Picture 2. Percentage of Material Suitability

Based on the table of subject matter expert validation results, the content suitability score was 92%, indicating the "Highly Suitable" criterion, and the presentation completeness score was 95%, indicating the "Highly Suitable" criterion. Overall, the subject matter expert validation of the product yielded a suitability score of 93%, indicating the "Highly Suitable" criterion. In the presentation suitability component, the E-Module includes competency tests, combined with multimedia in the form of videos on the basic concepts of local government accounting. Thus, the E-Module can be applied in the learning process when teaching the basic concepts of local government accounting.



Gambar 3. Precentation Lingustic Appropriateness

Based on the validation table prepared by language experts, the developed product achieved a feasibility rating of 96%, indicating the criterion "Highly Feasible." These results indicate that the language used in the flipbook E-Module is coherent, clear, and conforms to the rules of the Indonesian language, while maintaining consistency in the use of terminology and symbols, thereby enabling students to understand the material more easily. Consequently, the E-Module can be utilized for instruction when covering the foundational concepts of local government accounting.

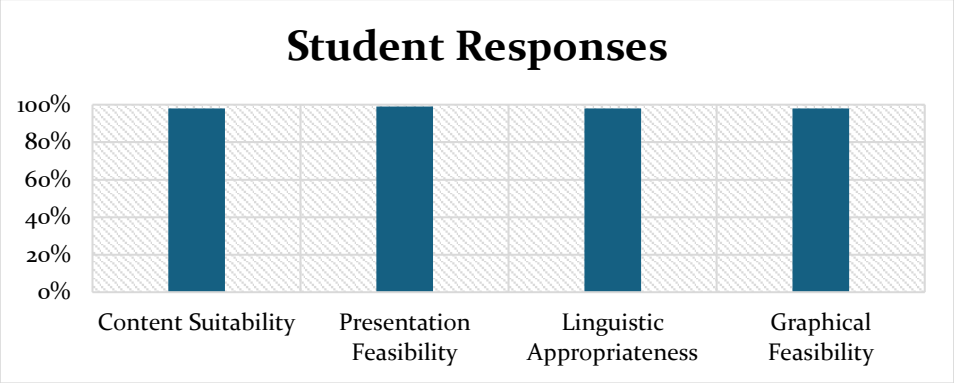


Picture 4. Presentase Kelayakan Grafis

Based on the table of validation results from graphic design experts, the developed product achieved a 100% feasibility rating, indicating the "Highly Feasible" criterion. Based on these results, the flipbook E-Module can be used in learning. The graphic presentation in the flipbook E-Module is systematically organized, easily accessible via various electronic devices, visually appealing, features high-quality images and videos that support the content, and is available in various formats that make it easy for students to download or read directly.

The E-Module's design is considered appealing, featuring a systematic layout and supported by illustrations, colors, and navigation that make it easy for students to access the material. The combination of systematic material presentation, communicative language, and an attractive graphic design makes the PBL-based flipbook E-Module a suitable digital teaching resource to support learning on the topic of Basic Concepts of Local Government Accounting.

Thus, the E-Module is highly suitable for use in teaching the basic concepts of local government accounting.



Picture 5. Student Response Rate

Based on the table of student response results, the details of the content comprehension results were 98%, indicating the "Very Well Understood" criterion; clarity of presentation was 99%, indicating the "Very Well Understood" criterion; readability was 98%, indicating the "Very Well Understood" criterion; and visual quality was 98%, indicating the "Very Well Understood" criterion. Overall, student responses to the developed product achieved a response rate of 98%, indicating the "Very Well Understood" criterion. These results reflect students' responses regarding the practicality of using the developed flipbook E-Module. The integration of questions and supporting media within the E-Module enables students to understand the material more deeply. In terms of content comprehension, clarity of presentation, readability, and visual quality—all rated as "Very Proficient" by the students—it is evident that the flipbook E-Module used assists them in the learning process. Consequently, students view the PBL-based flipbook E-Module as a tool supporting differentiated learning on the basic concepts of local government accounting, finding it easy to understand and suitable for use in the learning process.

In this chapter, the discussion section will present the overall and specific results of the development process, ranging from the development process itself to the students' responses to the PBL-based flipbook E-Module. The 4D model developed by (Thiagarajan et al., 1974) was used for the E-Module development process; this model consists of the definition (define), design (design), development (develop), and dissemination (disseminate) stages. In agreement with Muluk & Athaillah (2023), the 4D development model was chosen because it is suitable for the development of learning tools. This model encompasses learning methods and implementation stages in their entirety. A second opinion, offered by Waruwu (2024), states that in the field of education, the 4D model can be used as an alternative product development model. Another study conducted by Denisa & Hakim (2021) also utilized a modified 4D development model, but only up to the "develop" stage.

In line with the research by Putra & Susanti (2024), who also developed instructional materials and reached the development stage. All of these development steps relate to the development of innovations in education, particularly those related to educational management, educational policy, curriculum, and educational leadership. The development undertaken by the researchers takes the form of a PBL-based flipbook E-Module, as this

platform supports the integration of text, video, and interactive elements that adapt to students' learning styles and response levels. Constructivist theory also underpins this development, emphasizing that students actively construct knowledge through experiences and interactions with their environment. Meanwhile, Lev Vygotsky emphasizes the importance of social interaction and the ZPD concept to help students achieve a higher level of understanding. Thus, the CTL approach is also relevant as it connects learning materials to students' real-life contexts to enhance the meaning of learning. Elaine B. Johnson states that CTL, through direct experience, collaboration, and reflection, helps students find meaning in learning. Therefore, it is hoped that the development of this E-Module will improve students' engagement, conceptual understanding, and critical thinking skills through the integration of constructivism and CTL.

The instructional material development process in this study was conducted using the 4D development model, which includes the define, design, and develop stages. During the develop stage, the PBL-based flipbook E-Module design that had been prepared in the previous stage was implemented as a digital instructional material product ready for use in learning. This development resulted in an E-Module containing learning components such as an opening page, module usage instructions, learning objectives, material presentation, problem-based case studies, practice questions, and learning assessments. The arrangement of these components followed the previously designed storyboard and module structure, ensuring the material is presented systematically, engagingly, and in a way that is easily understood by students.

The results of the E-Module development show that the resulting instructional materials incorporate the PBL model into every learning activity. The presentation of the material begins with the presentation of contextual problems related to local government accounting practices, followed by material exploration activities, discussions, and practice exercises that encourage students to analyze and find solutions. The integration of PBL principles into this E-Module aims to enhance students' critical thinking skills and conceptual understanding of the foundational concepts of local government accounting. Through the presentation of real-world problems and interactive learning activities, the developed E-Module serves not only as an information source but also as a learning tool that fosters active student engagement. In addition to the issue of teaching material availability, the results of the preliminary research also indicate that students have varying levels of readiness for learning. Some students require additional visual explanations in the form of videos and practice problems accessible via smartphones, while others are capable of independent learning through text and summaries. This highlights the importance of implementing differentiated learning based on E-Modules so that students can learn according to their readiness and learning styles. According to Djuddah et al. (2024), educators must be able to use technology in the classroom to engage students in learning. Mahendri et al. (2023) state that these interactive digital E-Modules have the following advantages: (1) a flipbook effect, which means turning pages like reading a real book; (2) they are equipped with images, sounds, references, quizzes, and instructional videos; and (3) the developed products can be accessed via computers and smartphones and published on a website. Based on these findings, this development is considered an appropriate solution to help students understand the basic concepts of local government accounting in a fun way that suits their learning needs.

Discussion

Based on the validation results conducted by experts, the PBL-based flipbook E-Module that was developed demonstrates an excellent level of feasibility. The feasibility assessment was conducted across three main aspects: content, language, and graphics. The results of the content validation by experts indicate that the content of the E-Module aligns with the learning outcomes, learning objectives, and characteristics of the material on the Basic Concepts of Local Government Accounting. The presented material was assessed as systematic, relevant to the needs of the students, and capable of supporting a problem-solving-based learning process. Additionally, the validation results for the language and graphics aspects also indicate that the developed E-Module falls into the "highly feasible" category. Regarding the language aspect, the use of sentences in the module was evaluated as communicative, easy to understand, and appropriate for the developmental level of VHS students. Meanwhile, in terms of graphics, the E-Module's interface is considered appealing, featuring a systematic layout and supported by illustrations, colors, and navigation that make it easy for students to access the material. The combination of systematic material presentation, communicative language, and an attractive graphical interface makes the PBL-based flipbook E-Module developed suitable for use as digital teaching material to support learning on the subject of Basic Concepts of Local Government Accounting. This study is also supported by previous findings, such as those by Hardini and Susanti (2020), who stated that based on validation results from subject matter experts, language experts, and graphic designers, the E-Module falls into the category of highly suitable for implementation as an alternative learning resource. Another study conducted by Sa'idah et al. (2024) states that, based on validation results from graphic designers and subject matter experts, the developed e-module was classified as highly feasible. Another study conducted by Pratiwi & Listiadi (2021) states that the developed e-module was rated as highly feasible based on validation results from subject matter experts, language experts, and graphic designers. Furthermore, a study by Fauziah et al. (2024) found that PBL-based flipbook E-Modules are suitable for use in learning activities because they fully meet the criteria for content, language, and graphic suitability.

The PBL-based flipbook e-module that has been developed systematically integrates PBL syntax into every learning activity, including the problem-orientation stage through the presentation of contextual local government accounting cases; the organization of students through activity guidelines; the guidance of investigations supported by materials and videos; the development and presentation of results through problem-based exercises; and evaluation and reflection to assess the problem-solving process. The application of this syntax demonstrates that the E-Module functions not only as a medium for delivering content but also as a tool that fosters active engagement and the development of students' critical thinking skills, in line with constructivist theory, which emphasizes experience-based learning processes. However, the 100% validation result for the graphic design aspect requires critical review as it may be influenced by the limited number of validators and the subjectivity of the assessment; therefore, future research is recommended to involve a broader sample and test the product's effectiveness more thoroughly to obtain more objective and comprehensive results.

The advantages of PBL-based flipbook e-modules over conventional modules lie in their interactivity, contextual relevance, and flexibility in supporting learning. While conventional modules tend to be static and present only text, flipbook e-modules offer engaging visual displays with integrated multimedia such as images, videos, and interactive navigation, thereby better enhancing students' interest and focus. Furthermore, the implementation of PBL ensures that the material is not merely studied theoretically but is linked to real-world problems, thereby helping students develop critical thinking and problem-solving skills. In terms of accessibility, the E-Module can be accessed anytime and anywhere via digital devices, making it more conducive to self-directed learning compared to printed modules. Thus, PBL-based flipbook E-Modules serve not only as a source of information but also as a more active, contextual learning medium focused on developing 21st-century skills.

The uniqueness of this research lies in its success in integrating the PBL model into a digital teaching resource—an E-Module flipbook—specifically developed for the subject of Basic Concepts of Local Government Accounting, which has long been considered complex and difficult to understand. Not only does this research demonstrate a very high level of feasibility as assessed by experts, but it also proves that the developed product is capable of eliciting a very positive response from learners, particularly in terms of interactivity, ease of understanding, and increased learning motivation. Unlike previous studies, which generally only assessed the effectiveness of media or models separately, this study presents an innovative combination of a problem-based learning approach with contextual, visual-interactive digital media relevant to the professional world. This makes the E-Module not only a learning resource but also a tool for training critical thinking and real-world problem-solving skills, thereby contributing more comprehensively to improving the quality of learning.

Student responses were based on four aspects: content, presentation, language, and graphics. As shown in the table of student responses above, it can be concluded that, in general, the responses fell into the "Very Well Understood" category. Regarding the content aspect, a high level of understanding of the material on local government accounting practicum elements was demonstrated. This indicates that the use of E-Modules supplemented with supporting videos is effective in helping students understand the material more effectively. Furthermore, regarding the presentation aspect, student responses indicated a "Very Well Understood" result. This is supported by the E-Module's systematic organization in accordance with the sequence of learning materials, as well as the ease of accessing it. The language aspect also received a "Very Well Understood" rating, indicating that the material in the E-Module is presented in language that is easily understood by students. The digital features presented in the module allow students to access the material flexibly via electronic devices such as laptops or smartphones, making learning more practical and unrestricted by time and place. Additionally, the systematic presentation of material, supplemented with case studies and problem-based exercises, helps students connect theoretical concepts with real-world situations in the field of government accounting.

Furthermore, in terms of visual design, the E-Module was rated "Very Good" for its attractive layout. The E-Module is easy to read and understand due to the appropriate choice of font type and size. Additionally, the inclusion of images and illustrations makes the module

more engaging, preventing students from becoming bored while reading. The positive response shown by students toward the use of the E-Module can be examined through the CTL approach (Johnson, 2002). CTL is based on the philosophy that the material students learn can be linked to their prior knowledge and experiences (Johnson, 2002; Nisa & Ma'arif, 2021). The CTL approach is a learning model focused on new or contextual materials, emphasizing students' direct engagement in the learning process. This can enhance students' attention to the lesson by increasing their engagement (Ismatunsarrah et al., 2020; Sumiati, 2023). Theoretically, these results align with the principles of constructivist learning, which emphasize students' active involvement in constructing knowledge through meaningful learning experiences.

The findings of this study are supported by research conducted by Saputri & Susilowibowo (2020), which found that students' responses in that study indicated a "very well understood" category and that the E-Module was deemed suitable for use in learning activities. Another study conducted by Tunggawardhani & Susanti (2022) reported that 95.36% of students fell into the "very well understood" category; the average student response indicated that the E-Module received a positive response from students. These results suggest that the material presented in the instructional materials was appropriate. Another study conducted by Fahru et al. (2024) found that the E-Modules created using Flip PDF Professional received positive reviews from students. Additionally, research by Hasanah et al. (2023) indicated that attractive visual design and interactive presentation are key factors in enhancing student motivation and learning outcomes.

The implications of this study are that PBL-based flipbook E-Modules are an engaging digital teaching resource for teaching the basic concepts of local government accounting to 11th-grade students in vocational high school accounting programs. With content presented through videos and interactive practice exercises, students can more easily grasp the fundamental concepts of local government accounting—from general definitions to accounting systems—in a clear and practical manner. This E-Module teaching material supports differentiated learning, as it contains content tailored to various learning styles and readiness levels of students. This E-Module is not only suitable for 11th-grade accounting classes but can also be applied in other classes or schools covering the basic concepts of local government accounting. The PBL-based flipbook E-Module can serve as an alternative digital teaching resource aligned with the Merdeka Curriculum. Educators can utilize this E-Module to support independent and collaborative learning, while also serving as a tool to develop more interactive innovative learning models, in line with 21st-century competency requirements and the needs of students in VHS.

Conclusion

Based on the research question, the conclusion regarding the development of a PBL-based flipbook e-module to support differentiated learning on the basic concepts of local government accounting at VHS State 1 Sooko Mojokerto is that the development process of the PBL-based flipbook e-module to support differentiated learning on the basic concepts of local government accounting at VHS State 1 Sooko Mojokerto utilized the 4D development model, which consists of the Analysis, Design, Development, and Dissemination stages. The feasibility

of the PBL-based flipbook E-Module developed to support differentiated learning on the subject of basic concepts of local government accounting at VHS State 1 Sooko Mojoketo was rated "Highly Feasible" based on validation by subject matter experts, language experts, and graphic design experts, as well as student responses to the PBL-based flipbook e-module developed to support differentiated learning on the basic concepts of local government accounting at VHS State 1 Sooko Mojokerto received a response rating of "Very Well Understood" from 11th-grade Accounting students at VHS State 1 Sooko Mojokerto. It can be concluded that the PBL-based flipbook e-module, designed to support differentiated learning on the basic concepts of local government accounting, is rated "Very Well Understood" and is suitable for use in the learning process.

Acknowledgments

We would like to express our gratitude to the Dean of the Faculty of Economics and Business at Surabaya State University for granting permission and this opportunity; to the Coordinator of the Bachelor's Program in Accounting Education at the Faculty of Economics and Business, Surabaya State University; to the academic advisor for granting permission and this opportunity; to the administration of VHS State 1 Sooko Mojokerto for granting the author permission to conduct preliminary research and for serving as the research site; and to the author's parents.

Authors' Note

The authors declare that there is no conflict of interest regarding the publication of this article. The authors confirmed that the paper was free of plagiarism.

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