DEVELOPMENT OF "SIMAAKSI" LITERACY OF DIGITAL-BASED MANUFACTURING ACCOUNTING COMPUTER PRACTICUM

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ABSTRACT

This research aims to produce application-based learning media as a learning literacy for manufacturing accounting computer practicum that can improve the learning outcomes of accounting students. "Simaaksi" learning media is useful in assisting learning activities effectively and efficiently. Features in the application are adjusted to the needs and competencies that must be mastered by students majoring in accounting. This research is a research and development study by adapting the Borg & Gall model. The research subjects were students majoring in accounting education at Universitas Negeri Malang. The effectiveness test was conducted using a quasi-experimental with a one-group pretest-postest model. Based on the results of the paired sample t-test analysis, the sig value was obtained. 0.04 <0.05 which means there is a significant difference. These results indicate that the use of the learning media "Simaaksi" effectively improves student learning outcomes.

Keywords:
Simaksi,
Litercy Digital,
Accounting Computer,

INTRODUCTION

Technological developments have influenced changes in accounting information systems in various types of business fields. The utilization of technology by companies in the field of accounting is increasingly evident from the change in accounting systems from single entry to double entry and cash-based recording methods to accruals in the preparation of financial statements (Larasdiputra et al., 2019). These changes require accounting professionals to have appropriate competencies to be able to exist in the era of technological disruption (Myrelid & Olhager, 2019). *The Future Job Report 2020* assessed that accounting, bookkeeping, and data entry jobs in Indonesia in the span of up to 2025 are predicted to experience a decline (Puspitasari & Nasihin, 2021). This challenge is one aspect that needs to be underlined by various parties, especially accounting education institutions.

Technology adoption has been pursued in facing these challenges. Adjustments in the field of accounting have been made by higher education institutions by responsively updating technology-laden curricula that can create qualified graduates. (Parra et al., 2021). One of the courses that requires more attention to the combination of practicum and technology is computer accounting. The competence honed in this course is the ability to complete the accounting cycle in various types of businesses that exist in both service, trade, and manufacturing companies (Luh et al., 2015)

Mastery of the competence of preparing corporate financial statements is a must for accounting students (Pratama Putra & Susilowibowo, 2021). The facts on the ground show the opposite of this necessity. Research results on accounting students at the Universitas Negeri Malang show that of the three accounting computer practicum cycles, more than 50% of them experience difficulties in manufacturing accounting computer

practicum. The main causative factor is the complexity of the financial data of manufacturing companies so students find it difficult to master the recording and summarizing components of manufacturing accounting computer practicum. The learning difficulty is also influenced by the limited learning resources available. Learning resources provided are limited to physical books and modules on available e-learning. These limitations can affect the level of effectiveness of learning literacy in reducing student learning outcomes (Raković et al., 2022).

Increasing the effectiveness of learning literacy can be done through the development of media that is attractive and can be accessed indefinitely. In line with technological developments, the development of digital-based media is needed as a form of renewal of the teaching and learning process (Salleh et al., 2012). The development of digital-based learning literacy can be a solution to the limitations of physical books or modules available (Klimova, 2020). Digital literacy is in line with the blended learning model that combines technology and learning (Fadhilatunisa & Miftach, 2020). Most educational institutions today have implemented a blended learning system in every lesson. Therefore, digital-based learning literacy is effectively used in learning manufacturing accounting computer practicum (Nurhaini et al., 2023).

The development of digital-based learning literacy in manufacturing accounting computer practicum learning will provide benefits to time efficiency, and increase student learning motivation. Some studies have developed such learning literacy, but there are some weaknesses, namely the menu is not arranged in order and the service features provided are less able to attract users in terms of appearance (Nurhaini et al., 2023). The limitation of user access, which can only be done through a computer, is a limitation of the research (Made I et al, 2016).

This research aims to develop digital-based learning literacy packaged in the form of application learning media. Manufacturing Accounting Literacy "Simaaksi" is developed according to the needs and characteristics of students. The learning media developed will contain teaching materials, videos, questions, and supporting information about the needs of the manufacturing business field for the accounting profession in Indonesia and online courses that can be followed by students. The literacy presented is a manufacturing accounting computer practicum using MYOB 19. "Simaaksi" media was developed to create effective, efficient learning and be able to help improve student learning outcomes.

METHOD

This research is a type of Research and Development (R&D) research by adapting the Borg&Gall model. This model has ten stages that are adjusted based on development needs and research limitations (Munastiwi, 2015). This model is suitable for use in technology-based development research (Hasyim et al., 2021).
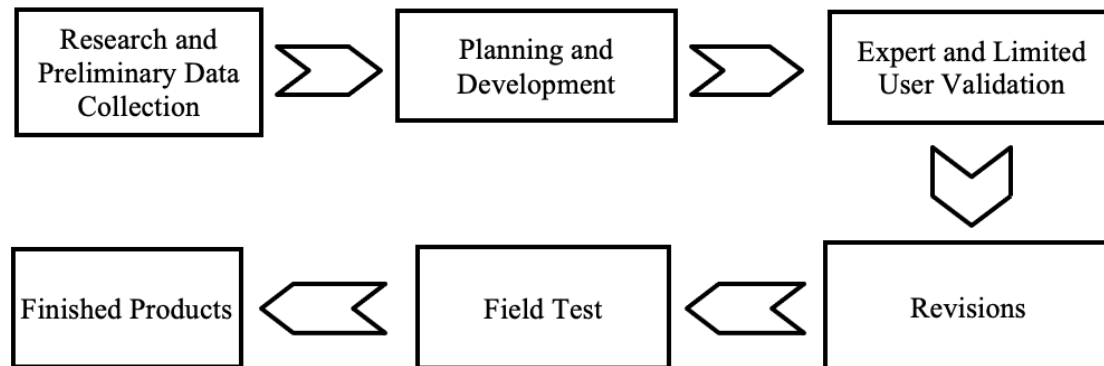
Figure 1: Flow of research activities

In the research and development procedure, first, the researcher identified the problem of learning manufacturing accounting computer practicum through initial data collection of accounting students in Malang Raya. The identification results showed that the learning literacy of manufacturing accounting computers was limited to physical books and electronic modules that had not been optimally utilized by students. The tendency of students in learning to wait for lecturers' instructions causes less effective learning. The high level of difficulty and complexity of manufacturing data cause students' ability to complete the manufacturing accounting cycle tends to be low compared to the service and trade accounting cycles.

The second step is to plan and develop learning literacy according to student needs. The development was carried out through the design stage of the application components based on the results of problem identification. Third, validation of development products is carried out on media and material experts and limited users. Fourth, the product development went through an improvement stage on the input obtained from the validation stage.

In the fifth step, the product was implemented through a field test on 30 accounting education students at the State University of Malang to determine the effectiveness of the developed learning literacy on learning outcomes. The effectiveness test was designed using a quasi-experimental with one group pretest-posttest model. The effectiveness of learning outcomes was analyzed through a paired sample t-test with a significance level of 0.05. Then, an application evaluation questionnaire was distributed to improve the development product to produce a finished product.

RESULT AND DISCUSSION

This research has successfully developed a digital learning literacy product "Simaaksi" which aims to improve the ability of accounting computer practicum of manufacturing companies. Based on the analysis conducted on the research results, the product was declared feasible by media and material experts with 90% and 92% feasibility levels. This media is also stated to have a high level of flexibility because it provides easy access both online and offline. Then, the development product was tested on 20 accounting students as limited users. The test results can be displayed as follows.

The results of the limited trial showed that more than 50% of students agreed that the developed media had quality in the aspects of material presentation, appearance, interactivity, and other aspects. These aspects can be broadly mentioned as a unity of content and display components which can be explained as follows.
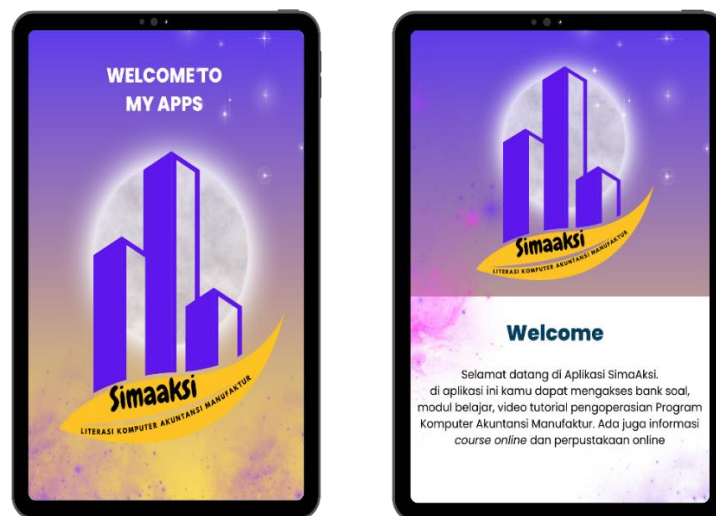

Figure 2. Display of Opening Screen

The homepage is attractively designed to increase user interest (Lai et al., 2022). The combination of images and colors is adjusted to the application theme so that it has an aesthetic integration to increase the effectiveness of the application. This display also presents an overview of the contents of the application at a glance to provide an explanation of the menu in the application.

Figure 3. Display menu

The menu page is displayed simply and includes the content components presented. The intended contents are video tutorials, question banks, tutorial modules, an online library, instructions for use, and a helpdesk display. The layout of the submenus is made by paying attention to font size and writing to increase ease of use. (Sophonhiranrak, 2021).
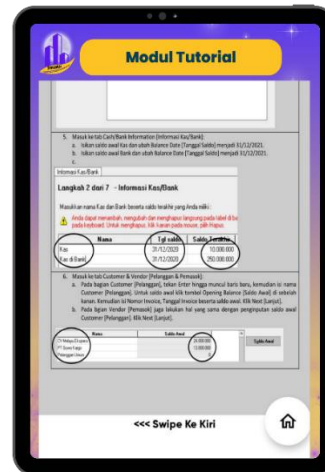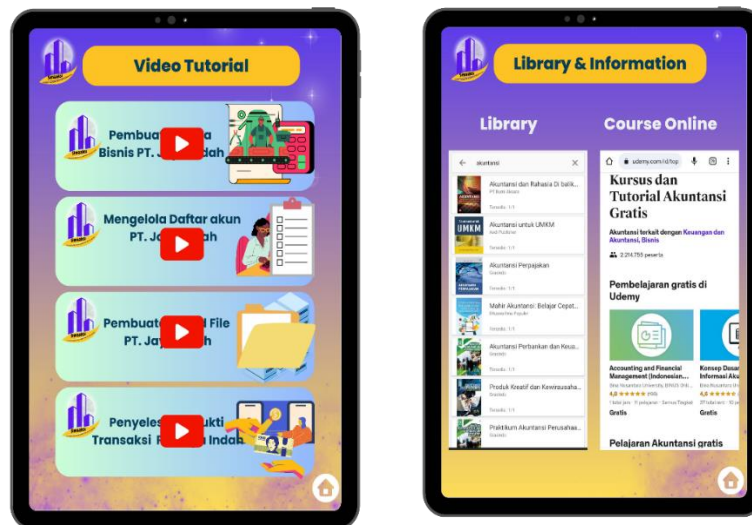
Figure 4. Simaaksi feature display

The menu page displays features that are explained as follows. First, the question bank page presents practical questions to test students' abilities in manufacturing accounting computer practicum. The questions given in "Simaaksi" are adjusted to the material presented and the level of student understanding. This page also provides access to the answer key to the questions given through the tutorial module menu.

Second, this tutorial module view presents a module that contains the steps of manufacturing accounting computer practicum. The steps presented include setting up company identity, inputting accounts and initial balances, setting up tax codes and linked accounts, inputting accounts payable and receivable cards, inputting initial inventory balances, completing purchase transactions, and sales, paying debts, paying off receivables, receiving and spending cash to presenting financial statements. Practical steps delivered using the MYOB 19 application.

Third, this display is a feature that shows video tutorials from account creation to financial statement presentation. The video is presented in order and sequentially to facilitate understanding of the material presented (Gever et al., 2021). The successive delivery of material is intended to provide understanding according to the competencies that must be mastered at each stage (Nurhaini et al., 2023).

Fourth, the online library submenu presents learning materials and media sourced from the internet. The literacy has been filtered and adjusted to the material presented. The aim is to provide literacy that is following the material presented (Kutluk & Gülmez, 2014). The existence of this online library is expected to represent the ease of access to technology in obtaining materials. Next, online training information provided is online training from third parties that will be updated every month. The goal is that students not only learn from lecturers or e-learning but can upgrade their skills in a broader scope.
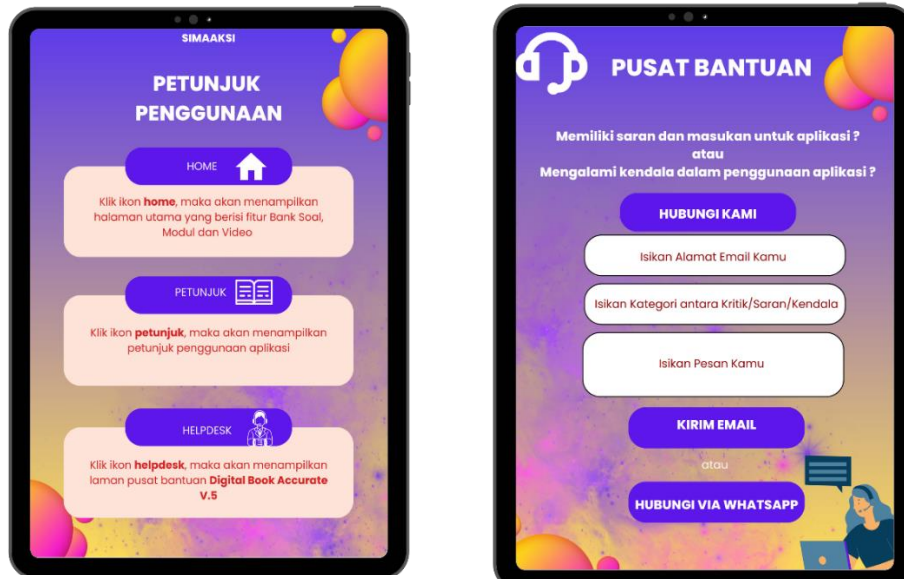
Figure 5. Simaaksi Application Submenu Display

The instructions for use display present how to use the application for the menus and submenus in "simaaksi". Instructions for use are delivered concisely and according to the menu displayed. The existence of instructions for use aims to facilitate access to the application and become a guideline for its use (Degner et al., 2022). Then, the help center page provides access for users to interact with developers. The intended interaction is the delivery of obstacles or providing criticism or suggestions for the experience of using the application. This feature contains an input column and can be sent directly via whatsaap or or email to the developer.

Effectiveness of Learning Literacy "Simaaksi
The appearance and content that have been described are the results of improvements made by expert validators and limited users. Products that have gone through the improvement stage are then tested to determine the effectiveness of the development on improving student abilities. Based on the experimental test results, the following data were obtained.

Table 1. Data Normality Test Results

Test	Result	Description
Pretest	0,282	Normal
Posttest	0,965	Normal

Normally distributed data is a requirement for a paired sample t-test to determine effectiveness with a sig value. < 0,05.

Table 2. Effectiveness Test Results

Test	Result	Description
Pretest-Posttest	0,040	There is a difference (effective)

The results of the effectiveness test show that the sig value. 0, 040 <0.050 so it can be said that the developed learning literacy succeeded in improving student learning outcomes. This significant change shows that the learning literacy "Simaaksi" is useful for students to obtain new and appropriate learning resources. The results of the effectiveness test above can be displayed in a graph of changes in pretest and posttest.
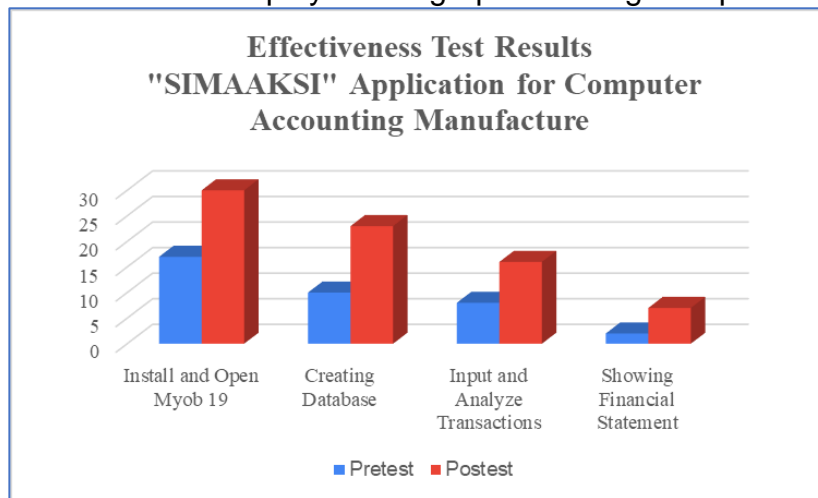

Figure 6. Graph of pretest-posttest Effectiveness Test Results

The developed "Simaaksi" learning literacy can provide opportunities for students to obtain complete and structured learning resources straightforwardly so that learning objectives can be achieved properly. The development of technology-based learning resources has proven effective in improving student competence (Ihsan & Akhmad, 2022). The use of learning literacy "Simaaksi" makes students more focused on participating in learning activities both online and offline.

The results of the feasibility test of the application to users show that in general, the application is suitable for massive use by all students who want to learn manufacturing accounting computers. The test results on the assessment aspects show that all components are very feasible and attractive to users. Field test results can be displayed as follows.

Table 3. Field Test Results

No.	Assessment Aspect	Percentage
1	Technical Quality	85%
2	Presentation of Material	87%
3	Display Quality	88%
4	Interactivity	85%
5	Overall Assessment	90%
Validity		**87%**
Indicators		**Highly Feasible**

Learning literacy "Simaaksi" is an application that combines audio-visual components to attract users to use it. Systematic and complete presentation of material can increase students' interest in learning (Ihsan & Akhmad, 2022). Interest in learning resources can significantly improve student understanding. Material management combined with learning videos makes it easier for students to follow the practicum in stages according to the completion steps in the accounting cycle of manufacturing companies. The adaptive appearance of the application is considered effective and attractive. This opinion is reinforced by research that says that the combination of audio-visual is an effective tool to increase interest in learning (Nuritha & Tsurayya, 2021). Access to additional menus such as online libraries and online courses provides convenience for students in preparing themselves to become qualified graduates. This convenience is expected to be maximally utilized by students to create competent accounting professionals in the current era of technological disruption.

CONCLUSION

The development product "Simaaksi" which is packaged in the form of an application is a solution to the limitations of manufacturing accounting computer learning resources using MYOB 19. The resulting learning literacy is following the results of the research analysis. This application has general access so that all groups of teachers, students, students, and accounting practitioners can use it to understand the stages of completing the accounting cycle of manufacturing companies. "Simaaksi" contains the main features of teaching materials, learning videos, question banks, and supporting features such as online libraries and online course information for accounting computer practice. The feasibility test results show that the application has fulfilled all aspects of the assessment from technical quality to overall assessment. Expert and user recommendations have been followed up through improvements to produce a finished product that is ready for implementation. Based on the results of the effectiveness test, this research has produced learning literacy "Simaaksi" which is effective in improving student learning outcomes.

This study has not been able to carry out experimental activities with a control-experiment class design so differences in learning outcomes in the treated and untreated classes cannot be known. This study also has limitations because it was only tested on students majoring in accounting, for future researchers it is hoped that they can conduct research in other majors so that their effectiveness can be known in a wider scope. Then, future researchers are also expected to develop learning media that can be used for practicum through laptops or computers.

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