

Development of an Accounting E-Module with *Book Creator* to Improve Student Learning Achievement in Accounting Material as an Information System for Regina Pacis Bajawa High School Students

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Abstract: *The objectives of this research are: (1) To produce an e-module accounting module to improve the learning achievement of SMAS Regina Pacis Bajawa students. (2) Examining the feasibility of accounting e-modules to improve the learning achievement of SMAS Regina Pacis Bajawa students. (3) Examining the effectiveness of the accounting e-module in improving the learning achievement of SMAS Regina Pacis Bajawa students. This type of research is research and development research with the ADDIE model. With an experimental trial design using a pre-test – post-test model. The test subjects in this research were class XI IPS D SMAS Regina Pacis Bajawa. Product suitability is tested by media experts, material experts, learning practitioners, namely teachers, and media users, namely students. Data collection was carried out using observation, interviews, questionnaires and tests. The data collection instruments used were interview guides, expert validation questionnaires, teacher response questionnaires, student response questionnaires, and accounting questions as an information system. Development products are assessed based on the appropriateness of media design and learning materials. The feasibility of the resulting learning media was analyzed using a conversion of 4 eligibility criteria, namely very good, good, poor and very poor. Results of the research (1) An accounting e-module with a book creator has been developed to improve student learning achievement. (2) The accounting e-module with book creator was assessed in the very appropriate category by media experts with a score of 91.66%, a score of 84.61% in the very appropriate category from material experts, a score of 100% in the very appropriate category from teachers and a score of 87.14% in the very feasible category was obtained from student assessments. (3) E-module accounting module with book creator can improve the learning achievement of Regina Pacis Bajawa High School students. It can be seen that there is an increase in the average student score from the pretest of 57.18 to 85.78 in the posttest.*

Keywords: *E-module, Book Creator, Student Learning Achievement, Accounting as an Information System .*

1. INTRODUCTION

Education is all learning activities that occur throughout life in all places and situations that have a positive influence on the growth of each individual creature. Education today is very important and is a right for all children. Quality education will produce students who are not only intellectually capable but also have noble personalities. Education should be the basis for students to learn and apply the knowledge gained at school into everyday life. In accordance with the views expressed by (Puriani, 2020) education is a place where intelligence, behavior and attitudes are formed, as well as the resulting performance.

Quality education in learning activities is not just about studying theory, but more than that. The knowledge gained can be implemented in the world of work which is not only intellectually capable but also has a personality and character that is formed by education. Moreover, nowadays the problems faced by young people are different from those of the past. In this day and age, young people face various life challenges that require the ability

to adapt to digitalization conditions. Therefore, as an institution providing teaching and learning services, schools certainly need to pay attention to various important aspects to support the knowledge that will be given to students.

As an educational institution, schools need to be aware of the quality demonstrated by students leaving school. To support the quality of graduates produced by schools, it is necessary to consider and prepare various aspects such as teaching staff, teaching materials, learning media, learning models, facilities and infrastructure at the school. The readiness shown by the school for competent teaching staff is an important factor for success in learning. Today's teaching staff, with advances in technology, are required to learn new innovations that can be used in the process of delivering lesson material to students.

Information that is conveyed well from teacher to student can make it easier for students to understand more quickly. Students who have good understanding will have an impact on their learning achievement, where students who have satisfactory learning achievement prove that the student is able to digest any material presented by the teacher. According to (Purwanto, 2016) the domain of learning achievement is psychological behavior that will be changed in the educational process. Psychological behavior is divided into three domains, namely cognitive, affective and psychomotor. (Nana Sudjana, 2016) states that student learning achievement is essentially a change covering the cognitive, affective and psychomotor fields that is oriented towards the teaching and learning process experienced by students. This means that student learning achievement can be known after carrying out an evaluation test which will have an impact on the evaluation results so that it can show the high and low levels of student learning achievement.

Evidence of student success can be seen in student learning achievements according to the weight they achieve. Learning achievement is related to knowledge, while learning outcomes are related to the formation of student character. Based on Bloom's Taxonomy theory (Subaryana, 2019), learning outcomes in the framework of the study are achieved through three domain categories, including cognitive, affective and psychomotor. Thus, learning outcomes are changes that occur in students after carrying out learning activities, these learning outcomes are in the form of knowledge, attitudes and skills. In practice, the three domains mentioned above cannot be enforced proportionally in every subject.

According to Benyamin S. Bloom, in the national education system the formulation of educational objectives, the classification of learning achievement is divided into three domains, namely (Sudjana in Jannah, 2021):

a. Cognitive Domain

The cognitive domain includes intellectual abilities consisting of six aspects, namely knowledge or memory, understanding, application, analysis, synthesis and evaluation.

b. Affective Domain

Learning achievement in the affective domain is seen in students' behavior such as paying attention to lessons, discipline, learning motivation, respect for teachers and classmates, study habits, and social relationships.

c. Psychomotor Domain

The psychomotor domain includes motor skills to activate and coordinate activities.

Based on the opinion of Benjamin S. Bloom, it can be concluded that learning achievement is a result obtained by students after carrying out learning activities with certain objectives and within a certain time period. Learning achievement is a reflection of mastery of the material studied at a time. The learning achievements achieved by students will appear in the form of grades obtained through the activities of a test or examination that has been prepared by the teacher.

Ngada Regency is one of the districts in East Nusa Tenggara. Ngada Regency has 16 high schools spread across all sub-districts consisting of public and private schools. One of the private high schools in Ngada Regency is SMAS Regina Pacis which is located in the city of Bajawa and has an A accreditation. This school is a favorite school for students who will continue high school because of its strategic location in the middle of the city and this school has facilities that allow students to in learning. This school has two majors to choose from, including the science major and the social studies major.

Learning achievement is an important thing for students because with student achievement the teacher can find out whether the student really understands the material presented by the teacher. Based on brief observations carried out at SMAS Regina Pacis Bajawa, several problems were found in the class, such as the students' opinion that accounting is a difficult subject so it takes quite a long time to learn accounting. The teaching materials used to deliver material to SMAS Regina Pacis Bajawa students still use printed books. Printed books can be said to be teaching materials that are less flexible for students to use because they are not practical and are arranged monotonously. Class

Using printed books is not practical considering that currently teachers are required to design electronic teaching materials that are easier to carry everywhere and open at any time

and suit students' needs. The results of the observations carried out showed that not all of the students' scores reached the KKM (Minimum Completeness Criteria). This was proven by the scores of class from the minimum completeness criteria. This shows that there are still many students whose achievements can be said to be less than good. One of the reasons is that students have different grasping abilities and different ways of learning, so they need new innovations that can be used as a forum for designing teaching materials that are not only interesting but appropriate for students to use.

The changes that occur in the current educational curriculum are a challenge for teaching staff and students. This change makes teaching staff have to think about how to ensure that students do not feel confused and continue to provide quality knowledge to students. Considering that the need for knowledge continues to increase in order to support the advances that are currently occurring, including in the field of education. Therefore, various efforts are needed so that the process of transferring knowledge from teaching staff to students continues to be conveyed well so that there are new innovations in the world of education such as novelty in the use of teaching materials used by students with efforts to produce more interactive teaching materials.

All types of materials used in teaching and learning activities are considered teaching materials (Kosasih, 2021). Teaching materials also mean things that students and teachers use to make learning easier, these can be reading books, workbooks, digital materials, newspapers, and others. Currently, there are many teaching materials that can be used by educators as a means of student learning. With today's technological advances, teaching materials do not only come from printed books, but can also use online media to create more interesting teaching materials for students, known as e-modules.

E-Modules are electronic-based media that are well designed and also serve as sources that contain teaching materials including boundaries as well as clear techniques and methods with systematic and organized evaluation to achieve certain competencies in the curriculum (Laili et al., 2019). (Samiasih et al., 2017) e-modules are computerized learning resources that contain pieces of content with questions for each piece to make it easier for students to understand the content. Furthermore, interactive e-Modules are a set of learning resources containing clear materials, techniques and boundaries with an evaluation program designed to be more systematic and interesting with a level of difficulty that is aligned to achieve the set goals (Imansari & Sunaryantiningsih, 2017). The e-module itself can be created using several applications that are widely available today.

The technology that supports the creation of e-modules is in the form of applications and websites that can be accessed for free by users. One website that provides facilities for creating e-modules is book creator. The book creator application is the simplest e-module creation application and improves abilities in 4 learning domains, namely writing, reading, speaking and listening (Puspitasari et al., 2020). Using the book creator application in creating e-modules also makes it easier for users to create e-modules, because the book creator is equipped with features for designing and inserting various types of learning material, such as documents, power point presentations, videos, images and audio. This application provides interesting features so that this application can be used to design your own modules according to the teacher's creativity. This application can support the creation of e-module teaching materials that can foster new experiences for students in learning.

Research conducted by (Yulianto, 2022), aims to analyze the need for developing flipbook maker-based learning e-modules that can facilitate students to improve learning outcomes for service company accounting cycles during learning. The method used in this research is descriptive qualitative. Data was collected through interviews, observation sheets, and questionnaires. The results of data collection show that (1) the majority of learning outcomes do not meet the minimum completeness criteria set by the school, (2) students find it difficult during the learning process of service company accounting cycle material, (3) they tend not to maximize communication technology during the learning process, (4) the learning media used is only Google Form, both in the learning and evaluation process, (5) students do not yet have a handbook in the form of LKS. The results of the needs analysis show recommendations for developing a flipbook maker-based e-module to improve learning outcomes for service company accounting cycles.

Research conducted by (Made Sri Dewi & Nyoman Ayu Lestari, 2020), aims to analyze the effect of using interactive E-modules on student learning outcomes. This type of research uses the nonequivalent control group design method. The population in this study were class X students, who were recorded as being divided into 5 classes totaling 133 students. In this research the sample was determined from the population using random sampling technique. Data collection uses multiple choice tests and is equipped with an assessment rubric. Then a hypothesis test calculation was carried out using the Independent Sample T-Test and gain score. The results of this study show that the data is homogeneous with a test result of 0.503 and a significance of 0.481 which is much greater than the alpha significance of 5%. Thus the test result assuming homogeneity is met is -2.407 with a significance of 0.019. If the alpha significance level is set at 5%, the significance of the test

results is smaller than the alpha significance ($0.019 < 0.05$). So, project-based interactive e-modules have a positive impact on student learning outcomes.

Previous research results show that e-modules can be used to improve student learning achievement. The difference between previous research and this research is that this module uses a book creator application where this application uses simple features that can be used by teachers in designing modules according to teacher creativity. Apart from that, this application is quite easy to use for teachers and students, making it easier for teachers and students to use teaching materials that have been designed by the teacher. The use of e-modules as interactive teaching materials presented by teachers can be applied to learning to meet student needs with various learning methods that students expect. The use of e-modules as teaching materials at SMAS Regina Pacis Bajawa will make it easier for students to learn and access accounting material according to their needs. Based on the descriptive background above, the author assumes that e-modules can be used as development of teaching materials using the book creator application aimed at improving student learning achievement in accounting material as an information system at SMAS Regina Pacis Bajawa.

2. LITERATURE REVIEW

Understanding Student Learning Achievement

Student learning achievement is the result achieved by students in subjects at an educational institution. Learning achievement can be measured through several methods such as tests, examinations, or other methods that can reflect students' understanding of the material presented by the teacher. Learning achievements can be expressed in the form of numbers, letters, or sentences. This achievement reflects student progress in achieving learning goals over time.

This is in accordance with the view expressed by (Rosyid, 2020) that learning achievement is the result of a learning activity with changes achieved by a person. The success rate is expressed in the form of symbols, numbers, letters and sentences with predetermined standards. These learning outcomes can be taken into consideration in determining students' learning achievements. These results can also be interpreted as achieving understanding related to certain material or locales that have been presented by the teacher and studied by the students.

Learning achievement is student behavior in the educational process including cognitive, affective and psychomotor aspects which can be used as an indicator of success

in education so that it can be a determining factor for students to continue their studies to a higher level and get a job. Learning achievements include understanding concepts, mastery of skills, ability to apply knowledge in real situations, creativity, critical thinking skills, and attitudes towards learning. This is in line with the opinion of (Purwanto, 2016) which states that the domain of learning achievement is psychological behavior that will be changed in the educational process. Psychiatric behavior is divided into three domains, namely cognitive, affective and psychomotor. The same opinion was also expressed by (Sudjana, 2016) that student learning achievement is essentially a change that includes the cognitive, affective and psychomotor fields which are oriented towards the teaching and learning process experienced by students.

Learning achievement is the result of individual and group efforts in gaining experience or interacting with the surrounding environment. As is known, students have different abilities, but how do students maximize their abilities in order to produce high learning achievements? This is in line with the opinion of (Wahab, 2016) concluded that learning in a broad sense can be interpreted as a process that allows changes in behavior to emerge as a result of the formation of a primary response, as long as the change or emergence of a new behavior is not caused by maturity or by a temporary change due to something.

In line with this expert (Helmawati, 2018) stated that learning achievement is the result of learning. Achievement is obtained from evaluation or assessment. Each child will have different learning outcomes or achievements from one another. Achievement obtained from learning outcomes after being assessed and evaluated can be low, medium or high. (Susanti, 2019) also states that learning achievement is the ability to complete difficult things, master, outperform, match and surpass other students while overcoming obstacles and achieving high standards.

Based on the opinions above, it can be concluded that learning achievement is a manifestation of student behavior in the educational process, including cognitive, affective and psychomotor aspects, and expressed in the form of symbols , values , alphabets or speech . This illustrates the existing results achieved from students in a certain period. Student learning achievements can vary from one to another, depending on their efforts to overcome learning challenges as best as possible.

Understanding Accounting Material as an Information System

Accounting as an information system is the first material discussed in accounting subjects. Accounting as an information system is the basis for students to be able to study

further material. A good foundation when studying accounting will have a positive impact on students' understanding of subsequent accounting material. It is not impossible that understanding basic accounting material will increase student achievement so that they are more motivated to study accounting more seriously. In the old curriculum, this material was studied when students were in class XII, but in the independent curriculum students can study this material in class XI.

Accounting material as an information system contains quite a lot of sub-material for students to study, such as the history of accounting science, the meaning of accounting , users of accounting information, characteristics of the quality of accounting information, basic principles of accounting, basic concepts of accounting, accounting standards, areas of accounting, accounting profession, and ethics of the accounting profession

Definition of Module

Modules are teaching materials designed to assist the learning process which contain objectives, steps and learning media that will be used in one topic. These teaching modules are usually arranged according to a specific curriculum or lesson plan to help students understand the subject matter effectively. In accordance with the opinion expressed by (Maulinda, 2022) teaching modules are learning tools or learning designs that are based on a curriculum that is applied with the aim of achieving predetermined competency standards. A similar opinion was also expressed by (Hadiansah, 2022) that a teaching module is a document that contains objectives, steps, learning media, and *assessments* required in one topic based on the flow of learning objectives.

Modules are teaching materials that students can use with or without the help of educators. A good teaching module contains clear learning objectives that will be achieved, material that suits students' needs, media, and assessment instruments that will be used. A good module will make students more interested in learning to use the module. This is in line with the opinion expressed (Yaumi, 2018a) that modules are small learning units that can operate independently. This means that learning can take place without the direct presence of educators.

A similar opinion was expressed by (Purwanto, 2016) which states that modules can be considered as program packages organized into certain units for learning purposes. Modules can also be interpreted as learning programs that allow students to study them with a little help from educators (teachers, instructors, supervisors, or lecturers). The module includes planning clear objectives, providing learning materials, equipment, media or

technology, as well as assessment tools to measure student achievement in the learning process.

Modules are teaching materials designed in structured language so that they are easy for students to understand. The module contains information tailored to the needs of students and educators. Good teaching modules can help increase the efficiency and effectiveness of learning by providing structured and supportive guidance for students in understanding the subject matter. In line with the opinion of (Tjiptiany et al., 2016) modules are considered teaching materials that are prepared using language that is easy for students to understand, adapted to their age and level of knowledge, so that they can learn independently with a little help from educators. The purpose of using modules in learning is to enable students to learn independently, with little or no help from educators. In the learning process, the teacher's role is more as a facilitator. The same opinion was also conveyed by (Prastowo, 2015) who emphasized that a module is a collection of teaching materials that are arranged systematically and use appropriate language, so that they can be understood according to the student's level of knowledge or age, thereby enabling students to learn independently. With the module, students can learn independently without depending on the teacher, because the module contains clear functions and objectives. It is hoped that the use of modules as an independent learning resource can help students achieve maximum learning outcomes.

Based on the opinion above, it can be concluded that a module is a learning tool that includes objectives, steps, learning media and necessary assessments, arranged in certain units for learning needs. This module uses language that is appropriate and understandable based on the level of knowledge or age of the students which allows them to learn independently. The purpose of using modules in learning is so that students can learn independently with or without help from the teacher.

Understanding E-Modules

E-module is a learning module presented in electronic or digital format. Usually, these e-modules are available in the form of PDF files, websites, or learning applications. E-modules can present learning material that will be given to students in a structured way and can be accessed by students on electronic devices such as computers, tablets or cellphones. This is in line with the opinion expressed by (Rahmi, 2018) that e-module is a form of independent learning media that is prepared in digital form where this aims to be an effort to realize the learning competencies to be achieved as well as to make students become more interactive by using this application. In line with the opinion above, similar things were also

conveyed by (Ricu Sidiq & Najuah, 2020). Learning modules also underwent a transformation in terms of their presentation in electronic form, known as electronic modules.

E-module is a teaching material that utilizes technology to develop teaching materials so that they can be used by students during learning. The existence of e-modules makes it easier for educators to design fun teaching materials for students, where in e-modules educators can add interesting features that can support student learning. Currently, with advances in technology, e-modules can be accessed by students and educators easily. This opinion is in line with (Sugihartini & Jayanta, 2017) who say that electronic modules (e-modules) are the development of printed modules in digital form which are adapted from printed modules and can be accessed via devices. A similar thing was also conveyed by (Winaya et al., 2016) Electronic modules are learning facilities or tools that are designed systematically and interestingly containing material or information, methods, limitations and how to evaluate them. Electronic modules are included in *electronic based e-learning*. This is learning that uses or utilizes information and communication technology, especially the use of electronic devices.

E-modules can be said to be teaching materials that students can use to solve problems independently. This is because the e-module provides instructions that will direct students to carry out each step in achieving the learning objectives. E-modules can be presented in electronic format which will make it easier for students or educators to access them. In line with Gunadharma's opinion in (Amir & Kusuma W, 2018) he expressed the opinion that electronic modules (e-modules) are a form of presentation of teaching materials which are arranged systematically into the smallest learning units to achieve certain learning objectives which are presented in electronic format, where each The learning activities in it are connected by links as navigation which makes students more interactive with the program, equipped with the presentation of video tutorials, animation and audio to enrich the learning experience.

Digital modules adapt the components contained in printed modules in general, only the difference between printed modules and conventional modules lies in the physical presentation of digital modules which require computer equipment to use them and require an additional application to run the electronic module. Digital modules are the latest innovation from printed modules, where these digital modules can be accessed with the help of a computer that is tied to supporting software (Santosa et al., 2017).

Based on the opinions above, it can be concluded that e-modules are a form of independent learning media which are prepared in digital form, designed systematically and interestingly containing material or information, methods, limitations and how to evaluate them. E-modules prioritize student independence in carrying out learning activities that contain teaching materials to help students solve problems with their own abilities because they are equipped with the presentation of video tutorials, animations and audio to enrich the learning experience which can be accessed with the help of computers that are tied to supporting software. .

Book Creator

Book Creator is a platform that allows users to easily create interactive digital books. With *Book Creator* , users can combine text, images, audio and video to create attractive digital books with high creativity. This platform is often used in educational contexts, both by teachers and students, to create storybooks, textbooks, portfolios of artwork, and various other types of creative work. With *Book Creator* , users can create interesting and useful digital books, which enrich the learning experience and help build students' creativity and technology skills. A similar thing was also conveyed by (Puspitasari et al., 2020) the *book creator* application becomes the simplest e-module creation application and improves abilities in 4 learning domains, namely writing, reading, speaking and listening.

Using the book creator application in creating e-modules can also help users create e-modules, because *the book creator* is equipped with features for designing and inserting various forms of learning material, such as documents, *power points* , videos, images and audio. This application provides interesting features so that this application can be used to design your own modules according to the teacher's creativity. This application can support the creation of e-module teaching materials that can foster new experiences for students in learning.

Book Creator is a simple " *tool* " for creating an attractive book that not only displays images and writing but can also insert audio or video. *Book creator* is a very simple application designed to make digital media visually appealing. Unlike conventional reading materials, *book creators* also offer a variety of other multimedia such as audio recordings and educational videos (Diana et al., 2022) . *Book Creator* is an electronic book that can be used by teachers and students with 4 components, namely reading, writing, speaking and listening, so that it can make it easier for students to understand the material.

Book creators can be an option for educators to design interesting teaching materials for students. *Book Creator* uses simple features that are easy to use for both educators and

students. This application offers a new experience for students to make learning more enjoyable because in this application educators can provide videos and links so that students can more freely explore the material they want to study. This is in line with the opinion (Fitria, 2022) that this *book creator application* is user friendly and ideal for novice educators because it functions both *online* and *offline* . With a simple user interface and easy-to-understand tool menu, creating digital learning media has never been easier. Additionally, *Book Creator* can be linked or integrated with other popular apps such as *Canva* and *Google Maps* .

Based on the opinion above, it can be concluded that the *book creator application* is an e-module creation application that is easy to use to create an attractive book that not only displays images and writing but can also insert audio or video. *Book creator* can be used by teachers and students with 4 components, namely reading, writing, speaking and listening so that it can make it easier for students to understand the material. This app is user friendly and ideal for beginner educators as it works both *online* and *offline* .

3. RESEARCH METHODS

This research uses a research and development model. The aim of this research is to produce teaching materials in the form of e-modules that can be used to interact with students. This e-module needs to be analyzed and its efficacy tested so that this product can be used by the public, especially by educational institutions, namely schools. Based on this, this research focuses on educational products.

Research and development *is* a research method for developing and testing products that will later be developed in the world of education. According to (Sugiyono, 2015) , research and development is a research method used in the production of certain products and evaluating their efficacy. As a result, research and development (R&D) can be maintained, a systematic study to design, develop, and then evaluate learning programs, processes, and outcomes that must meet predetermined criteria is another definition of research and development.

The ADDIE development model developed by Dick and Carey to design learning systems, is one model that can be used. This model consists of five development stages, namely analysis, design, development, implementation and evaluation as explained by (Sugiyono, 2018) .

4. RESULTS AND DISCUSSION

This research creates an accounting e-module product with *a book creator* to improve student learning achievement. The development of e-modules with *book creators* uses the ADDIE development method which contains several stages, namely *the analysis* , *design* , *development* , *implementation* and *evaluation stages* . The ADDIE method was used in this research because it can increase knowledge, abilities and attitudes (Muflinah, 2022).

The material used in this research is accounting as an information system for class XI SMA. The aspect of learning achievement that will be measured is the cognitive aspect which includes intellectual abilities consisting of six aspects, namely knowledge or memory, understanding, application, analysis, synthesis and evaluation. Affective aspects appear in students' behavior such as attention to lessons, discipline, motivation to learn, respect for teachers and classmates, study habits, and social relationships, and psychomotor which includes motor skills to activate and coordinate activities (Sudjana in Jannah, 2021).

The final product study of developing e-modules with *book creators* is to improve student learning achievement in accounting material as an information system which is described based on product quality and product characteristics.

a. Product Quality

The result of this research is an electronic module that focuses on learning outcomes in accounting as an information system, which was built using the ADDIE development model. The ADDIE model includes a series of stages, including analysis, design, development, implementation, and evaluation. The process of developing this e-module is in accordance with the steps in the ADDIE model, meeting the standards as a learning e-module. In line with the opinion of (Rahmi, 2018) e-module is a form of independent learning media which is prepared in digital form where this aims to be an effort to realize the learning competencies to be achieved as well as to make students more interactive by using the application. .

According to (Prihatiningtyas & Sholihah, 2020), in general the characteristics of e-modules are similar to the characteristics of modules, namely: *self-instructional* , *self-contained* , *stand alone* , *adaptive* , and *user friendly* . The electronic modules created include instructions for use, table of contents, learning objectives, materials, assessments, summaries, glossaries and learning videos. Improving the accounting e-module with *a book creator* refers to the results and suggestions provided by media experts, material experts, accounting subject teachers and students which are then adapted to the students' real conditions during the e-module trial process.

An accounting e-module using *a book creator* was developed and presented more attractively in simple language, and is equipped with videos that can support students' learning needs. The choice of color and font for the e-module is adjusted to the student's comfort when reading the e-module. The choice of color, type and size of letters in the e-module should be designed as much as possible with soft colors *and* letters that are easy for students to read. The images and animations used in the e-module are not excessive and are in accordance with the needs of the e-module. In line with Gunadharma's opinion in (Amir & Kusuma W, 2018) electronic modules (e-modules) are a form of teaching material that is arranged systematically into the smallest learning units to achieve certain learning objectives in electronic format, where every learning activity in it is connected with navigation links that make students more interactive with the program. Apart from that, e-modules are also equipped with video tutorials, animations and audio to enrich students' learning experience.

The accounting e-module with *book creator* was assessed in the very appropriate category by media experts with a score of 91.66%, a score of 84.61% in the very appropriate category from material experts, a score of 100% in the very appropriate category from SMAS accounting teacher Regina Pacis Bajawa and value 87.14% with category very worthy obtained from evaluation student XI IPS SMAS Regina Pacis Bajawa became sample study . *Pretest* and *posttest* results can seen there was an increase in the average student score from *the pretest* of 57.18 to 85.78 on the *posttest* . It can be interpreted that using accounting e-modules using *a book creator* can help improve student learning achievement in accounting material as an information system. The results of the correlated t test show that sig.2 (tailed) is $0.000 < 0.005$, so it can be concluded that there is a significant difference before using the e-module and after using the e-module.

The results of this research are in accordance with previous research conducted by (Septiyani, 2022) shows that the learning process using e-modules for economics subjects based on *problem based learning for* class X at SMA Negeri 1 Wirosari is good. The level of feasibility of e-module products based on *problem based learning* as a learning medium for economic subjects is known based on the assessment of material experts with a percentage of 85.71% in the very feasible category, media experts with a percentage of 89.00% in the very feasible category, language experts with a percentage of 64.00 % feasible category, teacher responses with a percentage of 100% in the very practical category, and student responses. with a percentage of 80.9% in the

practical category. The use of e-modules in economics subjects based on *problem based learning* as a learning medium that can improve student learning outcomes is proven by the average *pre-test score* of 58.86 while the *post-test score* is 64.53. This means that the e-module for economics subjects based on *problem based learning* is able to improve the learning outcomes of class X IPS 2 students at SMA Negeri 1 Wirosari by 9.63%.

b. Product Characteristics

The accounting e-module with *book creator* can be accessed online via the link <https://shorturl.asia/laYBG>. This e-module product can also be accessed offline if the user downloads the PDF of this electronic module first. This electronic module utilizes the *book creator application* as a tool for designing the appearance of the e-module. Apart from that, this electronic module also uses the *wordwall application* to play games which makes evaluation more interesting and fun for students. This e-module is also designed so that students can access it using their *smartphone or laptop*.

This electronic module consists of the initial display of the module, table of contents, introduction, instructions for using the module, learning outcomes, indicators of achievement of learning objectives, glossary, learning materials, self-evaluation, assignments, games and learning videos which can be accessed using links. This e-module can be distributed via a link that can be *copied and pasted* for widespread distribution. The accounting e-module with *book creator* is designed in an attractive and simple way so that it makes it easier for students to operate it so that it can help students study, do assignments and improve student learning achievement in accounting material as an information system.

CONCLUSION

Conclusions from the research (1) An accounting e-module with *a book creator* has been developed to improve student learning achievement. (2) The accounting e-module with *book creator* was assessed in the very appropriate category by media experts with a score of 91.66%, a score of 84.61% in the very appropriate category from material experts, a score of 100% in the very appropriate category from teachers and a score of 87.14% with category very worthy obtained from evaluation student. (3) E-module accounting module with *book creator* can improve the learning achievement of Regina Pacis Bajawa High School students. It can be seen that there is an increase in the average student score from *the pretest* of 57.18 to 85.78 in the *posttest*.

BIBLIOGRAPHY

- Amali, K., Kurniawati, Y., & Zulhiddah, Z. (2019). Development of Community Science and Technology Based Student Worksheets in Science Subjects in Elementary Schools. *Journal of Natural Science and Integration* , 2 (2), 70.
- Amir, MF, & Kusuma W, MD (2018). Development of Contextual Problem-Based Learning Tools to Improve Elementary School Students' Metacognitive Abilities. *Journal of Medicine: Journal of Mathematics Education IKIP Veteran Semarang* , 2 (1), 117.
- Deni Febrini. (2017). Learning psychology. In *Psychology of learning* (Cet. 1, pp. 1–223). Student Library.
- Diana, S., Sianipar, S., & Harianja, R. (2022). National Digital Literacy Movement as a Learning Media in the City of Medan. *Skylandsea Professional Journal of Economics, Business And Technology* , 2 (2), 67–73.
- Djaali Tarmizi. (2014). Educational Psychology. In *Educational Psychology* (Cet. 8, pp. 1–133). PT. Literary Earth.
- Gresinta, E. (2020). Development of an Immune System Learning Module to Improve Learning Outcomes in Animal Physiology Courses. *Sinasis (National Seminar on Science)* , 1 (1), 186–189.
- Hadiansah, D. (2022). Independent Curriculum and New Learning Paradigm. In *Independent Curriculum and New Learning Paradigm* . Yrama Widya.
- Helmawati. (2018). Educating Achievement Children Through 10 Intelligences. In *Educating Achieving Children Through 10 Intelligences* (1st ed., pp. 1–284). PT Teen Rosdakarya.
- Ihsan, & Hully. (2023). Development of an Android Installation-Based Trading Company Accounting E-Module to Increase Student Independence and Learning Outcomes. *Journal of Economic Education and Entrepreneurship* , 7 (1), 115–124.
- Imansari, N., & Sunaryantiningsih, I. (2017). The Effect of Using Interactive E-Modules on Student Learning Outcomes on Occupational Health and Safety Material. *Volt: Scientific Journal of Electrical Engineering Education* , 2 (1), 11.
- Kosasih. (2021). Development of Teaching Materials. In *Development of Teaching Materials* (pp. 1–268). Literary Earth.
- Laili, I., Ganefri, & Usmeldi. (2019). Effectiveness of developing project based learning e-modules on electric motor installation subjects. *Scientific Journal of Education and Learning* , 3 (3), 306–315.
- Lidia Susanti. (2019). Academic and Non-Academic Learning Achievement. In *Academic and Non-Academic Learning Achievement* (pp. 1–150). Eternal Archipelago Literacy.
- Made Sri Dewi, A., & Nyoman Ayu Lestari, P. (2020). Project-Based Interactive E-Modules on Student Learning Outcomes. *Scientific Journal of Education and Learning* , 4 , 433–441.

- Maulinda, U. (2022). Development of Independent Curriculum Based Teaching Modules. *Tarbawi* , 5 (2), 130–138.
- Muhibbin Shah. (2015). Educational Psychology. In *Educational Psychology* (pp. 1–276). PT. Raja Grafindo Persada.
- Nana Sudjana. (2016). Assessment of Teaching and Learning Process Results. In *Assessment of Teaching and Learning Process Results* (pp. 1–164). Rosdakarya Teenager.
- Prastowo, A. (2015). Creative Guide to Creating Innovative Teaching Materials. In *Creative Guide to Creating Innovative Teaching Materials* (Cet. 5, pp. 1–419). Diva Press.
- Prihatiningtyas, S., & Sholihah, NF (2020). Project Based Learning E-Module to Teach Straight-Motion Material for Prospective Physics Teachers. *Physics Education* , 8 (3), 223–235.
- Puriani, RSD (2020). Adversity & Problem Solving Skill Concept. In *Adversity Concepts & Problem Solving Skills* . Bening Media Publishing.
- Purwanto, MN (2016). Educational Psychology. In *Educational Psychology* (pp. 1–170). PT Teen Rosdakarya.
- Puspitasari, V., Ruffi'i, & Walujo, DA (2020). Development of Learning Tools with a Differentiation Model Using Book Creator for BIPA Learning in Classes with Diverse Abilities. *Journal of Education and Development Institute* , 8 (4), 310–319.
- Rahmawati, D., Yuberti, Y., & Syafrimen, S. (2021). Development of E-module Learning Media Using Sigil Software in Physics Learning Materials. *Journal of Physics Learning Research* , 12 (2), 106–112.
- Rahmi, L. (2018). *Ta'dib Journal, Vol 21 (2), 2018, (July - December)* . 21 (2), 105–111.
- Ricu Sidiq, & Najuah. (2020). Development of Android-based interactive E-modules in teaching and learning strategy courses. *Journal of Historical Education* , 9 (1), 1–14.
- Rohmalina Wahab. (2016). Learning Psychology. In *Psychology of Learning* (pp. 1–258). Rajawali press.
- Samiasih, R., Sulton, & Praherdhiono, H. (2017). Development of an E-Module for Natural Science Subjects, the subject of the interaction of living things with their environment. *Edcomtech* , 2 (2), 119–124.
- Sani, RA (2020). Tips for Writing Quality Scientific Work. In *Tips for Writing Quality Scientific Work* . Literary Earth.
- Santosa, ASE, Santyadiputra, GS, & Divayana, DGH (2017). Development of E-Modules Based on Problem Based Learning Models in Network Administration Subjects for Class XII Computer and Network Engineering at SMK Ti Bali Global Singaraja. *Development of an E-Module Based on a Problem Based Learning Model in the Class XII Network Administration Subject Computer and Network Engineering at SMK Ti Bali Global Singaraja* , 6 No.1 .

- Septiyani, B. (2022). *Development of E-Modules for Economics Subjects Based on Problem Based Learning to Improve Learning Outcomes for Class X Students at Sma Negeri 1 Wirosari* .
- Subaryana. (2019). Self-concept and learning achievement. *Journal of Elementary Education Dynamics* , 7 (2), 21–30.
- Sugihartini, N., & Jayanta, NL (2017). Development of E-Modules for Learning Strategy Courses. *Journal of Technology and Vocational Education* , 14 (2), 221–230.
- Sugiyono. (2015). Development Research Methods. In *Development Research Methods* (pp. 1–724).
- Sugiyono. (2018). Quantitative, Qualitative and R&D Research Methods. In *Quantitative, Qualitative And R&D Research Methods* (pp. 1–526). Alfabet.
- Syaiful Bahri Djamarah. (2015). Psychology of learning. In *Psychology of Learning* (Revised Ed., pp. 1–259). Rineka Cipta.
- Tjiptiany, EN, As'ari, AR, & Muksar, M. (2016). Development of a Mathematics Learning Module Using an Inquiry Approach to Help Class X High School Students Understand Opportunity Material. *Journal of Education: Theory, Research, And Development* , 1 (10), 1938–1942.
- Winaya, IKA, Darmawiguna, IGM, & Sindu, IGP (2016). Development of E-Modules Based on Project Based Learning in Class X Web Programming Subjects at SMK Negeri 3 Singaraja. *Journal of Technology and Vocational Education* , 13 (2), 198–211.
- Yaumi, M. (2018a). Learning Media and Technology. In *Media and Learning Technology* (Printed to, pp. 1–248). Prenadamedia Group.
- Yaumi, M. (2018b). Learning Media and Technology. In *Media and Learning Technology* (pp. 1–248). Prenadamedia Group.
- Yuliyanto, R., Pujiati, P., Suroto, S., & Maydiantoro, A. (2022). Analysis of the Need for Development of a Flipbook Maker-Based Learning E-module to Improve Learning Outcomes for the Accounting Cycle of Service Companies. *Economic Education and Entrepreneurship Journal* , 5 (1), 74–84.
- Yusuf, S. (2020). Development of PBL-based e-modules in economics lessons to improve student learning achievement. *Journal of Education: Research & Conceptual* , 4 (4), 632–640.