



## Development of Myob Accounting Computer Teaching Materials at A Web-Based Service Company

Dina Restu Utami<sup>✉</sup>, Kardoyo<sup>2</sup>, Muhammad Khafid<sup>3</sup>

Postgraduate, Universitas Negeri Semarang

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### Abstract

The purpose of this study is to find out how the development of MYOB accounting computer teaching materials in web-based service companies that are valid, practical, and effectively used in computerized accounting learning to improve students' skills in operating MYOB accounting computers. This development research produces products in the form of MYOB accounting computer teaching materials at web-based service companies which are developed with a 4-D model into 4 stages, namely defining, designing, developing, and disseminating. Based on the validation results by validators, the feasibility of teaching materials is wonderful and the average reliability of all validators with reliable categories is so that teaching materials are worthy of use in learning. The form of innovation in learning resources and the learning approach provides a positive response to students, the results of student responses to teaching materials obtained from all aspects of MYOB accounting computer teaching materials at web-based service companies are marvelous. Students' skills in operating MYOB accounting computers differ between the control class and the experimental class, meaning that teaching material products have proven to be effectively applied in computerized learning of accounting, where the improvement of students' skills in operating MYOB accounting computers in the experimental class was obtained by a score of 0.322 with a moderate category.

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✉ Correspondence :  
Postgraduate, Universitas Negeri Semarang  
Kelud Utara III, Semarang 50237 Indonesia  
E-mail: dina.utami96@students.unnes.ac.id

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## INTRODUCTION

Vocational High School (SMK) is a form of formal education unit that prepares graduates to be ready to work with the provision of knowledge, skills, and work attitudes in certain fields that are following the needs of the Business World and the Industrial World (DU / DI), and are expected to be entrepreneurial. This is stated in UUSPN Article 18 and explanation of article 15 which regulates Vocational Secondary Education. To achieve this goal, SMK students must have the ability, both theoretical and practical. One of the government's efforts to realize the achievement of this goal is the Dual System Education (PSG) program. Fathoni (2019) stated that PSG is an education implementation that integrates systematically educational activities (theory) in schools with educational activities (practice) in industry.

Vocational High School aims to produce students into a productive, adaptive, and creative workforce so they can compete in the world of work and can fill the needs of the business world / industrial world for now and in the future. Therefore, the vocational high school education (SMK) curriculum needs to be aligned with the needs of the labor market. Curriculum adjustment is expected to improve the competence of Vocational High School (SMK) graduates to comply with the Indonesian National Work Competency Standards (SKKNI). The implementation of education to produce competent and competitive graduates is carried out through a learning process.

Learning is a central part of education. A learning process will be successful if it is equipped with adequate teaching materials in achieving student competencies. Based on the Regulation of the Minister of National Education (Permendiknas) Number 22 of 2016 concerning Process Standards, which regulates the planning of the learning process that requires educators in education units to develop a Learning Implementation Plan (RPP). One of the elements of RPP is learning resources. Based on this matter, teachers are expected to be able to develop teaching materials as one of the learning resources. The ability of teachers to design teaching materials is

very instrumental in determining the success of the learning and learning process through teaching material. Teaching materials are a very important learning resource. According to Asi (2017), teaching materials are all forms of material both written and unwritten that are used to assist teachers or instructors in carrying out teaching and learning activities. Arani (2017) stated that teaching materials have a great influence on improving the quality of teaching. With the presence of teaching materials, teachers want to be easier in teaching and students want to be more help in learning.

The school always updates teaching materials that are tailored to the needs of the current world of work. Some of the contents of the teaching materials need to be reviewed according to the world of work. In this study, the development of web-based MYOB accounting computer teaching materials was carried out, namely adjusting to the state of work at DUDI in the construction/service sector.

The main data of the Directorate of Vocational High School Development in 2021, Semarang City is the city with the highest number of vocational schools in Central Java, namely 89 public and private vocational schools, while 40.45% of the total vocational schools in Semarang City are business and management expertise. The most popular expertise competencies are accounting for as many as 27 schools, marketing for as many as 16 schools and office administration for as many as 14 schools. Accounting is one of the expertise competencies of the most in-demand business and management programs. The subject matter of accounting expertise competencies is basic accounting, basic banking, number processing applications, simulation and digital communication, business economics, general administration, financial accounting, computer accounting, tax administration, professional ethics, creative products, and entrepreneurship.

Computer accounting is one of the competency subjects of expertise that students must master. In the expertise competency test, the accounting computer is one of the materials tested. The Mastery of computer accounting skills is very necessary because these skills will be used by

students when entering the world of work. Computer accounting is an accounting system where a computer is a technology to run applications used in processing accounting transaction data and at the same time to produce financial statements in a company.

Computer accounting is one of the influential subjects for students' careers after graduating from school. Students who graduate from SMK with competence in accounting skills will be prepared to work in the finance department. Technological advances have led companies to use accounting computers for the process of making financial statements. So, the material provided at school must be adapted to the needs of the world of work. But, the fact is that there is a gap between the material provided in school and the needs of the world of work. The discrepancy can be seen in the following table:

**Table 1. Gap Between Syllabus and SKKNI**

SKKNI (KUK)	Syllabus (Material)	Description
Tax code archived	-	Not Appropriate
The process of closing the book is carried out precisely	-	Not Appropriate

Source : SKKNI analysis and Syllabus

Based on the table above, it can be seen that there are gaps between the material provided in schools and the needs of the world of work. The discrepancy lies in the KUK (in SKKNI) that is preparing tax codes and closing books on computer accounting subjects at service companies. Based on these discrepancies, the KUK prepares a tax code and closes the book appropriately will be added to the teaching materials. So it is necessary to develop accounting computer teaching materials.

Technological advances in the present provide an overview to make the development of teaching materials with web media. The web is one of the technological developments that are used as

a medium in the learning process. Alsaif (2019) states that learning using the web is more effective than conventional learning. Learning uses the student's web more freedom and space to engage which is the result of a higher level of learning motivation. Vause (2017) said that the use of web-based teaching is more effective for increasing knowledge and reducing stress compared to traditional teaching. Then Xueqing (2020) stated that the use of the web in the teaching process can increase students' self-confidence.

However, this research is not in line with research conducted by Arani (2017) which shows that to improve the quality of teaching teachers collaborate with students in the learning process. The direct learning by having discussions with students through textbook teaching materials is more effective and can increase the student activity than using internet / web-based teaching materials. This research is supported by research conducted by Nosuke (2018) which states that the use of a note and a text can increase the effectiveness of learning. Students can record each explanation described by the teacher so that students can remember the material that has been delivered. Furthermore, research conducted by Zarei, et al (2017) states that the traditional mindset of educators and traditional curricula make the application of learning using websites less effective, educators tend to use conventional methods because of their traditional mindset.

Learning is still monotonous and boring for students, the teacher only conveys the steps lacking in conveying the concept or purpose and purpose of the material. Facts in the field show that many students find it difficult to learn Computer Accounting.

Learning can be more interesting and students can gain competencies that will later be used in the world of work if there are teaching materials that pack materials into a medium that can attract students so that students will be motivated in learning which makes the teaching and learning process more effective and efficient and fun. One of the learning media that can be used to make computer accounting learning more interesting, flexible, effective and efficient is teaching materials in the form of modules that are

packaged using web media. If a teaching material is compiled with web media, it will be able to become a source of student learning without being limited by time.

## RESEARCH METHODS

The design of this research is Research and Development (R&D), the design of this development research is adapted from the development of the Thiagarajan model, better known as the 4-D model. Thiagarajan explained the development of the 4-D model into 4 stages, namely define, design, develop, and disseminate. The subjects in this study were students of SMK Negeri 9 Semarang class XI AKL for the 2021/2022 academic year which consisted of three classes, namely class XI AKL 1, XI AKL 2 and XI AKL 3. Used in this study class XI AKL 1 was used for the experimental group and class XI AKL 2 was used for the control group.

The steps that must be taken to produce a product include 1) Define, at this stage Empirical fact analysis of MYOB accounting computer teaching materials service companies used in learning. The results of this analysis will be the basis for the development of a new teaching material to be able to improve students' skills in operating the MYOB accounting computer. 2) Design, there are some things that are done at the design stage, namely making a map of the needs of teaching materials, determining the structure of teaching materials, compiling research instruments, and validating research instruments by validators. 3) Development at the development stage, namely the manufacture of web-based teaching materials, and validation of teaching materials by material experts, media experts and IT experts. 4) Product Trial, The trial stage of this product, applied teaching materials that have been improved on the advice and input by the validator, then the teaching materials are used in real situations, namely in the classroom. After the results of the trial, the product is successful, the teaching materials are then evaluated whether the teaching materials can be declared effective can improve students' skills in operating the MYOB accounting computer.

The effectiveness of MYOB accounting computer teaching materials at web-based service companies on students' skills in operating MYOB accounting computers using different tests. An indicator of success in this study was the difference in students' skills in operating MYOB accounting computers between the experimental group and the control group after and after using teaching materials. The normalized gain test (N-Gain) was carried out to determine the improvement of students' skills in operating the MYOB accounting computer after treatment. This N-Gain aims to avoid mistakes in interpromising the gains of a student.

## RESULTS AND DISCUSSION

Based on the results of observations regarding the availability of MYOB accounting computer books in service companies in libraries, it can be concluded that the availability of books is very adequate with the number of accounting computer books of service companies as many as 115 books, while what students need is 107 books. However, the learning process is less effective because the accounting computer books used by each class are different authors according to the book supplies in the library.

The results of the content analysis of the MYOB accounting computer book on the service company used by students in the learning process can be concluded that in general the content / content of the accounting computer book is good, but in the book there are several aspects that have not been listed, including that there are no basic competencies, learning objectives, material summaries, assessment instruments and feedback.

In addition to being analyzed in general, the content of accounting computer books is also specifically analyzed based on skkni. The results of the analysis of specifically the MYOB accounting computer book at the service company are quite good, but there are still some materials that have not been presented, including tax code materials and closing the book appropriately so that it needs to be refined. Based on the results of the content analysis of accounting computer books, it can be concluded that the books used by students in the

learning process are still incomplete both in general and in particular so they need to be completed and refined.

In this era of technology, more digitalized and flexible learning resource innovations are needed so that it can facilitate the learning process because it can be accessed anywhere and anytime using a gadget or PC. One of the learning media that can be used to make computer accounting learning interesting, flexible, effective and efficient is teaching materials in the form of modules that are packaged using web media. The availability of internet networks and PCs/laptops in schools is very adequate so that it is appropriate if the teaching materials for computer accounting service companies are packaged using web media. The computer teaching materials of service companies are packaged according to the needs of students. If a teaching material is compiled with web media, it will be able to become a source of student learning without being limited by time.

According to Rusman (2013) that e-learning refers to the use of internet technology to deliver a series of solutions that can improve knowledge and skills. Onno W. Purbo explained that the term "e" or electronic abbreviation in e-learning is used for the term of all things technology used to support learning efforts through internet technology. In this research conducted by Giovani (2018) which states that the development of information systems based on computer technology will experience rapid development over time. Where this will bring students to update their abilities in using an accounting computer, namely the MYOB application. Furthermore, research conducted by Noor (2017) which states that E-Learning has benefits for educational institutions to attract more students than conventional learning methods.

Students can learn independently by using MYOB accounting computer teaching materials at a web-based service company. The learning process must go through the active involvement of students with concepts and principles in solving problems. The teacher acts as a facilitator and motivator to gain experiences that allow students to find and solve the problems learned. Learning with the Project Based Learning (PjBL) model can encourage students to be more active and think critically in developing their skills. In addition, it trains problem-solving skills in completing its projects in the form of financial reports at service companies. Students will be guided by the teacher in the completion of the project.

Researchers compile teaching materials using the web. The material chosen in the development of this teaching material is the material taught to class XI AKL students of computerized accounting subjects in odd semesters. The aspects that are considered by researchers in the development of teaching materials on the media are Screen Design, Ease, Consistency, Format, Expediency, While the material consists of several aspects including the feasibility of content based on the Ministry of National Education (2008, 3-4) and the feasibility of content based on SKKNI and Syllabus. Then the web quality consists of several aspects, namely Usability Quality, Information Quality, and Intercation Quality.

Furthermore, the validation process by expert lecturers, computer accounting teachers, and IT experts to find out the feasibility of MYOB accounting computer teaching materials at web-based service companies to be tested, with the following validation result :

No	Aspects	Skors	Value	Category
<b>Media</b>	1 Screen Design	20	4	Very Worthy
	2 Easiness	20	4	Very Worthy
	3 Consistency	24	4	Very Worthy
	4 Format	16	4	Very Worthy
	5 Benefit	36	4	Very Worthy
<b>Material</b>	6 Feasibility of the content of teaching materials based on Ministry of National Education (2008, 3-4)	60	4	Very Worthy
	7 Feasibility of the content of teaching materials based on SKKNI and Syllabus	72	4	Very Worthy
	Actual number of scores	28	4	Very Worthy

Based on the validation results of expert lecturers, computer accounting teachers and IT experts, the teaching materials developed in this study are suitable for use. The data analysis in table 2 is the result of validation carried out by expert lecturers on web-based MYOB accounting computer teaching materials. The overall score of the aspects obtained a score of 3.93 with very decent criteria, meaning that the web-based MYOB

accounting computer teaching materials are very feasible to use in learning. it can be stated that the overall teaching materials obtained an assessment with very decent criteria. Based on the total score results of the entire aspect of validation of phase II lecturers and teachers on teaching materials to be used in learning obtained a score of 3.96 with this validation of phase II teaching materials obtained a very feasible category.

**Table 3. Validation by the teacher**

No	Aspects	Skors	Value	Category
<b>Media</b>	1 Screen Design	19,5	3,9	Very Worthy
	2 Easiness	19,5	3,9	Very Worthy
	3 Consistency	23	3,83	Very Worthy
	4 Format	15,5	3,88	Very Worthy
	5 Benefits	36	4	Very Worthy
<b>Material</b>	6 Feasibility of the content of teaching materials based on Ministry of National Education (2008, 3-4)	60	4	Very Worthy
	7 Feasibility of the content of teaching materials based on SKKNI and Syllabus	72	4	Very Worthy
	Actual number of scores	27,51	3,93	Very Worthy

Based on the results of validation carried out by IT experts on MYOB accounting computer teaching materials at web-based service companies, they got an overall score of 4 with very decent criteria, meaning that the web quality of MYOB accounting computer teaching materials at web-based service companies is very feasible to use in learning. After the validation test is carried out,

the next step is to conduct a reliability test by expert lecturers, computer accounting teachers and IT experts. The reliability test contains the intention of the accuracy of the instruments used to obtain research data. Reliability tests are carried out to determine the feasibility of computer teaching materials for accounting web-based service companies that will be tested. The data from the

assessment of MYOB accounting computer teaching materials at web-based service companies are presented in table 5 below:

**Table 5. Reliability Of Accounting Computer Teaching Materials And Media Experts**

No	Aspects	Skors		Mean	Reliability
		Lecturer	Teacher	Score	
1	Screen Design	19,5	20	19,75	99%
2	Easiness	19,5	20	19,75	99%
3	Consistency	23	24	23,5	98%
4	Format	15,5	16	15,75	98%
5	Benefit	36	36	36	100%
6	Feasibility of the content of teaching materials based on Ministry of National Education (2008: 3-4)	60	60	60	100%
7	Feasibility of the content of teaching materials based on SKKNI and Syllabus	72	72	72	100%
<b>Actual number of scores</b>			28	35,25	99%

Web-based on material experts and media experts is 99%. Based on the percentage agreement, it is stated that the data obtained is reliable because

it is above 75%. While the reliability of computer accounting teaching materials to IT experts can be seen in the following table:

**Table 6. Reliability Of Accounting Computer Teaching Materials by IT Expert**

No	Aspects	Skors		Mean Score	Reliability
		IT Expert 1	IT Expert 2		
1	Usability Quality	36	36	36	100%
2	Information Quality	24	24	24	100%
3	Interaction Quality	8	8	8	100%
		12	12	12	100%

The reliability obtained from all aspects assessed for MYOB accounting computer teaching materials at web-based service companies in IT experts is 100%. Based on the percentage agreement, it is stated that the data obtained is reliable because it is above 75%. From the explanation above, it can be concluded that MYOB accounting computer teaching materials at web-based service companies can be used as alternative teaching resources to support the learning process

of computer accounting in schools. This teaching material is suitable for use as a source of learning in the classroom and independent learning.

After the teaching materials passed the validation test stage, the teaching materials were implemented in learning, at the end of the lesson a questionnaire was given and data on the results of the student's response to the MYOB accounting computer teaching material was obtained from the questionnaire sheet which was answered by 36

students. The results of the student's response to the MYOB accounting computer teaching materials in the trial there are 3 aspects shown in table 7 below:

**Table 7. Student Response Results**

No	Aspects	Skors	Percentage	Category
1	Easiness of use	659	92%	Excellent
2	Attraction	912	90%	Excellent
3	Efficiency	656	91%	Excellent
<b>Actual number of scores</b>		2227	91%	Excellent

The results of the student's response to the MYOB accounting computer teaching materials in the trial there were 4 aspects displayed in the student assessment table of teaching materials on the aspect of ease of use obtained a score of 92% with an excellent category, in the aspect of attractiveness obtained a score of 90% with an excellent category, in the aspect of efficiency obtained a score of 91% with an excellent category, The results of the student response obtained from the overall aspects of MYOB accounting computer teaching materials at web-based service companies are 91% with excellent categories.

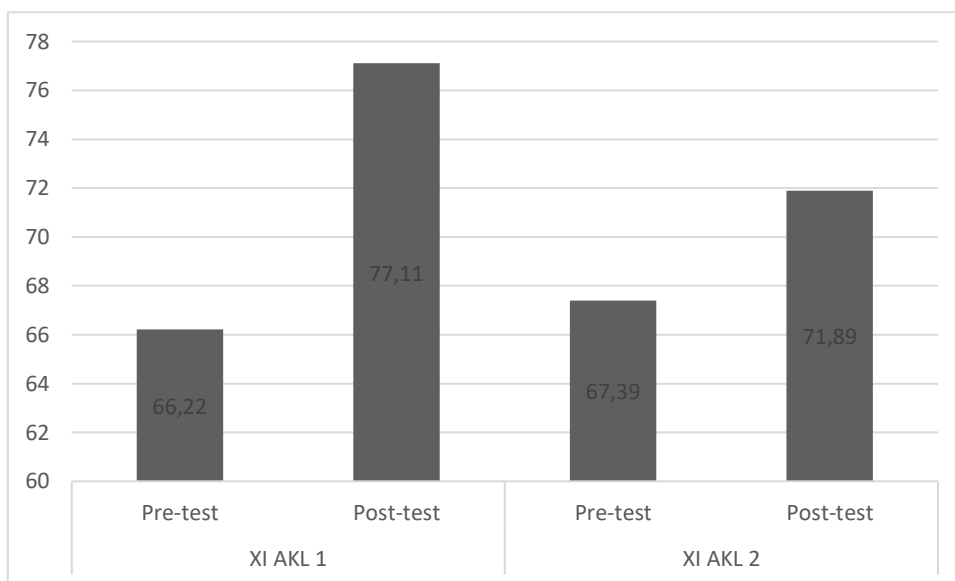
The response is very good by students because the MYOB accounting computer teaching materials at web-based service companies have many advantages, including being able to present teaching materials that are easy to use. It can be seen that the highest percentage score of student response is in the aspect of ease of use with it being expected that with the use of web-based teaching materials, students are more receptive to the material presented by teachers and students can learn independently at school and outside of school.

The results of this study are in line with Piaget's (1972) theory of constructivism learning where the role of teachers in constructivism learning is the teacher as a facilitator, mediator and motivator. In this case, the teacher is not the main

character, but the student is the main character of learning. This is in line with research conducted by Hidayat (2018) which states that MYOB teaching materials have feasibility in terms of material aspects and learning media. A similar study was conducted by Rohmaini, et al (2020) which stated that the learning modules developed have feasible / valid criteria and are interesting to be used as learning resources in learning. Furthermore, research conducted by Irma, et al (2019) stated that the student response to the e-module was very good in the aspects of teaching material format, media, language, content feasibility, and presentation.

Students' skills in operating an accounting computer are obtained from the results of answers when doing pre-test questions and post-test scores obtained from the results of students' answers. Pre-test and post-test questions are arranged based on 5 aspects to measure students' skills in operating MYOB accounting computer. The 5 aspects are (1) Creating a company data file, (2) Inputting the initial account and balance list, (3) Entering transactions and adjustment journals, (4) Printing financial statements of service companies, (5) Creating Backup files. Students' skills in operating MYOB accounting computers can be seen from the learning outcomes of student skills. Data on the results of students' skills in operating the MYOB accounting computer are presented in figure 1 below:





**Picture 1. Accounting Computer Skill MYOB**

Based on figure 1, it can be seen that students' skills in operating MYOB accounting computers in the experimental class obtained an average pre-test score of 66.22 and a post-test of 77.11 from 36 students of class XI AKL 1 SMK Negeri 9 Semarang. In the control class, the average pre-test score was obtained at 67.39 and post-test at 71.89 from 36 students of class XI AKL 2 SMK Negeri 9 Semarang. The effectiveness of MYOB accounting computer teaching materials at

web-based service companies on students' skills in operating MYOB accounting computers using different tests. An indicator of success in this study was the difference in students' skills in operating MYOB accounting computers between the control group and the experimental group on the post test scores. Analysis with Independent differential tests was carried out using SPSS 22 with the following results:

**Table. 8 Independent Samples Test**

	Levene's Test for Equality of Variances		t-test for Equality of Means				95% Confidence Interval of the Difference		
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Students Skills	4.757	.033	2.312	70	.024	5.22222	2.25851	.71776	9.72668
Equal variances assumed									
Equal variances not assumed			2.312	61.055	.024	5.22222	2.25851	.70613	9.73832

The effectiveness of MYOB accounting computer teaching materials at web-based service companies on students' skills in operating MYOB accounting computers using independent

differential tests. In the independent samples test in table 8, the results of the sig value of 0.024 < 0.05 can be concluded that the research data has the results of students' skills in operating MYOB

accounting computers that differ between the control class and the experimental class, meaning that the MYOB accounting computer teaching material product in web-based service companies has proven to be effectively applied in computerized accounting learning. The normalized gain test (N-Gain) was carried out to determine the improvement of students' skills in operating the MYOB accounting computer in the experimental class, namely XI AKL 1 after treatment, from the calculation results obtained an N-Gain score to see the improvement of students' skills in operating the MYOB accounting computer in the experimental class (XI AKL 1) on the results of the pre-test and post-test learning obtained a score of 0.322 with a moderate category.

The difference and improvement of students' skills in operating MYOB accounting computers in the experimental class is a form of the result of an innovation of learning resources using technology, and through Project Based Learning (PjBL) based learning makes students more interested and more utilizing learning resources in supporting improving students' skills in operating MYOB accounting computers, encouraging students to be more active and think critically.

The difference and improvement of students' skills in operating MYOB accounting computers in the experimental class is a form of the result of an innovation of learning resources using technology, and through Project Based Learning (PjBL) based learning makes students more interested and more utilizing learning resources in supporting improving students' skills in operating MYOB accounting computers, encouraging students to be more active and think critically. According to Bruner in Anggraenia (2021:184) reveals the theory of learning that learning must be through the active involvement of learners with concepts and principles in solving problems and teachers serve as facilitators and motivators to obtain experiences that allow students to find and solve problems learned, in learning with Project Based Learning (PjBL) encourages learners to be more active and think critically in developing their skills. In addition, it trains problem-solving skills in completing its projects in the form of financial reports at service companies. Students will be

guided by the teacher in the completion of the project.

The results of this study are in line with research conducted by Guo, et al (2020) which states that Project Based Learning (PjBL) can encourage student innovation based on active construction science learning that emphasizes the construction of knowledge that allows students to test and achieve creative ideas and encourage innovation competencies and student skills. A similar research was conducted by Anazifa & Djukri (2017) which stated that Project Based Learning (PjBL) learning can improve students' creativity and critical thinking skills. The research is in line with research conducted by Maros, et al (2021) which states that Project Based Learning (PjBL) learning is more efficient and has other advantages compared to traditional learning. Furthermore, research conducted by Yustin, et al (2020) which states that learning using Project Based Learning (PjBL) can improve critical and creative thinking skills. A similar research was conducted by Sumarni & Kadarwati (2020) which stated that Project Based Learning (PjBL) based learning can improve students' critical and creative thinking skills.

## CONCLUSION

Based on research on the development of MYOB accounting computer teaching materials at web-based service companies on learning computerized accounting to improve students' skills in operating MYOB accounting computers, it was concluded that this development research produced products in the form of MYOB accounting computer teaching materials at service companies that have been equipped and refined in accordance with the Ministry of National Education (2008, 3-4), SKKNI and Syllabus. Teaching materials are packaged using web media to become attractive, flexible, effective and efficient teaching materials.

Based on the validation results by validators, the feasibility of teaching materials is very good and the average reliability of all validators with reliable categories, so that MYOB accounting computer teaching materials at web-

based service companies are suitable for use in learning. MYOB accounting computer teaching materials at a web-based service company can be used as an alternative to previous learning by providing innovative teaching resources to support the learning process of computer accounting in schools. This accounting computer teaching material is very suitable to be used as a source of learning in the classroom and independent learning.

The form of innovation in learning resources and learning approaches provides a positive response to students, where the results of students' responses to accounting computer teaching materials obtained from all aspects of MYOB accounting computer teaching materials at web-based service companies are very good, meaning that can be interpreted to mean that computer accounting teaching materials are practically used by learners. Students' skills in operating MYOB accounting computers differ between experimental classes and control classes, meaning that teaching material products have proven to be effectively applied in computer accounting learning, improving students' skills in operating MYOB accounting computers in experimental classes at a score of 0.322 with a moderate category.

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