



## The Development of Accountancy Learning Materials Using Inquiry Basis

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### **Abstract**

The aimed that wants to be achieved in this research are: 1) Developing accountancy learning materials using inquiry basis to increase the critical thinking and learning achievement of students; 2) Knowing the effectiveness of accountancy learning materials using inquiry basis to increase the critical thinking and learning achievement of students. This research uses the research and development method from Borg and Gall. This research develops the accounting learning material using inquiry basis.

The subject in this research is the students of SMK N 1 of 11 Accounting. The learning materials developed have been validated by 4 validator. They are : 1) the language expert, 2) media expert, 3) material expert, 4) practitioner. The significant test uses post test only control design Model.

The result of the research is as follow: 1) The result of the research is the accounting learning materials with inquiry basis. The learning materials which are developed are presented by using the case that must be finished by the students based on the Inquiry basis learning scenario with the steps started by setting the hypothesis, making the experiment, collecting the data, analyzing the data, and making the conclusion. After doing the development, the validation to the learning materials is done. The result of validation shows 87,96% which means the learning materials developed are valid and they can be used to try out, 2) The product developed is proved to be significant to improve the ability of critical thinking and learning achievement. The result of try out shows the average score for the experiment class is 81,85 and the average score for control class is 71,97. The average score shows that the experiment class has higher score than the control class. Next to test the significance product, it is done by using t-test. The result of t-test shows that the significant score  $0,0 < 0,05$  means that  $H_0$  is refused and  $H_a$  is accepted. This shows that the development of inquiry basis accounting learning materials are proved significantly effective to improve the ability of critical thinking and the students' achievement.

**Keywords:** Learning Material; Accountancy; Critical Thinking; Reconciliation; Adjustment

## ***Introduction***

Paradigm changing in education causes a lot of thinking about the need of innovation in learning process. Learning process in traditional way dominated by teacher has changed into the learning process which focuses on the student's active role to get their own learning experience. The role of teacher in this learning process is just as a facilitator who creates learning environment to ensure the accomplishment of learning experience for the students. As a facilitator, the teacher completely influences the student's leaning experience. They are also demanded to create the learning environment supporting the accomplishment of student learning. Furthermore, they should also have a good knowledge and ability to fulfill the need of qualified education. The recent learning process asks the students to be more active in gaining and exploring their own knowledge, instead of focusing on the teacher as the only source of knowledge. As the result, the student achievement isn't merely depended on the teacher's quality, but it is based on how far the students can study independently.

Hasset in Danim (2010: 39) suggested that "When we talk about teacher's quality, it means that we talk about technical problems, content, and presentation." The teacher's quality includes the technique of controlling the class or the ability to handle the learning, the material mastery and the material delivering. It often happens that certain teacher has good material mastery but he is lack of class controlling ability and the material delivering or vice versa. In order to perform perfectly, the teacher can push the hinder away by using various kinds of media, model and the learning material.

The development of technology has the teacher follow the development of advance technology and knowledge and get the benefits from the technology development including education field. It is expected to help the teacher to create variety of media as well as learning materials supporting the learning process. The use of media and learning materials should be able to help the teacher to facilitate the students to perform well.

## ***Problem***

The previous result study which is conducted to get the overview of the first condition about learning activity obtains several facts about the learning condition. The previous study is done by interviewing some accountancy teachers to understand the problem in the student learning process, the student achievement, and the use of learning materials in learning activity. Each interview is aimed to know the ability of critical thinking from the students that is conducted by using the observation sheet with some indicators determined before and measured by using likert scale.

The previous study is done to find the problem in the accountancy learning class in SMKN 1 Surakarta. The biggest problem appears in the accountancy computer learning. They use MYOB application and Accurate. The accountancy computer learning with Accurate is a new subject, so that there are still a lot of hinders both for the teachers and the students. It is noticed that the problems found in this methods are the lack of learning material and the material mastery from the teacher.

The teacher tries to avoid the lack of learning material by giving an assignment for the students to look for the information from the books or internet, and then the students are asked to write a report about it. The best report will be chosen as the new learning material in teaching accountancy computer. The materials that can't be found in the learning material will be given in the form of note. Apart from the material, the question and the case used in the learning process are also given by the teacher in the form

of note. The teacher will assign the students to read in turn the transaction proof provided while the others take a note and practice it.

In order to make the comparison, the researcher came to SMK N 6 Surakarta teaching accountancy computer with Accurate. And the learning activity in SMK N 6 Surakarta is better because it is supported by the teacher ability who actually is a national instructor for Accurate. There is no significant problem in the learning process. Even the students have been able to make a handbook as their final task. The learning activity in SMK N 6 Surakarta has directed to follow the certification program called Accurate Professional (CAP) and Certified Accurate Data Entry (CADE) that have been acknowledged by Profession Certification Institution (LPS). Certification program CAP/CADE is a proof that it has obtained Accurate qualification standard especially for database setup and transaction input. CAP and Cade certification can be an additional point when they want to apply for a job. Those will also help the company in searching for the employees who are able to use Accurate software of accountancy computer.

Based on the questionnaire, the researcher finds the students' interest in joining the learning process. In fact, the students are very interested with the accountancy computer learning if they are master it. They have reasoned that it is because they get the new knowledge, have the opportunity to try the technology in studying and get a new challenging. The others who are not interested emphasize on the lack of understanding, complicated, and difficulty in understanding the teacher's explanation. Thus, the students need the learning material to overcome their problem in the learning process. The lack of learning material leads to the lack of materials sources. The students have just to listen and take a note; therefore the learning process becomes boring. Moreover the lack of variety makes some students unable to follow the lesson. And the others consider it is dull since they too focus on the computer practice which is very complicated.

Basically the students of SMK N 1 Surakarta have high interest to study the accountancy computer. Some students consider it as an important subject as it can be used as additional knowledge which is very important for the future. Another reason for the importance is that they need to pass it in their final examination. And they feel it is important is that since accurate is made in Indonesia, it must be suitable with the job condition they will face in the future.

From the result of interviewing some teachers, there are some facts of problems found in the accountancy learning. First, the learning process still use the conventional way due to the lack of learning materials. As a consequently, in order to support their study, the students need to make their own note and it results on their poor outcomes. The students' achievement shows on their final score that the students get from science, skill and attitude. The lowest score is from science that shows 24 of 32 students succeed in reaching the criteria of the minimum score through remedial test.

The students' achievement is believed to be associated with the way of learning and students' activities in joining the learning process. Most of the students perform passively when they join the learning process. They haven't pushed their ability of critical thinking. Based on the observation result done on the observation sheet, the method is measured with 7 indicators by using likert scale. The indicators observed include: the ability to understand the problem; the ability to identify the problem; the analysis ability; the ability to seek the information; the ability to solve the problem; the ability to make the conclusion; and the ability to give the argument. The observation is conducted on 32 students. And the result of the observation shows that 68.75% of the students don't have a good critical thinking. There is only one student who has a very good critical thinking. While 29.125% of the rest students shows an average ability. This observation result can be an interesting problem to find the solution.

Accountancy is the art of financial transaction entry. Everyone can use different methods or approaches in registering the transaction. The accountancy learning is a cycle of financial transaction entry which is related from the beginning until the end. The registering in transaction will influence the final result. In order to understand many impacts from the transaction entry, the students have to use the critical thinking ability to make adjustment so that they can present the latest financial report. It will lead to the demand for the students to think logically, analytically, and systematically to overcome various problems in the accountancy learning.

The learning material is one of the tools that can make the students interested in the learning process. The learning material should be made based on the certain method in order to make the students follow the lesson actively. Inquiry learning method is a learning method to encourage the students to think critically, analyze the problem and finally find the alternative solution to overcome it. This method will train the student to more skillful in seeing the cause of the problem so that they can find the solution for those problems. The inquiry methods can help the students in the scientific way based on certain stage to solve the problem. Besides, the inquiry learning motivates the students to know, to finish the problem, and to get the solution from it. The development of learning material with inquiry basis is expected to improve the ability of critical thinking and the students' achievement.

The main competency in the accountancy learning that have to be achieved by the students demand high level order thinking for the students. In this study, they will meet many kinds of problem. By using this competency, it is expected that the students improve their ability to solve those problems.

The inquiry learning model is one of the learning models that force the students to think deeply, find their own information, and build their own knowledge. When it comes to apply this inquiry learning model, the students are expected to understand knowledge in a concept. And when someone has understood this concept completely based on his/her study experience, it can be ensured that he/she can solve the problem easily. The understanding of concept knowledge built by the students will train their ability in solving many problems, thus improving their learning achievement.

The inquiry learning model needs learning material that can help the teacher to handle learning circumstance for the students. Learning material is one of the components of learning which is very important in the learning process. The teacher can use the learning material to help her/his handle the class and guide the students to get their learning experience that it is expected to enhance their understanding and achievement.

### ***Book Reference***

The learning material, according to Simsek in Ibrahim (2011: 36), is "All materials and resources used for developing the desired knowledge, skills, attitudes and values in students are regarded within the scope of teaching materials". It means that all of the materials used to develop the knowledge, skill, attitude and values for the students are called the learning material.

The learning material is not only the material used by the teacher to teach the students. Widodo and Jasmadi (2008: 40) explains about the learning material as the tools or devices filled with the learning topics, methods, limitations and evaluations designed systematically and interestingly in order to achieve the learning purpose, which is gaining competency or sub competency in its all complexities.

According to DIKMENJUR, "the learning material is a set of material or teaching material which is systematically arranged to show the complete competency that will be mastered by the students in the teaching activity" (DEPDIKNAS, 2008: 8). The learning material shows all of the competency mastered by the students systematically. The use of learning material allows the students to study a competence or basic competence systematically so that they can understand the whole competence completely.

Based on some opinions above, it can be concluded that the learning material is all teaching tools which can be used to develop the ability, skill, students' attitude containing teaching materials, methods, limitations, evaluation ways with the purpose to enhance the knowledge, skill, students' attitude set up systematically based on basic competence and competence standard in syllabus.

The development of learning material is the arrangement of learning material which is set up based on the teaching circumstance and certain reference. The arrangement of learning material must contain knowledge, attitude and skill developed based on the competence standard and basic competence that must be learnt by the students to achieve the determined competence. The arrangement of learning material must be adjusted with the characteristic and the need of the students. The development of learning material should be able to handle the difficulty in the teaching process. The learning material will help the teacher to manage the learning activity and help the student in studying every competence that must be mastered.

The accountancy computer learning in SMK Negeri 1 Surakarta is held based on the syllabus from accountancy computer. The syllabus of accountancy computer mentions some main competence which is explained in the basic competence. Every basic competence has certain competence standard that can be achieved through studying each main topic. Then it is done based on the activity, the length of the time, and the assessment in syllabus.

The accountancy computer is an accountancy system by using computer as technology to run the application used in managing accountancy transaction and also resulting the financial report in a company. Accurate is one of the best software made by Indonesian which is currently used widely in Indonesia. This software is usually used by SMK Negeri 1 Surakarta to study accountancy computer.

Inquiry is a main part of contextual teaching component. The role of the teacher in the inquiry learning is to create the teaching environment that can facilitate the students to find their own knowledge and skill from that knowledge. The inquiry derives from the word to inquire which means taking part or involving in asking questions, getting the information, and doing the investigation. The purpose of the inquiry learning is to give the way for the students to build intellectual skills associated with the process of reflective thinking. Therefore, the students can get the knowledge from their own learning process instead of remembering the material.

Next, Yamin (2013: 73) explains that "The process of learning using inquiry is building the knowledge or the beginning concept of the observation, asking, investigation, analysis, and then creating the theory or concept." This learning process asks the students to be more active in the teaching activity. The students need to be more active in doing the observation, getting the information, handling the information, and building the theory.

The stage of inquiry learning is looking for the information, handling the information, and finding it. The first activity of inquiry is done to look for the information. In this level, the students will try to formulate the problem, do the observation, and make the hypothesis. The next stage is processing the information meaning the students have to analyze the information, provide and communicate it through presentation. The last stage is finding meaning the students have to take the conclusion, build the theory and apply it.

The recent studying focuses on the learning experience. It is expected that the learning experience can be more meaningful for the students because their ability to think will build their own knowledge. The teacher is just a facilitator in this teaching process which means he/she has to facilitate the teaching activity. And the teacher needs the learning material so that it is simple to control the teaching process.

The inquiry learning activity demands the students to understand the material alone through the process of seeking and finding while the teacher is only a facilitator. The inquiry learning is a set of teaching activities focusing on the process of critical and analytical thinking to find the answer from the problem raising. The thinking process can be done through the interview between the teacher and the students.

Critical thinking can be developed through CTL learning. According to Johnson (2006: 182), “to help the students develop their intellectual potency, CTL teaches the steps that can be used to think critically and creatively and also give the opportunity to use the those ability in the real world.” The inquiry learning is one of the CTL components that can develop the students’ intellectual potency. The inquiry basis learning encourages the students to get the relevant information to build the knowledge and in the end it can improve the students’ grade.

### ***Research Methodology***

This research uses Research and Development (R&D) method. It is said that Research & Development is the research activity which is started with research and then followed by development. This activity is done by getting information about the need assessment while the development is done to produce the learning material. The learning material which is arranged is in the form of LKS (Student Work Sheet).

Sugiyono said that (2014), “Research and Development is the research method which is used to produce certain product and test the effectiveness of those products.” According to Sukmadinata (2011), it is said that “Research and Development is a process or stages to develop the new product or make the current product more perfect and it can be guaranteed.”

The stages in the Research and Development (R&D) operationally adopt Borg & Gall design. The researcher takes 7 stages in this research. They are: (1) Research and information collecting, (2) Planning, (3) Develop preliminary form of product. (4) Preliminary field testing, (5) Main product revision, (6) Main field testing, (7) Operational product revision. (Borg & Gall, 1983).

Gall, Gall, & Borg (2007) explained that “Research and Development is an industry based development, which the findings of research are used to design new product and procedures, which then are systematically field tested, evaluated and refined until they meet specified criteria of effectiveness, quality, or similar standards”.

Borg & Gall (1983: 782) assumed that:

“Educational research and development (R & D) is a process used to develop and validate educational products. The steps of this process are usually referred to as the R & D cycle , which consists of studying research findings pertinent to the product to be developed, developing the product based on the finding, field testing it in the setting where it will be used eventually, and revising it to correct the deficiencies found in the field testing stage. In indicate that product meets its behaviorally defined objectives”.

Problem potential is done through the former study and collecting the data is done to find the reference in setting the learning material. Designing the product is arranged based on the collected data in the previous stage. Validating the design is aimed to get the opinion from the expert about the learning material developed. Revising the design is obtained after getting the opinion from the expert. The next respon is the limited test to know the students' respons. After performed the revision of the limited test result, the next step is that it will be done the field try out to test the effectivity of learning materials. The students' respons and the field try out will be used to revise the final product.

## ***Result and Discussion***

This research develops the accountancy learning material using inquiry basis to improve the ability of critical thinking and the achievement. The inquiry model is used as the base to develop the learning material which is consisted of 1) Orientation, 2) formulating the problem, 3) formulating the hypothesis, 4) collecting the data, 5) testing the hypothesis, and 6) formulating the conclusion.

The products that have been developed then are validated by the expert to know the expediency of the learning material. The expert validation is done by material expert, media expert, language expert and practitioner. The expert validation is conducted two times. On the first stage, it is found that material expert has 73.38%, media expert 96.55%, language expert 100%, and practitioner 87.57%. The result from the first stage has an average score 90.62% which is considered very good score, however it is still recommended by the material expert and practitioner to make it even better. The result from the second stage is that material expert has 91.35% and practitioner 92.43%. The result from the first stage has an average score 95.08% and it is claimed as a very good score. After doing the validation, the learning material deserves field testing.

Media expert validation for the learning material of inquiry basis accountancy computer shows 95.55% with a very good qualification. The measurement is done based on the validation sheet with 29 questions. Those questions proposed in validation sheet are the questions about the presentation technique, the materials supporting the presentation, the conformity with the inquiry approach, the facilitation to think critically, and the language aspect. The presentation of validation result proves that the products developed have the standard specification to become the learning media.

The validation of language expert on the learning material for the inquiry basis accountancy computer shows 100% in percentage with a very good qualification. The measurement is done based on the validation sheet with 10 questions. Those questions proposed in validation sheet are the questions about spelling, diction, using technical term, and reading. The percentage of validation result proves that the products developed have the standard specification from the language aspect.

The validation of material expert on the learning material for the inquiry basis accountancy computer shows 78.38% in percentage with a good qualification. The measurement is done based on the validation sheet with 37 questions. Those questions proposed in validation sheet are the questions about the content expediency, the presentation technique, supporting material, the conformity with the inquiry approach, the facilitation to think critically, and the language aspect. The percentage of validation result proves that the products developed can be used; however there are some suggestions to revise it. Then the second validation gets the percentage 91.35% with the very good qualification. Based on the validation level 2 can be concluded that the products developed fulfill the specification which is suitable with the standard material to become the learning media.

The practitioner validation on the learning material for the inquiry basis accountancy computer shows 87.57% with a very good qualification. The measurement is done based on the validation sheet with 37 questions. Those questions proposed in validation sheet are the questions about the content expediency, the presentation technique, supporting material, the conformity with the inquiry approach, the facilitation to think critically, and the language aspect. The percentage of validation result proves that the products developed can be used; however there are some suggestions to revise it. After revising, it is conducted the second validation. Then the second validation gets the percentage 92.43% with the very good qualification. Based on the validation level 2 can be concluded that the products developed fulfill the specification which is suitable with the standard material to become the learning media.

The result of the trial shows the average score for the experiment class is 81,85 and the average score for control class is about 71,97. From the average score, it shows that experiment class has higher score than control class. The result of the trial shows that the significant score 0,0 or  $<0,05$  means  $H_0$  is refused and  $H_a$  is accepted. The result of posttest shows that there is significant difference between experiment class and control class. This shows that the development of the accountancy learning materials using inquiry basis is effective to increase the critical thinking and the learning achievement of the students.

### **Conclusion**

The learning material developing which has been done is valid to be used as the learning material. The result from the validation shows 91.35% from material expert and 92.43% from practitioner. The result from the first stage has an average score 95.08% which is very good. The result of the trial shows the average score for the experiment class is 81,85 and the average score for control class is about 71,97. From the average score, it shows that experiment class has higher score than control class. The result of the trial shows that the significant score 0,0 or  $<0,05$  means  $H_0$  is refused and  $H_a$  is accepted. The result of posttest shows that there is significant difference between experiment class and control class. This shows that the development of the accountancy learning materials using inquiry basis is effective to increase the critical thinking and the learning achievement of the students.

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The researcher realizes that it still needs a lot of improvement. Thus, the critique and recommendation are expected. We do hope that this research can give the advantages for the researcher and the common readers.



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