

## HALAMAN PENGESAHAN

1. Judul Makalah : The Development of Student Worksheet Activities Based on Cooperative Peer Tutor in Accounting Materials in Senior High School at XII Grade in West Lampung
2. Bidang Ilmu : Pendidikan
3. Penulis 1
- Nama : Titin Trimunarsih, M.Pd
- NPM : 1623011010
- Pangkat/Gol : -
- Jurusan/Fakultas : Teknologi Pendidikan FKIP

Penulis 2

Nama : Dr. Dwi Yulianti, M.Pd

NIP : 196707221992032001

Pangkat/Gol : Lektor/ III.c

Jurusan/Fakultas : IP/FKIP

Penulis 3

Nama : Dr. Budi Koestoro, M.pd

NIP : 1959010181982111001

Pangkat/Gol : IV.B/ Lektor Kepala


Jurusan/Fakultas : IP/FKIP

Diterbitkan pada : International Journal of Science and Research (IJSR)  
ISSN : 2319-7064  
Index Copernicus Value (2016): 79.57 | Impact Factor (2017): 7.296  
Volume 7 issu 4, April 2018  
DOI: 10.21275/ART20181887

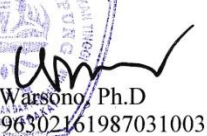
Mengetahui,  
Dekan FKIP Universitas Lampung

  
Dr. Muhammad Firdaus, M.Hum  
NIP. 195907221986031003

Bandar Lampung, 7 April 2018  
Penulis 2

  
Dr. Dwi Yulianti, M.Pd  
NIP. 196707221992032001

Menyetujui,  
Ketua LPPM Unila

  
Warsono, Ph.D  
NIP. 196302161987031003

# The Development of Student Worksheet Activities Based on Cooperative Peer Tutor in Accounting Materials in Senior High School at Xiigrade in West Lampung

Titin Trimunarsih<sup>1</sup>, Dwi Yulianti<sup>2</sup>, Budi Koestoro<sup>3</sup>

<sup>1,2,3</sup>Program Pasca Sarjana Teknologi Pendidikan Universitas Lampung, Jl. Prof. Dr. Sumantri Brojonegoro No. 1 Bandar Lampung 35415

**Abstract:** *This study aims to produce products in the form of Student Worksheet based on cooperative peer tutors to direct learners in a cooperative learning process through peer tutoring. The development of Student Worksheet based on peer tutors is developed using 4D development, which are define, design, development, and dissemination steps. The subjects of the study were 32 students from each school in West Lampung, namely SMAN 1 Liwa, SMAN 2 Liwa, and SMAN 1 Sukau. Through expert validation test, Student Worksheet based on cooperative peer tutor is very feasible to use with result of feasibility test 87,5% and 92,5%. Through the initial field test the effectiveness of learning shows the average value of the normalized gain of 0.76% with the One-Group Pretest-Posttest Design technique. Meanwhile, the level of learning efficiency showed 1.30% based on time comparison with efficient category > 1 while the attraction based on the questionnaire test with the percentage of attractiveness > 81%. This Student Worksheet can be used as an additional reference for educators in implementing cooperative tutor peer learning process.*

**Keywords:** Student Worksheet, Cooperative Learning peer tutor, Accounting

## 1. Introduction

An efforts of a country in facing the challenges of the times and the rapid development of science and technology one of them through education. It is aligned if viewed from the perspective of law, the definition of education based on "Undang-Undang RI No. 20 Tahun 2003" on the national education system, that is "Education is a conscious and planned effort to create an atmosphere of learning and learning process, so that learners actively develop their potential to have spiritual strength, self-control, personality, intelligence, noble character, and skills needed by himself, society, nation and state "

According to Hari Sudrajad (2005), quality education is education that is able to produce graduates who have the ability or competence, both academic competence and vocational competence, based on personal and social competence, and noble moral values, which are called life skills. Also delivered by W. Sanjaya (2006) in an effort to develop the potential of learners, the learning process should be oriented to the activities of learners (student active learning). Sanjaya further states, the educators need to create a learning climate by building the widest possible interaction among learners. So, that learning will lead learners to enthusiastic attitude and participate actively and conducive in learning. The same thing delivered by Evelina (2013) a good learning process is a learning process centered on student activities (student centered). This learning will lead learners in an active and meaningful atmosphere. Active learning is an approach in managing learning through active learning ways toward independent learning. To achieve this, then the learning activities should be designed in such a way as to be meaningful for learners.

One effort that can be done by educators in realizing quality learning process is by using various approaches and methods of learning, which are aims to facilitate the learning process. Presented by Rofiq (2010) through Cooperative Learning method, learning will be effective and run in accordance with the nature of learners as social beings that are not be able to stand alone, but always require cooperation with others to learn the ideas, solve problems and apply what they learn. It is clear that cooperative learning is not only aimed at instilling students in the material that will be studied but more emphasizing on training students to have social skills, that is, the ability to cooperate with each other, group and be responsible for fellow group friends to achieve the group's general goals.

The same thing is delivered by Mutmainah (2011), Smith and Mac Gregor (1992) define cooperative learning as "the most well structured end of the collaborative learning continuum" (Ravenscroft, 1995). Johnson, Johnson and Holubec (1994) define cooperative learning as "the instructional use of small groups so that students work together to maximize their own and their other learning." (Phipps et al., 2001). Various research about cooperative learning shows consistent results that is cooperative learning will improve achievement, more positive interpersonal relationships and higher self-esteem than competitive or individualistic efforts (Phipps et al., 2001). Delivered also from Hidayati (2015) cooperative learning model is a learning model that prioritizes the cooperation, that is cooperation among learners in groups to achieve learning objectives. In the implementation of learning, learners are divided into groups and directed to learn the subject matter that has been determined. Cooperative learning on a daily basis provides an opportunity for intense personal contact between learners with different racial backgrounds (Slavin, 2008: 103). Vigotsky's theory of learning states that learning

Volume 7 Issue 4, April 2018

[www.ijer.net](http://www.ijer.net)

Licensed Under Creative Commons Attribution CC BY

Paper ID: ART20181887

DOI: 10.21275/ART20181887

1464



takes place when students work in the zone of proximal development (the difference between what a child can independently do with what the child achieves if he gets the help of someone more competent) so that in completing his learning can not be alone. Learning process will occur efficiently and effectively if students learn cooperatively with other children, Supportive environment in guidance or mentoring someone who is more capable or more mature or someone more competent.

The conclusion of some statement above shows that cooperative learning is one solution that becomes an option in creating the learning process that leads to the activity of the learners. In the process of cooperative bring learners to be able to do tutorial activities among friends in the group. This is reinforced in the statement of Hisham Zaini in Amin Suyitno (2004) in Hidayati (2015) states that "The best method of learning is to teach others". Therefore, the selection of peer tutor learning model as a learning strategy will greatly assist the students in teaching the material to their friends. The notion of peer tutor is a clever student who helps other students learn in the same grade level. The same thing stated Wahyuning (2013) peer tutor activities for students is an activity rich in experience that is actually the needs of the students themselves. Both tutors and those taught equally benefit, for tutors will have experience, while the taught will be more creative in receiving lessons. Studying assistance by peers can eliminate clumsiness. Peer language is easier to understand, with peers no reluctance, low self-esteem, shame and so on to ask or ask for help (Erman Suherman, 2003).

Various researches conducted by Rachmiati (2010), Apriyani (2013), and Fadly (2018) give almost similar remarks that through peer tutoring strategies provide many advantages for learners in achieving their learning goals. Through the application of peer tutors can strengthen the relationship between fellow learners so as to reinforce social feelings. This is agree with the statement Indrianie (2011) Peer tutor is one of the learning strategies to help the needs of learners. Mutual respect and understanding are maintained among learners through cooperation. Peer tutors will feel proud of his role and also learn from his experience. This helps to reinforce what has been learned and earned for the responsibilities imposed on it. When they learn with peer tutors learners also develop better abilities to listen, concentrate, and understand what is learned in meaningful ways. Explanation of peer tutors to their friends is more likely to work than teachers, because, the learners see the problem in different ways than adults and they use a more familiar language.

Based on some statements above it can be concluded that in the development of peer tutor model is because of a condition that shows that learners will more quickly understand what is taught by his friend than what is taught by his teacher, because studying with his own friend can felt free learners to convey ideas and questions relating to things they do not know and do not yet understand (Hendriansyah, et al, 2013).

The result of observation through MGMP Economic Forum of West Lampung obtained the description of the condition

of learning that has not involved learners in the learning process maximally, accompanied by low achievement of competence achieved by the learners, and low participation of the learners in choosing economics in national exam are things background to this research. With these conditions, it would require the existence of a development that can be done to be able to lead the learners in a more active learning activities so that will be achieved an effective learning process, efficient and attractiveness.

Based on these conditions, the researchers develop a medium of teaching materials that is Student Worksheet based on cooperative peer tutors accounting material for class XII SMA. Accounting material is a material that requires a lot of knowledge. Spoken by Jhosua (2017) Accounting knowledge can be defined as a systematic set of sciences on how the art of recording, classifying, and summarizing transactions and events in a useful way and in the form of a unit of money, the interpretation of the results of the process is quantitative information used for retrieval economic decisions as a basis for choosing alternatives. Meanwhile, according to American Accounting Association (AAA), accounting is a process of identification, measurement, and communication of economic information to make the considerations and decisions by users of the information (Hendi Soemantri: 2005).

From some of these opinions, then the accounting learning is a process that is done by the educator in making the learners to do the act of studying an accounting process which includes the activity of processing input and reporting the output, which in a certain way cultivate financial transactions and provide meaningful economic information, with strategies and methods and models are adjusted in an efficient way, so that learners gain accounting skills.

Accounting process of trading companies that are part of the economic material there are several stages. Starting from the process of recording, classification, overviewing and reporting. The stages that have been considered difficult by the students is the overviewing accounting stage. Based on the preliminary analysis, the data of low competency achievement on the adjustment journal preparation indicator and the preparation of working papers are obtained. The competence to prepare adjusting entries and working papers requires students to be able to process input financial data company that will eventually be made a financial report. In Prayogoh and Hakim (2017) expressed accounting learning. "According to Suyadi (2010)) logical-mathematical intelligence is the ability to handle numbers and calculations, logical and scientific thinking patterns. Typically, this intelligence is owned by scientists, mathematicians, scientists, philosophers, physicists, and so forth. This intelligence has two elements, the first is mathematics and and the second is logic. These two elements are integrated into a logical mathematical intelligence". This is because the interrelation between the two (mathematics-logic) is very close, even both share the same basic law, consistency. In line with the statement Lukman (2015) states that the intelligence of mathematical logic has a very close relationship with the cognitive skills of accounting. From these opinions can be concluded that accounting is a material that requires intelligence of



mathematical logic in the form of cognitive ability. The skills that must be possessed by learners is not psychomotor skill, but cognitive skill in doing a series of accounting recording process.

Based on the needs analysis and the demands of the implementation of learning that leads learners on active activities in the learning process, the researchers develop teaching materials in the form of Student Worksheet based on cooperative tutors peer. learning with peer tutoring strategies is an implication of cooperative activities. Presented in the theoretical study Irfan Fajrul (2014) states that cooperative and peer tutors in principle have similarities in the substance of the learning process. As a basis, Slavin (2006) also expressed that through cooperative learning will provide a lot of space and advantages both for lower group learners and higher group learners to work with each other in completing academic tasks. Top group learners will be the tutor for lower group, so get special help from peers, who have the same language orientation. Cooperative skills serve to smooth relationships, activities and tasks.

The stages in the process of cooperative learning, which actually contains peer tutoring activities. According to Rusman (2012) on the cooperative learning phase and Syaiful Bahri and Aswan Zain (2006) about Peer tutor phase summarized in the following chart:

**Table 1: Cooperative Stages of Peer Tutor**

Stage	Co-operative	Peer Tutor
Stage 1 Conveying goals and motivating learners	Educators convey learning objectives to be achieved in lesson activities and emphasize the importance of topics to be learned and motivate learners	Educators communicate instructional goals and deliver materials to be learned and prompt learners to listen well
Phase 2 Presenting information	Educators present information or material to learners by way of demonstration or through reading materials	Educators provide general explanation of topics to be discussed
Stage 3 Organizing learners into learning groups	Educators explain to learners how to form study groups and guide each group to transition effectively and efficiently	Classes are divided into groups and students who are good at disseminating to each group to provide assistance
Stage 4 Guiding group work and learning	Educators guide learning groups as they work on tasks.	<ul style="list-style-type: none"> <li>Educators guide learners who need special tutoring</li> <li>If there is a problem that needs to be solved learners who are good at asking for help to educators</li> </ul>
Stage 5 Evaluation	Educators evaluate learning outcomes about the material that has been learned or each group which are presenting the results work	Educators to conduct evaluation
Stage 6 Giving rewards	Educators are looking for ways to appreciate both individual and group effort and learning outcomes	Giving rewards to all learners both individuals and groups with praise, rewards or other means

Based on these stages it can be concluded that cooperative and peer tutors can be paired. Irfan Fajrul (2014) presented in the process of cooperative learning and peer tutors directing educators as instructional learners and also as the main source. Therefore, in designing this model educators should consider the level of intelligence, grouping of learners, and observation of learning activities to achieve the competence of learners equally and optimally.

The Student Worksheet that was developed was aimed to produce teaching material product in the form of Student Worksheet based on cooperative peer tutor in the hope of achieving effective, efficient, and attractiveness for the learners in following the learning process. The effectiveness of effective, efficient, and appealing learning will of course be able to help the problem of low comprehensiveness, especially on adjustment journal preparation and compilation of working papers on the competence standards of accounting company overview. One of the supporters of the success of learners in achieving learning outcomes depends on the learning process. The activities that can be done is with cooperative learning strategies. Slavin (1955) put forward two reasons:

- 1) The use of cooperative learning can improve students' learning achievement while at the same time improving social relations ability, growing attitudes of accepting lack of self and others, and can increase self-esteem.
- 2) Cooperative learning can realize the needs of students in learning to think, solve problems, and integrate knowledge with skills. (Vienna Sanjaya, 2006: 242).

Anita Lie (2005) explains some of the reasons she likes heterogeneous groups is to facilitate class grouping because of high-academic students enabling the possibility of mutual teaching (peer tutoring). Furthermore, according to Omar Hamalik (2004) the techniques that can be developed with small groups such as tutorials. Through a more centered student learning approach, the peer tutor method will be more effective to use. In peer tutor methods, learners who can first understand the material correctly will become tutors for other friends. Co-operative Learning with Peer Tutor Assistance is expected to make students interested in following the learning activities.

The development of the Student Worksheet who will facilitate learners in the fulfillment of learning and collaborated with Cooperative learning process with peer tutoring techniques into one of the reference that can be an option. With this Student Worksheet is expected to give a great influence on the ability of learners through the inter-friends, the transfer of knowledge more effective and eliminate the sense of strange if you have to ask for explanations of materials that are less understood, especially for materials that require logical math reasoning such as accounting considered difficult by learners.

## 2. Research Method

This type of research is Research and Development. According Sugiono (2015: 30) research and development method is defined as a scientific way to product, results, and validity of products that have been produced.



The process of making Student Worksheet using research and development steps according to Thiagarajan (1974) with 4D research and development steps, which is an extension of Define, Design, Development and Dissemination. The steps

in the 4D development research are traversed by researchers ranging from Define, Design, Development and Dissemination processes. However, it does not need to be done by researchers who are doing the Dissemination stage.

Table 2: The Product Development Stage of Student Worksheet

Define Stage (definition)		Results Development Stage
Define	Define Preliminary	<p>Completely analysis</p> <ol style="list-style-type: none"> <li>1. Complete competence of the preparation of adjusting entries and working papers is low</li> <li>2. Participation in choosing economics in UN 2017 is low</li> </ol>
	Analysis of educators and learners	<p>Analysis of educators and learners</p> <ol style="list-style-type: none"> <li>1. Learning is still centered on educators</li> <li>2. Requirements that are appropriate with high material resource accounting</li> <li>3. There is no Student Activity Sheet based on cooperative peer tutor</li> <li>4. Learners are less interested in accounting because it is considered difficult material</li> </ol>
	Task Analysis	<p>Task analysis</p> <ol style="list-style-type: none"> <li>1. Tasks submitted in accordance with KD 1.4 summary of the accounting of trading companies on indicators 1.4.1 preparation of adjusting entries and 1.4.2 preparation of working papers</li> <li>2. The selection of questions that used is a matter that needs analysis to be solved together</li> </ol>
	Concept analysis	<p>Concept analysis</p> <ol style="list-style-type: none"> <li>1. The material that developed is the accounting summary material of trading company on the subject of preparation of adjusting journal and preparation of working papers.</li> <li>2. Time allocation required 16 times meeting with time allocation 1 x 45 minutes / meeting</li> </ol>
	Analysis of Learning Objectives	<p>The learning objectives to be organized in the Student Worksheet are-</p> <ol style="list-style-type: none"> <li>1. Prepare adjusting entries Includes: <ul style="list-style-type: none"> <li>• Recording merchandise inventory using the profit / loss overview method</li> <li>• Recording merchandise trade by cost of goods sold</li> <li>• Notes the use of equipment</li> <li>• Recording received revenues</li> <li>• Record revenue that must still be received</li> <li>• Note the cost in prepaid</li> <li>• Prepare accrued cost-adjusting entries</li> <li>• Recording depreciation of fixed assets</li> <li>• Recording bad debts</li> </ul> </li> <li>2. Prepare paperwork <ul style="list-style-type: none"> <li>• Prepare paperwork with a profit / loss overview approach</li> <li>• Prepare paperwork with cost of goods sold approach</li> </ul> </li> </ol>
Design Stage (definition)		Results Development Stage
Design	Design Preparation Tests	<ol style="list-style-type: none"> <li>1. Tests arranged in Student Worksheet Educational Activities tailored to the purpose of learning. In Student Worksheet are given practice questions as a benchmark of learners' abilities in learning</li> <li>2. The develop learning instruments, that are syllabus, Lesson plan, test grille, test instrument, and assessment</li> </ol>
	Format Selection	Student Worksheet that will be developed is cooperatively based peer tutor
	Initial Design	Student Worksheet who have been made then submitted to the supervisor to get advice and input as an improvement in the next stage of Expert validation stage (expert appraisal)
Develop Stage (definition)		Results Development Stage
Develop	Develop Validation Expert	Validation of Student Worksheet conducted by design experts, media experts, and material experts. 87.5% test results stated very feasible by media experts with a score of 35. The results of design tests and materials also states that the Activity Sheet Educate participants are worthy to be used with the test results respectively 87.5% and 92.5% with a score of 35 and 37. The test level of the media expert, the design, and the material is deemed very feasible to be used.
	Product Testing	Product trials are conducted through field tests. Analysis of field test data was performed by one-test, small-group test, and class-limited test. The results of field test analysis is used to analyze the magnitude of the effectiveness, efficiency, and magnitude of the attractiveness of the use of Student Activity Sheet in the process of learning accounting materials class XII IPS

The results of field test analysis obtained from this study as follows:

#### 1) Product effectiveness

A teaching material is said to have effectiveness if the teaching materials can help students' activities in achieving the competencies that have been set. It was stated by Hamzah B. Uno (2007: 9) that learning should be based on the principle of efficiency and effectiveness in achieving the learning objectives and the level of involvement of learners so that learners can carry out the learning activities

optimally. In this study the researchers analyzed how big the effectiveness of Student Worksheet based on the result of pretest value and posttest value. The effectiveness test using one-group pretest-posttest design. The effectiveness test through normalized gain calculation was obtained by one-one test data of 0.8 at SMAN 1 Liwa, 0.74 SMAN 2 Liwa, and 0.76 at SMAN 1 Sukau. The small group test of effectiveness level of each school obtained result of 0.8%, 0.74%, and 0.74%. Meanwhile, the results of the limited class effectiveness test obtained data 0.86 for SMAN 1 Liwa, 0.73 for SMAN 2 Liwa, and 0.71 for SMAN 1 Sukau.