

THE DEVELOPMENT OF VIDEO TO IMPROVE THE STUDENTS' ACCOUNTING LEARNING ACHIEVEMENT ON THE BASIC

PENGEMBANGAN MEDIA VIDEO UNTUK MENINGKATKAN HASIL BELAJAR SISWA PADA MATA

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Abstract

The objectives of the research to: develop a learning video for grade XI IPS in SMA N 1 Karangdowo on basic competence of Making Adjustment Entries of Service Enterprises. This research aims to identify the improvement of students' learning achievement by looking the increased difference in the score pretest-posttest between classes with/ out learning video. This research is Research and Development (R&D) adapted from a development model ADDIE. The results of the research showed five stages of the making of the Accounting Learning Video, they were: 1) Analysis, 2) Design, 3) Development, 4) Implementation, and 5) Evaluation. The level of the suitability of the Accounting Learning Video according to the assessment was: 1) by the material expert, the mean score was 4.8 with category Very Suitable, 2) by the media expert, the mean score was 4.75 with category Very Suitable. In Independent Sample T-Test, t -hitung was 4.557 with sig. 0.000 showing that the achievement experimental class learning achievement significantly higher than the control class. In conclusion, the Accounting Learning Video can improve the students' learning achievement.

Keywords: Development, Learning Video, Learning Achievement, Accounting

Abstrak

Tujuan dari penelitian untuk: mengembangkan video pembelajaran bagi kelas XI IPS di SMA N 1 Karangdowo kompetensi dasar Membuat Penyesuaian Perusahaan Jasa. Penelitian ini bertujuan untuk mengidentifikasi peningkatan hasil belajar siswa dengan melihat perbedaan kenaikan nilai pretest-posttest antar kelas dengan video dan tanpa video pembelajaran. Penelitian ini merupakan Penelitian dan Pengembangan (R & D) yang diadaptasi dari model pengembangan ADDIE. Hasil penelitian menunjukkan lima tahap pembuatan Video Pembelajaran Akuntansi yaitu: 1) Analisis, 2) Desain, 3) Pengembangan, 4) Implementasi, dan 5) Evaluasi. Tingkat kesesuaian Video Pembelajaran Akuntansi menurut penilaian adalah: 1) oleh ahli materi, skor rata-rata adalah 4,8 dengan kategori Sangat Cocok, 2) oleh ahli media, skor rata-rata adalah 4,75 dengan kategori Sangat Cocok. Pada Independent Sample T-Test, t -hitung adalah 4,557 dengan sig. 0.000 menunjukkan bahwa hasil belajar kelas eksperimen lebih tinggi daripada kelas kontrol. Kesimpulannya, Video Pembelajaran Akuntansi dapat meningkatkan hasil belajar siswa.

Kata kunci: Pengembangan, Video Pembelajaran, Hasil Belajar, Akuntansi

INTRODUCTION

Education is a process of a certain situation to a better one. It becomes long-term investment of all people for their future.

Definition of education has been specially regulated in UU number 20 year 2003 that education is a deliberate and planned effort done by educators through guidance,

teaching, and practices to realize a learning situation and process to make students active in order to achieve mature individuals.

A High School (SMA) aims to create and prepare students to be able to continue to higher education that is a university. One of the efforts required to realize the goal is to improve students' learning achievement. Accounting is one of the subjects that students are supposed to master by students of IPS, since it covers economics. SMA N 1 Karangdowo hopes that students of IPS are able to master Accounting. Nevertheless, the students' accounting learning achievement is low.

Based on observation, the reasons to that problems were that students were bored during learning processes because the teacher still used conventional method and did not use learning media. Accounting learning processes lasts 2 hours in a week usually were delivered by the teaching using explanation method. LCD and projector in the classroom were rarely used. It caused students' lack of understanding of the material. They did not pay attention and even they focused on their gadgets. Several students played games and some accessed social media like video on Instagram, etc.

In order to improve students' learning achievement, learning processes should be carried out well. One of the efforts that the teacher can do is to create interesting learning activities using learning media. The use of

learning media can be implemented in any subjects, including Accounting. One of the Accounting materials in grade XI IPS is making adjustment entries of service enterprises. An adjustment entry is adjustment of truthful notes and facts at the end of a period. It is written based on the data of balance sheet and adjustment data of recapitulation of accounting cycle of service enterprises. This topic is difficult if it is only explained with very limited media.

Learning media according to Nana Sudjana and Ahmad Rivai (2006: 7) is a supporting teaching tool that helps a teacher teach using a certain teaching method. Gagne and Briggs (in Slameto, 2013) implicitly say that learning media includes physical tools used to deliver the contents of learning materials covering books, tape recorders, cassettes, camcorders, video recorders, films, slides, photographs, pictures, graphs, televisions, and computers. Baugh (in Arsyad, 2007) explains that around 90% of someone's learning achievement is gained from sense of sight and only around 5% of that is gained from sense of hearing and other 5% of that is gained from other senses. Characteristics of learning media according to Azhar Arsyad (2007: 37-52) are: 1) storable and usable for many times, 2) having special techniques, 3) easy to operate, 4) able to present past events or events in other places.

From the background of the problems, the researcher tried to develop video as learning media. According to the researcher, video is media that is implemented through sense of sight and hearing causing students' excitement to understand the material of adjustment entries making of service enterprises. Video as learning media is practical and easy to play everywhere. It can be played repeatedly using computer or laptop or students' gadgets. Also, it can get students' attention. Hopefully, video as learning media in Accounting subject can increase students' learning achievement.

Based on the explanation above, the researcher chose a title for the research "The Development of Video to Improve the Students' Accounting Learning Achievement on the Basic Competence of Making Adjustment Entries of Service Enterprises of Grade XI IPS 3 at SMA N 1 Karangdowo in the Academic Year 2015/2016."

RESEARCH METHOD

Research Types, Setting, and Subjects

This research is a Research and Development (R&D). The research was conducted at SMA N 1 Karangdowo in January-April 2016.

The research subjects were one material expert, one media expert, one accounting teacher of SMA N 1 Karangdowo, 28 students of grade XI IPS 2,

29 students of grade XI IPS 3, and 31 students of grade XI IPS 4 of SMA N 1 Karangdowo.

This research using ADDIE procedure. ADDIE was developed by Dick and Carrey (1996) to design a learning system (Endang Mulyatiningsih, 2011: 200). It stands for Analysis, Design, Development, Implementation, and Evaluation. The following is the explanation of five development stages adjusted with the research:

a. Analysis Stage

1) Curriculum Analysis

The school still applies curriculum 2006. The researcher adjusted the materials for the video into a captivating and fun learning process.

2) Students' Needs Analysis

The learning process carried out by the teacher got students bored. This caused students unable to understand the materials, neglected the teacher's explanation, and even some students played their gadgets. That is why their learning achievement were low. In reference to this analysis, the researcher developed video as accounting learning media that can be operated using computer/ laptop to be applied during teaching and learning processes.

3) Material Analysis

Making adjustment entries of service enterprises is one of the difficult topics, students the teacher needed learning media accompanied with examples of interesting questions and answers to explain it.

4) Purpose Formulation

Video as accounting learning media was designed by the researcher as an alternative that hopefully, it can satisfy the students' needs. This learning media can increase students' understanding about adjustment entries of service enterprises and help them during learning processes.

b. Design Stage

The second stage was a design stage or media design. This stage was a media design according to the result of analysis stage.

1) Creating Assessment Instruments of the Quality of the Video

The assessment instruments were questionnaires of product suitability. The questionnaires were assessed by the material expert, media expert, teacher, and students. Assessment instruments of video suitability were taken from

assessment instruments by Sungkono.

2) Creating Assessment Instruments of Students' Learning Achievement

Assessment instruments of video were written tests consisting of 20 question items and 4 options. The questions were taken based on the materials in the video. The questions in pre and posttest were the same.

3) Creating Flowchart

The design stage begins with flowchart making as the plot of the researcher's thoughts in order to make the development process easier.

4) Designing a Product

The product design begins with the draft text of video, the video display, materials and others.

5) Arranging Materials, Questions, and Answers of the Product

Material arrangement, questions, and answers were compiled from various references.

c. Development Stage

1) Making a Video

The development stage includes producing audio and video, material programming, and supporting component preparation.

2) Validating Product Suitability

The video validation were carried out by one material expert, one media expert, one accounting teacher and 31 students.

3) Revision

Revision aims to minimize errors and make video as suitable learning media to use. It was done after the product was validated by the material, media, teacher and students.

d. Implementation Stage

Two classes were chosen to be the sample of this research, they were grade XI IPS 3 as the experiment class and grade XI IPS 2 as the control class. The technique used to determine the sample was Purposive Sampling according to the same mean score of daily examinations. The second class was chosen and given a different treatment. The experiment class was given a video as learning media, but the control class was not given video during the learning process. The research was done in two stages, they were pretest, action the treatment, and posttest.

e. Evaluation Stage

1) The Suitability of Learning Media

Concluded that of four stages done by the material expert, media expert, teacher and students showed a Very Good and Very Suitable product for learning media.

2) The Improvement of Learning Achievement of the Experiment Class and Control Class

In conclusion, there were significant differences of the score improvement of students' learning achievement of both classes. Experiment class got higher score improvement then control class.

Data Collection Techniques

a. Data

1) Questionnaires

Questionnaire is a data collection technique done by giving a set of written questions or statements to respondents to be answered (Sugiyono, 2011: 199). It was used to collect data from the media expert, material expert, teacher and students to evaluate the developed learning materials.

2) Observation

Observation is done to collect additional information regarding critics, suggestions, comments and feedbacks from the media expert, material expert, teacher, and students. It was done in the preliminary stage of this research in order to know the teacher's and students' responds about the learning method and

media used in accounting learning processes.

3) Test

Test is a series of questions or other means used to measure knowledge, intelligence, and abilities owned by an individual or group of people (Suharsimi Arikunto, 2010: 150). This technique was used to obtain data of the students' learning achievement before and after the learning process using and without using video..

b. Data Analysis Techniques

From the data and information obtained, the data analyses that needed to be conducted in this research were:

1) Data of product development process were descriptive data. They were obtained from the material, media, teacher, and students. The data were comments, suggestions and feedbacks used as a reference for product revision.

2) Data of product quality assessment by the experts were obtained from the questionnaires. The data were then analyzed by following the procedures below :

a) Converting qualitative data into quantitative data:

Tabel 1. Assesment Aspects of Validation Questionnaire using Likert Scale

Category	Score
Very Good	5
Good	4
Enough	3
Less	2
Very Less	1

(Sugiyono, 2011: 93)

b) Calculating the mean score of each aspects using a formulation as follows:

$$\bar{X} = \frac{\sum x}{n}$$

Explanation:

\bar{X} = Mean Score

$\sum x$ = Total Score

n = Number of test Subject

(Eko Putro Widoyoko, 2011: 237)

c) Converting mean scores

Tabel 2. The Conversion of Quantitative data (Validation Scores) Tinto quanlitative data

Score	Formula	Value	Category
5	$\bar{x} > \bar{x}_i + 1,8 SB_i$	A	Very Good
4	$\bar{x}_i + 0,6 SB_i < \bar{x} \leq \bar{x}_i + 1,8 SB_i$	B	Good
3	$\bar{x}_i - 0,6 SB_i < \bar{x} \leq \bar{x}_i + 0,6 SB_i$	C	Enough
2	$\bar{x}_i - 1,8 SB_i < \bar{x} \leq \bar{x}_i - 0,6 SB_i$	D	Less
1	$\bar{x} \leq \bar{x}_i - 1,8 SB_i$	E	Very Less

Explanation:

Maximum score = 5

Minimum score = 1

Ideal maximum score = total indicator x the highest score

Ideal minimum score = total indicator x
the lowest score

\bar{X} = the gained score

\bar{X}_i = $\frac{1}{2}$ (ideal maximum
score + ideal
minimum score)

SBi (ideal standard deviation) = $\frac{1}{6}$ (ideal
maximum score-ideal minimum score)

(Eko Putro Widyoko, 2011: 238)

3) Analysis Technique of the Improvement of T-Test Learning Achievement

a) Analysis Prerequisite Test.

The collected data from the
field were analyzed to test the
hypothesis. Before testing the
research analysis, analysis
prerequisite test was held as follows:

(1) Normality Test

(2) Homogeneity Test

b) Hypothesis Test

Hypothesis test is finished to
know the significant differences
between the treatment using video
and that without using video to
improve the students' accounting
learning achievement on adjustment
entries of service enterprises making
for grade XI IPS of SMA N 1
Karangdowo.

The data analysis on the
learning achievement tests during the
research used t-test. The formula is:

$$t\text{-test} = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\left[\frac{SD_1^2}{N_1-1}\right] + \left[\frac{SD_2^2}{N_2-1}\right]}}$$

Explanation :

\bar{X}_1 = mean on the distribution of
samples 1

\bar{X}_2 = mean on the distribution of
samples 2

SD_1^2 = variance in the distribution of
samples 1

SD_2^2 = variance in the distribution of
samples 2

N_1 = the number of individuals in the
sample 1

N_2 = the number of individuals in the
sample 2

(Winarsunu, 2004: 88)

FINDINGS AND DISUSSION

Description of Research Subjects

The subjects of this development
research were one material expert, one media
expert, one accounting teacher, and students
of grade XI IPS 2, XI IPS 3 and XI IPS 4 of
SMA N 1 Karangdowo.

Research Report

a. Developing Video as a Learning Media

The procedure of the research
consisted of several stages explained is :

1) Analysis Stage : Curriculum
Analysis, Students' Needs Analysis,
Material Analysis, and Purpose
Formulation

- 2) Design Stage : Creating Assessment Instruments of the Quality of the Video, Creating Assessment Instruments of Students' Learning Achievement, Creating Flowchart, Designing a Product, and Arranging Materials, Questions, and Answers of the Product
- 3) Development Stage : Making a Video, Validating Product Suitability, and Revision
- 4) Implementation Stage : Experiment Class and Control Class
- 5) Evaluation Stage : The Suitability of Learning Media and The Improvement of Learning Achievement of the Experiment Class and Control Class

Developing the video as accounting learning media in making adjustment entries topic, using the models ADDIE Dick dan Carry (1996). It stands for Analysis, Design, Development, Implementation and Evaluation. The steps in ADDIE easier to apply and more rasional than others models.

b. Validation of the product's Suitability

The collected data were quantitative as the primary data and the qualitative data were comments and suggestions from the validator. Validation is an evaluation stage before the product is tested to students. The

pocket books' validation were carried out by one material expert, one media expert, one accounting teacher, and 31 students of grade XI IPS 4.

1) Material Expert

Table 3. Recapitulation of Validation Results of All Aspects by the Material Expert

No.	Aspect	Gained score	Mean Score
1	Material	34	4.86
2	Presentation	5	5.00
3	Learning	9	4.50
Total		48	4.80
Category		Very Suitable	

Referring to Table 3 about converting quantitative data (validation score) into qualitative data (score category), it was known that the mean score (X) 4.80 was in a range $4.80X > 4.20$ which means that the developed media got score "A" with category "Very Suitable". The validation results showed that the accounting video as learning media was developed according to material, presentation and learning aspects.

2) Media Expert

Table 4. Recapitulation of Validation Results of All Aspects by the Media Expert

No.	Aspect	Gained score	Mean Score
1	Narration	20	5.00
2	Visualization	33	4.71

3	Music/ sound effect	9	4.50
4	Presentation	4	4.00
5	Usage	15	5.00
6	Packaging	14	4.67
Total		95	4.75
Category		Very Suitable	

Referring to Table 4 about converting quantitative data (validation score) into qualitative data (score category), it was known that the mean score (X) 4.75 was in a range $4.75X > 4.20$ which means that the developed media got score “A” with category “**Very Suitable**”. The validation results showed that the accounting video as learning media was developed according to narration, visualization, music/ sound effect, presentation, usage and packaging aspects.

3) Accounting Teacher

Table 5. Recapitulation of Validation Results of All Aspects by the Teacher

No.	Aspect	Gained score	Mean Score
1	Materials	30	4.29
2	Learning	8	4.00
3	Narration	4	4.00
4	Visualization	27	3.86
5	Music/ sound effect	8	4.00
6	Presentation	4	4.00
7	Usage	14	4.67
8	Packaging	14	4.67
Total		109	4.19
Category		Very Suitable	

4) Students

Table 6. Recapitulation of Validation Results of All Aspects by the Students

No.	Aspect	Gained score	Mean Score
1	Material	9.0	4.50
2	Learning	8.90	4.45
3	Narration	4.39	4.39
4	Visualizatio n	31.48	4.50
5	Music/ sound effect	8.42	4.21
6	Presentation	4.55	4.55
7	Usage	13.16	4.39
8	Packaging	12.97	4.32
Total		92.90	4.42
Category		Very Suitable	

c. The Accounting Learning Video



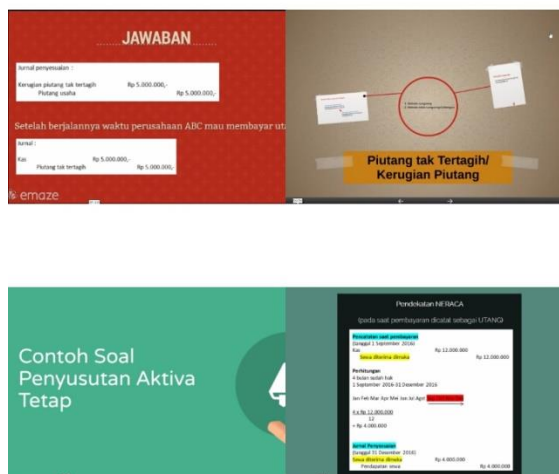


Figure 1. The Accounting Learning Video

d. The Improvement of Learning Achievement of the Experiment Class and Control Class

Purpose this research is to know the students' learning achievement after the use of the accounting learning video on managing adjustment entries. The improvement of students' learning achievement could be seen from the results of pretest and posttest of students'.

Different improvement of the students' learning achievement can be identified using pretest and posttest in the experiment and control class. The experiment class was a class with a treatment using video, while the control class was a class with a treatment without using video.

Table 7. T-Test Summary of the Score Improvement of the Experiment and Control Classes

Class	Mean	Standard Deviation	t _{table}	P
Experiment	35.00	4.557	2.012	0.000
Control	19.82			

T-test of the score improvement of experiment and control classes aims to identify the differences of the score improvement of the learning achievement of both classes on adjustment entries of service enterprises topic. By using Independent Sample T-test, the score improvement of the experiment class was 35.00 and that of the control class was 19.82. In conclusion, the score improvement of learning achievement of the experiment class was 15.179 higher than that of the control class. From the table, t_{hitung} was 4.557 with significance 0.000. t_{table} of df 47.679 at significance standard 5% was 2.012. So, $t_{hitung} > t_{table}$ (4.557 > 2.012) and the significance score was less than 0.05 ($p = 0.000 < 0.05$). In conclusion, there were significant differences of the score improvement of students' learning achievement of both classes.

CONCLUSIONS AND SUGGESTIONS
Conclusions

According to the report and discussion of the research, it can be conclude that:

- a. Accounting learning video on the basic competence of making adjustment entries for service enterprises Suitable as a learning media of SMA N 1 Karangdowo.
- b. Accounting learning media can increase the students' learning achievement.

Suggestions

- a. The product should be able to be applied to students not only during the Accounting learning hours, but also everytime and everywhere.
- b. According to the questionnaire results of media suitability filled in by the students, item 12 and 17 were the lowest which were on the opening and closing attractiveness and user-friendliness. Other researcher can improve the learning media or it can be a reference to produce another video as learning media with a more interesting opening and closing and more user friendly to all electronic instruments.

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