The Basic Acid Scientific Experiment Video and the Separation of Mixed-Based Information Technology

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Abstract. This research results in a video of scientific experiments worthy of use, resulting in a video of scientific experiments that is practical to use. The video is a video-based scientific experiment and a mixture of information technology. The development model in the study uses the Borg & Gall development model which is adapted into a simple model. The results showed the validation of material experts with very decent categories, media experts with very decent categories, small group tests with very practical categories, and field trials with categories very practical.

1. Introduction

Seeing the development of science and technology, learning is generally affected by the development and discovery in the field of skill and technology. The influence of technological developments is evident in the efforts of renewal of education and learning system. For that, learning media becomes a field to be mastered by every person especially teachers and students.

Technology is a media that has an important role in the educational world, because technology is very helpful to achieve national education objectives. Technology provides a new feel in presenting information. The use of technology in learning can change the climate of learning in classes that students generally only hear, see, impersonate what teachers and texts say in the book, but with the technology students can receive information more attractive so that students can build their knowledge and understanding independently, thus students can establish meaningful learning (Zuhrieh, 2009).

The Video is a technology that crises, moves, processed, and distorses, transfers, as well as a sequence of still image alignment that presents scenes in motion electronically (Munir, 2015). This video will be presented in the form of experiments or experiments such as practicum activities in the IPA laboratory. The Program provides a series of tools and materials, then performs experiments or experiments in accordance with the instructions and then develops other experiments based on the instructions (Hamdani, 2011).

Videos to be produced are scientific experimental videos. This experimental Video performs a practicum in accordance with the scientific approach steps. The steps of scientific approach are the scientific approach which includes information through observation, questioning, conducting experiments, associating and then communicating in learning activities (Daryanto, 2014)
The material to be used in this video is acid base and separation mixture. Each material will be loaded with 2 videos. One video for acid-base material and one video for mixed separation material. Each material will be conducted practicum in accordance with scientific approaches.

1.1 Stages of Video making acid base and mixed separation
The steps for compiling a video program are: 1) The title is derived from the basic competency or subject matter according to a lot of material. 2) Creating a synopsis describing briefly and clearly about the material that will be discussed in the video program. 3) supporting information is explained in a sequential, solid, and interesting form of a story board or script. 4) Shooting is done on the basis of the manuscript. 5) Perform the editing process done by the person who knows the editing tool or the person who mastered the substance or content of the video material. 6) in order for the video to be satisfactory, before the multiplier should be assessment of the program as a whole, either in substance, education, or cinematography. 7) The video Program is usually not interactive, but its tasks can be done at the end of delivery through the presenter. 8) Judgment may be made against written answers to questions from within the video program or the work of the tasks provided (Prastowo, 2015).

1.2 Application for acid-base Video making and mixed separation
The making of the practice video using a computer application that is Filmora or complete is often known as Wondershare Filmora Video Editor is an application or program designed to make the video editing process easily and Simple but has a pretty powerful quality. Nowadays many video editing programs with high reputation and are used on TV stations such as Adobe Premiere or others, but for novice video editors it may take a while to complete a video project, that's even the result Satisfactory warranties.

Wondershare Filmora Video Editing gives you a process of video editing with a fast time, because in addition to its lightweight program when compared to other Video editors, the work view Filmora is also very simple and easy to learn.

2. Method
The development model used is the Borg and Gall development model which is designed to suit the needs of researchers. The steps of the development stage are as follows:
1. Conducting preliminary research, namely:
   a. Identification of the video needs of basic acid practicum and mixed separation.
   b. Write core competencies, competencies Indicators and objectives that will be Reached by students.
   c. Strategize in video consisting of:
      - Explanation of alkaline acid material and mixed separation
      - Steps of scientific approach (observing, testing, experimenting, associating, and communicating)
2. Praktikum video design, which includes:
   a. Creation of base acid and mixed separation
3. Collection of materials, which include:
   a. Image making and collection (shooting)
   b. Audio Collection
4. Develop and make a video of practice (editing process)
5. Review and test Products
Data analysis in this study uses quantitative descriptive analysis. All collected data is analyzed with descriptive statistical techniques that are quantitatively separated by category to sharpen the judgment in drawing conclusions. Qualitative data which is a statement of very decent, decent, less decent and unworthy and very practical, practical, less practical and impractical to be converted into quantitative data with a value scale of 1 to 4. The results are averaged and are used to assess the feasibility and practicality of acid-base video and mixed separation. Criteria will be converted into values with a descriptive four-scale (Sriadhi, 2018).

3. Results And Discussion
Initial product creation was done by creating a grid of materials and the design of practicum measures with a scientific approach that would be used as basic acid steps and the separation of the mixture to be delivered. After the initial lattice and design were made, researchers wrote the script in the form of a basic acid practicum activity and a mixture separation delivered in real form. Here are presented preliminary products of the manufacture of acid-base video and mixed separation.

3.1 Validation of acid-base Video and mixed separation
Videos created are then validated by an expert. The validated aspects are the material aspect/media content and the Konstruk media itself as supporting the success of the video. The following are presented comparisons of alkaline acid video validation results and mixed separation.

Table 1. Results of the assessment by experts of alkaline video materials and mixed separation

| No | Video               | Average | Criteria  |
|----|---------------------|---------|-----------|
| 1  | Acid base           | 4.31    | Very decent |
| 2  | Mixed separation    | 4.56    | Very decent |

The results were assessment by material experts against acid-base video and mixed separation with averages 4.31 and 4.56 with very decent criteria.

Table 2. Result of assessment by the base acid video media expert and mixed separation

| No | Video               | Average | Criteria  |
|----|---------------------|---------|-----------|
| 1  | Acid base           | 4.35    | Very decent |
| 2  | Mixed separation    | 4.35    | Very decent |

Assessment results by media experts on acid-base video and mix separation with average rating of 4.35 and 4.35 with very decent criteria
Table 3. Test result small group of acid-base video and mixed separation

| No | Video                | Average | Criteria   |
|----|----------------------|---------|------------|
| 1  | Acid base            | 4.04    | Practical  |
| 2  | Mixed separation     | 4.11    | Practical  |

Small group test assessments on acid-base video and mixed separation with average rating of 4.04 and 4.11 with practical criteria. Based on the results of the assessment, there are several parts revised on the acid video base and the separation of the mixture is as follows:
- Add text asking in video when Step asks
- Duration of accelerated test steps

Table 4. Result of test assessment of Acid base video field and mixture separation

| No | Video                | Average | Criteria   |
|----|----------------------|---------|------------|
| 1  | Acid base            | 4.59    | Very       |
|    |                      |         | Practical  |
| 2  | Mixed separation     | 4.67    | Very       |
|    |                      |         | Practical  |

Small group test results against acid-base video and mixed separation with average assessment of 4.59 and 4.67 with practical and good criteria.

Benefits in the use of acid-base video and the separation of mixture-based scientific approaches:
(1) Facilitate the material to be understood because the presented concept is planned to facilitate students and systematically, (2) Availability of practicum video Acid-base material and mix separation, so that students can see directly how to test alkaline acid and separate the substance mixture directly instead of just being heard and still images only, (3) as the teacher guide material to do practicum In the study of base acid material and mixed separation, (4) Learn more tired and interesting so as not to cause boredom in learning because it is equipped with animated and sound motion Pictures, (5) The acid-based video and the separation of mixed-base scientific approaches gives students the opportunity to learn or perform practicum independently.

4. Conclusion
Based on the results of the research discussion of alkaline and mixed separation video, it can be concluded as follows:
1. The validation result of the expert material against acidic video bases and mixed separation indicates that; On acid-base video is rated very decent with average, 4.31, and mixed separation videos judged very well with an average of 4.56. Thus, the acid-base video technology and a mixture-based separation of scientific approaches are well worth using.
2. The validation result of the media experts against the acid-base video and mixed separation shows that; On an acid alkaline video is rated very decent with an average of 4.35, and the mix of mixed mix videos is rated very decent with an average of 4.35. Thus, the acid-base video technology and the separation of scientific approaches are very well worth using.
3. The test results of small group of acid-base video and mixed separation showed that the results on acid-base video were assessed practically by an average of 4.03. On mix separation video is rated practically by an average of 4.11.
4. The result of a video field test base acid and mixed separation shows that the outcome of the acid base video is assessed very practically by an average of 4.59. On mixed separation videos are rated very practical with an average of 4.67. Thus the acidic video technology and separation based scientific approaches are very practical to use.

Advice
The suggestions that need to be considered in the development of learning media are as follows:
1. To design video technology should consult with media experts and material experts.
2. For teachers can take advantage of acid base video excellence and the separation of mixed-based scientific approaches by using this practicum video as a guide for doing practicum.
3. For students can use the acid video base and the separation of mixture based scientific approaches to study independently.
4. For other researchers the results of this research can be used as relevant research to do the same research with different topics

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