Sinkron : Jurnal dan Penelitian Teknik Informatika
Volume 6, Number 1, January 2022
DOI : https://doi.org/10.33395/sinkron.v7i1.11272
e-ISSN : 2541-2019
p-ISSN : 2541-044X

Multimedia Development of Student Discipline Character Training at Police Schools Pontianak State

[1] Sugiyono [2], Aunurahman [3], Indri Astuti
[1][2][3] Tanjungpura University
[1] sugiyono77@gmail.com [2] aunuruntan@gmail.com [3] Indri astuti@ fkip.untan.ac id

Submitted : Jan 15, 2020 | **Accepted** : Jan 19, 2022 | **Published** : Jan 22, 2022

Abstract: This research refers to the research and development (R&D) design, meaning that the research method used to produce the product then tests the effectiveness of the product. According to Borg and Gall, the design used in this study used the ADDIE learning model design. This study has proposed an integrated model between ADDIE instructional designs to address their weaknesses and exploit their strengths in guiding the process of developing multimedia content for learning training, which requires incorporating the training needs of PE at the design stage. In this development research, the data collection instrument used an observation technique with an observation sheet. The data analysis used in this research is qualitative and quantitative. Qualitative data analysis in this study will be carried out to determine the validation of the design experts for student discipline character training at the Pontianak State Police School (SPN). Quantitative data analysis technique is to find out how the results of expert validation or validators on multimedia character training of students' disciplines are analyzed quantitatively. Quantitative data analysis techniques were carried out to find out how the results of expert validation on the quality of multimedia training that had been designed and tested on students. The result of this research is the effectiveness of learning is the level of success that can be achieved from a particular learning method in accordance with the learning objectives that have been planned. And this can also be interpreted that a learning media can be said to be effective if it meets the criteria, achieves goals, including being able to influence, change or can bring results, then effectiveness can be seen from how far the goals are achieved. The more goals achieved, the more effective the multimedia training used.

Keywords: Multimedia; Student Discipline, Police Education.

INTRODUCTION

The State Police School (SPN) is one part of police education that aims to provide the knowledge and skills and attitudes needed by police personnel in fulfilling police duties. In addition, education in SPN is also a series of activities from the human resources management (HR) development cycle, so that the implementation of education and training of the National Police sticks to the principle of integration, with the aim to accommodate the National Education system. The current police education system must be able to create superior police personnel and can keep pace with the progress of increasingly modern times. However, there needs to be a lot of improvement and breakthroughs to achieve this goal. To realize that qualified Police personnel, of course, new breakthroughs are needed in the world of Police Education.

The State Police School (SPN) is one part of police education that aims to provide the knowledge and skills and attitudes needed by police personnel in fulfilling the Police duties. In addition, education in SPN is also a series of activities from the human resources management (HR) coaching cycle, so that the implementation of education and training of the National Police sticks to the principle of integration, with the aim to accommodate the National Education system. The current police education system must be able to create superior police personnel and can keep pace with the progress of the increasingly modern era. However, there needs to be a lot of improvement and breakthrough to achieve this goal. To realize that qualified Police personnel, of course, new breakthroughs are needed in the world of Police Education.

*name of corresponding author

Sinkron : Jurnal dan Penelitian Teknik Informatika
Volume 6, Number 1, January 2022
DOI : https://doi.org/10.33395/sinkron.v7i1.11272
e-ISSN : 2541-2019
p-ISSN : 2541-044X

Strengthening the Field of Coaching, especially the Human Resources Program for the provision of personnel through formation education. One of its work units is the State Police School (SPN) which is tasked with organizing brigadier formation education as well as other education and training in accordance with the Work Plan or Policy of the Police Chief and/or The Police Chief. There are currently 27 SPNs throughout Indonesia.

The Indonesia Police Education Management Policy implemented by SPN refers to the Regulation of the Head of State Police of the Republic of Indonesia Number 4 of 2010 concerning the Education System of the State Police of the Republic of Indonesia. This regulation is determined with consideration a) that the development of science and technology and public demands on the performance of the State Police of the Republic of Indonesia, required to increase resources. professional human beings to be able to carry out their duties in accordance with the vision and mission of the State Police of the Republic of Indonesia; and b) that the increase in professional human resources in the State Police of the Republic of Indonesia implemented through a programmable, targeted, systematic, and sustainable education system based on the policies and strategies of the Head of State Police of the Republic of Indonesia.

Based on the description above, it is necessary to develop an interactive learning medium as a handle or reference for learners in disciplined character training. Learners can use this learning medium anywhere, and anytime so that they can hone their knowledge and understanding and can support existing learning systems. Therefore, researchers will develop learning media in the form of interactive video CDs by combining multimedia content in it that can be used as an alternative in training programs.

LITERATURE REVIEW

A. Educational Technology

Educational technology is one of the specialized fields of study of educational science with the efforts needed to facilitate the process of "learning" or commonly also referred to as the learning process. Study is not only done by and for individuals, but also by and for groups, and even for the organization. This is also in accordance with the objectives of the media development of the student discipline character training program in the Pontianak state police school, to improve the ability of learners in improving performance through certain strategies and adapted to the conditions and needs of learners.

Educational technology is one of the fields that dabbles in the efforts needed to facilitate the effective and efficient learning process in individuals. This is in accordance with the 2004 definition of educational technology put forward by The Association of Educational Communication and Technology-The (A. A. Piña, 2018; A. Piña & Harris, 2019) Educational technology is the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technology processes and resources". Educational technology can be defined as "An ethical study and practice used to facilitate the course of the learning process and improve performance through the creation, use, management of projects, technologies and appropriate resources". This is in line with the opinion of (Mod Istyak Ali, 2020) revealed that: educational technology is the study and ethical practice of facilitating learning and improving performance by creating, using and managing appropriate technological processes and resources. Educational technology is the study and ethical practice of facilitating learning and improving performance by creating, using and managing appropriate technological processes.

Based on the exposure of some of the above concepts, it can be concluded that learning technology is a theory and practice in design, development, management, utilization, and assessment that can be used as a source of learning and can be applied in solving learning problems with the main purpose of learning technology is to solve learning problems or facilitate learning activities.

The five areas of learning technology are design, development, utilization, management, and evaluation. These are interrelated as can be seen in the figure below.

*name of corresponding author

Sinkron : Jurnal dan Penelitian Teknik Informatika
Volume 6, Number 1, January 2022
DOI : https://doi.org/10.33395/sinkron.v7i1.11272
e-ISSN : 2541-2019
p-ISSN : 2541-044X

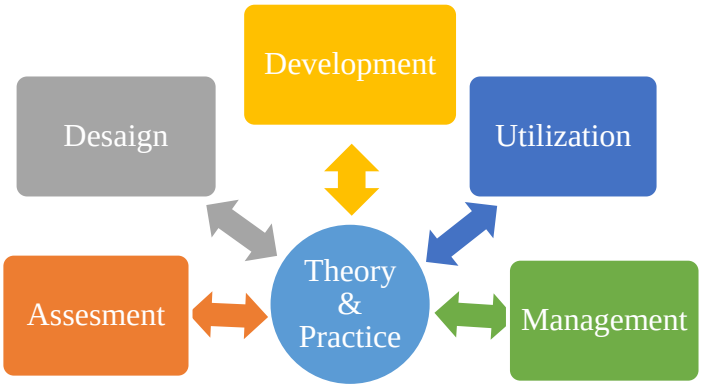

Figure 2.1. Educational Technology Area

(Tavukcu et al., 2020) in instructional technology: the definition and domain of the field, presents five fields or domains of educational technology that include theoretical and practical activities.

B. Learning Media

Media is a means of learning used to facilitate learning activities. Media is intended as an intermediary for teachers and learners to create a learning process for learners, so that it can be used as a source of learning and help learners to learn effectively, efficiently, and attractively during the teaching and learning process.

According to (Mahnun, 2018) mentions that "Media" comes from the Latin "Medium" which means "Intermediary" or "Introduction". Furthermore, media is a means of distributing messages or learning information that is intended to be conveyed by the source of the message to the target or recipient of the message. The use of teaching media can help achieve learning success.

According to (Pekkala & van Zoonen, 2021)stated that media is a means of communication channels. Media is derived from Latin and is the plural form of the word "medium" which literally means "Intermediary" i.e., the intermediary of the source of the message (a source) by receiving the message (receiver). Learning media is a tool that allows students to understand and understand something easily to remember it for a long time compared to the delivery of lessons in a face-to-face and lecture manner without learning aids or media. Based on the definition or opinion of experts, it can be concluded that the learning media is a tool used in the learning process to convey messages, ideas, or ideas in the form of learning materials to students by teachers.

METHOD

This research refers to the design of research and development (R&D), meaning the research method used to produce the product and then test the effectiveness of the product. According to Borg and Gall (Putra et al., 2020), the design used in this study was using the design of the ADDIE learning model. This means that the ADDIE model is one of the most commonly used models in the field of learning design. It helps teaching designers and teachers to create efficient, and effective teaching designs by applying the ADDIE model process to each teaching product (Alodwan & Almosa, 2018).

Therefore, the study has proposed an integrated model between ADDIE learning designs to address their weaknesses and harness their strengths in guiding the process of developing training multimedia content for learning, which requires incorporating the needs of the practice pe at the design stage.

The development procedure in this research will explain and explain each component at each stage that will be done in designing and producing a product. The study was conducted at the Pontianak state police school (SPN). The implementation time of research is in March-April 2019. The timing of the study refers to the academic calendar of the Pontianak state police school. In this development research data collection instrument uses: Observation Techniques with observation sheet tools, Observation techniques carried out in this study are participant observations, with data collection tools that are observation sheets where researchers collect data by making direct observations. At this stage, the observer will conduct direct observations of researchers and students in the process training at Pontianak state police school (SPN),and Direct Communication Techniques with Tools in the Form of questionnaire.

The data analysis used in this study is qualitative and quantitative. Analysis of derivative qualitative data in this study will be conducted to find out from validation experts on the design of student discipline character training at Pontianak state police school (SPN). Quantitative data analysis techniques to find out how validation results from experts or validators against multimedia character training of quantitatively analyzed student

*name of corresponding author

Sinkron : Jurnal dan Penelitian Teknik Informatika
Volume 6, Number 1, January 2022
DOI : https://doi.org/10.33395/sinkron.v7i1.11272
e-ISSN : 2541-2019
p-ISSN : 2541-044X

disciplines. Quantitative data analysis techniques are carried out to find out how the results of validation from experts on the quality of multimedia training that has been designed and tested with students.

RESULT

The education process at the Pontianak state police school, especially in the material education character discipline of students is still not maximal, so researchers are interested in doing development of a learning media that can provide improvements in the training of student disciplinary characters, namely interactive multimedia that begins with conducting analysis first, after which researchers do design creation.

The results of the more learner's assessment can be seen Following the recapitulation of the average results of the assessment of learners from class A at SPN Pontianak against multimedia training developed by researchers:

Table 1. Field Trial student Assessment Results

No	Aspects	Average	Category
1	Learning	95,83	Very Agree
2	Material	94,58	Very Agree
3	Language	96,25	Very Agree
4	Display	97,08	Very Agree
Overall average		95,94	Very Agree

Based on the results of field trials on multimedia training, as the results of the calculation above when viewed from the learning aspect obtained an average of 95.83 which fall into the category "Strongly agree", material aspects obtained an average of 94.56 which fall into the category "Strongly Agree", aspects of language obtained an average of 96.25 which falls into the category "Very Decent", the Display aspect obtained an average of 97.08 which falls under the category "Strongly Agree". Overall, the results of multimedia assessment training by learners obtained an average of 95.94 and fall into the category "Strongly Agree" as multimedia training for SPN Pontianak students. The results of the assessment of class A students at SPN Pontianak are presented in the following bar diagram:

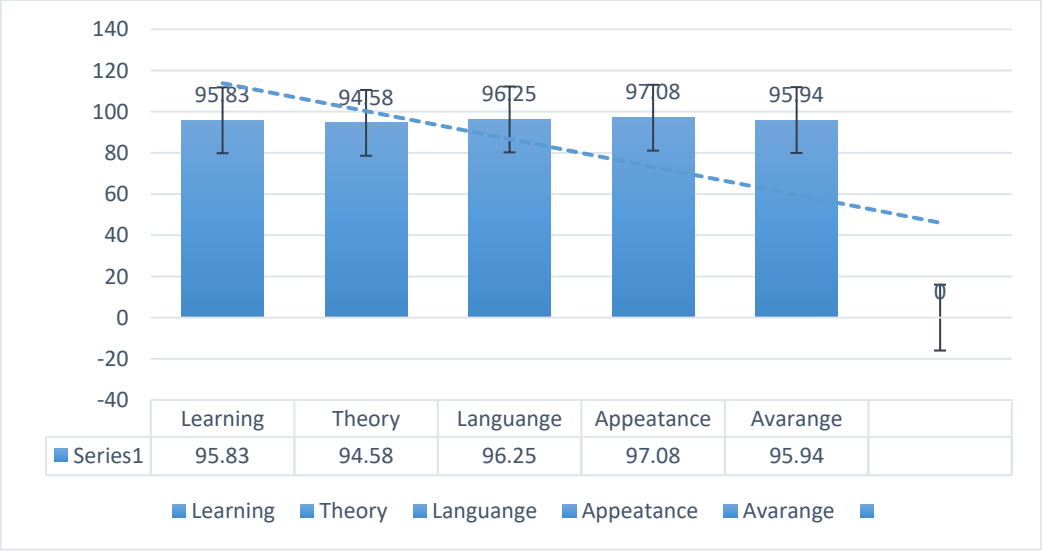

Figure 1. Field Group Trial Results

Based on Table4.10 above it can be concluded that students provide positive comments and no longer comment negatively on multimedia training for the character of the student discipline, in addition multimedia training that has been designed undergoes an improvement of 95. 94. This means that multimedia training can be one of the alternative learning media that is suitable for solving learning problems, especially in training the discipline character of students in Pontianak state police schools.

As for the comparison of the results of the revision of the one-to-one trial, small groups and large groups can be seen in the picture as follows.

*name of corresponding author

Sinkron : Jurnal dan Penelitian Teknik Informatika
Volume 6, Number 1, January 2022
DOI : https://doi.org/10.33395/sinkron.v7i1.11272
e-ISSN : 2541-2019
p-ISSN : 2541-044X

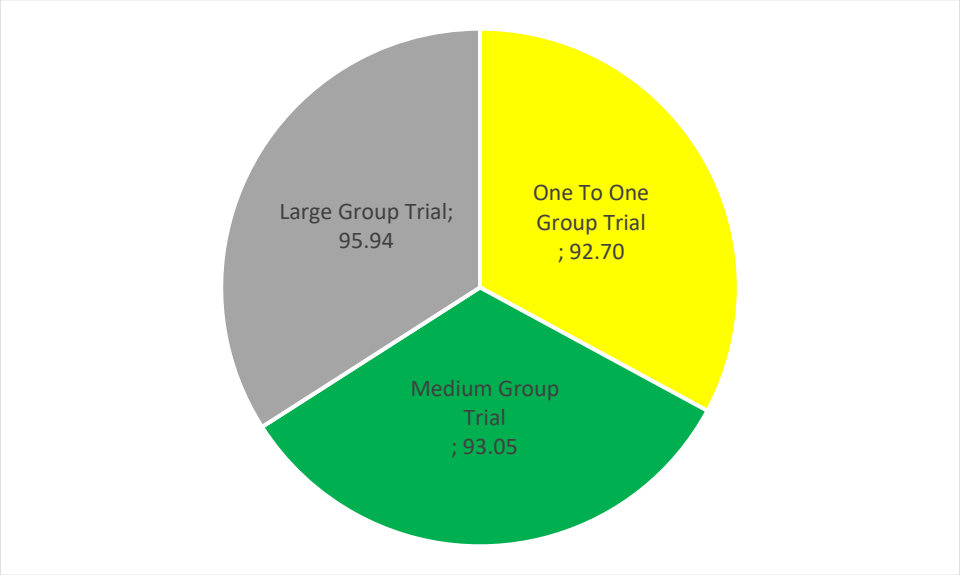

Figure 2. Comparison of student trial results

Based on graph 4. 8 above showed that there has been an increase in revision results, namely from the results of one-to-one trials 92.70,thenrevised followed by small group trials increased by 93.05,andcontinued again with large group trials increased the value by 95.94. So that multimedia training for student discipline character training in Pontianak state police school is getting closer to the perfect stage and deserves to be used in the training process.

DISCUSSIONS

Research and development have two objectives, the first in this development is to produce a product in the form of multimedia training. The goal is to find out the student's response and how effective the use of multimedia learning is using multimedia student discipline character training at SPN Pontianak.

Training program design

The type of product produced in this study is the video media learning training program. In this study juxtaposed borg and gall development methods with system-oriented learning models that use the ADDIE (Analysis-Design-Develop-Implement-Evaluation) model. This is in accordance with the opinion of Ching Yee Yong et al (Pohan, 2019) who stated ADDIE model is the generic process traditionally used by instructional designers and training developers. The five phases ADDIE of Analysis, Design, Development, Implementation, and Evaluation—represent a dynamic, flexible guideline for building effective training and performance support tools. This expert opinion emphasizes that the ADDIE model is a developer's traditional process that is general in designing teaching and practice. This is in line with the opinion of Sezer et al (Pohan, 2019) that ADDIE is the systems approach implies an analysis of how its components interact with each other and requires coordination of all design, development, implementation, and evaluation activities. That is, ADDIE is a system of indirect approaches, namely the analysis of how the relationship of one component with another component and coordination, consisting of design (design), development (development), implementation (implementation), and assessment (evaluation). To answer the problem no. one, in the video media essay learning training program will be discussed from the first step, namely:

Analysis

The analysis stage, at this stage researchers get information from the school through in-person interviews with the instructional at SPN Pontianak regarding the learning media used in the training program used in the school, it turns out that the educational training program conducted has not used media assistance in the learning process but only uses textbooks, lecture methods, and discussions.

Even though with the help of the media is very helpful for learners in understanding learning. Learners will more easily understand disciplined character training materials by using the help of learning media. because discipline character training material is material that is difficult to understand and certain terms, so it requires several videos to explain the material.

*name of corresponding author

e-ISSN : 2541-2019
p-ISSN : 2541-044X

At the decision-making stage, many things need to be discussed with the supervisors before making the decision ranging from determining the material or choosing what material is appropriate, determining the purpose of the development of the media of this training program by conducting a series of activities such as initial observations about the characteristics of learners and the state of learning carried out by teachers to conducting literature studies so that the media developed accordingly. with the learning objectives to be achieved.

Next is to determine the theme or scope of multimedia so that there are limits in the creation of developed media. This stage is done by paying attention to the suitability of the material to be developed, namely seven sacrament and considering with the guidance lecturer about the material that is worthy to be used as a reference in the creation of the learning media.

The next stage is to create a learning media that uses the Camtasia studio application, after the selection of the material to be used next is to publish material files into the media and automatically the material will be published by a few minutes, in addition to the image and video material will be published automatically and adjust the location of images and videos in accordance with the material in question.

At this decision-making stage there are many obstacles faced ranging from the determination of the media or materials to be used, whether the learning media to be used will have an influence in the learning process of learners, and after observation first and some considerations from the instructors selected the learning media with the solutions provided, the shortcomings at this stage are the material included in the learning media. It's still lacking.

At this stage, a need analysis and competency analysis are carried out. The needs analysis carried out is related to the characteristic problems of students in the implementation of learning and learning media. From the results of the researcher's analysis, students have poor concentration and motivation by often skipping what is conveyed by their teachers when they see the subject matter that is felt a lot from their point of view.

Competency analysis is conducted on multimedia material of character training discipline, covering the content of the material, and learning videos that must be achieved by the student. The implementation of the analysis is carried out looking at the content and indicators based on the characteristics of students who see a lot of material from their point of view. In this competency has a varied material content with discussions that include definitions, types, examples, and understanding, basically this material falls into many categories while students have a point of view in seeing a lot of material that results in their motivation and concentration during learning, on the other hand for this competence does not yet have multimedia adjustments to learning so that the material does not look much and according to the student's characteristics.

The appropriate product developed based on the analysis of needs and competencies carried out is the development of learning media in the material of the Camtasia studio-assisted discipline character training program, through this learning medium can be used as a message delivery from instructor to student so that the teacher's message to students can be conveyed properly.

Design

The next stage is the design / design stage, at this stage researchers design the initial design of media by making storyboards and flowcharts first designed by creating an outline or outline of the video Camtasia learning media developed starting from determining the title, determining the theme, and the purpose of the formation of the media. Storyboard is an outline of the content of the media in general that includes the design of templates and materials.

After creating the outline, the next step is to create a flowchart or concept of material sequence in the video learning media training program to determine the learning flow and plan the content in the presentation of the material. The plan that has been made will be consulted to the guidance lecturer. Revisions will be made if the design is not yet appropriate. At this stage of design, several applications are needed to develop learning media, namely software Camtasia studio which is the main application in developing learning media training programs to be able to run applications on a laptop / computer.

The design that is then arranged is the interface display (interface). At this stage, the arrangement and arrangement of the layout or position of several components will be displayed in one layer. This is done to facilitate in designing the appearance of video media training programs when in one layer there are several component combined such as images and materials.

Development

The next stage is development, at this stage researchers begin to create media, such as collecting material, determining material with KD, making, or developing animations, videos that will be included in the media. The next stage is the development stage (Develop). Video learning media disciplined training programs that have been

*name of corresponding author

e-ISSN : 2541-2019
p-ISSN : 2541-044X

designed and combined and then published in the form of applications, and to open the media in a laptop / computer are used to open the media in a laptop / computer.

Then the design is given to three validators to be assessed for eligibility (validation) of aspects of media and language called the first design (prototype I). In the first validation (Prototype1) many comments from the validator so that the learning media that has been revised again in accordance with the input of the validators ranging from the appearance, design of learning media, the material used as well as the language used in the material to all aspects, ranging from the material, the quality of the display, and the media program as a whole.

In the media validation assessment, in the aspect of media assessment obtained an average score of 3.57 with the criteria "Sangat valid", the display aspect obtained an average score of 3.61 with the criteria "quite valid", and the aspect of the vote obtained an average score of 3.8 with the criteria "Sangat valid". While the aspect of the letter obtained an average score of 3.6 with the criteria "Sangat valid" Assessment of each aspect then calculated the overall average of the assessment of the feasibility of the whole and obtained an average of 3.65 with the criteria "quite valid". Therefore, the feasibility of video media products learning discipline character training program at SPN Pontianak using video Camtasia is still being improved in part based on the results of validation of media.

While on the assessment of learning design validation on the display aspect obtained an average score of 3.57 with the criteria "valid", the aspect of efficacy obtained an average score of 3.67 with the criteria "valid", the ease aspect obtained an average score of 3.8 with the criteria "valid". While the aspect physical application obtained an average score of 3.57 with the criteria "Sangat valid"

Assessments of each aspect then calculated an average of the overall assessment of media feasibility in the learning material in its entirety and obtained an average of 3.65 with "valid" criteria. Thus the feasibility of video program training media products using Camtasia is said to be worth using with partial revision of the results of learning design validation. In the assessment of validation of learning materials In the aspect of conformity of learning objectives obtained an average score of 3.67 with "valid" criteria, aspects of learning are obtained an average score of 3.78 with "valid" criteria, aspects of language obtained an average score of 3.6 with "valid "criteria. While the aspect of presentation of the material was obtained an average score of 3.6 with the criteria "Sangat valid" Assessment of each aspect then calculated the average of the overall assessment of media feasibility on the learning material in its entirety and obtained an average of 3.66 with the criteria "valid". Thus, the feasibility of multimedia training products using Camtasia is said to be worth using with partial revision of the results of material validation.

Implementation

The implementation stage is the embodiment of design into a medium. The embodiment of the design into the media uses Camtasia studio software, where there are several advantages of using this software, including the result after publication, able to import almost all image and audio files, and can form executable files (*.exe) so that it can be run on any PC without installing the Camtasia studio program first.

After the product is completed, the researcher then performs the testing phase. Testing is the stage where the design of a product goes through a validation stage by experts and a small group test is then applied to a trial class. There are six experts in the validation of this product, namely material experts 1 person, media experts 1 person and design experts 1 person. Due diligence by material and media experts is in accordance with aspects of existing research media feasibility tests. Aspects of material validation include aspects of content quality and language, while aspects of media validation include aspects of media quality, display, and language.

The results of the trial were conducted through two stages, namely, one-to trials, small group trials and large-scale (field) trials to see the wisdom of learning media by spreading student response questionnaires. At the questionnaire, students see the video media learning discipline character training program in the display of covers, images, sentences and language that are not confused and not difficult to understand.

The results of the multimedia media training test obtained an average one to one trial result on the learning aspect obtained an average score of 91.66 which belonged to the category "Very Decent", while for the material aspect obtained an average score of 91.66 which belonged to the category "Very Worthy". Aspects of the language earned an average of 91.66 which fall into the category "Very Decent". The viewing aspect earned an average of 95.83 which falls into the category "Very Decent". So that the overall average trial on one to one for student response to the ministry of android-based learning media is 92.70 with the criteria "agree".

Furthermore, the student response to small-scale trials for multimedia ministry of student discipline character training on learning aspects obtained an average score of 93.06 with the criteria "agree", material aspects obtained an average score of 91.66 with the criteria "agree", aspects of language obtained an average score of 93.05 with the criteria "agree". On the Display Aspect obtained an average of 95.83 which falls into the category "Very Decent". So that the overall average of trials on small-scale trials for student response to the multimedia management of student discipline character training is 93.05 with the criteria "Strongly agree".

*name of corresponding author

Sinkron : Jurnal dan Penelitian Teknik Informatika
Volume 6, Number 1, January 2022
DOI : https://doi.org/10.33395/sinkron.v7i1.11272
e-ISSN : 2541-2019
p-ISSN : 2541-044X

While the results of field trial assessments reviewed from learning aspect indicators obtained an average score of 95.83 with the criteria "agree", material aspects obtained an average score of 94.58 with the criteria "agree", aspects of the language obtained an average score of 96.25 with the criteria "agree". On the Display Aspect obtained an average of 97.08 which falls into the category "Very Decent". So, the overall average of the trials is 95.94 on the "agree" criteria.

From the existing values in small group tests and large groups have received categories strongly agree. With it can be concluded that multimedia training developed meets the aspect of ministry so that it is worth using to help the learning process of training programs at SPN Pontianak. Therefore, multimedia character training discipline is ready to be used as a teaching material supporting student discipline character training.

Evaluation

The last stage of the video learning development of this disciplined character training program is the evaluation stage. Multimedia character training disciplines students who have been developed and have been worthy according to the three validators will be evaluated by conducting trials to research subjects to find out the improvement of learners' learning outcomes after using multimedia training developed.

Evaluation is the final stage of each of the above development steps. From the results of the student response questionnaire, observation, and interview to the instructor will be evaluated for products developed to be improved if there are still shortcomings in the multimedia training. The results of the evaluation of the development of learning media using multimedia training are expected to be suitable for the use of learners and educators in student disciplinary character training activities at SPN Pontianak because it has gone through development research procedures gradually and appropriately.

After the results of the analysis obtained, the design stage is carried out by adjusting the results of the analysis stage, namely the curriculum used, how the character of students, and the technology used in the SPN environment. If the design stage has been done then the next is the product validated by experts, namely material experts, and media experts. The next stage is a product trial conducted at SPN Pontianak as many as 30 students.

Based on the results of product development according to the advice of validators, the product is tested, the results of product trials that have been improved based on research that has been done, the author obtained responses from educators and students who said that this product is feasible and interesting, then it can be said that the learning media using multimedia training has been completed to produce the final product.

Profile multimedia training

Profile stage of multimedia training development for student disciplinary character training is an activity undertaken to compile and test the readability and feasibility of the initial design of multimedia learning media Training. Profile multimedia training that contains written content, images contained in interactive learning videos are expected to improve student training results at Pontianak state police school. Referring to constructivist learning theory, this interactive learning images and videos can trigger students to build new understandings of the material displayed on the media.

The contents section of the learning media of this Training Program discusses material about student disciplinary character training. The first step is to be given a problem related to the characteristics of the discipline and related to everyday life. Then learners can plan problem solving with the problem, after that carry out problem solving planning, and the last one re-examines the answers we find.

The sub-material discussed in the learning medium of this Training Program is to understand about the character of the discipline in solving problems. Examples of questions and exercises are related to daily life in the hope that learners will better understand the material and be able to apply it to community life.

In other words, educators successfully act as mentors and facilitators in training multimedia activities to understand the character of student discipline. In profile multimedia this training can maximize learners in learning activities in understanding the character material of the discipline. Furthermore, students are able to develop the ability to think systematically, logically and critically, so as to improve learning outcomes and students' understanding in building discipline character.

From the storyboard that has been displayed before, it can be seen that the media developed by the researcher is made interesting by presenting images that match the material of the character of the discipline. Training multimedia profiles that contain text, images, audio can reduce a learner's cognitive burden on the student's disciplinary character training materials. Can be seen from the positive response of learners and posttest values obtained after using the media.

Based on the description above, it can be concluded that the learning media training program in the Pontianak state police school will make the learning process more interesting, for example in terms of display combined with images, and videos in the material. The physical appearance greatly affects the learning and training

*name of corresponding author

Sinkron : Jurnal dan Penelitian Teknik Informatika
Volume 6, Number 1, January 2022
DOI : https://doi.org/10.33395/sinkron.v7i1.11272
e-ISSN : 2541-2019
p-ISSN : 2541-044X

process, the more attractive the media display, the more motivated students are to learn the character of the discipline.

Effectiveness of multimedia training

Effectiveness is a measure that states how far the target (quantity, quality, and time) has been reached, or the greater the percentage of the target achieved, the higher its effectiveness. The effectiveness of the learning process agrees with the path, efforts of techniques and strategies used in achieving objectives optimally, precisely and quickly, actions or efforts that bring results.

The effectiveness of development products in this study was measured by conducting pretests and posttests through t tests implemented against class A students in Pontianak state police schools of 30 students. Before the product is used, each student performs a pretest to find out how to understand the material structure and function of plant parts. Furthermore, it continued to posttest on 30 students after getting training using development products in the form of multimedia training.

As for the results of pretest and posttest based on the index of results criteria completion of the end of the minimum in SPN Pontianak at table 4.11 above stated that the average pretest value of 74.83 and the average posttest value is 90.33.this shows that the postets value is better than the pretendest value. So there is a significant difference to the use of learning media that has been developed.

Significant differences are also evidenced in the results of the t test which explains that t count table. Acquisition of tcount with sig value. (2-tailed) is 0.00 with a confidence level = 0.05, df (n-1) = 30-1 = (29) obtained tcount value (11.934).while to get the value of ttable is with the formula t table = t (a / 2; nk-1) = t (0.025;27)= 2.05183, thus t count>t table which is1.934> 2.05183 means Ho rejected and Ha accepted.

From the results of t arithmetic and t table acquisition Ha is accepted because t count is larger than t table, so it can be concluded that there is a significant difference between before and after using multimedia media discipline character training students get a post -test score of 90.33 is in excellent qualification and is above the KKM value in SPN Pontianak.

Seeing the average grade of the student posttest is greater than the student's pretest grades, it can be taken to conclude that multimedia training of student discipline character is effectively used in the learning process to help students overcome learning difficulties and form new ideas that will be made to make it easier for students and for instructors in the training process at SPN Pontianak.

Then after the researcher conducted an assessment by conducting a paired sample t-test, the next step researchers conducted an Effect size test against multimedia character training discipline. The effect size test was conducted to determine the magnitude of the effectiveness of multimedia disciplined character training against the results of student discipline character training. Based on Table 4.11 above shows that the large effectiveness of the use of multimedia disciplined character training in SPN Pontianak is 1.63 and when adjusted to Effect Size, it has a very strong influence on multimedia character training discipline students on the results of discipline character training. by using effect size for the student discipline character training program is categorized as high. So, it can be concluded that the use of multimedia character training discipline for students at SPN Pontianak has a high effectiveness against the results of character training disciplined students.

This is also in line with Dunne's opinion (Eze, Onwusa, & Nwaosa, 2020; Eze, Onwusa, Olumoko, et al., 2020; Subrun & Subrun, 2015) who said that the effectiveness of the learning process means the success rate of teachers in teaching certain groups of students using certain methods to achieve certain instructional goals.

This is also in line with the opinion according to Jusmawati (2015: 7) learning is said to be effective if at least 60% of the number of learners have a minimum gain of being at moderate or categorized achievements either on the test. In this study, learning is said to be effective if the percentage of students who have gained understanding of well-categorized concepts in the classroom that uses the learning media of the Training Program more than 60% of the number of learners and the increase in understanding that follows learning using multimedia training is higher than the understanding of students using conventional learning.

Regarding the description above, that the effectiveness of learning is the level of success that can be achieved from a particular learning method in accordance with the learning objectives that have been planned. And this can also be interpreted that a learning medium can be said to be effective when meeting criteria, achieving goals, including being able to provide influence, change or can bring results, then effectiveness can be seen from how far the goal is achieved. The more goals achieved, the more effective the multimedia training is used.

*name of corresponding author

e-ISSN : 2541-2019
p-ISSN : 2541-044X

CONCLUSION

The design of video development training program in this research is an activity in the process of character formation of learners' disciplines. Design video development training program in this research using ADDIE model, (analysis, design, development, implementation, evaluation). Based on the assessment by the material expert get a feasibility score with a percentage of 3.66 and is intended into the category of decent / valid. Assessments by media experts get a feasibility score with a percentage of 3.65 which means worthy, and an assessment by a design expert gets a feasibility score with a percentage of 3.65 which means it is worth using in training P program learning at SPN Pontianak. So, it can be concluded in the learning process as an alternative learner during the learning process. From the results of student responses to android-based learning media developed in the percentage of ono to one trials obtained an average result of 92.70 with agreed criteria, in the small group test obtained an average value of all aspects of 93.05 which falls into the category " Strongly agree" and assessment on field trials obtained an average value of all aspects of 95.94 those who fall into the category of "agree" that indicate the response of interested students so that it can be concluded that the video learning media of the discipline character training program developed is agreed to be used in SPN Pontianak. Effectiveness Media video learning training program effectively against the results of discipline character training in SPN Pontianak material with a value of -11.934 table 2.05183 and P Value (0.000) 0.05, then the ha hypothesis is accepted. Furthermore, conducting data analysis using the effect size test was conducted to find out the video effectiveness of the training program asr1.63 and when adjusted to the effect size gives a high influence, so it can be concluded that the use of video learning training programs has a high effectiveness to the results of student training in Pontianak state police school.

REFERENCES

Alodwan, T., & Almosa, M. (2018). The Effect of a Computer Program Based on Analysis, Design, Development, Implementation and Evaluation (ADDIE) in Improving Ninth Graders' Listening and Reading Comprehension Skills in English in Jordan. *English Language Teaching*, *11*(4), 43–51.

Eze, T. I., Onwusa, S. C., & Nwaosa, F. I. (2020). Effectiveness of Computer Tutorial Model, Drill and Practice on Student's Achievement and Retention in Fabrication and Welding Technology in Technical Colleges. *European Journal of Education Studies*, *7*(10), 269–284. https://doi.org/10.46827/ejes.v7i10.3304

Eze, T. I., Onwusa, S. C., Olumoko, B. O., & Sanni, R. A. (2020). Effectiveness of Constructivism Instructional Method on Students' Psychomotor Achievement, Problem-Solving and Retention in Mechanical Engineering Craft Practice in Technical Colleges. *Advances in Social Sciences Research Journal*, *7*(12), 135–148. https://doi.org/10.14738/assrj.712.9258

Mahnun, N. (2018). Implementasi pembelajaran online dan optimalisasi pengelolaan pembelajaran berbasis online di Perguruan Tinggi Islam dalam mewujudkan World Class University. *IJIEM: Kajian Teori Dan Hasil Penelitian Pendidikan*, *1*(1), 29–36.

Mod Istyak Ali. (2020). Importance of Education Technology In TeachingLearning. *Our Heritage*, *68*(1).

Pekkala, K., & van Zoonen, W. (2021). Work-related social media use: The mediating role of social media communication self-efficacy. *European Management Journal*. https://doi.org/10.1016/j.emj.2021.03.004

Piña, A. A. (2018). AECT Instructional Design Standards for Distance Learning. In *TechTrends* (Vol. 62, Issue 3). https://doi.org/10.1007/s11528-018-0282-9

Piña, A., & Harris, P. (2019). Utilizing the AECT Instructional Design Standards for Distance Learning. *Online Journal of Distance Learning Administration*, *22*(2).

Pohan, J. E. (2019). The Development of Inquiry Learning Model on Indonesian Language Lessons. *International Journal for Educational and Vocational Studies*, *1*(4), 335–338.

Putra, D. D., Okilanda, A., Arisman, A., Lanos, M. E. C., Putri, S. A. R., Fajar, M., Lestari, H., & Wanto, S. (2020). KUPAS TUNTAS PENELITIAN PENGEMBANGAN MODEL BORG & GALL. *Wahana Dedikasi : Jurnal PkM Ilmu Kependidikan*, *3*(1). https://doi.org/10.31851/dedikasi.v3i1.5340

Subrun, V., & Subrun, L. (2015). International journal of learning, teaching and educational research : IJLTER. *International Journal of Learning, Teaching and Educational Research*, *13*(4), 41–48. https://www.ijlter.org/index.php/ijlter/article/view/501/222

Tavukcu, T., Kalimullin, A. M., Litvinov, A. V., Shindryaeva, N. N., Abraukhova, V., & Abdikeev, N. M. (2020). Analysis of Articles on Education and Instructional Technologies (Scopus). *International Journal of Emerging Technologies in Learning*, *15*(23). https://doi.org/10.3991/ijet.v15i23.18803

*name of corresponding author