Development of Interactive Videos As a Means of Independent Learning in the Educational Philosophy Course Material Biography and Thinking of Philosophical Leaders

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Abstract

Students of the class of 2023, Department of Educational Technology, State University of Malang, experienced difficulties in studying the Philosophy of Education course because this course has abstract concepts so it requires additional time to study it. The aim of this research is to develop learning media in the form of interactive videos as a means of independent learning. The course used in this development research is Educational Philosophy, material on the biographies and thoughts of philosophical figures. The media development method uses the Sadiman model (2014) which consists of 9 development stages, namely needs analysis, formulation of learning objectives, formulation of material items, formulation of success measuring tools, media script writing, media production, validation, revision, ready-to-use media. The results of validation development by material experts obtained a percentage of 94.7%, while validation by media experts obtained a percentage of 97.5%. Tests were also carried out on students in measuring media satisfaction, obtaining a percentage of 87.5% and the effectiveness of media obtained a percentage of 96.4%. It can be concluded that interactive video media as a means of independent learning in educational philosophy courses, material on the biographies and thoughts of philosophical figures, has proven to be effective and is included in the valid category and is suitable for use in learning.

Keywords: Interactive Videos; Independent Learning; Educational Philosophy

1. Introduction

Education is a conscious and planned effort that aims to create a learning atmosphere and learning process so that students are actively able to develop their potential so that they have spiritual strength in religion, self-control, personality, intelligence, noble morals, and skills that can become provisions for themselves, Society, nation and state (Law No. 20 of 2003). Education is a conscious and systematic effort, carried out by every person who is given the responsibility to be able to influence students to have characteristics and habits that are in accordance with educational ideals (Achmad Munib, 2004).

At this time, learning in schools and institutions is starting to be adapted to developments in information technology, resulting in changes and shifts in the educational paradigm (Hujair, 2009). It has been often found in learning that technology is used as a learning medium. According to Gerlach and Elly (1971), when understood in broad terms, media are people, materials or events that create conditions that enable students to acquire knowledge, skills and attitudes (Audie, 2019). According to Gegne (1970: 1) states that media are various types of components in students that can stimulate them as tools that make learning easier. Meanwhile, Brigs (1970: 1) has the opinion that media is any physical tool that can present messages and stimulate students to learn. Books, films, cassettes, frames, and so on are examples of various types of media in education (Sapriyah, 2019). Research conducted

by Eyler and Giles (in Widharyanto, 2003) proves that the media used by educators influences the effectiveness of learning. Therefore, the use of learning media must be appropriate so that you can achieve learning goals easily. This is a challenge for every educator to continue to innovate in creating learning media with interesting presentations.

Learning activities that need to be improved are expected to occur in learning Philosophy of Education. The Philosophy of Education course is a course with abstract concepts so it requires additional time to understand. The problem that occurs is that it is not enough to just study in the classroom, students need independent learning to improve their understanding of educational philosophy material.

Based on the results of a questionnaire that has been distributed to students class of 2023 at the Department of Technology Education State University of Malang, the problem that occurs apart from the lack of learning activities is that many students do not yet have awareness in increasing their references in studying educational philosophy. Educational philosophy, one of which is studying the biographies and thoughts of philosophical figures, is a challenge for students. Therefore, students need to carry out independent learning activities in order to improve their understanding of the material provided in class. By carrying out independent learning, students can better understand concepts that are not well understood in class, students are able to develop a deep understanding of educational philosophy. Independent learning is able to overcome material that is difficult to understand and students will deepen their knowledge in educational philosophy.

Independent learning according to H. Holec, (1981), that is tocapablen someone who is responsible for the learning process. Independent learning is a learning situation where students have control over the learning process through knowledge and application of appropriate strategies, understanding of tasks, strengthening decision making and learning motivation (Chamot, 1999). Independent learning is any increase in knowledge, skills, achievements, or personal development that a person chooses and carries out through his or her own efforts using any method, in any circumstances, and at any time (Maurice Gibbons, 2002).

If there are problems that occur, an interactive learning media is needed that can help students carry out independent learning activities. This research was conducted to create interactive video media because according to Riyana (2007) learning video media has been widely viewed as being able to make learning more effective and can form students' learning independence (Whatley & Ahmad, 2007). Interactive video is a form of original raw video series that is digitally enriched, enabling viewers to obtain interesting and powerful forms of interactivity and navigation possibilities (Riad Ibrahim Hammoud, 2006).

Based on the description above, interactive video media will be developed that presents educational philosophy courses, biographical material and the thoughts of philosophical figures to facilitate independent learning. It is hoped that the development of this interactive video media can make it easier for students to carry out independent learning activities, especially in understanding educational philosophy courses, educational philosophy courses, biographical material and the thoughts of philosophical figures.

2. Method

This research is development research (*research and development*). Borg and Gall (1983) argue that development research is a research design that aims to develop and validate an educational product. The aim of this development research is to overcome problems in education and increase the effectiveness of the teaching and learning process in the classroom/laboratory (Soenarto in Ainin, 2013). This research was carried out with the aim of producing a product to make it easier for students to carry out independent learning in educational philosophy courses on biographical material and the thoughts of philosophical figures. This development research stage used the Sadiman model approach. Sadiman's development model includes 1) Needs Analysis; 2) Formulation of Goals; 3) Formulation of Material Points; 4) Formulation of Success Measurers; 5) Media Script Writing; 6) Trial; 7) Media Production; 8) Media Validation; 9) Revision. The development of the Sadiman model was chosen because it has development stages that are suitable for developing learning media. This model also makes it easier for developers to control every step.

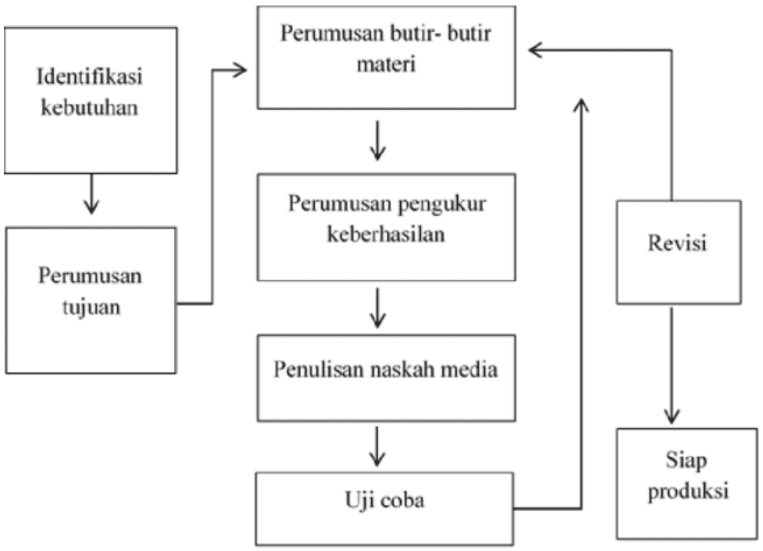

Figure 1 Sadiman Development Model (2014)

This research is aimed at students of the 2023 class of the educational technology department, Faculty of Education, State University of Malang. Data was obtained from experts, lecturers and students. Distributing questionnaires to lecturers and students was carried out at the beginning to find out existing problems in learning and to obtain information before conducting research. The questionnaire given to experts, namely material experts and media experts, was carried out to measure validity so that we could know the appropriateness of using learning media for the learning process. There are two questionnaires for students which aim to measure media satisfaction after carrying out independent learning using media that has been developed and there are *pre test* and *post test* used to measure the effectiveness of a media.

The steps used in collecting data were preparing instruments based on a grid, conducting instrument expert tests, and validity tests using questionnaires given to material experts and media experts, providing *pre-test,* carry out research, provide *post-test,* provide

media satisfaction questionnaires and independent learning questionnaires, after that analyze the data that has been obtained after carrying out the research.

Data from product validity testing results were analyzed using *rating scale.* Analysis of score data obtained from experts based on the results of questionnaires given to material experts and media experts uses the Arikunto (2010) formula:

Table 1. Eligibility Categories

Category	Percentage %	Score	Qualification	Equivalent
A	80% – 100%	4	Valid	Worth it
B	60% – 79%	3	Fairly Valid	Decent Enough
C	40% – 59%	2	Less Valid	Not Worth It
D	< 40%	1	Invalid	Not feasible

Source: (Arikunto, 2010)

Based on the feasibility categories in table 1, the results of the material expert and media expert validity test using the material expert and media expert validation questionnaire can be said to be valid and feasible if the percentage score range is at least 80% - 100%. Measurement of media satisfaction and use of media for independent learning is obtained through data from student responses via questionnaires that will be distributed.

Table 2. Effectiveness Categories

Category	Level of Achievement	Qualification
A	80%-100%	Very effective
B	66%-79%	Effective
C	56%-65%	Effective enough
D	40%-55%	Less effective
AND	30%-39%	Fail

Source: (Arikunto, 2012)

Based on Table 2, measurement of media effectiveness test data is obtained through *pre-test* and *post-tes* and adjusted to the effectiveness category according to Arikunto (2012), The calculation is carried out using the formula (Arikunto, 2012), as follows:

P = The number of students is increasingTotal number of students x 100%

Source: (Arikunto, 2012)

Information:

P = Percentage

100% = Constant

Table 3. N-Gain Value Criteria

A	n-gain > 0,7	(high n-gain)
B	n-gain 0,3 – 0,7	(medium n-gain)
C	n-gain < 0,3	(low n-gain)

Source: (Anisa, 2013)

Increased understanding of media development as a means of independent learning is measured through results *pre-test* before learning is given using media and results *post-test* after use, learning uses media which is adjusted to the measurement criteria for the N-Gain value in Table 3.

3. Results and Discussion

3.1 Result

The results of interactive video development that have been validated by media experts and material experts produce products that are valid and suitable for use, then the products that have been validated are tested on students. The development that has been carried out produces an interactive video product as in the image below:

Figure 2. Initial display of interactive video

Stages of developing interactive video media as a means of independent learning in educational philosophy courses, material on biographies and thoughts of philosophical figures based on the stages of Sadiman's model (2014) as follows:

Needs Analysis

Identification of needs is the initial stage of research in the Sadiman (2014) model. At the needs identification stage, a questionnaire was filled out which was given to lecturers teaching philosophy of education courses and students of the Class of 2023 Department of Educational Technology, State University of Malang. Based on the results of the questionnaire that has been distributed, several problems can be identified, namely: 1) limited time in increasing learning activities in educational philosophy courses because educational philosophy material requires in-depth thinking, 2) Students do not yet have awareness in increasing their references in learning educational philosophy, 3) Students need independent learning, 4) Limited time in creating learning media. Based on the existing problems, it is necessary to develop learning media in the form of interactive videos which are expected to be able to help facilitate the independent learning process so that it can achieve learning objectives in the philosophy of education course, material on the biographies and thoughts of philosophical figures.

Goal Formulation

The research aims to produce video media products for learning that are suitable for class groups to use in the form of interactive videos that can make it easier for students to carry out independent learning in educational philosophy courses on biographical material and the thoughts of philosophical figures. The formulation of this objective is adapted to the existing curriculum in the Department of Educational Technology in educational philosophy courses, material on biographies and thoughts of philosophical figures. The SCPL is based on biographical material and thoughts of philosophical figures, namely study philosophy, philosophy of science, and educational science through a critical, rational, and logical reasoning process to carry out professionalism duties in the field of education and CPMK on biographical material and thoughts of philosophical figures, namely analyzing the scope of philosophy, the scope of science, and philosophical thinking and which becomes a learning experience for students, namely students are able to identify philosophical figures in various countries, students are able to tell the history of philosophical figures, and shows the thoughts of each philosophical figure.

Formulation of Material Items

The material or content of the main material must be in accordance with the expected learning objectives. The material provided must be dynamic, meaning it can change from time to time, not just come from one source.

In order to achieve a learning objective, the developer holds discussions with lecturers who teach philosophy of education courses on material about biographies and thoughts of philosophical figures. The result of the approval of the specified material is that it contains the biography of each figure and the thoughts of each philosophical figure.

Formulation of Success Measurements

The stages of formulating success indicators aim to measure Whether interactive video media is feasible or not in helping students facilitate the independent learning process, an instrument in the form of a questionnaire was created based on aspects of independent learning. As for measuring the quality and validity of interactive video media, an instrument in the form of a questionnaire was used. This questionnaire was submitted to media experts, material experts and students. Developers use validation sheets as validity by material experts, media experts, and students.

Media Script Writing

The script writing stage for interactive video media can make it easier and become a reference in producing interactive video media. The video script writing stage begins with identifying ideas. In instructional development, topics and ideas are formulated in specific learning intentions, these ideas are then written down in the form of a script and produced in the form of an interactive video. The following is the component design:

a. Preparation of ideas and ideas originating from various sources regarding biographical material and thoughts of philosophical figures which will be included in interactive videos

b. The preparation of the manuscript provides an outline of the biographical material and thoughts of philosophical figures

c. Writing a synopsis that focuses on describing how the video will be made and how long it will be set

d. Writing a treatment that briefly presents the flow in a descriptive manner, including the selection of images, the text to be displayed, and the audio to be added

e. Writing scripts based on treatments that have been created by paying attention to the correct language rules to be used as a learning medium.

Media Production

The media production stage is the stage in creating interactive video media. This stage is the implementation stage of the script that has been created and then compiled into interactive video media. Interactive video media as a means of independent learning in educational philosophy courses, biographical material and thoughts of future philosophical figures implemented to students of the Class of 2023, Department of Educational Technology, State University of Malang, it was created using web-based applications, namely Powtoon and Edpuzzle, to make the video into an interactive video. The developer carries out the production stages which are described as follows:

1. The preparation stage is the stage where you prepare the application for editing the video. In this development, researchers used a web-based application, namely Powtoon.
2. Open the powtoon application via chrome web.
3. Prepare material from various valid sources.
4. Looking for the elements you need for animated videos.
5. Create scripts and storyboards.
6. Create and edit animated videos.
7. Add text.
8. Enter voice dubbing.
9. Display the video to see how the images, text and audio match.
10. Exporting videos.

Media Validation

The next stage that is carried out after producing the media is validating the interactive video media. The media that has been developed is validated by material experts and media experts who are lecturers at the Department of Educational Technology, State University of Malang. The following are the validation results from material experts and media experts:

1. Materials Expert

The material expert consists of 1 lecturer from the Educational Technology department, namely Dr. Deka Dyah Utami, M.Pd., the indicators that are aspects of observation in the interactive video are presented in the table below:

Table 4. Material Expert Validation Results

No.	Validated aspects	Alternative Answers				Score		Percentage %
		SS	S	KS	TS	∑X	∑Xi	
		(4)	(3)	(2)	(1)			
	Title							
1.	The title can be understood well	√				4	4	100%
2.	The title contains the user's target precisely	√				4	4	100%
3.	The title uses grammar that is in accordance with the KBBI	√				4	4	100%
	Material							
4.	Learning objectives are listed	√				4	4	100%
5.	Learning objectives are in accordance with the material	√				4	4	100%
6.	The material uses standard grammar	√				4	4	100%
7.	There are communicative sentences that can make students active	√				4	4	100%
8.	The sentences used can be understood clearly	√				4	4	100%
9.	The terms used are easy to understand		√			3	4	75%
10.	The images used correspond to the material displayed		√			3	4	75%
11.	The data and facts in the material are accurate		√			3	4	75%

12.	The videos displayed are in accordance with the material	√				4	4	100%
13.	The quality of the learning videos is quite good and clear		√			3	4	75%
	Quiz							
14.	The time for completing the questions is appropriate	√				4	4	100%
15.	The difficulty level of the questions has been sorted and arranged	√				4	4	100%
16.	The feedback you get when answering questions is easy to understand and in accordance with the material provided	√				4	4	100%
17.	The choice of image in the question is correct	√				4	4	100%
18.	The audio in the quiz is sufficient to support students in working on the questions	√				4	4	100%
19.	Conformity of results and evaluation	√				4	4	100%
	Amount					72	76	1725
	Rate-rate							**94.7**

From the data presentation above, there are 15 items (SS) with a score per item (4) and 4 items selected (S) with an item score (3). So the percentage results for each component are as follows:

Percentage = ∑X∑Xi X 100%

Percentage = 7276 X 100%

Percentage = 94.7%

Figure 3 shows the results of the material feasibility test analysis carried out by material experts, overall they got good results with an average value **94,7%** of the expected value of

100% which consists of 19 question items. Based on the results of the analysis carried out on the material in the interactive video, it is included in the category **A (80% - 100%) Valid and Feasible criteria** used in learning.

2. Members of the Media

Media experts consist of 1 lecturer at the Department of Educational Technology, State University of Malang, named Dr. Citra Kurniawan, S.T, M.M. The indicators that are aspects of interactive video observation according to media experts can be presented in the following table:

Table 5. Media Expert Validation Results

No.	Validated aspects	Alternative Answers				Score		Percentage %
		SS	S	KS	TS	ΣX	ΣXi	
		(4)	(3)	(2)	(1)			
	Display and Sound							
1.	Letter size according to proportion	√				4	4	100%
2.	The color of the letters matches the background color	√				4	4	100%
3.	The typeface can be read clearly	√				4	4	100%
4.	Images and text are well organized	√				4	4	100%
5.	The image quality is good and attractive	√				4	4	100%
6.	The sound is clear and easy to understand	√				4	4	100%
7.	The graphics are correct	√				4	4	100%
8.	The animation quality is in the good category	√				4	4	100%
	Materials and Quizzes							
9.	Use communicative language	√				4	4	100%
10.	Use sentences that comply with the KBBI	√				4	4	100%
11.	The learning objectives in learning media are clear		√			3	4	75%
12.	Coverage of learning media content in		√			3	4	75%

	accordance with learning objectives							
13.	Delivery of learning media increases students' interest in learning	√				4	4	100%
14.	The quizzes given are in accordance with the learning objectives	√				4	4	100%
15.	The quizzes given are in accordance with the learning objectives	√				4	4	100%
16.	The quizzes given provide good feedback	√				4	4	100%
17.	The duration of the animated video is appropriate	√				4	4	100%
	Functions and Benefits							
18.	Media can be used as a source for independent learning	√				4	4	100%
19.	User friendly media (*user friendly*)	√				4	4	100%
20.	Easy to manage (*maintenable*)	√				4	4	100%
	Amount					78	80	1950
	Rate-rate							**97.5**

From the data presentation above, there are 18 items (SS) with a score per item (4) and 2 items selected with (S) with an item score (3). So the percentage results for each component are as follows:

Percentage = ∑X∑xi x 100%

Percentage = 7880 x 100%

Percentage = 97.5%

Based on table 5. the results of the product feasibility test analysis carried out by media experts, overall the results were good with an average value **97,5 %** of the expected value of 100% which consists of 20 statement items. Based on the results of the analysis, interactive

video media is included in the category **A (80% - 100%) with Valid and Feasible criteria** used in learning.

Trials

Media that has been validated by experts, namely material experts and media experts based on the assessment of material experts and media experts, is carried out in a trial phase for students class of 2023, Department of Educational Technology, State University of Malang. The trial phase is carried out in 3 stages, namely trial *one to one*, small group trials, and field group trials, the results of the trial phase are presented as follows:

Table 6. Trial Results *One to One*

Statement	Number of Voters				
	SK	K	B	SB	%
1. The title is understandable				2	100
2. The writing is large and readable				2	100
3. The text color matches the background color				2	100
4. The picture is quite interesting				2	100
5. Good image quality				2	100
6. The language used is easy to understand				2	100
7. The images are quite attractive and the image quality is good				2	100
8. The difficulty level of the questions on the quiz has been completed				2	100
9. Quiz completion time is quite good				2	100
10. The shape and size of the writing is clearly visible				2	100
11. The color of the text matches the background theme color				2	100
12. The picture matches the description				2	100
13. The terms used are easy to understand				2	100
14. The audio can be heard clearly				2	100
15. The learning videos displayed are in accordance with the material				2	100
16. Images and writing are neatly arranged				2	100
17. Materials and quizzes are displayed in sequence				2	100
18. Increase learning motivation and make it easier to understand the material				2	100
19. Arouse curiosity to learn the material			1	1	90
20. Makes independent learning easier				2	100
Total					**99,5**

Based on Table 6. in a one to one trial carried out by 2 students class of 2023, the Department of Educational Technology, State University of Malang got results **99,5%** of the expected results 100%. From the results of the media satisfaction analysis carried out by students included in **category A (80% - 100%) with Valid and Feasible criteria** used in learning.

Table 7. Results of Small Group Trials

Statement	Number of Voters				
	SK	K	B	SB	%
1. The title is understandable			2	4	91,7
2. The writing is large and readable			2	4	91,7
3. The text color matches the background color			2	4	91,7

4.	The picture is quite interesting	2	4	91,7
5.	Good image quality	2	4	91,7
6.	The language used is easy to understand	2	4	91,7
7.	The images are quite attractive and the image quality is good	2	4	91,7
8.	The difficulty level of the questions on the quiz has been completed	2	4	91,7
9.	Quiz completion time is quite good	2	4	91,7
10.	The shape and size of the writing is clearly visible	2	4	91,7
11.	The color of the text matches the background theme color	2	4	91,7
12.	The picture matches the description	2	4	91,7
13.	The terms used are easy to understand	2	4	91,7
14.	The audio can be heard clearly	2	4	91,7
15.	The learning videos displayed are in accordance with the material	2	4	91,7
16.	Images and writing are neatly arranged	2	4	91,7
17.	Materials and quizzes are displayed in sequence	2	4	91,7
18.	Increase learning motivation and make it easier to understand the material	2	4	91,7
19.	Arouse curiosity to learn the material	2	4	91,7
20.	Makes independent learning easier	2	4	91,7
	Total			**91,7**

Based on Table 7. In a small group trial carried out by 6 students class of 2023, the Department of Educational Technology, State University of Malang got results **91,7%** of the expected results 100%. From the results of media satisfaction analysis carried out by small groups included in **category A (80% - 100%) with Valid and Feasible criteria** used in learning.

Table 8. Field Trial Results

	Statement	**Number of Voters**				
		SK	K	B	SB	%
1.	The title is understandable		1	12	15	87,5
2.	The writing is large and readable		1	11	16	88,4
3.	The text color matches the background color			12	16	89,2
4.	The picture is quite interesting			10	18	91,07
5.	Good image quality			11	17	90,1
6.	The language used is easy to understand			15	13	86,6
7.	The images are quite attractive and the image quality is good			13	15	88,4
8.	The difficulty level of the questions on the quiz has been completed		2	16	10	82,1
9.	Quiz completion time is quite good		1	12	15	87,5
10.	The shape and size of the writing is clearly visible		3	11	14	84,8
11.	The color of the text matches the background theme color			11	17	90,1
12.	The picture matches the description			13	15	88,4
13.	The terms used are easy to understand		1	13	14	86,6
14.	The audio can be heard clearly		8	10	10	76,7
15.	The learning videos displayed are in accordance with the material			9	19	91,9
16.	Images and writing are neatly arranged		2	11	15	86,6
17.	Materials and quizzes are displayed in sequence			12	16	89,2
18.	Increase learning motivation and make it easier to understand the material		1	11	16	88,4
19.	Arouse curiosity to learn the material			14	14	87,5
20.	Makes independent learning easier			11	17	90,1

	Total	**87,5**

Based on the results of Table 8, the results of field trials carried out by 28 students of the class of 2023, the Department of Educational Technology, State University of Malang, obtained results **87,5%** of the expected results 100%. From the results of the media satisfaction analysis carried out by the field group, it is included in the criteria **A (80% - 100%) Valid and Appropriate** used in learning.

Table 9. Trial Results *One to One*

	Statement	**Number of Voters**				
		TS	**KS**	**S**	**SS**	**%**
1.	I'm sure that I have tocapablen to complete academic assignments after learning using interactive videos				2	100
2.	I am confident that I can understand the biographical material and thoughts of philosophical figures well after learning to use interactive videos				2	100
3.	I feel confident in preparing effective study plans				2	100
4.	I believe that I can develop the study skills necessary to achieve my academic goals			1	1	87,5
5.	I feel more confident in learning new material after using interactive videos as a learning resource			1	1	87,5
6.	I regularly plan time to watch interactive videos			1	1	87,5
7.	I can maintain concentration while watching interactive videos			1	1	87,5
8.	I can evaluate the effectiveness of interactive videos that have been watched			1	1	87,5
9.	With interactive videos I am motivated when I feel lazy about studying				2	100
10.	I practice the material learned from interactive videos as part of independent learning				2	100
11.	I feel satisfied in using interactive videos as an independent learning tool			1	1	87,5
12.	I feel more motivated to do independent learning when using interactive videos			1	1	87,5
13.	I feel interactive videos can help in achieving learning goals			1	1	87,5
14.	I took the initiative to create my own study schedule and included interactive videos as one of the main learning resources			1	1	87,5
15.	I actively search for relevant video material to improve my understanding of a learning topic			1	1	87,5
16.	I plan to use interactive videos as an independent learning tool to deepen my understanding of the material being studied			1	1	87,5
17.	I use interactive videos as a means to overcome difficulties in understanding difficult material				2	100
18.	I take steps to find solutions when experiencing problems in accessing or understanding videos			1	1	87,5
19.	I take full responsibility for my learning process and use videos as the main tool to achieve my learning goals				2	100
20.	I feel a responsibility to watch interactive videos fully and focused			1	1	87,5
21.	I actively note down important things I learn from interactive videos			1	1	87,5
	Total					91,7

Based on Table 9. Test results *one to one* which was carried out by 2 students from the Department of Educational Technology, State University of Malang, got results **91,7%** of the

expected results 100%. From the results of the analysis, interactive video media as a means of independent learning carried out by one to one groups is included in the criteria **A (80% - 100%) Valid and Appropriate**.

Table 10. Results of Small Group Trials

	Statement	Number of Voters				
		TS	KS	S	SS	%
1.	I'm sure that I have tocapablen to complete academic assignments after learning using interactive videos			2	4	91,7
2.	I am confident that I can understand the biographical material and thoughts of philosophical figures well after learning to use interactive videos			2	4	91,7
3.	I feel confident in preparing effective study plans			3	3	87,5
4.	I believe that I can develop the study skills necessary to achieve my academic goals			3	3	87,5
5.	I feel more confident in learning new material after using interactive videos as a learning resource			2	4	91,7
6.	I regularly plan time to watch interactive videos	1		2	3	79,17
7.	I can maintain concentration while watching interactive videos			3	3	87,5
8.	I can evaluate the effectiveness of interactive videos that have been watched		1	2	3	70,9
9.	With interactive videos I am motivated when I feel lazy about studying	1		2	3	66,7
10.	I practice the material learned from interactive videos as part of independent learning		1	2	3	70,84
11.	I feel satisfied in using interactive videos as an independent learning tool			3	3	87,5
12.	I feel more motivated to do independent learning when using interactive videos			3	3	87,5
13.	I feel interactive videos can help in achieving learning goals			2	4	91,7
14.	I took the initiative to create my own study schedule and included interactive videos as one of the main learning resources	1		2	3	66,7
15.	I actively search for relevant video material to improve my understanding of a learning topic			2	4	91,7
16.	I plan to use interactive videos as an independent learning tool to deepen my understanding of the material being studied			2	4	91,7
17.	I use interactive videos as a means to overcome difficulties in understanding difficult material			2	4	91,7
18.	I take steps to find solutions when experiencing problems in accessing or understanding videos		1	2	3	70,84
19.	I take full responsibility for my learning process and use videos as the main tool to achieve my learning goals			3	3	87,5
20.	I feel a responsibility to watch interactive videos fully and focused		1	2	3	70,84
21.	I actively note down important things I learn from interactive videos	1		2	3	66,7
	Total					78,17

Based on table 10, the results of small group trials carried out by 6 students of the Department of Educational Technology, State University of Malang **78,17%** of the expected results 100%. From the results of the analysis, interactive video media as a means of

independent learning carried out by one to one groups is included in the criteria **B (60% - 79%) Fairly Valid and Fairly Appropriate**

Table 11. Field Group Trial Results

	Statement	Number of Voters				
		TS	KS	S	SS	%
1.	I'm sure that I have tocapablen to complete academic assignments after learning using interactive videos			12	16	89,2
2.	I am confident that I can understand the biographical material and thoughts of philosophical figures well after learning to use interactive videos			12	16	89,2
3.	I feel confident in preparing effective study plans		1	15	12	84,8
4.	I believe that I can develop the study skills necessary to achieve my academic goals			15	13	86,6
5.	I feel more confident in learning new material after using interactive videos as a learning resource			14	14	87,5
6.	I regularly plan time to watch interactive videos		3	12	13	78,5
7.	I can maintain concentration while watching interactive videos		3	11	14	84,8
8.	I can evaluate the effectiveness of interactive videos that have been watched		2	16	10	85,7
9.	With interactive videos I am motivated when I feel lazy about studying		2	11	15	86,6
10.	I practice the material learned from interactive videos as part of independent learning			13	15	88,3
11.	I feel satisfied in using interactive videos as an independent learning tool	1		10	17	89,2
12.	I feel more motivated to do independent learning when using interactive videos		2	13	13	83,03
13.	I feel interactive videos can help in achieving learning goals			14	14	87,5
14.	I took the initiative to create my own study schedule and included interactive videos as one of the main learning resources		1	14	13	85,7
15.	I actively search for relevant video material to improve my understanding of a learning topic		1	13	14	86,6
16.	I plan to use interactive videos as an independent learning tool to deepen my understanding of the material being studied		1	13	14	86,6
17.	I use interactive videos as a means to overcome difficulties in understanding difficult material			14	14	87,5
18.	I take steps to find solutions when experiencing problems in accessing or understanding videos			13	15	88,3
19.	I take full responsibility for my learning process and use videos as the main tool to achieve my learning goals		2	9	17	88,3
20.	I feel a responsibility to watch interactive videos fully and focused			15	13	86,6
21.	I actively note down important things I learn from interactive videos		5	11	12	81,25
	Total					86,3

Based on Table 11, the results of small group trials carried out by 6 students of the Department of Educational Technology, State University of Malang **86,3%** of the expected results 100%. From the results of the analysis, interactive video media as a means of

independent learning carried out by one to one groups is included in the criteria **A (80% - 100%) Valid and Appropriate.**

Table 12. Results *Pre-Test* and *Post Test* Independent Learning

No.	No	Pre-test	Post-test	Information		Enhancement
				Increased	Not yet	
1	Respondent 1	55	75	√		20
2	Respondent 2	30	55	√		25
3	Respondent 3	50	70	√		20
4	Respondent 4	70	80	√		10
5	Respondent 5	70	95	√		25
6	Respondent 6	65	90	√		25
7	Respondent 7	70	85	√		15
8	Respondent 8	60	70	√		10
9	Respondent 9	80	70		√	-10
10	Respondent 10	60	85	√		25
11	Respondent 11	60	80	√		20
12	Respondent 12	30	80	√		50
13	Respondent 13	60	80	√		20
14	Respondent 14	50	75	√		25
15	Respondent 15	60	90	√		30
16	Respondent 16	70	90	√		20
17	Respondent 17	70	80	√		10
18	Respondent 18	65	95	√		30
19	Respondent 19	70	80	√		10
20	Respondent 20	75	90	√		15
21	Respondent 21	50	65	√		15
22	Respondent 22	50	80	√		30
23	Respondent 23	80	100	√		20
24	Respondent 24	75	80	√		5
25	Respondent 25	30	80	√		50
26	Respondent 26	80	90	√		10
27	Respondent 27	25	70	√		45
28	Respondent 28	80	80	√		0
Total value		1690	2260			
Grade Average		60,36	80,71			
Total Increase						570
Percentage Increase			570/2800 x 100% =			20,35%
N-Gain						1,06

Based on table 12. The results of presenting data on independent learning of 28 students of the Department of Educational Technology class 23, State University of Malang in the biographical material and thoughts of philosophical figures can be analyzed and interpreted. 27 students experienced an increase in grades. *pre test* the *post test* after carrying out independent learning using interactive video media, 1 student stated that he had not improved

Calculating Values *Pre Test* and *Post Test*

Based on results data *pre test* and *post test* students regarding educational philosophy courses, material on the biographies and thoughts of these philosophical figures, to determine the effectiveness of using interactive video media as a means of independent learning for class 23 students of the Department of Educational Technology, State University of Malang, calculations were carried out using the formula (Arikunto, 2001), as follows :

P The number of students increasesTotal number of students x 100%

Source: (Arikunto, 2001)

Information:

P = Percentage

100% = Constant

The calculations are as follows:

= 2728 x 100%

= 96,42 %

Based on the processing of the learning completeness data above, the overall percentage result obtained is **96,42%.** Based on data interpretation, it is included in the criteria **A with percentage (80% - 100%)** then this media includes effective qualifications and can be a media that can help implement independent learning in educational philosophy courses on biographical material and thoughts of philosophical figures. Apart from that, there was also an increase in the average score from 60.36 to 80.71 and the total increase in scores for all students was 570 with an increase percentage of 20.35%.

Calculating N-Gain

This calculation aims to obtain results from increasing understanding of biographical material and thoughts of philosophical figures based on the results *pre test* and *post test* with the following formula:

Gain = (Post Test Score-Pre Test Score)(Maximum Score-Post Test Value) x 100%

= 2260 -16902800-2260 x 100%

= 570540 x 100%=1,06 = 106%

Data processing and N-Gain testing can result in an increase in the gain value of **1,06**. Based on data interpretation, data processing and the N-Gain test are included in the criteria **A (N-Gain > 0,7)** which means increasing understanding of the material in the use of interactive video media as a means of independent learning in educational philosophy courses, the biographical material and thoughts of philosophical figures are relatively high.

Revision

The final stage of the Sadiman (2014) model is revision. Products that have been validated by media experts and material experts are revised based on input provided by the experts. This is done to perfect a media that has deficiencies or problems. Based on validation from media experts and material experts, there are no suggestions for improvements or revisions to the media so that it can be implemented by students.

3.2 Discussion

Video media in learning is media that presents audio and visuals containing messages or information in the form of concepts, principles, procedures, theories, application of knowledge as a tool in providing understanding of learning material (Riyana, 2007). Learning videos have been widely viewed because they are able to make learning more effective and can form students' learning independence (Whatley & Ahmad, 2007).

In research regarding the use of video media, it can indeed increase learning independence, but not in assessing their understanding (Singer, L. M., & Alexander, 2017). Interactive multimedia is designed to direct students' attention so they are able to focus on the message conveyed, apart from that, students are also able to interact directly with the learning process (Sudarman, Sugeng, 2018). These various components (text, audio, video, animation, simulation, or photos) can be combined into interactive media which can be effective when applied in learning (Sutopo, 2003; Samsudin, A., 2008; Witri, 2018). This is relevant to the aim of this research, namely developing valid media as a means of independent learning in educational philosophy courses, material on the biographies and thoughts of philosophical figures.

Based on the results of feasibility validation which has been carried out by material experts, media experts, and student trials. Obtained from material experts was 94.7% in the valid and appropriate category, media experts were 97.5% in the valid and appropriate category. Measuring media satisfaction in trials *one to one* obtained 99.5% with valid and feasible criteria, small group trials obtained 91.7% with valid and feasible criteria and field group trials obtained 87.5% valid and feasible. Media trials as independent learning carried out by students during trials *one to one* obtained 99.5% with valid and feasible criteria, small group trials obtained 91.7% with valid and feasible criteria, and field group trials obtained 87.5% with valid and feasible criteria. On measurements *pre test* and *post test* in measuring media effectiveness carried out by students, they obtained a result of 96.42% in the effective and increasing categories *pre test* the *post test* through the N-Gain calculation, namely 1.06 in the high category. It can be concluded that interactive video media can be used as a means of independent learning.

This development is in line with the statement Gibbons (2002) said that all independent learning approaches require the development of new teaching materials. When students begin to learn independently, the function of the class must also be changed so that students capable move freely to study individually, have discussions with each other, or in groups. According to Niswa (2012), interactive video is a learning media that contains practical guidance on target which is presented through audio-visual presentations (images and sound) which are equipped with clear and easy to understand Indonesian language guides and are designed with an autorun program, so that users can learn. independently at any time and will support in deepening the material (Wardani, 2018). Gibbons (2002) said that all independent learning approaches require the development of new teaching materials. When students begin to learn independently, the function of the class must also be changed so that students capable move freely to study individually, have discussions with each other, or in groups. The advantages of interactive videos are that they make it easier for an educator to convey messages during the teaching and learning process so that it is easier for students to understand the material,

especially in distance learning, facilitate the learning process between educators and students, and have a positive influence on the progress of students' knowledge.

4. Conclusion

Based on the results of the research carried out, it can be concluded that in developing interactive videos as a means of independent learning in educational philosophy courses, material on the biographies and thoughts of philosophical figures has been carried out. Through the needs analysis stage by distributing questionnaires to lecturers and students, it was identified that learning philosophy in education requires more time to understand philosophy learning material, so interactive videos have been developed as an independent learning tool that has been validated by material experts and media experts. The results obtained from the validation of material experts were 94.7% and media experts, namely 97.5% of the expected results, 100%, meaning they were included in criterion A (80% - 100%) Valid and Appropriate. Meanwhile, in measuring media as a means of independent learning that has been implemented for students, the results were 86.3%, which is included in category A (80% - 100%) Valid and suitable for use in learning.

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