

CONSTRUCTION OF GRAPHIC DESIGN INTERACTIVE CD FOR LEARNING ACHIEVEMENT USING FREQUENCY DISTRIBUTION OF RESPONDENTS

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ABSTRACT: Preliminary observation by the author demonstrated that the learning achievement of graphic design of the students at SMK of Dharmasraya Regency was relatively low. It was allegedly due to the poor support from the media for learning achievement. This research aims to analyzing the need for the construction of the Graphic Design interactive CD for the improvement of the students' learning achievement in the entrepreneurship product-oriented graphic design subject. Based on the analysis result of the student needs, from 30 respondents, it was found that 22 respondents (73.33%) answered that they were highly agreed with the development of the Graphic Design interactive CD and the Learning Modul of the entrepreneurship product-oriented Graphic Design and 8 respondents (26.67%) agreed. The other factors, some of school still has lack facilities, such as lack computer or lack in focus. The purpose of these facilities to make the student interested in learning process. Based on the explanation above in this paper will discussed about construction of graphic design interactive CD for learning achievement using frequency distribution of respondents.

Keywords: Graphic Design, Interactive CD, Entrepreneurship Product

1. INTRODUCTION

Now Indonesia with the total population of 220 million people needs at least 4.4 million entrepreneurs. However, there are only 400 thousand entrepreneurs or less than 1% of total population. According to David McClelland, a country can be developed if the number of entrepreneurs reaches 2% from total population. The United States of America, for example, has 11.5% entrepreneurs of its total population. While Singapore has 7.2% entrepreneurs of its total population so that the small country is more developed. To create 4.4 million entrepreneurs in Indonesia, it takes a period of 25 years. [1].

Considering the need for new entrepreneurs to place Indonesia as a developed country and in view of the estimated time to reach the target, it is important now to take serious measures to increase the number of new entrepreneurs in a relatively short time. One of the measures that can be taken is producing new entrepreneurs taken from the graduates of High Vocational School or Sekolah Menengah Kejuruan (SMK) [1], [2].

Indonesia as a developing country continuously implements the development of any life aspects. To make it comes true, any efforts need to be taken in supporting such target, including by improving human resource through education [3]. Computers have become one of the key instruction technologies in education, especially in light of what we know about the 21st century learner [4].

2. LITERATURE REVIEW

The use and terminology of entrepreneurship are varied in Indonesia. Therefore, this variation sometimes triggers endless disagreement. If we are trapped into the variation of the definition, the result that we will involve in semantic problematic. In this learning we will not direct the subject matter to that way; however, by presenting some definitions and concepts of entrepreneurship as argued by some experts. At least to enrich our understanding about the definitions and concepts of entrepreneurship [2].

Entrepreneurship is the equivalent of entrepreneurship in English, *unternehmer* in German, *ondernemen* in Dutch. While in Indonesia given the name of "Kewirausahaan". Entrepreneurship itself actually originated from the French language is "entreprende" which means adventurers, creators and business managers. This term describes entrepreneurs who are able to move economic resources from low productivity levels to higher levels [4].

Argues that the learning media used in the learning activities can influence the learning effectiveness. Originally, the learning media only functions as an aid for the lecturers to teach, what is used is a visual aid. At about the mid of the twentieth century, visual usage is equipped with the use of the audio tool, resulting in the emergence of audio-visual tools [3], [6].

Learning materials such as wild animals, human organs, light properties, planets and the other are generally difficult to find concretely, in this case learning media can be used as a means to replace it,

although in the form of books, films, videos, slides, miniatures, or form of images/photos presented in audio, visual, and audiovisual.[7], [8], [9], [12].

3. RESULT AND DISCUSSION

Based on the purpose of the research, the following are the descriptions of the need analysis for the Graphic Design learning oriented to entrepreneurship products in form of a table of frequency distributions.

3.1 Need for Computer and Learning Media

Based on the distribution of the survey score analysis of the need for the development of the entrepreneurship product-oriented graphic design learning at SMK of Dharmasraya Regency, some results were found as shown in the table below:

Table 1 Frequency Distribution of Respondents having Computers and Laptops

Statement	Answers	Frequency	%
Do you have computer or laptop?	Yes	22	73.33
	No	8	26.67
Total		30	100,0

Based on the data above, it is shown that from 30 respondents, 22 respondents (73.33%) have laptop/computer and the remaining 8 respondents (26.67%) do not own laptop/computer.

The table below displays the data about frequency of the students using computers.

Table 2 The Frequency Distribution of Respondents frequently using Computers

Statement	Answers	Frequency	%
Where do you frequently use a computer?	Home	5	16.67
	School	24	80.00
	Warnet	1	3.33
Total		30	100,00

Based on the data above, it is seen that of total 30 respondents, 5 respondents (16.67%) were found to frequently use a computer at their home, 24 respondents (80.00%) frequently used a computer at school and only 1 respondent (3.33%) used a computer at warnet. Table 3 below displays the data about how long the students have used computers:

Based on the data above, it is demonstrated that of total 30 respondents, 17 respondents (56.67%) have used the computer for the 0-1 year, 8 respondents (26.67%) have used it for 2 – 5 years, and 5 respondents (16.67%) for 6-10 years. The following table shows the data about how long the students have used a computer in a day:

Table 3 The Frequency Distribution of How Long the Students Have Used Computers

Statement	Answers	Frequency	%
How Long Have You Used Computer?	0-1 Year	17	56.67
	2-5 Year	8	26.67
	6-10 Years	5	16.67
	>10 Years	0	0
Total		30	100,00

Table 4 The Frequency Distribution of How Long the Students have Used Computer in a Day

Statement	Answers	Frequency	%
How long the student have used computer in a day	1 hour/day	1	3.33
	2 hours/day	2	6.67
	3 hours/day	12	40.00
	4 hours/day	4	13.33
	5 hours/day	9	30.00
	6 hours/day	2	6.67
Total		30	100,00

Based on the data above, it is shown that of 30 respondents, 1 respondent (3.33%) used computer for 1 hour/day, 2 respondents (6.67%) used computer for 2 hours/day, 12 persons (40.00%) used computer for 3 hours/day, 4 respondents (13.33%) used computer for 4 hours/day, 9 respondents (30.00%) used computer for 5 hours/day, and 2 respondents (6.67%) used computer for 6 hours/day. Meanwhile, the students used a computer in daily activities for such needs as making an assignment, searching for school tasks at the internet, learning to run the computer applications at school and playing games. The data as shown in the table below demonstrate whether the school has been equipped with the focus facilities:

Table 5 The Frequency Distribution of the School already has Infocus Facilities

Statement	Answers	Frequency	%
Is your school already equipped with the infocus facility?	Yes	30	100.00
	No	0	0.00
Total		30	100,00

Based on the data as shown in Table 5 above, of total 30 respondents, total 30 respondents (100.00%) answered that the school has been equipped with the focus facility. Table 6 below displays the data about whether the teachers have ever used laptop/computer in learning process:

Table 6 The Frequency Distribution of Computer Use in Learning

Statement	Answers	Frequency	%
Have your teachers ever used a computer in learning activity?	Yes	30	100.00
	No	0	0.00
Total		30	100,00

Based on the data above, it is shown that of total 30 respondents, 30 respondents (100.00%) answered that the teachers have used laptop/computer in learning activity. The following table shows the data of how often the teachers used laptop/computer in learning:

Table 7 The Frequency Distribution of Computer Use in Learning

Statement	Answers	Frequency	%
How often do your teachers use laptop/computer in the learning	Every day	22	73.3
	Sometimes	8	26.67
	Never	0	0.00
Total		30	100.00

Based on the data above, it is shown that of 30 respondents, 22 respondents (73.33%) answered every day and 8 respondents (26.67%) answered sometimes. Table 8 below displays the data about whether the teachers have ever used multimedia in the learning process:

Table 8 The Frequency Distribution of the teachers have ever used multimedia in the learning process

Statement	Answers	Frequency	%
Have your teachers ever used multimedia in the learning process	Yes	29	96.67
	No	1	3.33
Total		30	100.00

Based on the data, as shown in the table above, it is seen that of total 30 respondents, 29 respondents (96.67%) answered 'Yes' and 1 respondent (3.33%) answered 'No'. For the time being the teachers have used a computer only for the

powerpoint display equipped with the focus merely to facilitate the delivery of information. The following table displays the data of using a computer, multimedia, graphic design materials, and learning media:

Table 9 The Frequency Distribution of Using Computer, Multimedia, Graphic Design Materials and Learning Media

Statement	Answers	Frequency	%
In this global era, is the use of computer a requirement in life	Yes	28	93.33
	No	2	6.67
The use of multimedia in the learning process will enable the learning to be more comfortable	Yes	30	100.00
	No	0	0.00
You find any difficulty in the Graphic Design materials	Yes	28	93.33
	No	2	6.67
Is the teacher's explanation enough for you to understand the graphic design materials	Yes	8	26.67
	No	22	73.33
Have your teacher ever used media in explaining the materials	Yes	30	100.00
	No	0	0.00
Is in your opinion necessary to use multimedia in learning the graphic design materials	Yes	29	96.67
	No	1	3.33
Are you agreed if the learning process uses multimedia to enable to master the concept of the graphic design materials	Yes	30	100.00
	No	0	0.00

Based on the data above, it is known that from 30 respondents, 28 respondents (93.33%) answered 'Yes' concerning the use of the computer as a need in life and 2 respondents (6.67%) answered 'No'.

All 30 respondents (100.00%) answered 'Yes' about the use of multimedia in the learning process will a learning activity becomes more comfortable (not boring). Of total 30 respondents, 28 respondents (93.33%) answered 'Yes' concerning the students' difficulty at the Graphic Design materials and 2 respondents (6.67%) answered 'No'. Of 30 respondents, 8 respondents (26.67%) answered 'No' for the statement 'is the teacher's explanation enough for you to understand the graphic design materials', while 22 respondents (73.33%) answered 'No'. All 30 respondents (100.00%) answered 'Yes' that your teacher has ever used media in explaining the graphic design materials. Of total 30 respondents, 29 respondents (96.67%) answered 'Yes' that it is necessary to use multimedia in learning the materials of graphic design and 1 respondent (3.33%) 'No'. All 30 respondents (100.00%) answered 'Agree' (Yes) if multimedia is used in the learning process to enable the students in mastering the concept of graphic design. According to the data about, it is very necessary to use multimedia in learning, especially by using interactive CD of Graphics Design learning because will have an impact on improving learning outcomes. The following table displays the data about the student's opinion concerning the development of the Interactive CD of Graphic Design Learning:

Table 10 The Frequency Distribution of the Respondents about the Development of Interactive CD of Graphic Design Learning

Statement	Answers	Frequency	%
How if the learning materials are developed using audio, visual, text and animation (Interactive CD of Graphic Design Learning)	Highly agree	22	73.33
	Agree	8	26.67
	Less Agree	0	0.00
	Not Agree	0	0.00
Total		30	100.00

According to the data above, it can be seen that of total 30 respondents, 22 respondents (73.33%) answered 'Highly Agree' if the learning materials are developed in form of Interactive CD of Graphic Design and 8 respondents (26.67%) answered 'Agree'.

3.2 Need for the Development of Learning Module/Learning Book

According to the distribution of the survey score analysis about the need for the development of the

graphic design learning oriented to entrepreneurship product at SMK Kabupaten Dharmasraya, the following finding was found:

Table 11 The Frequency Distribution of the Respondents Having Books, Module, Module Use, Graphic Design Products, Printing Tools of Graphic Design, Use of the Graphic Design Printing Tools

Statement	Answers	Frequency	%
Is your school equipped with the books of Graphic Design?	Yes	2	6.67
	No	28	93.33
Have your teacher's /learning books in the learning process?	Yes	30	100.00
	No	0	0.00
If they have, how often your teachers use Module/ Learning Books in the learning process?	Every Day	15	50.00
	Sometimes	15	50.00
Do you know about the products that can be produced by graphic design?	Yes	26	86.67
	No	4	13.33
Is your school equipped with the graphic design printing tools?	Yes	6	20.00
	No	24	80.00
Have you ever used the graphic design printing tools?	Yes	12	40.00
	No	18	60.00

Based on the data above, it is seen that from 30 respondents, 2 respondents (6.67%) answered 'Yes' that the school has been equipped with the graphic design books and the remaining 28 respondents (93.33%) answered 'No.' All 30 respondents (100.00%) answered 'Yes' the teachers have used module/learning books in the learning process. All of 30 respondents, 15 respondents (50.00%) answered that everyday the teachers use Module/Learning Books in the learning process and the remaining 15 respondents (50.00%) answered Sometimes. From 30 respondents, 26 respondents (86.67%) answered 'Yes' that they know with the products that can be produced by graphic design and the remaining 4 respondents (13.33%) answered 'Not Know.' From 30 respondents, 6 respondents (20.00%) answered 'Yes' and the remaining 4 respondents (80.00%) answered that the school has not been equipped with the printing tools of Graphic Design. From 30 respondents, 12 respondents (40.00%) answered 'Yes' that the school has ever used the facility and the remaining 18 respondents (60.00%) answered that it has never used the

printing tool of Graphic Design. The following table shows the students' opinion about the development of Learning Module/Learning Book of Graphic Design:

Table 12 The Frequency Distribution of the Respondents' Opinion about the Development of Learning Module/the Entrepreneurship product-based Learning Books of Graphic Design

Statement	Answers	Frequency	%
How if the learning module of Graphic Design is developed based on the entrepreneurship products	Highly Agree	22	73.33
	Agree	8	26.67
	Less Agree	0	0.00
	Not Agree	0	0.00
Total		30	100.00

Based on the data above, it can be shown that of 30 respondents, 22 respondents (73.33%) answered 'highly agree' if the Learning Module/Graphic Design Learning Books based on the entrepreneurship products are developed and the remaining 8 respondents (26.67%) answered 'agree'.

Meanwhile, the students' opinion about the development of the graphic design learning at school shows that it is better if the school is equipped with the graphic design books, not only using the modules/electronic books and also it is better if the school provides the graphic design books entrepreneurship products, in order to the students can be inspired. Similarly, the school must provide the students with the tools to print the graphic design products. This opinion is also supported by other students saying that 'I want the facilities of graphic design printing and its tools available at the school; I want the graphic design books are available; I want the vocational lesson (multimedia) is conducted with complete tools and facilities, and I want the learning process at the school can produce any products from the graphic design learning.[8][9]

4. CONCLUSION

Based on the analysis results of the need for the Design of the entrepreneurship product-based Interactive CD of Graphic Design among the students of SMK Dharmasraya Regency is necessary. From 30 respondents 22 respondents (73.33%) answered 'highly agree' if the

entrepreneurship product-based Interactive CD of Graphic Design and the Learning Module of the entrepreneurship product-based Graphic Design are developed at the school, while the remaining 8 respondents (26.67%) answered 'agree'. According to respondents only 20.00% of printing equipment is available in schools so the need for improved facilities. The result of the frequency distribution about the module development shows that 73.33% strongly agree with the development of graphic design learning module. The construction of interactive CD Graphic Design will have an impact on the improvement of student achievement.

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