Developing Fashion Design Vocational Career Guidance Module

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Article Info	Abstract
	This research was conducted with the main problem, namely the lack of resources that can be used by productive teachers in Vocational High Schools (SMK) in supporting industrial career path learning. Teaching materials that can be used as a provision to prepare students to enter the workplace, especially the fashion study program. This research aims to produce a feasible, practical, and effective module. In this research method, the R&D, the chosen design is ADDIE which consists of five stages: Analysis, Design, Development, Implementation, and Evaluation. The unit of analysis of this research is the fashion design vocational career guidance module. The instruments used in this study are (1) module assessment sheets; (2) questionnaires; and (3) and a questionnaire. The data analysis used in this study consisted of: (1) categories to determine the feasibility level of the module; (2) Guttman's categorization for the practicality of the module, using the coefficients Kr and Ks; and (3) n gain test using t test, for module effectiveness. The results of the module feasibility test obtained a score of 4,71% with a very feasible category, the practicality of the module is 88% with very practical criteria, and the effectiveness of the module obtained an N-Gain score of 82.37%. It can be concluded that the module is effectively used as vocational teaching materials. Previous research is developing a printed career material module in a broad scope and it is necessary to have a career focus in a particular field. In this study, the module focuses on a career in fashion that is feasible, practical, and effectively used by productive students and teachers in learning industrial career paths.

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INTRODUCTION

The source of printed teaching materials in the form of modules used by productive teachers in Vocational High Schools (SMK) in learning industrial career paths in tourism subjects is still in a broad scope so there is a need for modules that focus on certain areas of expertise. Charokopaki & Argyropoulou (2019) argued that students need to be equipped with career insights in accordance with their fields since entering school, so that students are better prepared to enter the workplace. This supports the goal of Vocational Revitalization, which is to form students who are ready to enter DU/DI (workplace) in accordance with their field of expertise. One of the efforts that can be done in preparing SMK graduates to enter the workplace is by providing career insights in their fields with innovative printed media.

Based on the elaboration of the problem above, the researcher developed a module that can be used as teaching material for industrial career paths that can be used by productive students and teachers in Vocational High Schools, especially the Fashion Design study program. According to Qemha (2020) modules are printed teaching materials that are designed to be studied independently by students. A module can be said to be good and attractive if there are characteristics of the module, namely self-instruction, self-contained, stand-alone, adaptive, and user friendly. Learning using modules will be more effective, efficient and relevant, students are required to learn independently and be able to solve problems, especially in determining careers (Sari *et al*, 2016).

Garcia *et al* (2015) Grice revealed that making a career choice is an easy thing to do, because of a mature and steady consideration. Everyone has to have independence in choosing a career, this is because the career that is followed by someone is not the responsibility of others but their own responsibility (thenmozhi, 2018).

According to Fernandes (2019), a career in fashion is very broad and complex where after graduating from a fashion vocational school, students can work in garment companies, convection and open their own business, or continue their studies in accordance with their field. Wiana (2018) reveals the rational steps that need to be taken so that the learning process in the field of fashion is effective, namely developing learning media. In addition, teachers also play an important role in students' careers, especially for students who are in vocational schools, in the field of fashion (Wahyuningsih, 2018).

Arjanggi (2017) based on the results of the analysis of research conducted in SMA and SMK in Semarang City, it shows a high level of difficulty in making adolescent career decisions. Career decision making is a crucial problem faced by adolescents when they reach adulthood (Hearne, 2020). Students feel that the majors taken in schools are inappropriate or in the wrong major. The use of effective modules as teaching materials for vocational school students is fun and can increase student motivation in careers and becoming entrepreneurs (Rohman, 2020).

This research is also based on the analysis of observations and interviews with students and teachers in vocational schools that there are some students who are hesitant, uninformed, anxious about the future, not confident, feeling that they have wrong majors, and the absence of career teaching materials in the form of vocational career modules in vocational high school. Research conducted by Atmaja (2014), and Alfriansyah (2018) developed printed teaching materials in the form of modules related to improving students' careers at school, in this study the developed module is a career guidance print module that focuses on the vocational field, especially the fashion study program. The main objective of this research is developing a module that is feasible, practical, and effective, used by vocational productive teachers as a support for career path subjects, and can be used by students as a reference in planning their future careers.

METODE

The research method used in this study uses the type of development research, namely developing fashion design vocational career guidance module. Development research is a research method that is used to produce certain products, and test the effectiveness of these products (Sugiyono, 2012). The product that will be produced is a fashion design vocational career guidance module that is feasible, practical, and effective, used in Vocational High Schools (SMK).

The research procedure carried out in this study adopted the ADDIE model developed by Lee and Owens, namely analysis, design, development, implementation, and evaluation. (Alodwan & Almosa, 2018). The ADDIE model was chosen because it is simple (basic stages of development) and structured systematically, making it easy to understand (Aldoobie, 2015). Data collection in this study can be seen in table 1 below:

Table 1. Data Collection Techniques

Data Collecting Type	Methode	Data Source
Feasibility test	Module Assessment Sheet	2 Media experts and 3 Material experts
Practicality Test	Questionnaire	Vocational high school teachers and students of fashion design study program
Module Effectiveness Trial	Questionnaire	Tenth grade students of SMK Al Asror Semarang
Module Effectiveness Test	Questionnaire	Tenth grade students of fashion design 1 and Tenth grade students of fashion design 2 SMK Widya Praja

This research was conducted at SMK Widya Praja and SMK Al Asror Semarang from May 2021 to July 2021. The stages in the development of the ADDIE model are explained as follows:

(1) The analysis includes needs analysis, module needs analysis, and analysis of student career decision making in SMK, especially the Fashion Design Study Program;

(2) Design is the activity of designing learning modules that will be developed including the preparation of the module framework, collection and selection of references, module design, and preparation of module response instruments;

(3) The first development is a fashion design vocational career guidance module at SMK Al Asror Semarang, then after the module is developed, the module is submitted to validators consisting of media experts, material experts, and module user responses (teachers and students);

(4) The implementation of the activities carried out in this stage is the application of the fashion design vocational career guidance module. Respondents are students of the Fashion Design Study Program at SMK Widya Praja, where group 1 is the experimental class and the 2nd class is the control class. The steps taken were pre-test on the two respondents, then giving treatment to the experimental class in the form of a fashion design career guidance module, while the control class was not given treatment, after that the post test was given as the final result of the response scoring;

(5) Evaluation The stages evaluated in this stage are divided into two evaluations, namely formative evaluation and summative evaluation. The formative evaluation in this study is related to the feasibility test of the module and the practicality of the module, the summative evaluation is related to the test of the effectiveness of the fashion design vocational career guidance module. To make it easier to understand the product design steps, the flow chart in Figure 1 below can be observed.
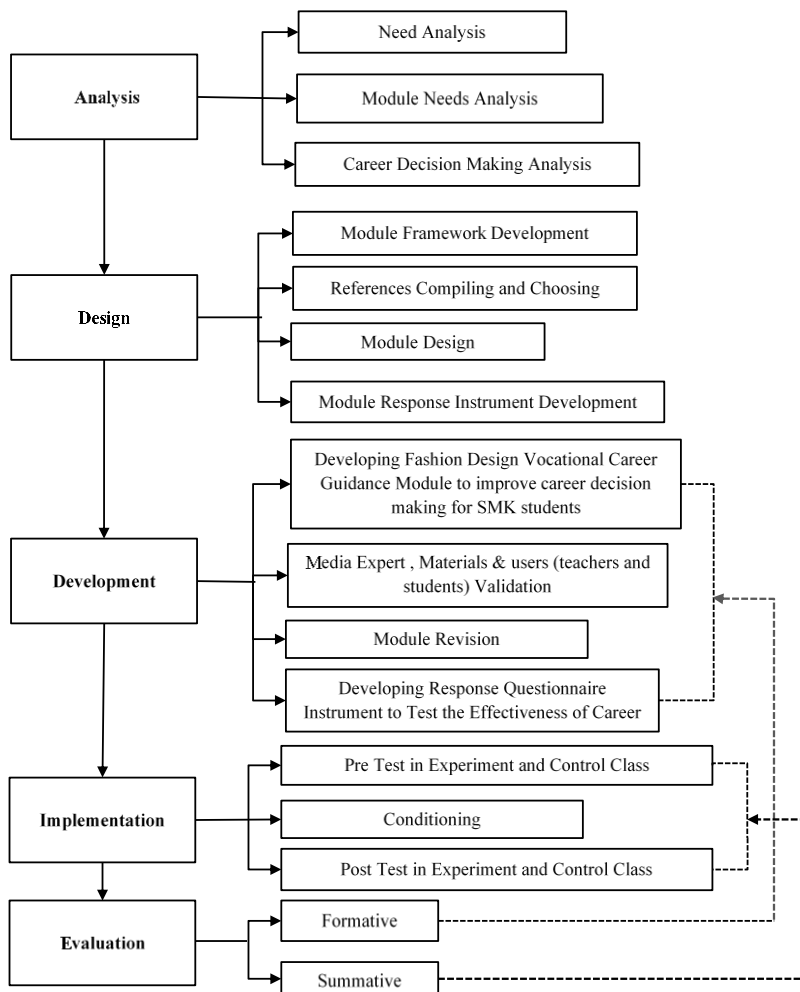
Figure 1. Product Design Flowchart

RESULTS AND DISCUSSIONS

1. Module Development

a. Analysis Results

The analysis is the initial stage carried out by collecting information that is used as material in making products, in this case the resulting product is the Fashion Design Vocational Career Guidance Module, with the following analysis stages:

(1) Needs analysis, before analyzing the modules needed in the field, students' needs for vocational career guidance modules;

(2) Analysis of the needs for vocational career guidance modules based on observations (a) learning media have not attracted the attention of students, (b) learning media have been difficult for students to be understood and less communicative, (c) there is a need for learning media that can be studied independently, (d) need teaching materials that can be studied anytime and anywhere and can be studied alone without the help of other parties, (e) more practical teaching materials that can be used by students, (f) there is a need for learning media that can increase students' motivation to learn;

(3) Analysis of student career decision making results of observations on student career decision making, researchers conclude that students have problems in making career decisions. With the career skills possessed, students graduating from vocational schools are expected to be able to actualize and implement all their abilities to live well with their career provisions. (Waters et al., 2015). Based on several characteristics of students, a module is needed to overcome problems and to arouse students' self-confidence, provide broad knowledge about careers in their fields, motivate students, and assist students in determining their career direction.

b. Designing

The design phase includes the criteria for the preparation of the module framework, collection and selection of references, module design, preparation of module response instruments. To make it easier to design the module, it can be seen in table 2 below:

Table 2. Module Designing Stage

No	Module Designing Stage	Module Design Context
	Preparation of Module Design	The initial part contains a cover, introduction, Core Competencies and Basic Competencies, Module Position Map, and table of contents, list of pictures, list of tables. The content section contains activities I, II, III, IV career guidance modules. The final section contains a Glossary and Bibliography.
	Module Design	Module Cover
		Preface
		Table of Contents, list of figures and list of tables
		Module position map
		Glossary
		Core Competencies and Basic Competencies
		The main part of the module (learning activities)
		Exercise
		References
	Preparation of Module Assessment Instruments	The instrument adopted from the BSNP questionnaire which has been proven to be valid and then adapted to the discussion of the fashion design vocational career guidance module.

c.   Development

This stage aims to determine the feasibility of the vocational career guidance module. The development stage of this research consists of:

(1) Development of a fashion design vocational career guidance module to improve students' career decision making. It is hoped that this vocational career guidance module can assist students to be more confident in choosing their careers, and improve students' career decision-making abilities to reduce the high unemployment rate due to lack of career information;

(2) Validation of Media Experts, Material Experts, and user validation (teachers and students), this step is carried out to determine the feasibility and practicality of the module. The feasibility test is carried out by module experts from BPMPK, media experts are carried out by lecturers and teachers who are experts in the field of fashion;

(3) Revision of the Vocational Career Guidance Module, after validation, the module is revised based on input and suggestions;

(4) Development of an instrument to test the effectiveness of the career guidance module, development of an assessment sheet based on the results of the module feasibility prerequisite test. In addition, participant response instruments were also developed. The participant's response instrument is adjusted to meet the requirements of the appropriate career guidance module by adopting the existing instrument.

d.   Implementation

The implementation phase can be done if the results of the expert test (feasibility test) and practicality test carried out by users (teachers and students) have met the feasible and practical criteria. Implementation is the stage of applying the vocational career guidance module at SMK Widya Praja, with the respondents are 30 tenth grade students of SMK Widya Praja Fashion Design study program 1 as the experimental class who were given treatment in the form of giving modules, while in 2nd class which is consisted of 29 tenth grade students as the control class and were not given treatment. Responses from questionnaires answered by students are taken into consideration to test the effectiveness of the module in stages:

(1) Pre Test in the experimental class and control class which aims to determine the initial state of the respondent before being given treatment in the form of giving a module. The pre-test was given once at the beginning of the study by the teacher of each study program which students could access online via google forms with a questionnaire of 30 responses. The researcher calculated that the processing of 1 response item can be completed in 1 minute. Questionnaires that are filled in by students will be directly taken as responses;

(2) The conditioning stage in this study was taken by conditioning the respondents after being given a pre test. The conditioning of these respondents was by giving treatment in the form of using a vocational career guidance module for students of Fashion Design Study Program SMK Widya Praja class 2 as a control group, while students of Fashion Design Study Program SMK Widya Praja class 1 as an experimental group with no treatment in the form of a module;

(3) Post test was given to both groups. The last stage is to test the effectiveness of the career guidance module by conducting a post test. The post test response instrument was given after the pre test. Pre-test was given once to two groups. The items tested were similar to both tests.

e. Evaluation

The last stage in R&D (research and development) is the evaluation stage, in this research, at the evaluation stage, improvements will be made for a better system by processing the data that has been obtained from the previous stages that have been carried out. This evaluation is carried out after the four previous stages in the ADDIE model have been completed. The evaluation stage in this study is divided into two, namely; (1) formative evaluation related to the module feasibility test conducted by Media Experts and Material Experts.

This formative evaluation is also related to the practicality of the module, formative evaluation is carried out in order to improve or revise the module. According to Scriven (1967) the formative evaluation stage is related to the implementation stage, so that the developed module is in a very

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feasible and practical condition; (2) Summative evaluation in this study was conducted in order to measure the effectiveness of the module. The dependent variable of this research is the career decision making of fashion design vocational students. The module is declared effective if the experimental group scores significantly higher on the student questionnaire than the control group. Summative evaluation in this study, getting a score in the experimental group has a score of N Gain in the effective category.

1. Module Feasibility

The feasibility assessment sheet for the fashion design vocational career guidance module in this study adopted a questionnaire from BSNP which has been proven to be valid. Therefore, the validity of the questionnaire testing was no longer carried out

Table 3. Module Feasibility Test Results

No	Aspects	Media Expert1	Media Expert2	Material Expert 1	Material Expert 2	Material Expert 3	Mean	Category
1	Content Feasibility	-	-	4.83	4.53	4.69	4.68	Very feasible
2	Display Feasibility	-	-	4.69	4.85	4.46	4.67	Very feasible
3	Language Feasibility	-	-	4.55	4.82	4.91	4.76	Very feasible
4	Contextual assessment	-	-	4.69	4/73	4.69	4.70	Very feasible
5	Graphic Feasibility	4.7	4.8	-	-	-	4.75	Very feasible
	$\bar{x}$ Overall Expert Average						4.71	Very feasible

Source: Calculation Results (2021)

1. Table 3 shows that the average score of the module feasibility test by Media Experts and Material Experts is 4.71 with very feasible criteria. Thus, this fashion design vocational career guidance module is declared valid and very feasible. Based on the validation results, it can be concluded that the fashion design vocational career guidance module is valid with revisions and does not require a significant overhaul and is suitable for use as teaching

materials for students of the Fashion Design Study Program.

2. Module Practicality

This stage is carried out to determine the practicality of the vocational career guidance module. The practicality test of the career guidance module is carried out by involving users, namely teachers and students. The results of the practicality test can be seen in table 4 below:

Table 4. Data Analysis of Kr and Ks Scores

Validator	Indicator	Kr Score	Ks Score
Teacher	Interest	0.92	0.82
	Material		
	Language		
	Content Competence		
Students	Interest	0.91	0.74
	Material		
	Language		
	Content Competence		
	$\bar{x}$ Average Score	0.92	0.79

Source: Calculation Results (2021)

The average score of the Reproductive Coefficient or Kr of teachers and students is = 0.92, indicating that the career guidance module is very practical to use because it has met the requirements of the Reproductive Coefficient < = 0.9. The results of the practicality test of the module are confirmed in the scalability test, the Scalability Coefficient or (Ks) obtains an average score of 0.79 with the criteria that meet the requirements, that is > 0.60.

Table 5. Practicality Test Results of Teachers and Students

No	Response Indicator	Average Validator		Average	Category
		Teacher	Student		
1	Interest	100 %	72.94 %	86 %	Very Practical
2	Material	94 %	89.71 %	92 %	Very Practical
3	Language	87 %	91.76 %	89 %	Very Practical
4	Competence	89 %	83%	86 %	Very Practical
Overall Average of Users				88 %	Very Practical

Source: Calculation Results (2021)

3. Module Effectiveness

The results of the pre-test and post-test data on the normality test for the experimental and control groups are as follows:

Table 6. Normality Test

Group		Sig. Kolmogorof-Smirnova	Sig. Shapiro-Wilk
Pre Test	Experiment	0,200	0,196
	Control	0,200	0,209
Post Test	Experiment	0,200	0,856
	Control	0,200	0,226

Source: Calculation Results (2021)

Based on table 6, the normality test has the lowest significance value (Sig.) of the Kolmogorov Smirnov normality test for the pre-test group of 0.196> 0.05 and for the post-test group of 0.226> 0.05. So that according to the basis for making student career decisions in the Kolmogorov Smirnov normality test, it can be concluded that the data is normally distributed.

Table 7. Homogeneity Test

Group		Lavene Statistic	Sig.
Pre Test	Based on Mean	0.659	0.776
	Based on Median	0.505	0.830
	Based on Median and with adjusted df	0.505	0.830
	Based on trimmed mean	0.478	0.785
Post Test	Based on Mean	1.608	0.152
	Based on Median	1.602	0.160
	Based on Median and with adjusted df	1.602	0.160
	Based on trimmed mean	1.626	0.153

Source: Calculation Results (2021)

Table 7 homogeneity test results based on the mean Pre Test shows a significant value of 0.776 which means data > 0.05, so it can be concluded that the data is homogeneous, while the score based on the mean Post Test shows a significant value of 0.152 which means data > 0.05, so it can be concluded that the data is homogeneous. The results of the N-Gain test with SPSS are shown in the following table 8:

Table 8. N-Gain Test Results

No	Experimental Group	No	Control Group
	N-Gain Score (%)		N-Gain Score (%)
Average	82.37	Average	37.28
Minimum	66.03	Minimum	21.82
Maximum	100.00	Maximum	58.93

Source: Calculation Results (2021)

The results of the N Gain score show that the N Gain score in the experimental group is 82.37 or 82% and with a minimum N-Gain value is 66% and a maximum N-Gain value of 100%. While for the control group is -37.28 or -37% with a minimum score of 21.82% and a maximum N Gain score is 59.93%.

The results of the t test on the pre test and post test for the experimental and control groups are as follows:

Table 9. Results of t test for N-Gain Data

Data	Levene Statistic	t test	T Significancy level
N Gain_Persentage	0.284	19.093	0.000

Source: Calculation Results (2021)

Table 9 shows the significance (Sig) of Levene's Test for Equality of Variances is 0.284 > 0.05, so it can be concluded that the variance of the N-Gain data (%) for the experimental class and control class is the same or can be said to be homogeneous.

Based on the calculation results, the calculated T value of N-Gain_percentage is 19,093 with a T table score at (df = 57; = 5%) is 2.0024. Because T count is greater than T table, it can be concluded that before being treated by using the fashion design vocational career guidance module to improve the career decision making abilities of vocational high school (SMK) students, there was no difference between the two classes being studied.

The results of the independent sample t test by including the average N-Gain score in the table, show that the N-Gain_Percentage data has a Sig (2-tailed) 0.000 (smaller than the 0.05 significance level), meaning that the N-Gain_Percentage data in

the study, the distributed data is quite effective and significant.

DISCUSSION

This research and development produces a final product in the form of printed teaching materials for vocational career guidance modules in Vocational High Schools (SMK), especially in the Fashion Design Study Program. The main purpose of learning using module media is to increase the efficiency and effectiveness of teaching and learning activities in schools, both time, funds, facilities and energy, in order to achieve optimal goals (Susanti & Kurniawan, 2020). This career guidance module is designed in such a way to produce products that are feasible, practical, and effectively used as teaching materials to support industrial career paths.

This vocational career module was declared feasible based on the responses of several experts in the field of fashion and module experts. According to Azwar (2014) in product development, expert validation needs to be done to get input. Based on the results of the assessment of the module size indicator a score of 4.66 with very feasible criteria, the module cover design indicator (cover) getting a score of 4.83 with very feasible criteria, the module content design indicator getting a score of 4.87 with very feasible criteria, of all the indicators that have been mentioned ,including the aspect of the feasibility of graphics, the average score of the results of media validation get a score of 4.79 with very feasible criteria.

The results of the material expert validation based on the content feasibility aspect got a score of 4.68 with very decent criteria, the presentation feasibility aspect got a score of 4.67 with very feasible criteria, the linguistic feasibility aspect got a score of 4.76 with very feasible criteria, contextual scoring aspects get an average score of 4.70 with very feasible criteria and the average of all aspects in the material validity test obtained a score of 4.70 with very feasible criteria.

The results of data analysis indicate that the fashion design vocational career guidance module is effective and significantly applied to learning activities. The effectiveness of a class is influenced by four main factors called the "four trump cards of effective teaching", namely goals (outcomes), clarity, participation and enthusiasm (Walls, 1999).

Based on the testing phase of the effectiveness of the fashion design vocational career guidance module. In the independent sample t test table, it can be concluded that the experimental class and the control class are the same or homogeneous, before being treated by using the fashion design vocational career guidance module, and in this study the data

distributed after the t test was concluded to be quite effective and significant.

The fashion design vocational career guidance module can be used by students and teachers in Vocational High Schools (SMK), especially the Fashion Design Study Program. This module category is very feasible, very practical, quite effective to be used as a support for productive teaching materials and as a provision for students to enter the workspace. The results of this study agree with research conducted by Alfriansyah & Widarto (2018), Garcia et al (2015), Atmaja (2014), Arjanggi (2017) that the career guidance module can be used as teaching and supporting materials in improving students' career knowledge.

CONCLUSION

The fashion design vocational career guidance module can increase students' enthusiasm for learning to explore careers in fashion because the modules are arranged in an innovative, structured way, the images presented are actual and up to date, and use communicative language equipped with pictures and illustrations that are presented in color print to attract student attention. This module has several advantages, one of which is the career path material presented for vocational students, especially the fashion program, which has been adapted to conditions in the field. The language context, cover, learning activities and practice questions presented in the module have been tested for validity by experts in the field of learning modules and experts in the field of fashion.

Based on the responses of several experts, it shows that the vocational career guidance module is appropriate to be used as teaching material for the fashion career path. This module can be used anytime and anywhere, making it easier for teachers and students in effective learning activities. Based on the results of the user's responses, namely teachers and students, modules in the practical category are used to support productive subjects in the Vocational High School majoring in Fashion Design. This vocational career guidance module is also effectively used by students as a support for career path subjects, besides that it can also be used as a provision in planning future careers.

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