



Precondition Model for Field Work Practices Based on Project-Based Learning to Improve Vocational School Students' Competence and Readiness in Entrepreneurship, Fashion Design Expertise Program

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Article Info

Article History :
Received July 2020
Accepted August 2020
Published December 2020

Keywords:
Precondition model for field work practice based on project-based learning, the readiness of vocational students for entrepreneurship

Abstract

Vocational High School (SMK) is an educational institution that specifically aims to prepare students to be ready for work, either working independently or filling existing job vacancies. Appropriate learning can improve vocational students' skills and vocational school students' readiness in entrepreneurship. This study aims to 1) produce a Precondition Model for Industrial Work Practices based on project-based learning to improve competency and work readiness of vocational school students in the Dressmaking expertise program. 2) to analyze the feasibility of the Preconditioned Industrial Work Practice Model based on project-based learning to improve the competence and work readiness of the Vocational School students in the Fashion Design expertise program 3) knowing the practicality of the Precondition Model for Industrial Work Practice based on project-based learning to improve competency and job readiness of vocational school students. Dressmaking expertise program Fashion. This type of research is development research (R&D) with a development model adapting to ADDIE development. The instruments used in this study were 1) Feasibility Assessment Sheet for the Precondition Model Model for Industrial Work Practice based on project-based learning 2) Practicality questionnaire for the Precondition Model for Industrial Work Practice based on a project-based learning 3) Evaluation sheet for evaluation of the effectiveness of project-based learning based on basic competency analyze the hemispheres in a product. The data analysis used in this study was (1) the scoring category to determine the level of feasibility of the Preconditioned Fieldwork Practices model based on project-based learning to improve the competence and readiness of vocational students in entrepreneurship in the Dressmaking expertise program. (2) to determine the level of practicality of the Preconditioning Practical Fieldwork model based on project-based learning using a Likert scale (3) N-Gain and the N-Gain difference test using the t-test, to determine the effectiveness of the Preconditioned Fieldwork Practices model based on project-based learning to improve the readiness of vocational high school students in entrepreneurship in the Dressmaking expertise program. The results of this study indicate that the assessment of the first validator and the second validator obtained criteria very worthy of use and based on the effectiveness test in the experimental class obtained effective and significant values to increase the readiness of junior high school students in entrepreneurship.

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INTRODUCTION

One of the economic developments is marked by the development of the industrial sector. The more developed the industrial sector will of course contribute to the creation of new jobs. The MEA, of course, will facilitate the entry of foreign workers to work between ASEAN countries. This can be an opportunity for Indonesian workers to benefit from working in other countries. Apart from being an opportunity for Indonesian workers, the AEC can also be a challenge as well as a threat. Labor competition between ASEAN countries is getting tighter, so it requires a workforce that is competent and able to compete with workers from other countries. A qualified workforce will be able to survive and develop their career. One of the efforts to improve the quality of the workforce is to improve the quality of education.

Efforts to improve the quality of education can be pursued through formal and non-formal education. One of the formal educational pathways that prepare graduates who are ready to work and have superior competencies is SMK. Vocational High School (SMK) is one of the educational institutions that specifically aims to prepare students to be ready to work, either working independently or filling existing job vacancies (Law NO 20/2003). For this reason, the implementation of vocational high schools is expected to be able to produce graduates (output) who are ready to work and have a set of competencies needed by the business world.

The government through the Ministry of National Education has issued policies that are contained in the strategic plan of the Ministry of National Education's Policy Strengthening Program with the 2015-2025 National Education Long-Term Development Plan (RPJP), one of which is the development of schools based on excellence in each district/city. Especially regarding Senior High School (SMA) and Vocational High School. The Ministry of National Education has a policy for a higher SMK ratio than SMA, namely 70% SMK and 30% SMA. This policy is a form of awareness that the Indonesian nation still needs a lot of middle-level workers. The government policy targeting the ratio of SMK to SMA to 70%: 30%

implies that in the future it will only focus on preparing students who will take careers in academics while SMK is for work-oriented students. This policy is inversely proportional to the data from the Central Statistics Agency (BPS), the SMK Open Unemployment rate in 2017-2019 shows the highest value than the others. In August 2017, the highest level of open unemployment according to education was Senior High School (SMK) with a contribution of 11.08%. Followed by Senior High School 7.10%, 5.46% Diploma, Junior High School 4.79%, Bachelor or University 3.73 and Elementary School and below 2.35%. In 2018 the unemployment rate for SMK was 10.85%, SMA 6.62%, University 5.48%, SMP 4.69%, Diploma I / II / III 3.65%, Elementary School and below 2.13%. In 2019, unemployment for Vocational School 10.16%, High School 6.35%, University 5.53%, Junior High School 4.70%, Diploma I / II / III 63.67%, Primary School and below 2.07%.

The industrial revolution 4.0 is a challenge and an opportunity that the Indonesian people must be able to take advantage of to be able to live side by side with the world community. The Indonesian government through the Ministry of Industry has prepared four steps. First, encourage the workforce in Indonesia to continue to learn and improve their skills to understand the use of internet of things technology or integrate internet capabilities with management lines in the industry. These efforts are carried out by initiating the implementation of vocational education and link and match between SMK and industry to prepare skilled and ready-to-use personnel in the industry. Second, the use of digital technology to boost productivity and competitiveness for small and medium industries (IKM), to make up for the export market. Third, the national industry uses Big Data Autonomous Robots, Cyber Security, Cloud, and Augmented Reality technology. The fourth step is technological innovation through startup development by facilitating business incubation sites.

This is in line with six strategic issues that are priorities for the revitalization of SMK, namely curriculum alignment, and updating; learning innovation; fulfillment and improvement of the professionalism of teachers and education personnel; and colleges; standardization of main

facilities and infrastructure; and structuring/managing school institutions and partnerships with the business world / industrial world (DU / DI). Conformity and involvement with the business world is the key to revitalizing SMK. A competitive and skilled workforce, one of which is born from quality vocational education and training, is relevant to the demands of the business world and industry that is constantly developing.

In the process of realizing effective and efficient learning, SMK arranges to learn programs in schools and the world of work / DUDI. Learning that is specifically held in the world of work is called Job Training. Fieldwork Practices, hereinafter referred to as PKL, are learning activities carried out in DUDI and/or other work fields for the application, consolidation, and competency improvement. PKL implementation involves expert practitioners who are experienced in their fields to strengthen learning by guiding students during fieldwork practices.

The implementation of street vendors is following the principles of education according to Prosser and Quigley in their book *Vocational Education in a Democracy*, among others: (1) Vocational education will be efficient if the environment in which students are trained is a replica of the environment in which they will work later. (2) Effective vocational education can only be given in which the training tasks are carried out by the same means, tools, and machines as those prescribed in the workplace. (3) Vocational education will be effective if it trains a person in the habits of thinking and working as required in the job itself. (4) Vocational education will be effective if it can enable each individual to capitalize on their interests, knowledge, and skills at the highest level. (5) Effective vocational education for every profession, position, or job can only be given to someone who needs it, who wants it, and who gets profit from it. (6) Vocational education will be effective if the training experience to form work habits and correct thinking habits is repeated so that it is appropriate as needed in later work. (7) In every position, there is a minimum ability that must be possessed by a person so that he can continue to work in that position. (8) The process of developing

habits that are effective in students will be achieved if the training is given to real work (value-laden experience). (9) A reliable source for knowing the content of training in a particular occupation is from the experience of the occupational experts. (10) Every job has a body of content that varies from one another.

Based on research at Harvard University in the United States (Ali Ibrahim Akbar, 2000), it turns out that a person's success is not determined solely by technical knowledge and abilities (hard skills), but rather by the ability to manage oneself and others (soft skills). This research reveals that success is only determined around 20% by hard skills and the remaining 80% by soft skills. Even the most successful people in the world can succeed because they are supported by more soft skills than hard skills. This suggests that the quality of character education, including the entrepreneurial character of students, is very important to be improved immediately. In this connection, improving the quality of learning and other factors that affect learning outcomes need to be carried out systematically and continuously. The results of the Rapid Study on entrepreneurship education in primary and secondary education conducted by the Center for Education Policy and Innovation Research (27 May 2010) obtained information that entrepreneurship education can generate positive perceptions of the profession as an entrepreneur.

Based on the data above, the entrepreneurial interest in the fashion design students of SMK Negeri 1 Ampelgading is very low, namely in 2017 students who became entrepreneurs were only 10% of the total 118 students, then in 2018 students who became entrepreneurs 8.5% of the total 117 alumni, and in 2019 only 3.3% of the total 87 fashion alumni, even though they should be armed with practical vocational competencies, SMK graduates are better able to apply their knowledge and skills in the world of work to the stage of creating their jobs as entrepreneurs, according to Presidential instruction Number 9 of 2016, namely printing students with children's "blue cards" that can open up employment opportunities, either for themselves or for others.

The factors that affect the low interest in entrepreneurship according to Wijaya (2019)

include two factors, namely internal factors in the form of competencies, in addition to the two factors that have been mentioned, fatigue in seeing the business opportunities needed today is a determining factor for the initial capital of the business.

One of the scientific learning approaches applied to SMK learning is a project-based learning model (Project Based Learning). Project-Based Learning can improve the performance and achievement of vocational students (Novi: 2018: 9). The Project-Based Learning model can be integrated with sewing technology subjects in class X SMK students majoring in Tata so that it can improve the technical skills and soft skills of SMK students. Wekasa (2016: 28) concludes in his research providing evidence and empirical basis that the use of project-based learning facilitates higher learning and understanding of the concept of Classification of Organisms that leads to increased academic performance and project-based learning techniques into a student-centered approach, changing students' attitudes towards positive classification that contributes to improving academic performance. Halil (2008: 1) states that project-based learning is seen as an effective learning strategy because it provides students with opportunities to create according to their abilities so that they are comfortable in learning.

This study aims to 1) produce a Precondition Model for Industrial Work Practices based on project-based learning to improve competency and work readiness of vocational school students in the Dressmaking expertise program. 2) to analyze the feasibility of the Preconditioned Industrial Work Practice Model based on project-based learning to improve the competence and work readiness of the Vocational School students in the Fashion Design expertise program 3) knowing the practicality of the Preconditioned Industrial Work Practice Model based on project-based learning to improve the competence and work readiness of vocational school students. Dressmaking expertise program Fashion.

METHODS

1. Model Development Methodology

This type of research is research and development (research and development). According to Sugiyono (2015: 30), research and development is a research method used to produce new product designs, test the effectiveness of existing products, and develop and test the effectiveness of existing products, as well as develop and create new products. The research and development model (R&D) serves to help produce new products in the form of street vendors' precondition models as an effort to increase the readiness of vocational students to entrepreneurial in Fashion Design Competencies.

This study is an educational research and development research. Research and development products in education can be in the form of models, media, equipment, books, modules, evaluation tools, and learning tools such as curriculum and school policies. This study aims to develop a product in the form of a PKL preconditioned learning model based on project-based learning to improve the readiness of vocational students in entrepreneurship.

The media development design in this study was adapted from the ADDIE development model which consists of five development stages, namely Analysis, Design, Development, Implementation, Evaluation. Educational development research includes the development process, product validation, product testing, and evaluation. This research procedure adapted the ADDIE development model, which is a development model consisting of five stages including analysis, design, development, implementation, and evaluation. Researchers modify the development model according to needs, place, and environment.

The stages that are implemented include the following:

a) Analysis Phase (Analysis)

The analysis is the first step in carrying out research that is used as a reference in problem formulation and sharpening research focus based on empirical data in the field. Activities carried out in the analysis stage include performance analysis and needs analysis as well as an analysis of entrepreneurial interest in the competence of the fashion department.

b) Design Stage (Design)

Activities in this design stage the researcher begins to design a learning model that will be applied, based on the needs and problems so that the results can provide solutions to the problems that occur.

c) Development Stage (Development)

The development stage (Develop) consists of 1) validating the conceptual model to the expert/expert with 2 stages/validation cycles. The results of the study are in the form of findings of factual models and theoretical concepts through the formulation of a preliminary study. The findings of factual models and theoretical concepts will be developed to formulate a conceptual model design which is then validated by experts. The model that has been validated will be revised according to the results of the study and include experts to obtain a hypothetical model.

d) Implementation Stage (Implementation)

The steps taken were giving pre-test to the two respondents, then giving treatment to the experimental class in the form of a PKL precondition model based on Project-based learning, while the control class was not given treatment, after that giving a post-test as the final result of scoring the respondent's responses.

e) Evaluation Phase (Evaluation)

The stages evaluated in this stage are divided into 2 evaluations, namely the evaluation of skills and evaluation of knowledge, where the evaluation of skills related to students' readiness in entrepreneurship and evaluation of knowledge is related to experimental design and the effectiveness of the preconceived model of practical fieldwork based on project-based learning.

2. Collecting Data and Data Reliability and Validity Methodology

Data collection technique is a method used to obtain a number of data needed in a study. In collecting data, certain tools are often used which are often referred to as research instruments. Data collection techniques in this study used quantitative and qualitative collection techniques. Data collection obtained from field data, model validation, and field trials.

(a) Instrument Validity and Reliability Test

To find out the validity or validity and reliability or state of the scale used in the study, it is necessary to first test the items of the instrument used.

- (1) Test the Validity and Reliability of the Assessment Sheet Instrument Against the Model
- (a) Validity

Validity with the type of answer in the form of a Likert scale scoring, the formula for calculating the CVR of the module feasibility assessment sheet instrument is as follows:

$$CVR = (2ne / n) - 1$$

Description: (Source: Hendryadi 2014)

CVR = content validity ratio, amount
 ne = Number of validation experts who scored (important / relevant)
 n = The number of validated experts

Based on the results of the data analysis instrument validation, validator 1 and validator 2 indicate that the CVR value = 1. This indicates that the instrument sheet for the assessment of the feasibility of the model used is valid.

(a) Reliability

The formula for Cohen's Kappa coefficient is

$$k = \frac{Pr(a) - Pr(e)}{1 - Pr(e)}$$

Description:

Pr(a) = Percentage of number of measurements that are consistent between raters

Pr(e) = Percentage of number of changes in measurement between raters

The high and low value of the Kappa coefficient can be classified on the criteria for the Kappa coefficient table

Tabel 1. Kappa Coefficient Score Criteria

Kappa	Interpretation
< 0	Poor agreement
0.0 – 0.20	Slight agreement
0.21 – 0.40	Moderate agreement
0.61 – 0.80	Substantial agreement
0.81 – 1.00	Almost perfect agreement

(Sumber : Wihharso 2010)

Based on the results of the Kappa data analysis, it was obtained a value of 0.683 > 0.6 so that it could be stated that the rater agreed in

assessing the good (substantial) category. Thus it can be concluded that the two validators are reliable in assessing the precondition model for project-based learning-based fieldwork practices to improve students' readiness in entrepreneurship.

(1) Test the Validity and Reliability of the Practicality Instrument Against the Model

(a) Validity

Validity with the type of answer in the form of Likert scale scoring, the formula uses the Pearson product moment correlation to calculate the instrument practicality assessment sheet for the model as follows:

$$r_{xy} = \frac{N \sum xy - \sum x \sum y}{\sqrt{N \sum x^2 - (\sum x)^2} \sqrt{N \sum y^2 - (\sum y)^2}}$$

(Source: Arikunto, 2010)

Description:

r_{xy} = the Pearson r correlation coefficient

N = number of samples

x = independent variable / first variable

y = dependent variable / second variable

Based on the results of the data analysis of the model practicality instrument validation, validator 1 and validator 2 indicate that the product value moment = 1. This indicates that the instrument practicality assessment instrument sheet used is valid.

(a) Reliabilitas

Rumus yang digunakan sebagai berikut:

$$r_{11} = \frac{k}{k-1} \left\{ \frac{V_t - \sum pq}{V_t} \right\}$$

(Arikunto, 2016)

Description:

r_{11} : reliability

k : total items

V_t : total varians

p : the proportion of subjects who answered correctly on one item (1/N)

q : the proportion of subjects who scored 0 / (q = 1-p)

The reliability testing criteria is that after getting the r_{11} price, then the r_{11} price is consulted with the product moment r price in the table. If $r_{11} > r_{table}$ then the item tested is reliable.

From the analysis of the item responses of the practicality instrument the reliability of the response items was obtained $0,853 > r_{table} = 0,602$, It can be

concluded that the response items are reliable with very high reliability criteria.

(1) Uji Validitas dan Reliabilitas Instrumen Efektifitas Terhadap Modul

(a) Validity

The technique of testing the validity of the learning outcome test items can use the biserial point correlation formula: $M_p M_t SD_t$

$$r_{pbi} = \frac{M_p - M_t}{SD_t} \sqrt{\frac{p}{q}}$$

Description :

r_{pbi} = Point biserial correlation coefficient, which represents the strength of the correlation between variable I and variable II, which in this case is considered the item validity coefficient.

M_p = The calculated average score owned by the test taker for which the item items have been answered correctly.

M_t = The average score of the total score.

SD_t = Standard deviation of the total score.

p = Proportion of test takers who answered correctly the questions.

q = Proportion of test takers who answered incorrectly.

The items said to be valid or invalid can be seen from the results of calculations compared with r_{table} at the 5% significance level according to the number of students studied. If $r_{pbi} > r_{table}$ then the item is valid. If r_{pbi} is less than or equal to r_{table} , then the item is invalid.

In this study, the researcher used the test item validity by calculating the biserial point coefficient that was consulted on the r_{table} to determine the validity of the items.

The results of the analysis of the instrument validity test of the effectiveness of the 50 responses obtained the number of valid items as many as 40 items and the number of invalid items as many as 10 items. To calculate the validity of the effectiveness test response items can be seen in the attachment section. The results of the recap of the

validity analysis of the effectiveness test response items can be seen in the table as follows:

Tabel 2. Recap of Instrument Validity Test

Criteria	No of Item	Total
Valid	1,3,5,6,7,8,9,10,11,12,13, 14,15,16,17,18,19,20, 25,26,27,28,30,31,32,33,3 4,35,36,37,38,39,40, 42,43,44,45,46,47,50	40
Invalid	2,4,21,22,23,24,29,41,48, 49	10

(b) Reliability

The formula used is as follows:

$$KR_{20} = \left(\frac{n}{n-1} \right) \left(\frac{St^2 - \sum pq}{St^2} \right)$$

(Matondang, 2009)

Description :

KR_{20} = Overall reliability of the test.

p = the proportion of subjects who answered the item correctly.

q = the proportion of subjects who answered the item incorrectly.

$\sum pq$ = sum of p times q.

n = Total items.

St^2 = Standard deviation from the test (standard deviation is the root of the variance).

While the variance formula used to calculate reliability is as follows:

$$St^2 = \frac{\sum x^2 - \frac{(\sum x)^2}{N}}{N}$$

Description:

St^2 = Variance, always expressed in quadratic form, because of the standard deviation is squared.

$(\sum x)^2$ = The square of the total score obtained by the student.

$\sum x^2$ = The sum of the squared scores obtained by the students.

N = The number of subjects who took the test.

The reliability testing criteria is that after obtaining the r_{20} price, then the r_{20} price is consulted with the product moment r price in the table. If $r_{20} > r_{table}$ then the items being tested are reliable.

From the analysis of the response items of the effectiveness test instrument, the reliability of the

response items was obtained $0,932 > r_{table} = 0,600$ so that it can be concluded that the question data is reliable.

a) Data Analysis Requirement Test

1) Normality test using Chi-squared (χ^2) as follows:

$$\chi^2 = \sum_{i=1}^k \frac{(O_i - E_i)^2}{E_i}$$

Description:

χ^2 = Chi-kuadrat

O_i = Observation Frequency

E_i = Expected Frequency

k = Number of Classes

The normality test is a test to determine whether or not a data distribution is normal by looking at the probability $\chi^2 > 0,05$.

Based on the results of the normality test, the normality value for the control class is 0.071 and the experimental class is 0.066 by looking at the probability $\chi^2 > 0.05$, so it can be concluded that the data is normally distributed

2) The homogeneity test using Levebne is as follows:

$$H_0 : \sigma_1 = \sigma_2 = \dots = \sigma_k$$

$$H_1 : \sigma_i \neq \sigma_j \text{ untuk sedikitnya satu pasang } (i, j).$$

The formula of Levene could be seen as follows:

$$W = \frac{(n-k) \sum_{i=1}^k n_i (Z_i - \bar{Z})^2}{(k-1) \sum_{i=1}^k \sum_{j=1}^{n_i} (z_{ij} - \bar{Z}_i)^2}$$

Based on the results of homogeneity, it was obtained a significance score (p) of $0.974 \geq 0.05$, thus indicating that the data group came from a population that had the same variance (homogeneous).

RESULTS AND DISCUSSION

1. Development of a Project Based Learning-Based Precondition Model

(a) Result of Analysis

The analysis stage is an information stage that can be used as material for making products, in this case the resulting product is a PKL precondition

model based on project-based learning. At this stage the analysis used is a performance analysis and a needs analysis carried out to determine problems and solutions in the implementation of the Sewing Technology learning process. Based on the results of the analysis, the next step is to identify to obtain further information about the learning components needed during implementation during the learning process. The results of this analysis produce an instructional design in the form of material that will be used as teaching material at the time of the implementation of the PKL preconstruction division. The results of this analysis phase will then be inputted at the design stage

(b) Design

The second stage of Design at this stage designs the framework of the preconditioned PKL learning model based on Project Based Learning, namely by: 1) designing the learning material in the form of modules used during the learning process to be implemented, 2) designing a project-based PKL precondition model conceptual model based learning, 3) designing a guidebook for PKL precondition models based on project-based learning 4) designing a jobsheet which is a learning reference designed to make it easier for students to make children's clothing products. 5) designing evaluation tools and instruments of street vendor precondition models

(c) Development

The third stage of ADDIE development is the development stage. This stage aims to see the feasibility of the training model that has been designed. The activities carried out were the making of PKL precondition model products based on project-based learning which included compilation, model manuals, learning material modules, jobsheets and learning evaluation tools. The next stage is the stage of testing the preconditioned PKL product model based on Project based Learning. The test phase is the stage of the development process, which starts from validation by experts before being tested.

(d) Implementation

The implementation stage is the stage of applying the precondition model for field work practice based on project-based learning to improve the readiness of vocational students to

entrepreneurship in the fashion skills program, with 32 students as the experimental class who were given treatment in the form of PKL precondition models based on project-based learning and 32 students as the control class was not given treatment in the form of giving modules. The first application stage is giving a pre-test to the experimental class and control class which aims to determine the initial state of the respondent before being given the precondition PKL model treatment based on Project Based Learning learning. After giving the pre-test the next stage is the provision of treatment for the application of the precondition model for street vendors based on Project-based learning with the project of making children's clothing in which there are several components of basic competency competencies.

(e) Evaluasi

The last stage is the evaluation stage, the evaluation stage is carried out based on the objectives to be achieved from the PKL precondition model based on project-based learning. The evaluation stage in this stage the assessment carried out is an assessment of skills and knowledge. This skill assessment aims to determine the readiness of vocational students in entrepreneurship and knowledge assessment aims to determine the effectiveness of PKL precondition models based on project-based learning in making children's clothing in sewing technology subjects, clothing skills program.

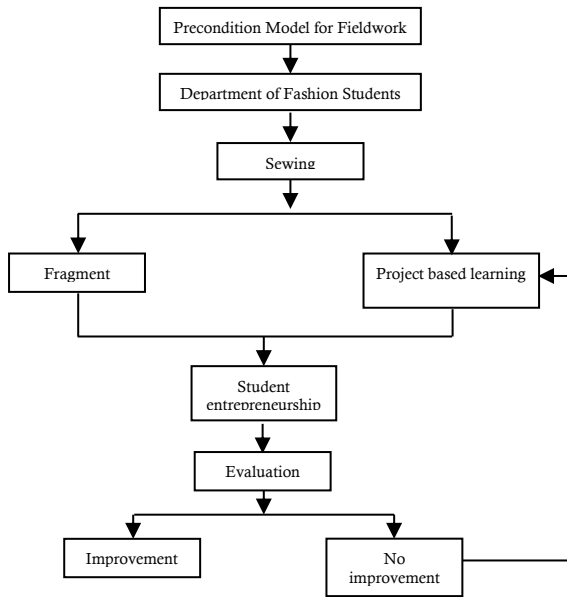


Figure 4. Model End Precondition Model Fieldwork practice based on Project Based Learning
 2. Feasibility of Project-based Learning-based PKL Precondition Model

Overall, the results of the validation state that the design of the preconditioned model for field work practices to increase student entrepreneurial readiness can be implemented with a few revisions and can be used without revision. The criteria for the validity of the model were prepared by calculating the rating scale with the formula:

Skoring =

$$\frac{\text{Total Score Points } 1x (1) + \text{Total Score } 2x (2) + \text{Total Score } 3x (3) + \text{Total Score } 4x (4)}{\text{number of question}}$$

Based on the scoring, interpretation criteria are made, such as a table drawing of the feasibility assessment scale of the PKL precondition model based on the following project-based learning:

Table 4. the feasibility assessment scale of the PKL precondition model based on project Based Learning

Eligibility Scale	Validity Category	Description
1.00-1.75	Less Valid	Can be used with major revisions
1.76-2.50	Quite Valid	Can be used with minor revisions
2.56-3.25	Valid	Proper to use
3.26-4.00	Very Valid	Very worthy of use

The conclusion that can be summarized from the results of the first validator's assessment gets the following assessment, the average score of 66: 19 = 3.47 with the validity category is very valid and very feasible to use. The second validator obtained a score of 65: 19 = 3.42 with the validity category very valid and very feasible to use. Based on the results of the validity test carried out, it can be concluded that the precondition model for field work practices to increase the readiness of junior high school students for entrepreneurship is considered to have a very valid validity level. Then the model validation test is calculated using the CVR formula with the results of the validity test results of the PKL precondition model showing that 19 items of the instrument are said to be valid.

3. Practicality of PKL Precondition Model based on project-based learning

The practicality of the PKL precondition learning model is known by providing a closed questionnaire to students. Following are the data on the responses of students and teachers to the practicality of the pre-condition internship model can be in Figure 5.

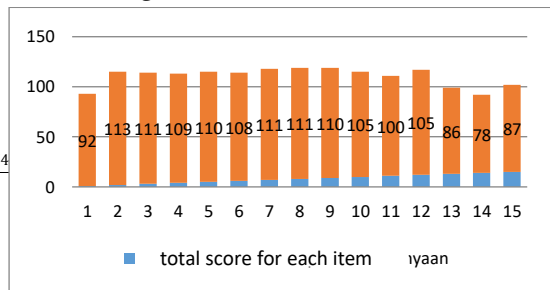


Figure 4.2 The total diagram of the acquisition of student practicality scores on the PKL precondition model to increase students' readiness to entrepreneurship.

Based on this scoring, interpretation criteria are made such as the practical score table image using the following criteria:

Table 5 Scoring criteria Practicality test

No	Practicality Score	Classification
1	3.01-4.00	Very practical
2	2.01-3.00	practical
3	1.02-2.00	Less practical
4	0-1.00	Not practical

Based on the results of student and teacher responses, it was obtained a score of 3.02, thus it can be concluded that the precondition model for fieldwork practice based on project-based learning is very practical to use.

4. The effectiveness of the Field Work Practice Precondition Model based on project-based learning

This effectiveness test was carried out to determine whether the precondition model for field work practices was effective and to improve the results of students' knowledge of the material that had been presented. The results of this increase are measured by student learning outcomes. The learning outcome test is used to see the achievement of basic competencies and learning indicators in the implementation of learning using the PKL precondition model based on project-based learning.

Based on the results of the calculation of the N-Gain score for the experimental class, 32 students

obtained an average of 77.1573 or 77% including the effective category with a minimum value of 53 and a maximum of 94 then for the control class an average of 40.3816 or 40% was in the poor category. effective with a minimum value of 21.05 and a maximum value of 66.67, so it can be concluded that the use of a preconditioned model for field work practices based on a project-based learning model can be said to be effective in increasing student readiness in entrepreneurship.

The next step, to find out whether the difference in effectiveness between the preconditioned model of project-based learning (experimental class) and conventional learning methods (control class) can be seen as significant (real) or not, it is necessary to do an independent sample t test. The results of the independent sample t-test can be seen in the following table of independent sample t-test results:

Table 6 Independent sampel t-test result

		Normality test		T test					
		F	Sig	Skor t	Dk	p	Average difference	Confidence level 95%	
								bottom	up
N	If variant is	3.526	.065	12.713	62	.000	36.7	2.8	42.5
Gain	homogen								
(%)	If variant is			12.713	58.661	.000	36.7	2.89282	42.56490
	not homogen								

Based on the output above, it is known that the significance value (Sig) in Levene's Test for Equality of Variances is $0.065 > 0.05$, it can be concluded that the variance of the N-Gain data (%) for the experimental class data and control class data is the same / homogeneous. Thus the independent t test for the N-Gain score is guided by the sig value found in the equal variances assumed table. Based on the t sample independent output table, it is known that the sig (2 tailed) value is < 0.05 , thus it can be concluded that there is a significant (real) difference in effectiveness between the experimental class and the control class in the use of PKL precondition models based on project-based learning learning to improve the readiness of

vocational students in entrepreneurship in the Dressmaking expertise program.

CONCLUSION

Based on the results of the study, it can be concluded that: (1) The developed learning model produces a final model with the name of the precondition learning model for project-based learning-based fieldwork practice to improve the readiness of vocational students to become entrepreneurs. The learning model developed is equipped with a model book, model support tools, and learning modules. (2) The level of validity of the preconditioned learning model for fieldwork

practice based on project-based learning to improve the readiness of vocational students for entrepreneurship is proven valid, this is proven through a process of assessment, advice, and input from experts. (3) The precondition learning model for fieldwork practice is proven to be practical. used, this is based on the results of student and teacher responses on a limited scale, and the overall score of student and teacher responses falls into very practical criteria. So that the precondition learning model practical fieldwork practice in the use and can be implemented in practical learning in schools. (4) Based on the results of the calculation of the N-Gain score for the experimental class, 32 students obtained an average of 77.157 or 77% including the effective category with a minimum value of 53 and a maximum of 94 then for the control class an average of 40.3816 or 40% included in the less effective category with a minimum value of 21.05 and a maximum value of 66.67, so it can be concluded that the use of the preconditioned learning model for fieldwork practices has proven to be effective, this is based on the results of the post-test and pre-test conducted in the experimental class and the control class. indicates that there is a significant or real difference.

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