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Plan-Do-Review-Share-Happy (Plandoresh) as a Development Strategy for Critical Thinking of Vocational School Students

Aftoni[1]
[1]Universitas Negeri Surabaya, Indonesia
Ekohariadi[2]
[2]Universitas Negeri Surabaya, Indonesia
Soeryanto[3]
[3]Universitas Negeri Surabaya, Indonesia
Achmad Imam Agung[4]
[4]Universitas Negeri Surabaya, Indonesia
Mohammed Saqr[5]
[5]University of Eastern Finland, Finland

Corresponding Author: *aftoni.19002@mhs.unesa.ac.id*

Abstract

The learning process and traditional teaching materials include activities that require memory and memorization. Most students are trained to follow this low-level thinking pattern in schools including vocational schools. When computers take over the routine tasks at work, a number of employees will be involved in tasks that require them to be more flexible and creative in solving problems. For this reason, the vocational school learning system must encourage students to become critical thinkers, through appropriate learning strategies. The purpose of this study was to test the validity of the Plan-Do-Review-Share-Happy (Plandoresh) strategy stages in the development for critical thinking of vocational students. This study used a descriptive method with the aim of obtaining the validity of the Plandoresh strategy stages from vocational school teachers with a random sample of 62 respondents. The results showed that: 1) Plan stage is valid with r count > r table of 0.845 > 0.254, 2) Do stage is valid with r count> r table of 0.889, 3) Review stage is valid with r count > r table of 0.866, 4) Share stage is valid with r count > r table of 0.880, 5) Happy stage is valid with r count > r table of 0.920. Based on these results, it can be concluded that the stages of the Plandores strategy are valid to be applied as a learning strategy for

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vocational students.

Keywords: Learning Strategies; Plandoresh; Critical Thinking.

INTRODUCTION

When computers take over routine tasks at work, some employees will become involved in tasks that require them to be more flexible and creative in solving problems. Life in the family is the same as the new technology provides endless opportunities for them to have entertainment, connect with friends and participate in society.

The learning process and traditional teaching materials include activities that require memory and memorization. Most students are trained to follow this lower level of thinking in schools. Knowledge and understanding is something that requires simple thinking and does not have to engage students in deep understanding and long-term attention. For example, the majority of traditional exams require students to only memorize information. Often this information is forgotten immediately after the exam is over.

Paulo Freire calls this condition a 'collection' of educational theories. They teachers 'store' knowledge into the minds of their students and students patiently accept, memorize, and repeat what they have learned. Current learning systems must encourage students to move beyond lower level ways to become critical thinkers. This kind of thinking requires higher thinking skills, such as analysis, synthesis, metacognitive observation, problem solving, and evaluation. Many educators agree that their students are not yet used to this expected way of thinking.

It is time for our education to move towards a better direction, namely preparing what should be prepared. Provide provisions for students with skills that are in accordance with the times. Teaching and learning systems today must encourage critical thinking skills of students. In order to familiarize and cultivate these skills, appropriate learning models and strategies are needed. In addition to the right models and strategies, the learning approach must be student-centred, where students are more dominant in their learning process and of course very relevant to the process of developing critical thinking.

Strategy is one of the keys to the success of the teacher as a facilitator in applying the learning model in teaching and learning activities. Kemp (1995) said that the learning strategy is a learning activity that teachers and students must do so that learning objectives can be achieved effectively and efficiently. Dick & Carey (1985) states that a learning strategy is a set of learning

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materials and procedures that are used together to produce learning outcomes in students.

The learning strategy developed in this study is the Plan-Do-Review-Share-Happy (plandoresh) project-based learning model. The implementation of this plandoresh strategy is expected to develop critical thinking skills of students, so that they are able to answer the challenges of work in the future. The purpose of this study was to test the validity of the plandoresh strategy stages in the development of critical thinking of vocational school students.

METHOD

This study used a descriptive method with the aim of obtaining the validity of the plandoresh strategy stages. Samples were taken randomly with the number of respondents 62 vocational teachers. The questionnaire for the plandoresh strategy stages uses a Likert scale of 1-5 and is distributed via the Google Form application on middle October 2020. To obtain the validity of the plandoresh strategy stages, a Pearson product moment validity test is carried out. The data were processed using the SPSS 23 application and the results of r count were compared with r tables with a significant level of 5%. If r count > r table then it is declared valid and vice versa.

RESULT AND DISCUSSION

The following is a stage plan which includes; 1) setting goals, 2) determining the final project, 3) scheduling, 4) challenges and solving, 5) learning resources. Based on the frequency distribution table Plan, stage set a goal of 27 respondents said better, and 30 other states a very good 48.4%.

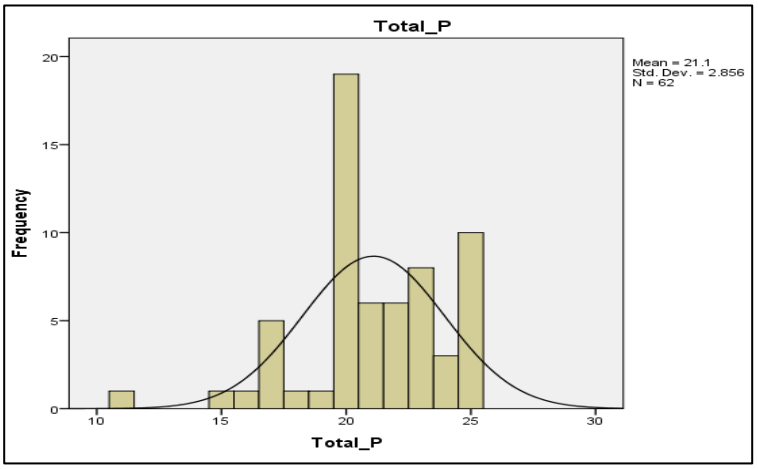


Figure 1. Frequency Distribution of Plan

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Furthermore, the stage of determining the final project, 61.3% of respondents said it was good and 30.6% chose very well. This means that the stage of determining the final project chosen by the majority of respondents reached 91.9%. The next stage is scheduling, it appears in the P3 distribution table that a number of 50% of respondents chose good and 41.9% said they were very good, the remaining 8.1% said it was sufficient and not good. For the challenge and solution stages, a total of 82.3% of respondents stated that they were good and very good, the remaining 17.7% stated that they were sufficient and not good. The last stage of the plan is to determine the source of learning, the results show that 83.9% of respondents said they were good and very good, while 16.1% said they were sufficient and not good.

Stage of Do consists of; 1) working on a plan, 2) finding new information, 3) keeping work well. The results are as follows: implementing the plan received good and very good responses by 55 respondents or 88.7%. The stages of finding new information received a good response of 59.7% and very good 27.4%, the remaining 12.9% responded sufficient and not good. For the next stage of do, save work well, get a good and very good response 85.5%. Shown in Figure 2 below:

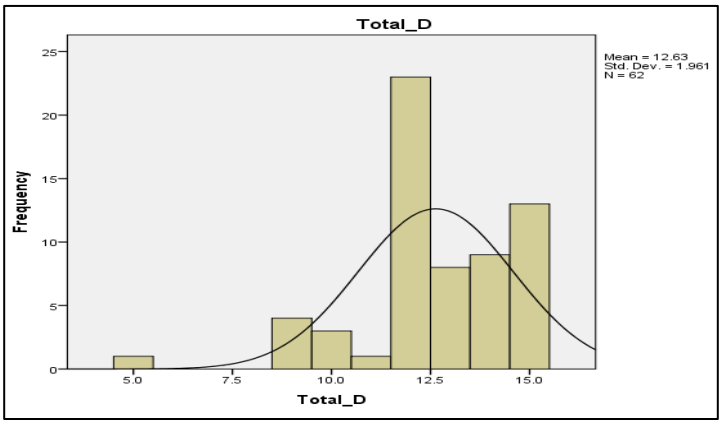


Figure 2. Frequency Distribution of Do

Stages of Review in the questionnaire consists of 1) discussion, 2) working group, 3) the interaction of students, 4) listen to the others, the result is shown in Figure 3 below. The discussion stages received a good response of 53.2% and a very good response of 30.6%. It shows that 79% of respondents stated that the group work stages were good and very good. In the stages of student interaction, 82.2% of respondents said they were good and very good. Listen to the others, 87.1% responded good and very good.

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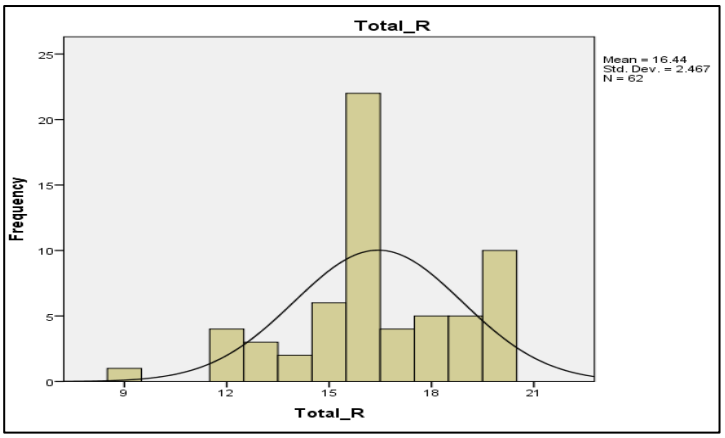


Figure 3. Frequency Distribution of Review

The Share stage consists of 1) presentation, 2) question and answer, 3) testing work results, and 4) receiving feedback. The frequency distribution of the share stages is shown in Figure 4, with the following results:

The presentation stage got good response of 50% and very good response of 32.3%. Question and answer get good response of 48.4% and very good response of 27.4%. Rest 24.2% responded well enough. Testing work results get good response of 51.6% and very good response of 25.8%. Remaining 22.6% responded quite well and there was 1 respondent who said it was not good or 1.6%. Stages receive feedback good response by 58.1 % and the response was very good 24.2 %. The remaining 11 respondents chose this stage with sufficient and not good.

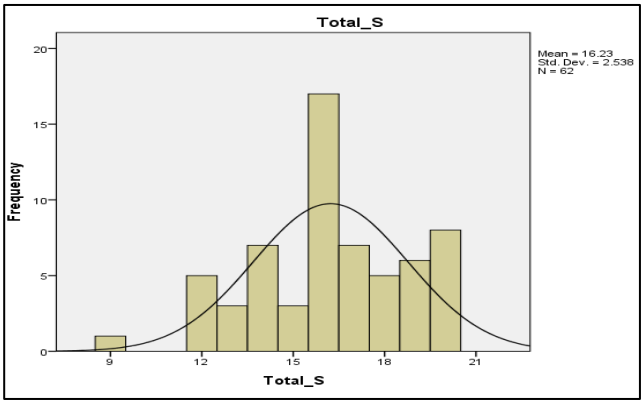


Figure 4. Frequency Distribution of Share

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The Happy stage consists of 1) continuously improving, 2) looking for new, better ways, 3) seeking improvements. The frequency distribution of the happy stage is shown in Figure 5 below.

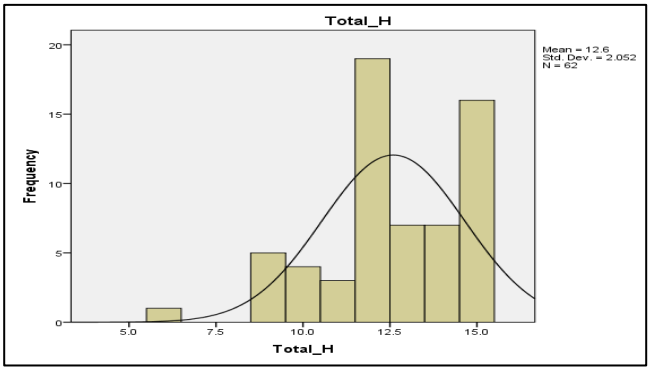


Figure 5. Frequency Distribution of Happy

Figure 5 shows the following results. Stages continually improving got good response of 45.2% and 41.9% very good response, or accumulation of 87.1%. Looking for a new, better way to get a good response of 45.2% and very good response of 37.1% or the accumulated 82.3%. The stage of trying to improve got a good response of 48.4% and a very good response of 33.9%, or an accumulation of 82.3%.

To obtain the validity of the stages of the Plandoresh strategy, the Pearson product moment validity was tested. Data were processed using the SPSS 23 application and the results of r count were compared with r tables with a significant level of 5%. If r count > r table then it is declared valid and vice versa. The results show that: 1) the Plan stage is valid with r count> r table of 0.845> 0.254, 2) the Do stage is valid with r count> r table of 0.889, 3) the Review stage is valid with r count > r table of 0.866, 4) Share stage is valid with r count> r table of 0.880, 5) Happy stage is valid with r count> r table of 0.920. The following is a summary of the results of the product moment validity test.

Table 1. Pearson validity test results

Number	Stage	r Count	r table significant level (5%)	Criteria
	Plan			
1	Setting goals	0.842	0.254	Valid
2	Determine the final project	0.862	0.254	Valid

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Number	Stage	r Count	r table significant level (5%)	Criteria
3	Scheduling	0.846	0.254	Valid
4	Challenges and Solutions	0.845	0.254	Valid
5	Learning Resources	0.828	0.254	Valid
	Do			
6	Work on a plan	0.889	0.254	Valid
7	Find new information	0.905	0.254	Valid
8	Save work well	0.872	0.254	Valid
	Review			
9	Discussion	0.891	0.254	Valid
10	Work in group	0.887	0.254	Valid
11	Student interaction	0.865	0.254	Valid
12	Listen to others	0.819	0.254	Valid
	Share			
13	Presentation	0.889	0.254	Valid
14	Question and answer	0.889	0.254	Valid
15	Test work results	0.903	0.254	Valid
16	Receive feedback	0.839	0.254	Valid
	Happy			
17	Continue to improve	0.909	0.254	Valid
18	Looking for a new, better way	0.953	0.254	Valid
19	Work for improvement	0.899	0.254	Valid

DISCUSSION

Strategy in education is defined as a plan, method, or series of activities designed to Achieves a particular educational goals (JR David, 1976). Learning strategy can be interpreted as planning that contains a series of activities designed to achieve certain educational goals. The learning strategy is a series of activities and the use of various resources or strengths in learning arranged to achieve learning objectives.

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The Plandores strategy in the learning process is an effort so that students get optimal results in their learning. Cycles in which students plan, do, review, share and discuss their opinions about the work results or answers developed at least support critical thinking skills of students. This is in line with Johnson's (2007) view that critical thinking is an organized process that allows students to evaluate evidence, assumptions, logic, and the language that underlies other people's thinking.

Mustaji (2014) states that critical thinking is thinking reasonably and reflective by emphasizing making decisions about what to believe or do. Teachers can help students think critically and work together meaningfully with others best in the cycle of awakening and enhancing their work. By foreseeing the potential challenges, teachers will be proactive and create a support system that will help students when needed.

Plan strategies many variant, however, the components are common, including; setting goals, determining the final project, scheduling, challenges and solutions, and learning resources. Working without coercion helps students find new information, as well as getting in the habit of keeping work properly. Paulo Freire (1993) states that individuals learn in the context of the world in which they live, with real problems and situations. Freires educational model emphasizes a higher level of thinking, his approach is often called critical ability. Research shows that people are more likely to make important changes if they have specific, concrete goals. By putting goals in writing, a person makes a commitment to an idea, and tends to achieve it.

The Do stage in addition to helping students think critically can also increase creativity. Students will do what they plan to do without external coercion. Opinion Hulbeck, Munandar (1990) mentions creativity an activity that uses all the capabilities in the face of environmental challenges in a unique way. Guilford, Lutfiah Nurlaela (2019) mentions more creativity associated with a person's ability and not because there are situations that force her.

The review strategy stages which include discussion, group work, interaction between students, and listening to other people's opinions are skills needed in the 21st Century era. This stage needs to be applied in the learning process. Piirto mentioned the characteristics of 21st century skills, among others, being open to seeing one's own experiences or the experiences of others, not being easy to reject ideas that at first seem strange and believing in collaborative groups, so they can easily accept other friends' ideas. Research says that working together gives students the opportunity to increase academic success because they have to ask questions, discuss thoughts, find solutions, clarify their own thinking, and develop deeper understanding. In

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addition, social skills such as taking turns, sharing, providing assistance to others, and receiving assistance from others will be obtained through cooperation.

Cooperation does not happen by itself to students and requires motivation, direct instruction, and time to practice. When students are working together, the teacher should make sure that all group members participate in and are accepted by the group, agree on their goals and plans for making a product, work on designated sections to complete the product, and talk about their work and help each other.

Share strategies include presentation, question and answer, test work results, and receive feedback which are expected to develop critical thinking skills. According to Harsanto (2005) critical thinking is one side of being a critical person. The mind must be open, clear and based on facts. To be a critical thinker, one must learn to ask questions about ourselves, other people, the problems and decisions made by others. Watson and Glaser (2008) state that the components of critical thinking include: drawing conclusions, assumptions, deduction, interpreting information, and analysing arguments. The components of critical thinking are used as a measure of a person's critical thinking ability.

Happy strategy includes; keep on improving ourselves, looking for new and better ways, and working on improvements. Seligman (2005) states that happiness is a result of self-assessment which contains positive emotions, such as comfort, joy, and involvement. Happiness has various positive impacts and will lead to a better and more productive life, Carr (2009). Kosta & Kallick (2001), say habitual mind is knowing how to act when you don't know the answer if you are faced with a challenging problem. They introduce habits of mind that are used by effective thinkers, including applying experiences to new situations, working hard, and learning continuously. With a happy condition, someone will strive diligently to improve themselves, always looking for new ways to improve.

CONCLUSION

Critical thinking is a key skill of modern students, teachers must know about the processes that help students become great thinkers. Theories presented by educational experts show that there are different types of thinking with complex levels of difficulty. Becoming familiar with these differences can help teachers break into several levels of thinking and help all students learn how to think deeply about what they are learning.

Based on the results of research and discussion, it can be concluded that the stages of the

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Plandoresh strategy are:

- Plan, which consists of setting goals, determining the final project, scheduling, challenges and solving, learning resources.
- Do, includes working on a plan, finding new information, keeping a job well done.
- Review, discussions, group work, student interactions, listening to others.
- Share, presentation, question and answer, test work, receive feedback.
- Happy, keep improving yourself, looking for new and better ways, seeking improvements

Valid is used as a stage of learning strategy in an effort to develop critical thinking of vocational students. A good teacher can build relationships with students by believing in the specialty of each individual student. Expressing respect and trust in students' abilities, and valuing effort over achievement will encourage student enthusiasm for learning. Students are better prepared to acquire and enhance new information, strategies or skills after they have spent a lot of time exploring a challenge or problem on their own without receiving explicit instructions or answers at the start of a lesson. Plandoresh strategy implementation in the learning process accommodate freedom of expression and differences, so it can help teachers be more effective in improving the higher way of thinking.

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