

The Effectiveness of Integrated Observation-Based Teaching Practice Assessment and Lesson Plans for Prospective Vocational Teachers

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ABSTRACT

Implementation of learning in vocational education continues to be a concern, especially the Indonesian government. technological developments and changes in learning orientation that demand 21st century abilities and become challenges to vocational education. Besides that, digitizing learning is also homework for all teachers and the government. The problem is, the assessment of prospective vocational teachers is not integrated which causes unsynchronization between universities and vocational schools. Different learning topics are not a problem, if the teacher has a strong basic concept, so that he is able to adapt to change. One of them is through a standard assessment process that is prepared based on clear indicators. This development research was carried out specifically for teaching practice assessment instruments and lesson plans. The population of this study is prospective teacher students who practice in vocational schools. The research instrument is structured based on two main parts, the first is the assessment of teaching practice and the second is the assessment of lesson plans. The results of the study revealed that this integrated observation-based assessment instrument was effective in assessing students' teaching practices and assessing their lesson plan designs. These results can be used as a measuring tool for evaluating student teaching practice at school, and can also be used as an indicator when implementing learning at universities. These results contribute to efforts to improve the quality of vocational education in accordance with the times.

Keywords: *Effectiveness, Assessment, Vocational, Education, Teacher.*

1. INTRODUCTION

Modern humans will always talk about potential, ideas, and positive impacts [1]. There are many opportunities in today's technological developments [2][3][4]. Especially after the 2019 covid pandemic, there have been changes in many aspects of life and provided opportunities for technological disruption to the world [5][6]. One aspect that has been touched by change is the educational aspect, such as digitization of education and the collaboration of teachers, students and technology into a combination towards modern learning. [4][7]. Vocational education has a big responsibility in this situation because it is closely related to technology [3][6][8][9]. Therefore, research on vocational aspects is always being developed [10][11], especially in the learning section and other sections such as the relationship between vocational education and industry,

curriculum, and technology development [12]. In the learning section for vocational aspects it is divided into two, in general it is divided into two, the first is theoretical learning and practical learning, where practical learning requires facilities and infrastructure that are in accordance with the area of expertise. One indicator of vocational education will be better if it is supported by the best system and teachers, therefore it is necessary to prepare an assessment form that is in accordance with the needs of achieving learning [13]. One of the indicators of a professional vocational teacher is being able to implement learning according to the lesson plans they design [14][15][16][17]. So, in order to prepare prospective vocational teachers, it is necessary to form an integrated assessment based on observation in order to see the compatibility between the teaching practices carried out and their lesson plans. [14]. This assessment relates to lecturers, teachers at vocational

schools, vocational school students, and prospective vocational teachers who are practicing teaching. This research also has the potential to be developed further because it sees the many elements involved, especially in determining government policy making from the educational aspect.

2. RESEARCH METHOD

This research is a 4D development research (define, design, develop, and disseminate) as shown in Figure 1.

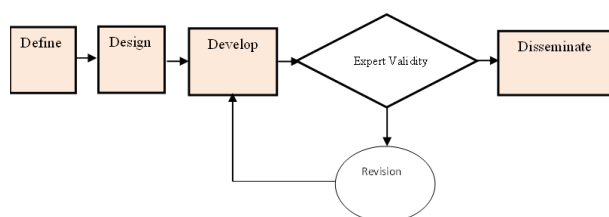


Figure 1. Flow of the 4-D Research Model

Based on Figure 1, it can be seen that the first stage of this research is define, namely the process of compiling information to determine the initial steps for carrying out research development based on needs analysis and rationale for development. The second stage is design, where in this research the design process is carried out by developing an assessment instrument with reference to clear references. The third stage is develop, namely the process of validating the designed instrument, this process is carried out with experts in their field. In this section, several sections are revised according to the suggestions given by experts. The last part is disseminate, which is dissemination. The intended dissemination is by conducting assessments of students during teaching practice using validated instruments.

3. VALIDITY & REALIBILITY

The results of testing the validity of using Aiken's v is 0.941 or can be interpreted as valid. The reliability test result was 0.850 or included in the reliable category.

Table 1. validity and reliability test results (*Expert Judgement*)

Validator	Coefficient	Classification
The validity of Aiken's V	0,941	Valid
ICC reliability	0,850	Reliable

Based on table 1, it can be seen the results which state that the assessment instrument can be used as a valid and reliable research measurement tool.

4. RESULT AND DISSCUSSION

4.1. Result

Assessment of teaching practice of prospective teachers uses the developed instruments, which are divided into two main parts, namely the teaching practice instrument with ten indicators and the standard lesson plan instrument with seventeen indicators.

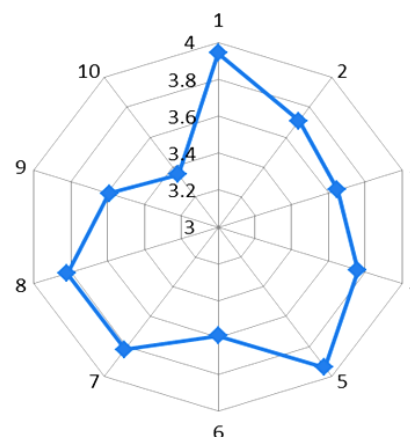


Figure 2. Teaching Practice Assessment

Table 2. Teaching Practice Assessment

No	Indicator	Value
1	class opening activity	3.94
2	Mastering Study Materials	3.71
3	Mastering the learning approach	3.65
4	Ability to Choose Learning Media	3.76
5	Ability to use learning media	3.94
6	Ability to Use Information and Communication Technology	3.59
7	Ability to Manage Classes	3.82
8	Ability to use language in learning	3.82
9	Able to demonstrate teaching style	3.59
10	Aability to Close Learning	3.35

Based on Figure 2, it was found that ten indicators for teaching practice in vocational schools conducted by student teacher candidates received varying scores. The value variations found were taken from 17 samples spread across two vocational schools. Based on these data, the highest score was found on the opening lesson indicator with a value of 3.94 and an indicator of the ability to use learning media with a value of 3.94. In Figure 2 it is also seen that there is the lowest value data owned by the closing learning indicator with a value of 3.35. After that it is followed by the second lowest value, namely the indicator of the ability to use Information and communication technology (ICT).

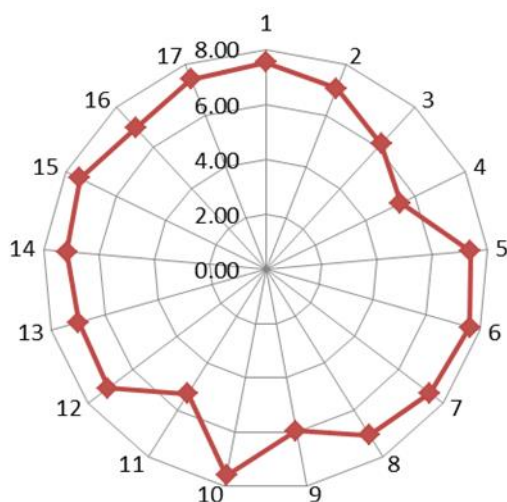


Figure 3. Lesson Plan Assessment

Table 3. Lesson Plan Assessment

No	Indicator	Value
1	Conformity of learning objectives with indicators of achievement of competence	7.53
2	The operational verbs used can be observed and measured	7.06
3	Learning objectives (cognitive, affective, and psychomotor)	6.18
4	Formulation of learning objectives	5.41
5	Conformity of learning materials with basic competencies and indicators to be achieved	7.41
6	Suitability of the arrangement of teaching materials	7.65
7	Teaching materials	7.41
8	Models, approaches, methods, and teaching techniques	7.06
9	Learning steps/syntax	5.94
10	Preparation of stages of learning activities	7.59
11	Using active learning/using problem/project based models	5.29
12	The ability to choose learning media	7.12
13	The ability to choose learning resources	7.00
14	Plans for the use of learning materials and tools	7.18
15	Scope of assessment aspects	7.47
16	Conformity of evaluation with objectives/indicators	6.94
17	Assessment components	7.41

Based on Figure 3 about lesson plan assessment indicators made by prospective teacher students. There are seventeen indicators used. It was found that the value of each indicator has variations. Some indicators have high values and some have lower values. The indicator with the highest score is the indicator of the composition of teaching materials with a value of 7.65, followed by the indicator of conformity of goals with indicators of achievement of competence with a value of 7.53. The next indicator with the same value of 7.41 is the suitability of learning materials with basic competencies and indicators to be achieved, indicators of teaching

materials, and indicators of assessment components. The lowest indicator is owned by the indicator of application of active learning/using problem/project-based models with a value of 5.29. Followed by the second lowest indicator, namely Formulation of learning objectives with a value of 5.41.

4.2. Discussion

Based on the results of the research, based on the first two main parts of the results of the teaching practice assessment and the second part based on the lesson plan assessment [18][19][20]. The first indicator is opening class, where students already have good skills when carrying out practice opening lessons in class. These results are relevant to previous research where the implementation of the class-opening process is an activity that is easy to master if properly trained [6].

The second indicator is mastery of the subject matter. Based on the results of the assessment, it was found that student teacher candidates already had the ability to master the subject matter. The results of the assessment on this indicator are also relevant to previous research where teachers master teaching materials [20]. The third indicator is mastering the learning approach, it is found that students have mastered the student center learning and teacher center learning learning approaches. This section is relevant to the results of previous research, namely the teacher has mastered the learning approach [6][21]. The fourth indicator, namely the ability to choose media, found that student teacher candidates during teaching practice were able to choose the right media for teaching. This indicator is in line with previous research which states that modern teachers already have the ability to choose the right media in learning [6].

The fifth indicator is the ability to use media, where it was found that prospective teacher students were able to use media in learning. This result is in line with previous research where teachers are able to use media, even during a pandemic [6][20]. The sixth indicator is the ability to utilize ICT. It was found that current students are technologically literate and already have good skills on this indicator. The seventh indicator is the ability to manage classes. this is also in line with and supports the results of previous research, namely teachers have the ability to utilize ICT [6]. The eighth indicator uses language, based on the results of the assessment it is found that students are able to use the right language in the learning process. The ninth indicator shows a style appropriate to learning, where it is found that students have mastered this indicator. The tenth indicator closes learning, based on the results it is found that students are able to close learning well, but need to be trained continuously. Indicators eight to ten were found to have relevance to the results of previous research which stated that the use of language, teaching style, and the process

of closing learning have become important parts that must be possessed by teachers. [6][20][21].

Next, the discussion for lesson plan assessments made by student teacher candidates. The first indicator is the suitability of goals with indicators of competency achievement. The most important part in the assessment of this lesson plan is that the learning objectives must be in accordance with the competency achievement targets. If it is not used as an assessment indicator, then the learning will be in the wrong direction. This research is in line with previous research which states that the most important part of learning is the achievement of competency targets [22][23]. The main purpose of organized learning is to create synchronization of learning objectives with the competencies to be achieved. Based on the assessment carried out, it was found that students were able to set goals according to competency achievements. However, these results still need to be improved, in accordance with previous research that learning objectives must be firm and clear [24][25].

The second indicator is the operational verbs used can be observed and measured in the lesson plan. In accordance with Bloom's theory that operational verbs are closely related to the level of learning given [26]. Therefore it is very important to be assessed. Based on the assessment carried out, it was found that students were able to arrange operational verbs well in the lesson plans they made. This result is in line with previous research that operational verbs must be clear [6][27].

The third indicator is that learning objectives include core competencies (cognitive, affective, and psychomotor). This indicator is very important, especially in vocational education that is competency-oriented, especially psychomotor. Based on the assessment carried out on the lesson plan, it was found that students already understood the nature of integrated competence in cognitive, affective, and psychomotor. These results support the reference which states that competency should be composed of three parts, namely cognitive, affective, and psychomotor [28][20].

The fourth indicator is the formulation of learning objectives. based on the assessment carried out, students are still weak in terms of formulating learning objectives, and need to be studied more deeply. Learning objectives need to be formulated very well so that the meaning of learning can be emphasized at each stage of learning. This low score is relevant to previous research which states that the formulation of learning objectives for teachers is also weak[21].

The fifth indicator is the suitability of learning materials with basic competencies and indicators to be achieved. This indicator is one of the most important to pay attention to. Teaching materials must be in accordance with the competencies targeted to be achieved, especially starting from basic competencies.

Based on an assessment of the lesson plans made by prospective teachers, it was found that they had made them well. These results are relevant to previous research, where learning competencies must be structured in teaching materials [20].

The sixth indicator is the arrangement of teaching materials. This indicator is an important part because teaching materials that are well prepared will have a good impact on the implementation of learning. based on the value obtained, it is known that prospective teacher students have prepared teaching materials in accordance with the order of teaching materials. This result is relevant to previous research which stated that prospective teacher students were able to compile teaching materials [6].

The seventh indicator is teaching materials. This indicator of teaching materials is undeniable that this is a very important part of learning. if the teaching materials are bad, the learning activities are poor and will not be achieved. Based on the assessment carried out, it was found that prospective teacher students had made teaching materials in accordance with the learning objectives. This result is in accordance with previous research which states that students have the ability to compose teaching materials [6].

The eighth indicator is models, approaches, methods and teaching techniques. In addition to teaching materials, prospective teacher students must understand models, approaches, methods, and teaching techniques. Based on the assessment conducted, it was found that students were able to incorporate models, approaches, methods and teaching techniques into their lesson plans. This result is in line with previous research which states that in learning it is necessary to have an approach, a variety of methods, and teaching techniques [24][29].

The ninth indicator is learning steps/syntax. This indicator is closely related to the application of the selected learning model in learning. Currently there are many forms of learning models developed through research, one of which is a project-based learning model. Based on the assessment conducted, it was found that students were able to write down the steps/syntax of learning in the lesson plan. This result is in line with previous research which stated that most students who had studied the learning model understood the stages of learning [24][30].

The tenth indicator is the stages of learning activities. The part that is often mistaken by teachers who apply learning models, especially young teachers, is related to the stages of learning. therefore, this is used as an indicator for evaluating the preparation of lesson plans. Based on the assessment carried out, it was found that students had begun to be able to arrange the learning stages according to what they should have been. Some of

them follow the learning stages according to the standard learning model used [25][31].

The eleventh indicator is the application of active learning/using a problem/project based model. This indicator is a special indicator because the students assessed in this study have previously been provided with information about several learning models, including the problem-based learning model and the project-based learning model. Based on the results of the field assessment, it was found that students were able to apply the learning model, but they still needed practice to become more proficient [25][32][33].

The twelfth indicator is the selection of learning media. In the midst of current technological developments, the selection of learning media must be of particular concern. Based on the assessment carried out, it was found that students had begun to be able to compile and choose appropriate learning media with their teaching materials. This result is in line with previous research which stated that students were able to choose the right media in learning as written in the lesson plan [29][34].

The thirteenth indicator is the selection of learning resources. Along with the very rapid development of science, of course the learning resources that are used as references in compiling lesson plans must always be updated. Therefore this point is used as an assessment indicator. Based on the assessment carried out, it was found that students were able to make lesson plans by selecting relevant and up-to-date learning resources. This result is in line with previous research which states that the selection of learning resources greatly influences the level of quality of knowledge obtained [29][35][36].

The fourteenth indicator is the plan to use learning materials and tools. learning variations need to be done, especially in terms of teaching materials and learning tools. Especially in the midst of technological developments that are happening at this time. Based on the assessment carried out, it was found that prospective teacher students were successful in using learning materials and tools by combining existing technology. This result is in line with previous research which stated that students were trained in using learning materials and tools, especially practical learning [6][37].

The fifteenth indicator is the scope of the assessment aspect. Broadly speaking, a teacher or prospective teacher must be able to see the scope of assessment in learning because this is the main component to increase the achievement of a lesson. based on the assessment carried out, it was found that prospective teacher students had been able to make a lesson plan by taking into account the scope of the assessment. This result is in line with previous research which stated that the assessment aspect is very important in learning [16][38].

The sixteenth indicator is the conformity of the evaluation with the objectives/indicators. This indicator is important to use because it relates to the suitability between the form of evaluation and the learning objectives. If the evaluation used is appropriate for measuring learning objectives, then the results will be measurable. Based on the assessment carried out, it was found that prospective teacher students had the ability to make evaluation forms in accordance with the learning objectives. These results support the statements and results of previous research, namely that the form of learning evaluation must be in accordance with the learning objectives [16][10].

The last indicator is the assessment component. This section is important to pay attention to and be used as an indicator because it relates to efforts to reveal the important parts that will be assessed from learning. based on the assessment made on the lesson plan made by students, it was found that students were able to make the assessment components of the lesson plan well. these results support findings from previous studies whereby teachers have the ability to construct assessment components [16][39][40].

Based on the assessment conducted on prospective teacher students through the teaching practice process, it was found that they already had very good abilities. next, based on an assessment of the lesson plans they made as part of their teaching preparation, it was found that students were able to make lesson plans in accordance with learning objectives.

5. CONCLUSION

The existence of vocational education in supporting the creation of an increase in the quality of Indonesian society is still highly expected. One way to maintain this existence is to carry out continuous innovation through research and development based on the problems that occur. Based on the results of research on the effectiveness of this integrated observation-based teaching practice assessment which focuses on the assessment of teaching practices and lesson plans made by prospective teacher students, it is concluded that the assessment instrument is capable of effectively assessing students. The research instrument was arranged based on two main parts, namely teaching practice assessment and lesson plan assessment. The results of the study revealed that this integrated observation-based assessment instrument was effective in assessing students' teaching practices and assessing their lesson plan designs. These results can be used as a measuring tool for assessing student teaching practice at school during teaching practice, and can also be used as an indicator when implementing learning at university.

6. AUTHORS CONTRIBUTIONS

Syaiful Haq is a research member whose role is to develop instruments and techniques for the Nizwardi Jalinus field as the head researcher whose role is to formulate ideas for research problems. Sukardi and Nurhasan Syah as the research team in compiling the instrument. Muhibuddin as a research team in providing input and suggestions regarding articles.

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