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## Cognitive Assessment Analysis with Self-Assessment Technique as A Cognitive Area Evaluation of Students in Entrepreneurship Lesson XI Class of SMK

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### Abstract

This study discusses the use of self-assessment techniques in assessing the cognitive domain of students in entrepreneurship subjects. Self-assessment is an assessment that involves students assessing their own competence. This study is motivated by the fact that teacher-centred assessment has often made it difficult to assess and the students themselves tend to be less involved. So that students as objects of assessment who should be able to take the most benefit from the assessment, have not received maximum feedback from the assessment. With this self-assessment, it is hoped that it can be used as an alternative in assessing the cognitive domain in Entrepreneurship subjects. Therefore, this study aims to explore information about performance appraisal with self-assessment techniques in evaluating the cognitive domain in Entrepreneurship subjects, including a description of the ability of students to conduct self-assessment; the results of self-assessment in revealing the performance of the cognitive domain of students; student responses regarding the assessment of Entrepreneurship subjects with self-assessment techniques, as well as obstacles in the implementation of this assessment. This research is qualitative research, using a descriptive approach. The subjects for the research instrument trial and the data collection group for the research instrument trial group consisted of thirty students of class X SMK PGRI 4 Blitar City. The total number of samples is 23 people.

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### How to Cite

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## INTRODUCTION

The learning process in the classroom is an integration between planning learning activities, learning activities themselves and evaluation activities. One aspect that must be included in the planning is the teaching objectives as the expected target of the teaching and learning process, as well as how the objectives and the teaching and learning process can be achieved effectively. Then based on the plans and objectives that have been set, learning activities are carried out. To answer these questions, it is necessary to evaluate learning.

Assessment of learning outcomes ideally can reveal all aspects of learning, namely cognitive, affective, and psychomotor aspects, because students who have good cognitive abilities when tested are not necessarily able to apply their knowledge well in overcoming life problems. Assessment of learning outcomes is closely related to the objectives to be achieved in the learning process. In general, the learning objectives follow the classification of learning outcomes carried out by Bloom, et al, namely cognitive, affective and psychomotor.

Cognitive domain is knowledge based on its development from students' perception, introspection, or memory. Cognitive learning objectives were developed by Bloom, et al, in Bloom's taxonomy. This goal is divided into six levels as shown in the following table:

Table 1. Cognitive Domain (*Bloom's Taxonomy*)

Level	Verb
1. <i>Knowledge</i> (knowledge)	Identification, specification, stating
2. <i>Comprehension</i> (understanding)	Explaining, explaining again
3. <i>Application</i> (application)	Using, applying
4. <i>Analysis</i> Analyzing	Comparing
5. <i>Synthesis</i> (synthesis)	Designing, developing, planning
6. <i>Evaluation</i> (evaluation)	Assessing, measuring, deciding

There are four elements in teaching and learning activities, namely objectives, materials, methods and tools and evaluation. The purpose as the direction of the teaching and learning process is essentially a formulation of behavior that is expected to be mastered by students after receiving or taking their learning experience. Material is a set of scientific knowledge that is described from the curriculum to be conveyed or discussed in the teaching and learning process to arrive at the goals that have been set. Methods and tools are means or techniques used to achieve goals. While the assessment is an effort or action to determine the extent of the goals that have been used as a tool to determine the success of the process and student learning outcomes. In general, learning outcomes can be grouped into three aspects, namely the cognitive, psychomotor and affective domains. Explicitly these three aspects are separated from each other. Whatever the type of subject, it always contains these three aspects but has a different emphasis. The cognitive aspect emphasizes more on theory, the psychomotor aspect emphasizes practice, and both aspects always contain affective.

One of the objectives or targets for evaluating learning outcomes is the cognitive aspect or realm. Cognitive domain is a domain that includes mental (brain) activities. According to law number 23 of 2016, Domain assessment is an activity carried out to measure students' mastery of knowledge. According to Benjamin S Bloom et al (1956), all efforts related to brain activity are included in the cognitive domain. Cognitive domains are related to thinking abilities, including the ability to memorize, understand, apply, analyze, synthesize, and evaluate abilities. According to Bloom, et al (1956), this cognitive aspect consists of six levels or levels, namely: knowledge or memory, understanding, application, analysis, synthesis, and evaluation. The first two aspects are called low-level cognitive and the next four aspects include high-level cognitive.

The teacher plans the whole series of learning starting from making learning designs, implementing learning activities, conducting evaluations to find out the impact of learning and is the final part of the learning process. By conducting an evaluation, teachers can find out information on the achievement and development of students' abilities during learning. Tyler in Arikunto describes evaluation as a description of the extent to which, in what ways, and how the educational goals have been achieved. In other words, evaluation is used to measure and assess the achievement of the goals that have been set. Meanwhile, Cronbach and Stufflebeam emphasized that further evaluation can be used to make decisions.

One form or method of evaluation is the technique of self-assessment or self-assessment. Self-assessment assessment is useful so that students can assess themselves. Thus, students can know the extent to which they understand a lesson and the extent to which they can improve their abilities. According to BPPPN, the self-assessment curriculum is an assessment technique in which students are asked to assess themselves regarding the status, process, and level of achievement of the competencies they have learned in certain subjects based on the criteria or references that have been prepared. (Ministry of National Education, 2010). With this assessment, it will free the teacher from the task of assessing students. The self-assessment assessment method is useful for fostering student confidence, encouraging students to be able to assess themselves honestly, and encouraging students to know their own weaknesses and strengths.

The current paradigm shifts from teacher centered to student centered. In the student-centered approach, it activates students more in the learning process, encourages students to master knowledge, introduces the relationship between knowledge and the real world (analytical, synthesis, and evaluation), encourages active learning and thinks critically, introduces various various learning styles, considering the needs and backgrounds of learners, providing opportunities for the application of various assessment strategies.

Boud and Falchikov (2006), stated that the active participation of students in the design of the assessment, the preparation of criteria and carrying out the assessment are very necessary in learning. It is time for the assessment carried out by lecturers now that there needs to be innovation, so that what the lecturer does is as expected. This expectation does not only apply to teachers, but also to stakeholders (students, parents, community).

In addition, this research was conducted due to the ineffectiveness of the assessment carried out by teachers at SMK PGRI 4 Blitar because it still uses teacher-centered assessment. Because the assessment that is still teacher-centred

does not make students aroused and have the desire to change and improve their own values.

Therefore, the researcher feels that the application of self-assessment in SMK is one of the important subjects to be discussed and raised the title "Analysis of Assessment of the Cognitive Domain with Self-Assessment Techniques as an Evaluation of the Cognitive Domain of Students in Entrepreneurship Subjects Class XI SMK PGRI 4 Blitar City".

### **Understanding Cognitive Ability Cognitive**

Ability is a domain that includes mental (brain) activities. According to Bloom, all efforts related to brain activity are included in the cognitive domain. The cognitive domain is related to thinking ability, including the ability to memorize, understand, apply, analyze, synthesize, and evaluate the ability. Measurement in school is only related to quantitative descriptions of student behavior. Measurement does not involve judgment about the goodness or value of the behavior being measured. Like tests, measurements do not determine who passes and who does not. Measurement only produces quantitative data about what is being measured. In the national education system, the formulation of educational goals, both curricular and instructional goals, uses the classification of learning outcomes from Benjamin Bloom which divides it into 3 measurement domains, namely the cognitive, affective, and psychomotor domains. In the cognitive domain, there are six aspects or levels of thinking processes, starting from the lowest level to the highest level.

### **Definition of Self-Assessment**

According to Sudaryono (2012) self-assessment is an assessment technique in which students are asked to assess themselves about the status, process and level of achievement of the competencies they have learned in certain subjects. Self-assessment techniques can be used to measure cognitive, affective, and psychomotor competencies.

The involvement of students in the "student self-assessment" self-evaluation process is now considered an important part of school success. Black and William argue, "... self-assessment by pupils, far from being a luxury, is in fact an essential component of formative assessment".<sup>10</sup> Self-assessment by students, far from being a luxury, is actually an important component of formative assessment. According to Orsmond, the comparison between self-assessment and assessment can be seen in the following table 2:

Table 2. Comparison between self-assessment and assessment

No.	Self Assessment	Assessment
1.	Student centered.	Usually not student centered.
2.	The criteria are clear and transparent	assessment refers to an assessment that has been determined without prior discussion with the student
3.	Students have power or authority	student is isolated from the assessment so that the student is isolated from the learning process
4.	Can encourage <i>deep approach</i> .	Learning development is only on the <i>surface approach</i> (shallow approach)

5.	Provide opportunities for students to actively build their learning	Does not provide encouragement to build independent learning
6.	Encourage discussion between students and teachers	Little or No discussion.
7.	There is formative <i>feedback</i> .	There is <i>feedback</i> because there is a time lapse or continuous loss of communication between students and teachers
8.	There is an opportunity to review or review weaknesses in learning.	The result has little opportunity to revise.
9.	Prepare students for <i>lifelong learning</i> a continuous	Usually, the end goal is just learning.
10.	Can increase students' self-confidence	Has a negative effect on self-confidence
11.	Provide good opportunities for <i>formative assessment</i>	Slightly <i>formative assessment</i>
12.	Improve performance or quality of learning from learning outcomes	-
13.	Usually <i>authentic learning tasks</i> .	Rarely <i>authentic learning tasks</i> .

**Self-**

1. Direct and Specific Assessments that are carried out directly (at or after completing a task), are used to assess the competency aspects of a subject.
2. Indirect and Holistic Assessment. An assessment was carried out over a long period of time to provide an overall assessment.
3. Socio-Affective Assessment, namely an assessment of the affective or emotional elements

**Strengths and Disadvantages of Self-Assessment**

The advantages of self-assessment are:

1. Teachers get objective input about students' absorption.
2. Students can assess themselves.
3. Learners are more active in learning.
4. Students can find their own material.

While the shortcomings of self-assessment are:

1. Self-assessment tends to be subjective.
2. Inaccurate results.
3. Active students usually rate themselves low.
4. Students who are less active usually overestimate themselves.

**Self Assessment**

Self-assessment must be carried out based on clear and objective criteria. The steps in self-assessment:

- 1) Determine the competencies to be assessed.
- 2) Determine the assessment criteria to be used.
- 3) Formulate assessment formats and assessment guidelines.
- 4) Asking students to do self-assessment.
- 5) The teacher reviews a sample of the assessment results at random, to encourage students to make a careful and objective assessment.
- 6) Provide feedback to students based on the results of the assessment.

- 7) Meanwhile, according to Orsmond, the implementation of self-assessment starts with the preparation, implementation, follow-up-evaluation and reflection stages.

## RESEARCH METHODS

A problem that occurs must always have a problem solving where in solving the problem it is necessary to hold correct, thorough and continuous research to get the right and accurate solution, while to find out how the research is carried out, we must use a research methodology. According to Sugiono (2014:2), the definition of research methods is as follows: "Research methods are basically a scientific way to obtain data with the aim of certain uses." According to Darmadi Hamid (2013:2), the notion of research methods is: "The procedure for how research is carried out." Based on the description above, it can be concluded that the research methodology is a scientific way to show the type or research model to obtain data with certain goals and uses.

### Details of Materials

This research is a type of descriptive research with a quantitative approach. This study uses one type of method from the type of descriptive research, namely the survey method. The survey method in this study was applied by collecting information about understanding students' prior knowledge about self-assessment- so that it was necessary to apply it to entrepreneurship subjects using questionnaires distributed to respondents, namely students of SMK PGRI 4 Blitar City. The subjects for the research instrument trial and the data collection group for the research instrument trial group consisted of thirty students of class X SMK PGRI 4 Blitar City. The total number of samples is 23 people.

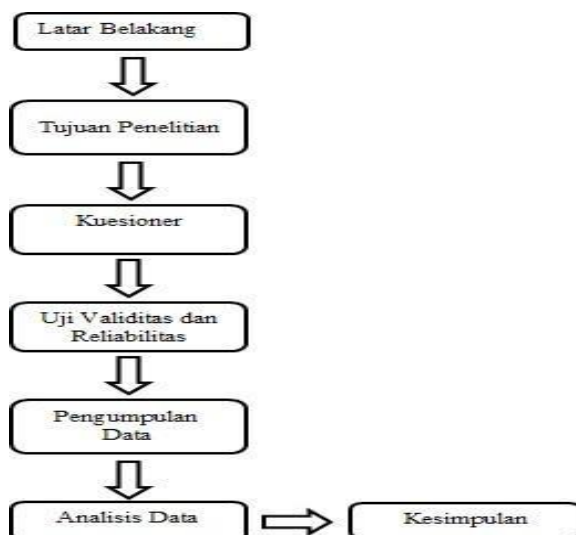


Figure 1. Research Procedure Chart Research

This research is focused on the implementation of practicum performance appraisal with self-assessment in the entrepreneurship folder. The focus of the research is described as.

1. Ability and understanding of students in conducting self- assessment of performance in the entrepreneurship subject.

2. Identification of obstacles in practicum performance assessment using self-assessment.
3. Student responses related to the use of self-assessment in the entrepreneurship course performance assessment.
4. technique self assessment.

Data collection was carried out through distributing questionnaires to class X students of SMK PGRI 4 Blitar City who had participated in learning entrepreneurship subjects.

### Measurement

1. Collecting questionnaire answers
2. Calculate the percentage of students' answers to each question in the questionnaire by

$$\text{Percentage Number} = \frac{\text{of student answers Total students}}{\times} 100$$

### Data Analysis

Interpreting the answers to the questionnaire by making interpretations as follows:

Table 3. Interpreting the answers to the questionnaire

Percentage Range %	Category
0-25	Weak
25- 50	Less strong
50-75	Strong enough
75-100	Very strong

## RESULTS AND DISCUSSION

The results of this study will be explained into four parts. The four sections that will be explained include how to describe the ability and understanding of students in conducting self-assessment; the results of self-assessment in revealing the performance of the student entrepreneurship subject; student responses regarding performance appraisal in the entrepreneurship subject with self-assessment techniques, as well as obstacles in the implementation of performance appraisal in the entrepreneurial maple with self-assessment assessment techniques.

1. The ability and understanding of students in conducting self-assessment
 

Information regarding the understanding and ability of students in conducting self-assessments will be explained based on the stages in the implementation of self-assessment. The stages of implementing the self-assessment in the entrepreneurship subject consist of two stages, namely the socialization of the self-assessment and the implementation of the self-assessment. The following is a description of the ability and understanding of students in conducting self-assessment at each stage.

  - a. Self-assessment of socialization
 

After students receive socialization, they are expected to know the purpose of implementing the self-assessment. A basic understanding of self-assessment can affect the assessment to be carried out. The implementation of self-assessment aims to provide opportunities for students to provide self-assessment. Based on the results of the questionnaire, it showed that many students stated

that they knew the purpose of implementing the self-assessment. When it was tried to be confirmed to several students with the question of what was known about self-assessment, their answers were almost the same, namely an assessment that involved students to assess themselves, students assessed their own abilities in the entrepreneurship subject. Seeing this, most students have been able to understand the purpose of self-assessment.

b. Self-Assessment Implementation Process

Based on the data above, there are still 90% of the 23 students who stated that they could complete the entrepreneurship and assessment subjects on time and there were still 73% of students who claimed to feel comfortable and not bothered by the self-assessment assessment. In practice, each student may fill out an assessment sheet when the entrepreneurship course takes place or after completing the entrepreneurship course. Based on observations, each group in the entrepreneurship subject can complete the assessment at different times. While the sense of comfort indicates whether students feel that their performance in the entrepreneurship subject is not disturbed by the implementation of this self-assessment. Based on information from interviews, information was obtained for students who feel uncomfortable or disturbed by the self-assessment because it is reasonable that this self-assessment should be placed at the end after completing the entrepreneurship course, or increase the time, so that they can focus more on completing the entrepreneurship course.

2. The results of self-assessment reveal the performance of the student entrepreneurship subject.

This shows the potential that self-assessment assessment can be used to reveal performance abilities in the entrepreneurship subject of students. It's just a matter of how the efforts can be maximized in the process, for example by practicing honesty and more intensively in training to equalize perceptions about the scoring between observers and students so that it is expected to increase objectivity and reduce inequality/difference from the assessment results.

3. Student responses regarding performance assessment on entrepreneurship subjects with self-assessment techniques.

Based on the experience of students being involved in self-assessment and the results of the self-assessment, students' opinions were explored using a questionnaire regarding reflection on the implementation of the self-assessment and the use of the results of the self-assessment.

## **CONCLUSIONS AND RECOMMENDATIONS**

1. The ability of students to conduct self-assessment to assess self-performance at entrepreneurship subjects. In general, entrepreneurship subjects can be said to be good. This is based on data that most of the ideal criteria in the implementation of this assessment have been met. Most of the students know the purpose of self-assessment, understand the assessment criteria, understand the assessment indicators, the students state that they can do the assessment independently and the students can complete the assessment on time.
2. The results of the self-assessment have not been able to reveal the performance of the student entrepreneurship subject due to the relatively large difference in assessments by students and observers. The tendency of the results of the self-assessment of observers based on the performance category on the entrepreneurship

map on the assessment sheet shows that many rate higher than the observer, many rate the same as the observer and a small part are lower than the observer. The results of the self-assessment can be used as feedback or only as a formative assessment.

3. In general, students gave good responses to the application of self-assessment to assess performance in the entrepreneurship subject in the entrepreneurship subject. Most of the students stated that they agreed with the implementation of the self-assessment, because with the self-assessment students claimed to know more about their abilities and shortcomings in the entrepreneurship subject, were encouraged to be more active, motivated to be more disciplined, and better prepare themselves.

4. Obstacles in the application of self-assessment to assess performance in the entrepreneurship subject include some students who do not know the purpose of self-assessment, are not enthusiastic or do not agree with the implementation of self-assessment. In addition, some students also do not know the criteria for self-assessment and the procedures that must be carried out in the implementation of self-assessment, students still tend to give more self-assessment. The next obstacle is that students have difficulty in determining assessment points/scores.

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