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Performance Effectiveness of Natural Science Using Productive Assessment Instruments at PGSD FKIP UNTAN

Tahmid Sabri

PGSD FKIP UNTAN, Pontianak, Indonesia

E-mail: tahmidsabripgsd@gmail.com

Abstract

This research started from "whether effective learning performance of Natural Sciences student using productive assessment instrument in PGSD FKIP Untan Pontianak?". This study aims to get a picture of the effectiveness of the performance of Natural Science Learning using productive assessment instruments in PGSD (Primary School Teacher Education). The method used is descriptive with qualitative approach in the form of class research. The results obtained turns out when compared with the learning of Natural Sciences without using instruments of productive assessment, activity and result of students in learning have increased significantly. The hope of this research results can contribute to the improvement of the quality of natural science learning in PGSD which has implications on the acquisition of student learning in elementary school.

Keywords: Effectiveness, Performance of Natural Science Learning, Instrument of Productive Assessment

Introduction

Various strategies and facilities used in the learning actually aim to streamline student learning performance, so as to obtain optimal learning outcomes. Natural Science (IPA) is one of the subjects that must be followed by every student. This course weighs 4 credits, consisting of the essence of Natural Science, objectives, materials, media, strategy, and evaluation must be mastered and understood by every student to be used as a provision, at least when practicing in elementary school teaching. According to the Law & Lecturer Law No.14 of 2005, it is affirmed that "teachers must have pedagogical, social, personality and professional". Ki Hadjar Dewantara said, "*Ing ngarsa sung tuladha, ing madya manguk karsa, tut wuri handayani*", according to Islamic nuances.

Mastery pedagogic, social, personality and professional for the teacher is a price that cannot be bargained as people who are in the front guard. There are ten (10) competencies that need to be mastered by teachers, namely: 1) mastery of material; 2) class control; 3) mastery of strategy; 4) control of media usage; 5) mastery of language, oral or written; 6) mastery of managing learning-teaching interaction; 7) assessment of appraisal; 8) mastery of guidance and counseling to students; 9) mastery of administration and management of education; and 10) mastery of principles and interpret the results of research conducted for the purposes of learning. Therefore, Natural Science Learning aims: (1) to gain confidence in the greatness of God Almighty based on the existence, beauty and regularity of his creation; (2) to develop knowledge and understanding of IPA concepts that are useful and applicable in everyday life; (3) to develop curiosity, positive attitudes and awareness of

interrelationships between science, environment, technology and society; (4) to develop process skills to investigate the environment, solve problems and make decisions; (5) to raise awareness of participation in maintaining, preserving and preserving the natural environment; (6) to raise awareness of respect for nature and all its order as one of God's creations; and (7) to gain knowledge of science, concepts and skills as a basis to learn more about science (KTSP, 2006).

To achieve this expectation, many things students can do, or lecturers. The students, of course, follow the provisions of the rules of lecture according to the agreed learning contract between students and lecturers during the following lessons in one semester. The lecturers have a blistering and precise strategy that allows students to naturally actively and effectively follow the lectures that have an impact on the acquisition of optimal learning outcomes. However, based on the facts that occur in any learning material, or on any subject, and lecturers whoever teach, the state of students while following the learning, generally tend to deviate activities, which resulted in less effective lectures, what if the teacher is not present during learning. For that, it is necessary to make the effectiveness of lecturing through the use of productive assessment instruments, which can raise the spirit of students in learning, even if not attended lecturers courses. The assessment instrument is a note sheet of various activities conducted by the students during the lesson. This instrument serves as a productive assessment of student competence in the lecture. Productive instruments can be regarded as self-assessment of students (ADM) in learning. Students are called and moved to actively participate in learning without any element of intimidation from the teacher. In line with the results of the Pharisee's study (2012), that students' responses to ADS (Self Assertive Self-Assessment) are positive, the quality of students in learning increases, which will impact on learning outcomes operated at the end of learning.

The effectiveness of student performance in learning can be improved if done through four stages, namely: planning, implementation, reflection, and compensation (Faith, S: 2010). The use of productive assessment instruments can also be regarded as an appropriate strategy in learning to streamline student activity in lectures. According to Prihastuti (2015), that: "the use of this productive assessment instrument can improve the effectiveness of student activities in learning". Based on this research, the effectiveness of students' performance in science learning in PGSD needs to be raised through the research titled "The Effectiveness of Learning Performance of IPA using Productive Assessment Instrument on PGSD FKIP Untan Pontianak" students, in hopes that the quality of learning followed by students can be improved both from the process aspect and from the learning product acquisition aspect. Siahaan P, Fitriajaya E, Putri R (2010) said that: "Changes in the field of education should continue to be done as an effort to improve the quality of education". The means used are productive valuation instruments that can motivate students in learning to study the maximum learning, not just understand concepts, but capable of applying it in everyday life. Instruments in the form of fluctuations recording sheet of learning conditions of students in the lecture, which consists of attendance recordings, questions, responses, without seeing the correct or wrong answers or responses from students, the important nature of participatory given rewards, appreciation or point plus, meaning no which is disadvantaged for students.

Research Method

The method used is descriptive with the type of survey research to see the empirical facts seen or that occur in students who follow the lectures, especially those associated with "The effectiveness of learning performance using productive assessment instruments on students PGSD FKIP Untan Pontianak". This research is conducted quantitatively and

qualitatively based on the conditions that occur in the learning in PGSD. Survey research is a type of research that collects information about the characteristics, actions, opinions of a group of representative respondents who are considered as population.

A. Population and Sample

According to Singarimbun and Effendi (1989), survey research is a study that takes samples from one population and uses questionnaires as the primary data collection tool, but Daniel in Balipaper (2010) says that surveys are critical observations or inquiries to obtain information- information needed. Survey research is a type of research that collects information about the characteristics, actions, opinions of a group of representative respondents who are considered as population. The population is every student who attended the lecture at PGSD amounted to 74 students of the fifth semester in 2016. To focus more research conducted to obtain data more accurate and reliable, then the sample is taken from 5 A regular class only, a number of 31 people.

B. Data Collection Techniques and Tools

The technique used by group interviews is to gather information within the group, allowing interaction among group members to get a better picture of the state of the subject or object under investigation. This technique is used because this research is used as a first step to getting information about the response of the object of research objectives related characteristics of the student performance appraisal instruments in learning to see the advantages and disadvantages of instruments used.

C. Data Collection and Analyst

Students of the study subjects are interviewed in groups, and each group consists of 5 groups, consisting of 6 groups, given questions or statements, the key points are: 1) how do you think it is appropriate or not when the performance appraisal instrument productive use in learning ?; 2) how effective do you think, or not when productive performance appraisal instruments are used in Lessons ?; 3) Is it effective or not, when the productive performance appraisal instrument is used at each lecture ?; 4) What do you think are the advantages and disadvantages of using these productive performance appraisal instruments ?; 5) how is the comparative performance appraisal used so far using productive performance appraisal instruments with other instruments ?; 6) what can you feel when these productive performance appraisal instruments are used when compared to the use of other performance appraisals ?; 7) what do you think if the productive performance appraisal instrument is used in another course, right or not ?; 8) is it appropriate for the productive performance appraisal instrument to be delivered at the beginning of the lecture as part of the lecture contract in the semester ?; 9) should these productive performance appraisal instruments in Learning need to be used on each semester, but not part of the lecture contract ?; 10) what do you think from a sincere heart about the use of these productive performance appraisal instruments in Natural Science Learning at PGSD ?. After the research data collected, processed and analyzed from each interview result from the components of research questions, followed by determining BS, B, C, K, or SK categorical according to the criteria that have been determined.

Results and Discussion

The study was conducted from 9 October to 12 October 2017 in PGSD FKIP Untan Pontianak with details of the findings as follows:

Findings relating to the effectiveness of learning performance consisting of several indications of the findings, namely: 1) Exactly or not when the instrument of performance appraisal productivity used in learning; 2) Effective, or not when productive performance appraisal instruments are used in learning; 3) Effective or not, when productive performance appraisal instruments are used at each lecture; 4) The advantages and disadvantages of using

productive performance appraisal instruments in learning; 5) Comparison of current performance appraisal using productive performance appraisal instruments with other instruments in learning in other subjects; 6) What can you feel when these productive performance appraisal instruments are used in Natural Science (IPA) when compared to the use of other performance appraisals in Non-IPA Learning; 7) What do you think if the productive performance appraisal instrument is used in another course, right or not ?; 8) Is it appropriate for the productive performance appraisal instrument to be delivered at the beginning of the lecture as part of the lecture contract within one semester ?; 9) Should these productive performance appraisal instruments in Science Lesson need to be used on each semester, but not part of the lecture contract ?; 10) What do you think from a sincere heart about the use of these productive performance appraisal instruments in Science Learning in PGSD ?. Research subjects as many as 30 students PGSD FKIP Untan Pontianak grouped into 5 groups, each group consists of 6 people, namely groups I, II, III, IV, and group V.

To facilitate the discussion of the findings above from the findings of 1 to 10 of the findings, it is, of course, necessary to look at other problems that have been raised in the following sections: 1) What is the effectiveness of student learning performance when using productive performance appraisal instruments?; 2) How much effectiveness of student performance follows the learning using productive assessment instrument?; 3) What is the student's response when the effectiveness of learning performance using productive assessment instruments?; and 4) What constraints are found when the effectiveness of learning performance using productive performance appraisal instruments? and how does the solution overcome them? Furthermore, it is necessary to start by looking at the Question Indicators related to the effectiveness of learning performance using the instrument of productive appraisal on the students are: 1) Exactly or not, when the productive performance appraisal instrument is used in the learning; 2) Effective, or not when productive performance appraisal instruments are used in learning; 3) Effective or not, when the productive performance appraisal instrument is used in each lecture; 4) The advantages and disadvantages of using productive performance appraisal instruments in learning; 5) Comparison of current performance appraisal using productive performance appraisal instruments with other instruments in learning in other subjects; 6) What can students feel when the instruments of productive performance appraisal are used in learning, when compared with the use of other performance appraisals in non-science learning?; 7) What do students think, when the productive performance appraisal instrument is used in another course, right or not?; 8) Is it appropriate for this productive performance appraisal instrument, if the utilization is delivered at the beginning of the lecture as part of the lecture contract in one semester?; 9) Should these productive performance appraisal instruments in learning need to be used on each semester, but not part of the lecture contract?; 10) What does the student's heart of sincere heart about the use of these productive performance appraisal instruments in learning?.

Therefore, it is necessary to make a recapitulation of each research findings from the findings of 1 s / 10, namely:

Table 1 Recapitulation of Research Findings from Findings 1 to Findings 10

Findings 1 to Findings 10										Average Score %
1	2	3	4	5	6	7	8	9	10	
100%	80%	60%	80%	100%	80%	100%	100%	100%	100%	90 %

Ad.1: Result of Finding 1: The findings are indicated by 100%, this means that the use of performance appraisal instruments in learning at PGSD contributes positively to the meaningfulness of student learning in learning.

Ad.2: Result of Finding 2: Finding result 2 is evidenced by the result of 80% respondent's answer about effective or not. This is the result of psychological analysis of the effectiveness of the use of student productivity appraisal instrument in less than 80% of course, but it is still considered better because the percentage is more than 50%, more than half of it. Therefore, the effectiveness level is still high in the use of productive performance appraisal instruments in Learning.

Ad.3: Finding Result 3: Effective or not, when productive performance appraisal instruments are used in each lecture (60%). These 3 findings are still considered good enough about the effectiveness of the use of productive performance appraisal instruments in Learning.

Ad.4: Finding Result 4: The advantages and disadvantages of using productive performance appraisal instruments in learning. Based on the findings of this 4, respondents provide answers or responses when interviewed, most of them they say with the use of these productive instruments, students feel spontaneously called to study harder, resulting in a positive learning competition. Each assignment is given, the students have to apply it according to the direction of the lecturer without any complaints from them at all.

Ad.5: Finding Results 5: Comparison of current performance appraisals using productive performance appraisal instruments with other instruments in learning in other courses. The findings are 100%, all respondents say that following the lesson using the productive performance appraisal instrument in Natural Science Learning is very different from following the course lessons that do not use this instrument, why? Because what they do during the learning-related remains positive, because it is a participatory activity in learning. That's why the response they did 100% in score.

Ad.6: Finding Results 6: Respondents' answers to the questions asked, 80% of respondents said what they felt when following the lesson using the productive performance appraisal instrument, most of the students' friends said our hearts were touched, called, follow the learning with a vengeance, the proof when given the opportunity to ask almost all the friends raised their hands to be given the opportunity to ask from the material already discussed. Well, this is an indication that students have different feelings when attending lectures on Non-Scientific Learning, but indeed there is still some apathetic sadness, this causes the answer or responses 80% of respondents.

Ad.7: Finding Result 7: The findings on point 7 show 100%, meaning that the respondent assumes that if the productive performance appraisal instrument is used for another course, spontaneity says strongly agree, because it will get the same service when following learning using productive performance appraisal instruments, weaknesses or lack of students about the competencies in the courses followed in the lessons can be equivalent from the lecturers of the lecturers, especially those relating to the learning process in the learning that followed. Therefore, respondents with the same voice say agree, even very, because they got same service and appreciation every follow the lesson given by lecturer on the same subject.

Ad.8: Finding Result 8: The respondent's answer to the question posed, academically they answer "necessary", is not only used at the beginning of the course contract, but in the middle and the end of the course it is necessary, even higher, because the implications have a very positive impact on the success students in join study at an institution including in PGSD FKIP Untan Pontianak.

Psychologically, the lecturer should understand the ability of each participant in following the course that the lecturer gives to the students. The lecturer is actually not justified if his ability should be equated equally with the student's ability, it is actually

violating human rights (ham). According to the review of the Religion of every human being created by Allah SWT, it must have different abilities, even twins even have to have a fundamental difference. Therefore, in the use of productive performance appraisal instruments on a lecture or learning needs to be used, even if it can be further developed so that respondents give a significant response with 100% percentage.

Ad.9: Finding Results 9: Respondents say firmly and clearly that the use of productive performance appraisal instruments in "necessary" learning, even very, when used on every semester, but not part of the lecture contract, why? Because viewed from the side of the benefits for students who learn anywhere, anytime, can really contribute to the success of students in learning, which is a relatively short time students must be able to complete his studies on time, even can get maximum learning result. This is the basis of the respondents' responses from question proposed 100% of the scorch, not even just used in every semester only on the instrument of productive performance appraisal conducted, but it can be used at every meeting of learning lesson. That's why the respondent's response to the question given 100% in score.

Ad.10: Result of Finding 10: The results of this 10th findings, the answers or responses of respondents 100% in score, meaning with a sincere heart of students said that the use of productive performance appraisal instruments in a lesson, including in the study of Natural Sciences in PGSD FKIP Untan very need to be used, and even if it can be developed again as a strategic and practical tool in providing a comprehensive assessment of the various performance that students do in learning.

Students as religious, social, and individual creatures would want to get the best of the various efforts undertaken in the study, to be reached in a relatively short time without any significant constraints. Respondents hoped that with the use of productive performance appraisal instruments in a lecture, can get optimal learning, learn not only to understand the theory but to apply it in daily, anytime and anywhere, this is why the response of the resonant 100% in score.

Conclusions

Starting from the problem, the findings and discussion in this research can be summarized as follows:

1. The effectiveness of student learning performance when using productive assessment instruments, in the form of assessment notes whose format consists of No. Sort; NIM; Student name; Attendance & Other Dates, such as attendance, inquiring, reconciling, answering questions, lecture course notes at each meeting, where previously the Earning Performance Appraisal Instrument is socialized beginning of the Course Contract on its usefulness and its usefulness for the student following the lesson. In addition, there are additional notes of discussion groups complete with attendance number, and handphone (HP) every student with a note there is a lecturer or not, lectures remain the path guided by lecturers. Each lecture is held by the students independently, the student must enter the subject matter which is discussed in the lecture journal with the note accompanied by the report of the event of the discussion, which group performs, who is the moderator, who asks, who has to answer there is the news of the show complete with no. absent students concerned.
2. The effectiveness of student learning performance following the learning using productive assessment instrument seen from the average of% in the recapitulation is 90%, meaning that the productive performance appraisal instrument used in the learning can contribute significantly to the student learning result.

3. Student response when effectiveness of learning performance using productive penial instrument, giving positive contribution to the success of students who follow the learning, indicated the responses of respondents from the questions given received a significant response (100%)
4. Obstacles found when effectiveness of learning performance using productive assessment instrument is to require sufficient time, the solution is diligent, thorough, and required patience and sincerity in learning.

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