



Object Analysis of Middle Semester Examination for Biocemistry Course Semester 4a Bengkulu Uinfas For Academic Year 2021

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Abstract: Object Analysis Of Middle Semester Examination For Biocemistry Course Semester 4a Bengkulu Uinfas For Academic Year 2021. This study aims to determine the analysis of midterm exam questions for semester 4A biochemistry courses at UINFAS Bengkulu for the 2021 academic year. This research was carried out at UINFAS Bengkulu. This type of research uses a qualitative descriptive method using data that has been collected in the form of interviews with lecturers of the 4A semester Biochemistry course who are natural in nature. The research was conducted using a subject in the form of a lecturer in Biochemistry courses, while the object used midterm exam questions. Thus it can be concluded that the results of this study indicate that ongoing learning has been achieved well enough to be able to achieve what was previously expected. So that the quality of questions for the Biochemistry subject in semester 4 A at UIN Fatmawati Sukarno Bengkulu has good quality questions. Even though there were students who got low scores, the scores obtained by these students were dominated by high scores.

Keywords: Items, Bloom's Taxonomy, midterm exam

▪ INTRODUCTION

Learning is a programmatic teacher's routine both in instructional design in carrying out productive learning activities that emphasize the availability of learning resources (Sagala, S., 2011). According to Law no. 20 of 2003 concerning the National Education System article 1 paragraph 20 states that learning is a process of interaction between students and educators and learning resources in a learning environment. Learning is a combination consisting of human elements, materials, facilities, equipment, and procedures that influence each other in achieving learning objectives (Hamalik, 2014). Learning is a process of obtaining information directly or indirectly through various media. The learning process is a component of a system that is interrelated and interacts in realizing learning objectives. (Suaedi, 2016).

The purpose of learning is to describe the knowledge, abilities, skills, and attitudes possessed by students in the form of behavior as a result of learning outcomes that can be observed or measured (H.Daryanto, 2005). The purpose of learning is to provide knowledge information to everyone who needs that information (Akbar et al., 2016). One of the goals of achieving science learning is to develop skills in investigating nature,

solving problems and making decisions that require appropriate learning methods (Depdiknas, 2008).

Implicitly the purpose of learning science is to demand and teach thinking skills (Wiyoko, 2019). Students' critical thinking can be seen through a comparison between two or more information obtained from outside with the information they already have (Irdayanti, 2018). It is also necessary in analyzing a problem the ability to think is needed. To identify weaknesses in learning outcomes, it is necessary to analyze the questions (Hermita et al., 2012).

Item analysis is an activity to understand and examine existing item items. So that good and bad information can be obtained about questions and instructions for making improvements (Arikunto, 2013). One of the components that must be taken by the teacher is an evaluation activity which is useful to find out how far the effectiveness of learning is in perfecting the learning program and improving it (Arifin, 2012). Activities that cannot be separated in the learning process are referred to as evaluation and assessment activities because the results of these two activities provide an overview regarding the quality of the learning process. Teacher performance greatly influences the quality of learning in the classroom because teachers play an important role in the learning process with evaluations in the form of tests and non-tests. The form of the test used in the form of questions must be answered or must be responded to by students. While non-test forms such as questionnaires, interviews, documentation, and observations (Bayo et al., 2018).

The test is an object to find out how far someone can understand the things that have been studied before. The test is a systematic, comprehensive and objective evaluation procedure so that the teacher can make learning decisions that have been done before (Marsiyah, 2016). In compiling test questions, you also need to pay attention to their quality. The requirements that need to be looked at in compiling test questions are validity, reliability, objectivity, practicality, and economy (Afrian et al., 2017). Test questions are a method used by teachers to evaluate how much comprehension of the material that is explained directly in the learning process (Anita et al., 2018).

To measure the cognitive level of students, this type of test instrument can be used during final exams or daily tests (Marsiyah, 2016). The test instrument as a tool used in the evaluation process functions to determine the results or achievements of student learning after carrying out the learning process. One of the test instruments used in the evaluation process is to see the progress and achievements of students, one of which is the Mid Semester Examination Questions. Mid Semester Deuteronomy Questions are an instrument used to find out the results or progress of students after learning until the middle of the semester. Based on the description above, it is necessary to do an Analysis of Mid Semester Test Items for Semester 4A Biochemistry Courses at UINFAS Bengkulu for the 2021 Academic Year.

▪ **METHOD**

Research conducted at UIN Fatmawati Sukarno Bengkulu for the 2021 Academic Year Jl. Raden Patah, Pagar Dewa, Bengkulu, 38211. This type of research uses descriptive qualitative research methods. The research used a qualitative descriptive method using the data that had been collected in the form of interviews with lecturers for biochemistry courses as semester 4A which were natural in nature. Descriptive qualitative research is a research method based on postpositivism philosophy which is commonly used to examine natural object conditions, in which the researcher acts as a key instrument

and describes a situation objectively or based on visible facts (Sugiyono, 2018). Qualitative descriptive describes the object to be studied based on the cognitive domain of Bloom's Taxonomy and reviews the level of difficulty in midterm tests. The research was conducted using a subject in the form of a Biochemistry lecturer at UIN Fatmawati Sukarno Bengkulu, while the object used Mid Semester Deuteronomy questions made by a lecturer at UIN Fatmawati Sukarno Bengkulu.

The instrument technique used in this study was interviewing and analyzing midterm test items based on the cognitive level of Bloom's Taxonomy. (Septiana, 2016). The data that has been collected is also in the form of documentation where the data is obtained starting from interviews and documents (in the form of writing).

The level of difficulty of the items can be divided into difficult, medium and easy (Sudijono, 2012). Difficulty level index can be analyzed using the formula:

$$TK = \frac{\text{Mean}}{\text{Maximum Score}}$$

Description: P = Difficulty Index of Description Questions

Mean = Average Student Score

JS = Maximum Score Available in the Scoring Guidelines

Figure 1. Table of Difficulty Level with Item Quality

Difficulty Index	Question Item Category
0,00-0,30	hard
0,31-0,70	currently
0,71-1,00	easy

▪ RESULT AND DISCUSSION

The results of this research were conducted by interviewing the Biochemistry Lecturer at UIN Fatmawati Sukarno Bengkulu with all 20 students in class 4A. So we can get that the cognitive domain level of Bloom's Taxonomy and analyzing the Mid Semester Test questions made by the Biochemistry Lecturer at UIN Fatmawati Sukarno Bengkulu for the 2021 academic year are as follows: in the cognitive domain. The six levels of Bloom's taxonomy are thought processes starting from the most basic to the highest, namely where C1 is remembering, C2 is understanding, C3 is applying, C4 is analyzing, C5 is evaluating and the last one is C6 namely creating (Sodiyah, 2013).

This research was carried out once in November 2022 at UIN Fatmawati Sukarno Bengkulu. From the results of the analysis of 6 semester 4A essay questions which have been grouped based on the level of the cognitive domain so that the questions are dominated by the levels of remembering, understanding and applying. The following is a table of results from the Mid Semester Deuteronomy on the aspect of difficulty level:

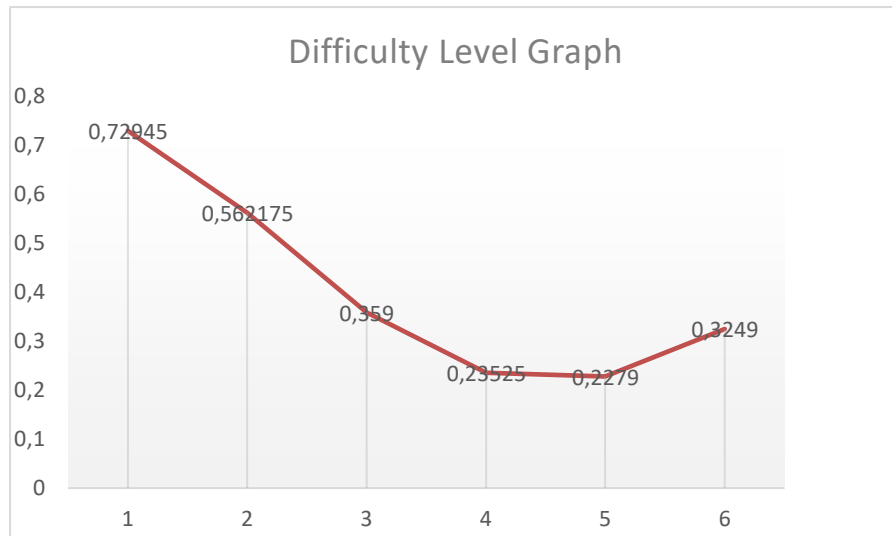


Figure 2. Graph of Difficulty Level Test Results for Mid-Semester Deuteronomy Essay Questions for Biochemistry Course Semester 4A

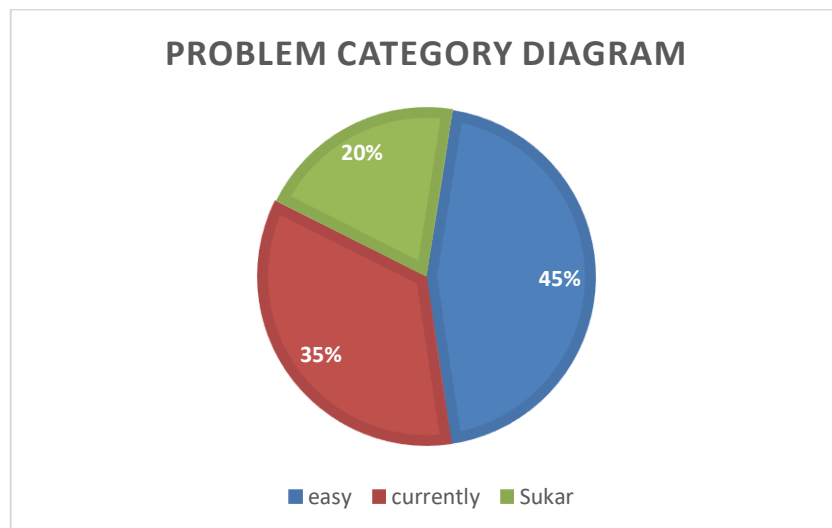


Figure 3. Category Diagram for Mid-Semester Deuteronomy Essay Questions for Biochemistry Semester 4A

Based on the graphs and diagrams above, we can see that the midterm test items made by the biochemistry lecturer at UIN Fatmawati Sukarno Bengkulu are dominated by questions that are classified as moderate. Questions that are not too easy or not too difficult are categorized as good questions (Arikunto, 2012). In addition, it is better for each question to be made not too easy and not too difficult. If the questions are too easy then it can reduce the student's interest in learning and for questions that are too difficult can make the student not enthusiastic.

The level of difficulty in the question is the portion of the number of students who answered the question correctly with all students who can work on the problem, so that we can get this category of questions including easy, medium, and difficult (Yusrizal et al., 2015). Based on the difficulty level graph, it shows that question number 1 is 0.72945, question number 2 has a difficulty level of 0.562175, question number 3 is 0.359, question

number 4 is 0.23525, question number 5 is 0.2279, question number 6 is level the difficulty is 0.3249.

Based on the diagram above, the results of the analysis of the Mid Semester Test questions in semester 4 A in the Biochemistry course which have been carried out based on the difficulty level of the items above, the items that contain 20% are classified as difficult, namely in numbers 4 and 5, with the item difficulty index starting from the range of 0.00-0.30. Items that have a difficulty level of 35% are in the Medium category, which means questions that are not too difficult and not too easy, namely in numbers 2.3 and 6, the value indicates a range of values from 0.31-0.70. While the questions that contained 45% were classified as easy, namely at number 1, with the item difficulty index ranging from 0.71 to 1.00. Items are classified as difficult, moderate, easy according to the relationship between the level of difficulty and the quality of the items.

Dominant questions that are easy enough will make it easier for students to get high scores. So that the highest score was obtained by several students with a value of 87.75. However, there are also students who get low scores with a value of 0. The low scores obtained by these students are usually due to the inability of students to remember and understand Mid Semester Test questions, lack of motivation in learning, and errors in writing answers because there are some questions that use pictures with formulas that are out of sync with the material that has been studied.

From the results of the analysis of the Mid Semester Test questions that have been carried out, it can be concluded that the ongoing learning has been achieved well enough so that it is able to achieve what was previously expected. So that if the quality of the Mid Semester Deuteronomy questions for the Biochemistry subject in semester 4A at UIN Fatmawati Sukarno Bengkulu has good quality questions even though there are still those who get low scores, the scores obtained by these students are dominated by high scores.

This is in accordance with Arifin's statement, (2016) which states that to find out how much difficulty the questions will be instruments, it is necessary to calculate the level of difficulty of the questions themselves. This is also supported by Sudijono, (2012) who stated that to determine the value of the difficulty level of an instrument, that is by dividing the number of student answers that were correct with student answers that were wrong. So that the level of difficulty of the questions can be divided into difficult, medium, and easy. This is also in accordance with the statement of Arikunto, (2018) which states that the score is categorized as too difficult if almost all students get low scores. Conversely, scores are categorized as too easy if almost all students get high scores.

This is in accordance with the statement of Sudjana, (2019) which states that item analysis is a study activity in the form of questions in order to obtain questions that have good quality. It is also supported by Kurniawan, (2015) which states the level of difficulty aims to determine the level of difficulty of a question that has been made. This is also in accordance with the statement Anita et al., (2018) which states that the item is categorized as good if it has a balanced level of difficulty in the form of an easy: medium: difficult category with a ratio of 3:5:2.

▪ CONCLUSION

Based on the Mid Semester Examination question items made by the Biochemistry lecturer at UIN Fatmawati Sukarno Bengkulu, the questions were dominated by moderate

questions. A good question is one that is neither too easy nor too difficult (Arikunto, 2012). Based on the level of difficulty, it shows that question number 1 is 0.72945, question number 2 has a difficulty level of 0.562175, question number 3 is 0.359, question number 4 is 0.23525, question number 5 is 0.2279, question number 6 is the level of difficulty of 0.3249.

So that in the diagram above we get the results of the analysis of the Mid Semester Test questions in semester 4A in the Biochemistry course which have been carried out based on the difficulty level of the items above, the items that contain 20% are classified as difficult, namely in numbers 4 and 5, with the item difficulty index starting from the range of 0.00-0.30. Items that have a difficulty level of 35% are in the Moderate category, which means questions that are not too difficult and not too easy, namely in numbers 2, 3 and 6, the value shows the range of values from 0.31-0.70. While the questions that contained 45% were classified as easy, namely at number 1, with the item difficulty index ranging from 0.71 to 1.00. Items are classified as difficult, moderate, easy according to the relationship between the level of difficulty and the quality of the items.

With the results of the analysis of the Mid Semester Test that have been carried out, it can be said that the ongoing learning has been achieved well enough to be able to achieve what was previously expected. So that it can be concluded that the quality of the Mid Semester Test questions for the Biochemistry subject in semester 4A at UIN Fatmawati Sukarno Bengkulu has good quality questions. Although there are still those who get low scores, the scores obtained by these students are dominated by high scores.

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