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The

Contextual Teaching : The Student Responses on
Application Teaching
Materials Using Linever (Lindo and Excel Solver ¹)

¹ Unoriginal text: 15 words

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Abstract

Lecturers apply various models or learning strategies to the students which causes different student responses in joining the teaching learning process. However, the student responses only focus on their cognitive. It means that the lecturers only assess on the students' achievement. Whereas the application different models or learning strategies have a purpose to achieve positive responses from the students. It is happened in learning linear program subject. In addition, there are also student responses on the teaching materials application for linear program subject based on contextual approach. Furthermore, the objective of the research is to describe student responses on the application of linear program teaching materials using contextual approach through Linever. Linever means that

an acronym for Lindo and Excel Solver software.

Moreover, textbook and student' worksheets (LKM) are the teaching materials which are developed. The technique of data collection uses student responses questionnaires. The result of the research is the student responses on the linear program materials using contextual approach through Linever got 96.6%. In conclusion, this research ² had achieved the positive responses ³ from the students in learning linear program subject.

Keywords: Contextual Teaching, Student Response, Teaching Materials, Lindo and Excel Solver

² Repetitive word: *research*

³ Repetitive word: *responses*

1. Introduction

Learning activities are a series of activities ⁴ between stimulus from educators and then from the stimulus comes the response of learners. The stimulus provided by educators is of course different depending on the learning objectives to be achieved. Just like the learning process at universities, where the stimulus dimerikan by lecturers to students, in the hope of a good response from students.

⁴ Repetitive word: *activities*

When the response ⁵ is given low or not in accordance with the expected then of course there are efforts of lecturers to provide another stimulus. One of the efforts of a lecturer in the improvement of learning process of course based on the existence of student problems in learning, either the problem ⁶ of learning outcomes or problems of motivation ⁷, liveliness, process skills etc. and in accordance with the objectives to be achieved. This is in line with the opinion of Uno Hamzah (2007) who said that the method in learning is the way used by educators, who in carrying out its function is a tool to achieve learning objectives.

⁵ Repetitive word: *response*

The problem is the effect of the low response given by students in the learning process. Many aspects that affect the low ⁸ response given ⁹ by students in the implementation of learning. The low ¹⁰ response of the student not yet tentusumber of teaching material errors in the students themselves, the ability of lecturers to deliver materials that are less adequate can cause the class to be

⁶ Repetitive word: *problem*

⁷ Repetitive word: *problems*

less interesting ¹¹ and tend to boring ¹² students. The lecturers' lack of sound, lax lessons, improper learning methods, or lecturers' position while teaching a lot of sitting can bring an unattractive atmosphere, making students fearful and unhappy resulting in a decrease in response. Or teaching materials used lecturers are not in accordance with the learning objectives to be achieved. So in solving the problem a lecturer to improve the learning process in a way that varies depending on aspects that will be improved ¹³. One way can be to improve ¹⁴ the teaching materials used for the learning process in collaboration with a particular learning model.

⁸ Repetitive word: *low*

⁹ Repetitive word: *given*

¹⁰ Repetitive word: *low*

¹¹ Overused word: *interesting*

¹² Overused word: *boring*

The

Teaching materials play an important ¹⁶ role in the ¹⁵ learning process. In the manufacture of teaching materials was certainly ¹⁷ in accordance with the goal to be achieved. This is in line with Wardhana (2010: 29) added that teaching materials is a medium to achieve ¹⁸ the desire or goals ¹⁹ to be achieved ²⁰ by learners. So from the teaching materials that have been in stacking themselves by a lecturer, is expected to properly ²¹ solve the problems to be achieved ²². No exception learning process linear ²³ course program which is one of the many subjects applied in problems in industry, company or in everyday problems ²⁴. The result of research from Mawarsari (2017) which implements linear program teaching materials with linever assisted contextual approach obtained the result ²⁵ that the teaching material is effective ²⁶ in learning process. Based on the research, there is a need for further research on the response of students from the application of linear program material with linever assisted approach. So the purpose of this study is to determine the response ²⁷ of students in the application of teaching materials linear program with linear-assisted contextual approach.

¹³ Repetitive word: *improved*

¹⁴ Repetitive word: *improve*

¹⁵ Unoriginal text: 8 words

¹⁶ ccsenet.org/journal/index.php/ass/arti...

¹⁷ Overused word: *important*

¹⁷ Overused word: *certainly*

¹⁸ Repetitive word: *achieve*

¹⁹ Repetitive word: *goals*

²⁰

2. Methods

This research is a qualitative descriptive research. Subjects in this study are mathematics and statistics students of the Faculty of Mathematics and Natural Sciences (FMIPA) Muhammadiyah University of Semarang (UNIMUS). The variable that is measured is the student's response to the application of linear program teaching materials with linear-aided contextual approach. Data source in this research is questionnaire of student response in lecturing program of linear program applying linear ²⁸ program teaching material with linear assisted linear ²⁹ approach. Questionnaire ³⁰ is given after the lecture is completed. To confirm the results of the questionnaire ³¹ then the researchers also make observations during the lecture ³². Data analysis technique is done descriptively qualitative. There are three paths of qualitative data analysis, data reduction, data presentation, and the conclusion of Miles and Huberman (in Ivanovich Agusta, 2003). The indicators of student response questionnaire measured in this study are: (a) clarity of material content in teaching materials, (b) language used in teaching materials, (c) component of instructional materials, (d) lecturers' ability to use teaching materials, (e) the ease of linever software, (f) the ability of lecturers to use linever software, (g) the usefulness of teaching materials for students, (h) the usefulness of linever software, (h) the students' aspect is happy in the application of teaching materials; (i) the continuity of the use of teaching materials Assisted linever software.

3. Results and Discussion

Results of research on student responses in the application of teaching materials linear program with linear-assisted contextual approach using the data analysis formula as follows.

Percentage of each indicator = $A / B \times 100\%$ Information :

A = number of students who answer an option

B = all students who answered

²¹ Repetitive word: *achieved*

Overused word: *properly*

²² Repetitive word: *achieved*

²³ Unusual word pair

²⁴ Repetitive word: *problems*

²⁵ Repetitive word: *result*

²⁶ Overused word: *effective*

²⁷ Repetitive word: *response*

²⁸ Repetitive word: *linear*

²⁹ Repetitive word: *approach*

³⁰ Repetitive word: *Questionnaire*

³¹ Repetitive word: *questionnaire*

³² Repetitive word: *lecture*

Furthermore, the result of questionnaire of student response in the application of linear program material with linear assisted linear approach obtained response ³³ as follows.

The

Table 1. Result of Student Response Questionnaire

No.

Result Of Students Response

OutComes

Result

Positive

Negative

Number Of percentage

Amount

Percentage

Number Of

Percentage

Amount of

Percentage

1.

clarity of material content in
teaching materials

12

100

³³ Repetitive word: *response*

0

0

2.

the language used in teaching materials

12

100

0

0

3.

component of teaching material grain

11

91,67

1

8,33

4.

the ability of lecturers in the use of teaching materials.

11

91,67

1

8,33

5.

ease of linever software

12

100

0

0

6.

ability of lecturer in using linever software

11

91,67

1

8,33

7.

the benefits of teaching materials for students

12

100

0

0

8.

the usefulness of linever software

12

100

0

0

9.

aspects of student happy in the application of teaching materials

11

91,67

1

8,33

10.

Continuity of the use of teaching
materials aided by linever software

12

100

0

0

Total

96,67

3,33

Based on the data analysis above can be said that the response given by students in the application of teaching materials linear program with contextual approach with positive linear ³⁴ assistance, with percentage 96,67%, while giving ³⁵ negative response ³⁶ only 3,33%. So it can be interpreted that the application of teaching materials linear program with linever -assisted contextual approach can help students in terms of understanding the concept of

linear ³⁷ programming, applying the concept ³⁸ of linear ³⁹ programming in contextual problems, providing benefits for students to be motivated in following the lectures, and the existence of kontiuitas in the use of teaching materials Assisted linever software. Here is the response diagram given by the students.

The

Diagram 1. Respons of Students

positif

negatif

³⁴ Repetitive word: *linear*
³⁵ Repetitive word: *giving*
³⁶ Repetitive word: *response*

³⁷ Repetitive word: *linear*
³⁸ Repetitive word: *concept*
³⁹ Repetitive word: *linear*

Based on the response given is of course another expectation, namely the achievement of competence or goals in the course ⁴⁰ of the linear program. The positive response given ⁴¹ by the students in linear ⁴² program materials with linever-aided contextual approach, certainly ⁴³ does not necessarily appear just like that. It exists because of the superiority of the teaching materials

used. The teaching materials used are: diktat and student worksheet (LKM). In the diktat has a feature that contains the material ⁴⁴ or the concept of linear programming that contains ⁴⁵ also the application in contextual problems. Contextual application ⁴⁶ is also in accordance with the problems ⁴⁷ in the industry and companies, so that when graduating students can apply the concept of linear programming on the work that is using the concept ⁴⁸ of linear ⁴⁹ programming. This is in line with the results of the study, et al (2013) concluded that learning with Contextual Teaching Learning approach (CTL) overcomes misconceptions in the learning process. In addition in the diktat also contains steps using software lindo and Excel Solver to solve problems related to linear programming. With the use diktat the students more easily learn the concept of linear ⁵⁰ programming and the use of software lindo and Excel Solver make students easy in solving problems. Utilization of media in this case the use of software tentunya facilitate students, especially in linear program problems and is an alternative for students in the calculation process. In addition, the use of software lindo and Excel Solver can also motivate students in the lecture process, so they become active. This is in line with Hamalik's opinion (in Arsyad, 2004) the use of media in the learning process can generate new desires and interests and generate ⁵¹ motivation for students.

Other teaching materials used are Student Worksheets that contain linear programming related issues. The Student Worksheet is used to train students to hone their skills in understanding the concept of linear ⁵² programming.

4. Conclusions

The conclusions obtained from the results of research that has been done is the students give a positive response to the implementation of learning that apply linear program materials teaching with Linever assisted approaches Linever of 96.67%. This can be interpreted that the application of teaching materials linear program with Linever assisted ⁵³ contextual approach to give influence to students in the lecture program linear program. (A) the

⁴⁰ Repetitive word: *course*

⁴¹ Repetitive word: *given*

⁴² Repetitive word: *linear*

⁴³ Overused word: *certainly*

⁴⁴ Repetitive word: *material*

⁴⁵ Repetitive word: *contains*

⁴⁶ Repetitive word: *application*

⁴⁷ Repetitive word: *problems*

⁴⁸ Repetitive word: *concept*

⁴⁹ Repetitive word: *linear*

clarity of the material content in teaching materials, (b) the language used in teaching materials, (c) the component of instructional materials, (d) the ability of the lecturer in Use of teaching materials, (e) ease of software linever, (f) ability of lecturer in using linever software, (g) usefulness of teaching materials for students, (h) usefulness of linever software,

⁵⁰ Repetitive word: *linear*

The

(h) student aspect happy in the application of teaching materials,) Continuity of use of instructional aided software linever.

⁵¹ Repetitive word: *generate*

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⁵² Repetitive word: *linear*

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⁵³ Repetitive word: *assisted*

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