















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

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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 had achieved the positive responses from the students in learning linear program subject.

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

1. Introduction

Learning activities are a series of activities 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. When the response 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 of learning outcomes or problems of motivation, 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.

The problem is the effect of the low response given by students in the learning process. Many aspects that affect the low response given by students in the implementation of learning. The low 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 less interesting and tend to boring 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. One way can be to improve the teaching materials used for the learning process in collaboration with a particular learning model.















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Teaching materials play an important role in the learning process. In the manufacture of teaching materials was certainly 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 the desire or goals to be achieved by learners. So from the teaching materials that have been in stacking themselves by a lecturer, is expected to properly solve the problems to be achieved. No exception learning process linear course program which is one of the many subjects applied in problems in industry, company or in everyday problems. The result of research from Mawarsari (2017) which implements linear program teaching materials with linever assisted contextual approach obtained the result that the teaching material is effective 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 of students in the application of teaching materials linear program with linear-assisted contextual approach.

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 program teaching material with linear assisted linear approach. Questionnaire is given after the lecture is completed. To confirm the results of the questionnaire then the researchers also make observations during the lecture.

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

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















Table 1. Result of Student Response Questionnaire

		Result			
No.	Result Of Students Response OutComes	Positive		Negative	
		Number Of	Amount	Number Of	Amount of
		percentage	Percentage	Percentage	Percentage
1.	clarity of material content in				
	teaching materials	12	100	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 assistance, with percentage 96,67%, while giving negative response 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 programming, applying the concept of linear 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.







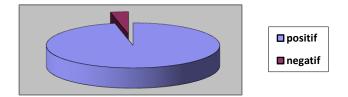








Diagram 1. Respons of Students



Based on the response given is of course another expectation, namely the achievement of competence or goals in the course of the linear program. The positive response given by the students in linear program materials with linever-aided contextual approach, certainly 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 or the concept of linear programming that contains also the application in contextual problems. Contextual application is also in accordance with the problems 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 of linear 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 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 softwaretentunya 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 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 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 contextual approach to give influence to students in the lecture program linear program. (A) the 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,

















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

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