



## **INFLUENCE THE LEARNING STRATEGY AND ENTRY BEHAVIOR TO YIELD LEARNING BUILDING CONSTRUCTION AND DRAWING 1 OF STUDENT**

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**ABSTRACT:** The aim of this research is to find out (1) the influence of learning courses learn strategy against the construction of buildings and drawing 1, (2) the ability to learn early influence results courses t he construction and drawing 1 (3) an interaction between learning strategy and ability to learn early in Influencing the outcome courses college-boy construction of buildings and drawing 1. This research is quasi his experiments with populations totaling 108 people. Instrument used is the test. Before data do first performed validation instruments. Statistics used in this research are the statistics descriptive and inferential statistics (t test and ANOVA test). The result Showed th at the testing of hypotheses: (1) there are differences courses the construction of buildings and drawing one group of students who unteachable with learning strategy of advance organizer with the student who unteachable with convolutional strategy of learning, indicated by t count = t 2,74 table = 1,771 (2) there are differences courses the construction of buildings and drawing 1 having ability early high and low, the early indicated resources by t count = 5.57 t table = 1.895 (3) the Guiler interaction between the preliminary learning strategy in Influencing the outcome, learning indicated resources of 5.35 by count 1 with probabilities 0.001 > 0.05. Based on the research is expected the construction of academic courses and drawing 1 to implement strategies advance in learning organizer.

**Keywords:** Learning Strategies, Early Capability, Learning Outcomes

### **1. INTRODUCTION**

Wrong one course available the curriculum Department of Civil Engineering Faculty of Engineering, University of Padang (FT UNP) is the Building Construction and Drawing 1. Course of Building Construction and Drawing 1 are included in the group of the Scientific and Skills Course (MKK) which serves as a supporting courses Course Construction and Drawing 2, as well as other subjects demanding mastery of building construction knowledge and the ability to read pictures.

From the interview result of the researcher with several lecturers of Building Construction and Drawing Lecture 1 in Civil Engineering Department, various efforts have been done by lecturers in improving student learning outcomes in Building Construction and Drawing Course 1, for example, providing training with guidance to students who do not understand pictures to be done and question and answer during the lecture on the part of the material that is still not mastered. However, these efforts do not seem to provide optimal results so that in the course still encountered many obstacles in terms of learning outcomes. One of the learning strategy to orient students on the material to be learned and help them to recall information that is related and can be used to assist in bringing new information to be learned

is the *Advance Organizer*. By learning strategy *Advance Organizer* will help students to be able to associate information or new ideas with cognitive structures he had. Ausubel, in Dahar (1998: 118), said that the *Advance Organizer* to direct students to the material to be learned and help them to recall the information associated with and can be used to help infuse new knowledge. Typically, *Advance Organizer* associated with the material is factual or less abstract than the preceding. *Advance Organizer* arise integrally associated with the information about the learning materials.

New information or ideas with the cognitive structure they possess are related to the student's own early ability. Initial capability between each student has different, it is because every student has a different level of intelligence. Sri Mulyani (2004) explains that the students' early ability to influence students' learning outcomes. That is, students who have a high initial capability then have a tendency to be the achievement of learning outcomes is also high. Ali (1996) explains that the initial ability of students before starting to learn a material or materials known as *entry behavior*. Muhammad Ali explained that the *entry behavior* is basically a state of abilities and skills that must be possessed in advance by the student before he learned the ability or skill. Demonstrated knowledge of students as the initial *entry* is individual *behavior*. Based on the experience of teaching and the researchers did a



survey, it appears that conventional learning strategies that have been applied to the Course of Building Construction and Drawing 1 not provide optimal results on student results. The conventional learning strategy applied is that there is no structured presentation of the material. Lecturers who do not arrange the order and make the link between what the subjects of Building Construction and Drawing 1 wherein each step is designed and presented separately with other measures, as a result students will not be able to associate information or new ideas with cognitive structures that have been held in a systematic and comprehensive.

The occurrence of behavioral changes in a person is the result of learning gained from the learning process. Behavior change is intended as a change of knowledge, attitudes and skills. Djamarah (1997: 23) explains that "learning outcomes are achievements in the form of impressions that result in changes in the individual as a result of learning activities". Winkel (1993: 102) "learning process experienced by a person produces changes in the field of knowledge / understanding, skills, values and attitudes". The existence of such changes is apparent in the learning achievements derived from the tasks assigned by the teacher / lecturer. Merrill (in Reigeluth, 1994: 287) states that "the knowledge acquired k's are grouped into four sections namely: facts, concepts, principles and procedures". The fact there was a relationship between time and events, or related to a name and parts thereof. Concept, a set of objects, events or multiple symbols with the characteristics and traits of the same. The principle is causality (*cause and effect*), while the procedures are sequences of activities to achieve goals. Assessment of learning outcomes for Building Construction and Drawing Course 1 used in the Department of Civil Engineering Faculty of Engineering State University of Padang according to Leightbody in Anonymous (2009) argues that the assessment of psychomotor learning results include: ability to use tools and work attitude, ability to analyze a job and arrange work sequences, speed of doing the task, ability to read pictures and symbols., harmonious shape with expected/ predetermined size.

According to Slavin (1997: 138) to make learning relevant and enable the ability to previously used strategies: (1) *Advance Organizer strategy* to orient students on the material to be learned and help them to recall information that relates that can be used to assist in brings together new information to be learned; (2) The analogy strategies that help students learn new information by linking concepts that have been previously owned. Provision of *Advance Organizer* in learning by Nasution (2003: 16) includes three phases: the

first phase, the presentation of *Advance Organizer*, the second phase of learning material provision, the third phase, approvals reinforce student cognitive structure.

Initial ability is the capital for students in facing the learning process. Because the teaching and learning activities need to provide the ability to start and help the learning experience associated with early ability of students while expanding and showing openness to the perspectives and how to follow everyday.

Initial ability between each student has a difference, this is because each student has a different level of intelligence. Sri Mulyani (2004: 20), explained that the initial ability of students has an influence on student learning outcomes. That is, students who have a high initial capability then have a tendency to learn yang results will be achieved is also high.

## 2. RESEARCH METHOD

This study belongs to the quasi-experimental research with factorial design 2 x 2. The population in this study amounted to 108 maha students with the withdrawal of samples are taken to determine the experimental and control classes conducted the draw with coins. Before the draw coins carried the researcher, lecturer of courses Const ruksi Building and Drawing 1 along the majors help map the two classes. This is done so that the samples obtained really new students take the Course Building Construction and Drawing 1 (not a student who has repeated). Both classes have an opportunity to serve as control class and experiment class. Coins consisting of two sides are defined as the side of the experimental class and the control class. The draw is done by dropping the coin on the floor, the side facing up is the experimental class and the down side facing is the control class. So that the number of students in the experimental class and control class, each of 14 people. This type of research involves two classes: experimental class and conventional class. Data collection techniques by administering an instrument conducted through tests.

Data were analyzed using normality test that aims to determine whether the data taken from the population distribution is normal or not. The test data is done with SPSS version 17. With the decision if a small probability of 0, 05, the data are not normally distributed, and vice versa if the probability greater than 0.05 then the normal distribution of data. After the subsequent normality test is carried out homogeneity test aims to see whether the two samples have a homogeneous variance or not. To get the test used to test the homogeneity m aka F. With the decision if the probability is greater than 0, 05, then  $H_0$  is



accepted and if the probability of less than 0.05 then  $H_0$  is rejected. If both classes are obtained normally and homogeneously then followed by hypothesis testing. Testing of hypotheses one, and two, is done using t test. While the third hypothesis by using Anova Two Line also performed with SPSS version 17.

### 3. RESULT AND DISCUSSIONS

From the results of research hypothesis testing is known there are three main variables that become the source of variance, namely: (1) Learning Strategies *Advance Organizer* and conventional learning strategies, (2) ability early in two categories: the ability of high initial and early ability is low, (3) Results learn.

Based on the analysis of the data in this study show that, learning strategies and capabilities *Advance Organizer* early overall mean more impact on learning outcomes Course Construction and Drawing 1. This is because every student has the same role in developing itself towards mastery of the material is being studied, the direct interaction between students, and the opportunity to discuss each other to solve problems in the same material with the guidance and direction of the lecturer. This study was supported by the theory that the use of the initial organizing or *Advance Organizer* is a teaching tool recommended by Ausubel (1960) to relate new learning materials with prior knowledge. Organizing the beginning, according to Ausubel in Nur (2011: 12) underlines the main ideas in a new learning situations and mengakarkan new ideas with existing knowledge to students. The initial organizing Ausubel described as a hook or intellectual *scaffolding* to help students activate prior knowledge relevant.

Differences in learning results are also caused early ability high by Arai (1995) is quick thinking, menegosiasi, understand the curiosity which is quite high, abstract thinking, and see the connection, while the ability to initial low by Arai (1995) is not fast enough to understand, less abstract thinking, less sharp in the imagination, less clever remember associate, and analyze. Initial capability will basically take effect on learning outcomes are achieved. By knowing the student's early proficiency a lecturer can determine where learning should begin. Nur (2011: 74) said initial ability of students is the state of knowledge / skills that must be possessed by students, before he learned the knowledge / new skills. Initial ability is the capital for students in facing the learning process. Because the teaching and learning activities need to provide the ability to start and help the learning experience associated with early ability of students while expanding and showing

openness to the perspectives and how to follow everyday.

The results of data analysis and hypothesis testing showed an interaction between learning strategies with initial ability to influence learning outcomes. Interaction is indicated by the graph intersecting between learning strategies (*Advance Organizer* and conventional) with initial capabilities (high initial capability and low initial capability).

### 4. CONCLUSIONS AND SUGGESTION

After conducting research and analysis of the research hypothesis influence learning strategies and ability early on learning outcomes of Building Construction and Drawing 1 student of Civil Engineering Department, Faculty of Engineering, State University of Padang, found some of the conclusions of which are: 1. There is a significant difference between the learning outcomes Course Construction and Drawing 1 students are taught strategies to learning outcomes *organizer Advance* Course of Building Construction and Drawing 1 students taught by conventional teaching strategies in the Department of Civil Engineering. Where learning outcomes Course Building Construction and Drawing 1 students taught by Learning Strategies *Advance Organizer* higher than the learning outcomes Course Building Construction and Drawing 1 students taught by conventional learning strategies, 2. There is a significant difference between the learning outcomes Course Construction Building and Drawing 1 students who have high initial ability and students who have low initial ability in the Department of Civil Engineering. Where the learning result of Building Construction Course and Drawing 1 students who have high initial ability higher than the student learning outcomes that have low initial ability, 3. There is no interaction between learning strategy *Advance Organizer* and early ability in improving learning outcomes Course Building Construction and Drawing 1 in the Department of Civil Engineering Faculty of Engineering, Universitas Negeri Padang. Students are taught by learning strategies *Advance Organizer* with high initial ability to get a higher learning outcomes than students taught by learning strategies *Advance Organizer* with lower initial ability. Students who are taught with conventional learning strategies with high initial ability get higher learning outcomes than students who are taught with conventional learning strategies with low initial ability.

After doing research many of the deficiencies found in this study. It is advisable: First, it is expected that the lecturer of Building Construction and Drawing Course 1 in Civil Engineering



Department can choose a more effective learning strategy. This can be done by selecting the *Advance Organizer* learning strategy, because strategy *Advance Organizer* is useful for faculty to improve student results overall. Second, natural d *Advance Organizer* application of learning strategy should be the first one to know the principles involved in learning strategi *Advance Organizer* so that there are no obstacles in the implementation of learning. Thus lecturers are expected to encourage and arouse student interest in learning. Third, Prior to the implementation of Building Construction and Drawing Course 1 should be tested the initial ability to see the ability of students as a whole in drawing and mastering the lecture material. Fourth, It is important to consider the use of learning strategies *Advance Organizer* in other subjects whose characteristics are the same as the Course of Building Construction and Drawing.

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## 8. AUTHOR'S CONTRIBUTIONS

Yuwalitas Gusmareta: Conception, design, acquisition, analysis and interpretation of data and drafting the article. Dr. Fahmi Rizal, M.Pd, MT and Dr. Nurhasan Syah, M.Pd: Critical reviewing and final approval of the version to be submitted.

## 9. ETHICS

This article is original and contains unpublished material. The corresponding author confirms that all of the other authors have read and approved the manuscript and no ethical issues involved.