

## The effectiveness of Activity-Based Learning to Improve Students' Self-Directedness in Learning

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### Abstract

The purpose of this study is to find out the differences between the implementation of ABL model and the conventional model in improving students' self-directedness in learning. This quantitative research used the quasi experimental design. The research population consisted of undergraduate students of Civil Engineering taking the Construction Management course. The study participants were students from two out of four Construction Management classes, taken by random sampling technique. Results showed that the implementation of activity-based learning (ABL) method exerted a significant effect on student self-directedness in learning. The ABL method was, in fact, more effective in improving self-directedness than the conventional model.

**Keywords:** Activity-Based Learning (ABL), Self-Directed Learning, Construction Management

### INTRODUCTION

Higher education becomes one of the centres of various intellectual activities, where each student expects to exhibit identifying characteristics of an educated person. Students are also required to think creatively and critically in addressing the issues arising in society. These demands make students position themselves as creative and self-directed learners. However, there is disappointment from the construction industries. They considered that the lack of work ethic, communication, problem-solving skill, leadership, decision-making, teamwork, and others are factors that influenced the Civil Engineering graduates who have low competencies. One of the factors that influenced the low quality of higher education graduates is the low quality of learning. The role of current instructional process acts as only a means of delivering theoretical knowledge. Kotler and Fox (1995:414) stated that there are six keys that determined the standard of a university; instructions, library resources, academic advising, faculty meeting, job placement and extracurricular activities.

Based on the six dimensions, the most crucial factor is the quality of learning. If the quality of instruction is poor, the whole aspects will get the negative effect.

Self-directedness in learning is a key factor in achieving learning success. It is a state where students learn autonomously, not relying on others. Self-directed students are full of determination and feel a responsibility to overcome their learning problems. The self-directedness will happen if students can closely control and evaluate their learning activities, plan improvements, and actively participate in the learning process.

Self-directed learning is the students with their self awareness that involved in learning activities to achieve the learning outcomes. Meyer (2010) pointed out that, to promote self-directedness in students, teachers should actively encourage them to build their independent learning skills. Self-directedness in learning, in fact, depends on the productive interaction between students and teachers. According to Francom (2010), there are some factors that contributed to the self-directedness in learning are studentteacher interaction, goal setting, learning implementation plan, self-evaluation, and utilization of metacognition, motivation, and domain knowledge. Williamson (2007) and Ricard (2007) stated that the positive relationship between teachers and students, the provision of learning resources, and the delivery modes give influences to the use the self directed method in the students' learning.

The majority of science and technology lessons today emphasizes content-based instruction in class and laboratory. Courses are delivered through teacher centered and accompanied by conventional content-based textbooks and handbooks. The teacher-centered instruction that put the students in a passive mode will make a low achievement and the lack of self-directedness in learning.

ABL is a learning method/approach that focused on developing the students' participation actively in theories or concepts learning by using various types of activities and experiences in diverse learning environments in the campus. It focuses on the students' active participation and creativity development are concerned in ABL. Then, the good balance between emotional, mental, physical and intellectual activities is important things that needed for ABL. For the students' learning outcome, ABL needs a good connection from learning the outcome of skills, knowledge, and attitudes. The role of the holistic development of the student is encouraged in ABL because the students need to be intelligent, well-behaved and experienced.

Based on previous studies and empirical observations, sometimes the ABL approach is neglected in the instructional processes by engineering fields. Apparently, many teachers have not understood that the implementation of ABL can make the students as active

participants from passive recipients of knowledge because the development of cognitive, affective and psychomotor domains can develop concurrently. The students can also achieve higher-order performance and assist them in a further approach to learning. It means the students consider the conceptualizing concepts or facts (orientation meaning) process is learning. We can conduct effective learning if there is a good environment for active learning. This statement is in line with Petra's (2014) as he stated that "for effective teaching, learning must occur"

ABL as a learning approach requires an appropriate specific learning model/method. For this reason, experiential learning has been chosen. Experiential learning refers to a learning process from a collaboration of comprehending and changing experience. It is an instructional model based on Kolb's theory. It focuses on learning as a process in which knowledge has been developed by the transformation of experience. The experiential learning focuses on the action and thinking as a connection in the transformation of experience. The experiential learning has a four-stage learning cycle in. They are reflective observation, abstract conceptualization, active experimentation, and concrete experience.

Several studies have suggested that the students' learning outcomes can improve the implementation of experiential learning significantly. Furthermore, the involvement of experiential learning in the ABL is expected to improve the students' knowledge, attitudes/soft and technical skill. It is expected to improve not only learning achievement but also self-directedness in learning.

In fact, the quality of learning is associated with the instructional process. The instructional process is closely related to the method used. Without the use of an instructional method/model in accordance with the characteristics of students and field of study, the instructional process cannot take place optimally. Based on the researchers' close observation, the ABL approach is rarely used in the instructional process in Construction Management classes. For a reason above, this study intended to find out significant differences between the implementation of ABL model and the conventional model in improving students' self-directedness in learning.

## **DISCUSSION**

Regarding the students' self-directedness, the use of the ABL model had an average score, higher than the use of the conventional model. On average, the self directedness of students in the experimental group increased by 10.3572, while that of students in the control group increased by only 3.1785. Based on the t-testing, the value of the equal variances assumed was 9.608 with a probability level of 0.000. So, a significant difference between the

implementation of ABL model and the conventional model in improving students' self-directedness in learning was found.

The results of this study suggested that the implementation of ABL was more effective in improving student self-directedness than the use of the conventional model. This happened because students could learn actively through various activities presented in blended environments inside and outside of campus.

One of the variables contributing to the success of ABL in improving self-directedness is experiential learning. The stages of the experiential learning model emphasise science experiences that related to daily life. This model suggested being implemented in various settings inside and outside campus together with the activity-based learning. The inclusion of experiential learning in ABL will promote productive interactions between teachers and students. Productive student-teacher interactions enhance self-directedness in learning Meyer (2010). The blended learning as an important role in the ABL's implementation. Because blended learning can support the students' cognitive, affective and psychomotor domains in learning. Structured cognitive, affective and psychomotor activities will affect the improvement of self directedness in learning.

The result of this research corresponds to Shah and Rahat's statement (2014). It stated that the implementation of ABL encourages students to participate actively in the learning process. It means the students need to comprehend scientific concepts and apply them in daily activities. Active participation indicates self-directedness in learning. As stated by Field, Dufy and Huggins (2015) that one of the indicators of self-directed learning is when students are proactive, motivated and responsible for learning. Ravi and Xavier (2007) further pointed out that ABL gives students the freedom and opportunity to devise their own ways of learning.

The quality of learning can be improved significantly by using ABL, if there is a qualified teacher that fully understand the concepts of ABL. ABL also needs a lot of money and time for its implementation. Harfield, Davies, Hede, Panko Kenley (2007) argued that in achieving higher-order performance the students need to be involved actively in real life experience. ABL can improve students' learning achievement and active participation in business. The students' high-order thinking skills could also develop in the ABL approach. Addy, Craft and Fletche (2012) concluded that the ABL model is beneficial in improving student achievement, active involvement and self-directedness in learning.

Learning on the outside of campus like in the workplace environment is very important for the development of the students' skills. Because it allows them to take a realistic view of the work world. Students can compare learning in the school and the real-life work.

Learning in the workplace is named Work-Based Learning (WBL). In WBL, the real experiences related to the skills, theories, and concepts are provided for the students. Since lessons are delivered in different settings (in and off campus) and formats, the process of grasping and transforming experience in learning can occur comprehensively.

In self-directed learning, students should closely control and evaluate their learning activities, and then plan improvements to get better learning achievement. In self directed learning, the learners are willing to learn by themselves and interested in learning. The knowledge, motivation and self-discipline are factors that can influence independent learning. Self-directed learners are confident, proactive and responsible for the tasks given. This can make students ready to learn throughout life without much need for guidance and to adapt during the learning process. In fact, self-directedness greatly contributes to improving student problem-solving skills.

## **CONCLUSION**

The results of hypothesis testing and discussion have led to the following conclusions. The implementation of activity-based learning (ABL) method exerted a significant effect on student self-directedness in learning. This was supported by the significance level of 0.00. The significance level' result described there was a significant difference between the implementation of ABL model and the conventional model. The implementation of the ABL method by using experiential learning in a blended environment could active the students' cognitive, affective and psychomotor domains that encouraged them to learn actively and comprehensively.

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