

# Implementation of Outdoor Education on Critical Thinking Ability

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Abstract: The purpose of this study is to determine whether there is an influence of outdoor education on students' critical thinking skills. The research method used is quantitative research method with randomized pretest-posttest control group design. The population in this study is the second year of fourth semester students from 11 classes, the samples taken are class 2A as the experimental group. The study was conducted on 16 meetings for 2 months. The instrument used is questionnaire critical with Likert scale. Based on the results of processing and data analysis using paired samples T test can be concluded that there is influence of outdoor education on students' critical thinking ability.

## 1 INTRODUCTION

The era of globalization demands the high quality of human resources, in order to be able to compete in global competition. Quality human resources can be obtained through the education process. Education through learning that conditioned students to be always active, creative, able to solve problems, and critical in dealing with various problems. Education should be tailored to the needs of the community. Education and community development cannot be separated from one another. The progress of a society and a nation is largely determined by the development of the education sector in the preparation of Human Resources (HR) in accordance with the times. "The importance of critical thinking in the 21st century is important to teach in schools, according to Kettler (2014, pp. 133), which says, "Developing skills of critical thinking is a pervasive 21st century goal for all students. The principle of differentiation suggests that when an educational goal calls on the teacher to teach a particular set of skills, understanding and responding to developed differences in those skills is important."

Critical thinking is required by every individual in his or her life. This ability is necessary because in social life, we will be faced with various problems that require solving. So that critical thinking skills need to be formed and improved. According to Erceg et al (2013: 66) states that In fact, critical thinking represents one of the most important

aspects of the real life problem solving ability. It means that the truth is that critical thinking is one of the most important aspects of the ability to solve real-life problems. So that, by having critical thinking skills, a person will be able to overcome various challenges in his life. Then Lombardi et al (2015, p. 149) reveals that the ability of critical thinking is very important to be productive at working world. High school graduates today are expected to have critical thinking and problem-solving skills function and become a member a productive society.

In addition, a person with critical thinking will be able to evaluate as part of critical thinking skills. According to Buckley et al. (2015, p. 3) Evaluative thinking is critical thinking. Implementation in the context of evaluation, involved identifying assumptions, posing thoughtful questions, pursuing deeper understanding through reflection and perspective taking, and informing decisions in preparation for action. However, the students in Indonesia are still lacking in critical thinking.

The results of a survey conducted by the Program for International Student Assessment (PISA) (2015, p. 5) show that Indonesia showed some improvement in student skills. However, it should continue to be improved as Indonesia is ranked 63 out of 72 participating countries. In contrast to other Southeast Asian countries, Indonesia has a low percentage seen from peak performance on subject's level 5 and 6. Like Singapore 39.1%, Thailand 1.7% and Indonesia 0.8%. In line with this result, Indonesia earns 403

points in the value of reading and is often frustrated when given open-ended questions that require analysis and reasoning that require them to think critically.

Then the rapid technology provides convenience for the various needs. Information can be obtained quickly through various content in technology. However, not a bit of content that presented a negative impact for its users. So it needs to be digested, scrutinized and suffered if you do not want to be adversely affected. not a few cases that occur due to lack of critical thinking skills. It's as easy to accept "Hoax" (news lie) that causes unrest. The national hoax outbreaks have become a national problem such as disunity, political instability and security disturbances that potentially hamper national development. This indicates that the ability to receive and find out the truth of information is necessary. By having the ability to think critically, one cannot easily accept the lie.

Critical thinking should be part of one's self because according to Ennis (1985, p. 45, in Mesa (2017, p 17) suggests that "Critical thinking is reflective and reasonable thinking is committed on deciding what ti believe or do." Critical thinking is reflective and sensible thinking that focuses on determining what to believe and do, so that the individual is able to use all the potential of his or her mind and thought to solve the problem.

Kayes (2006, p. 613) reveals that Critical Thinking emphasizes individuals' ability to manage, integrate, and organize complex information. Thought critical with regard to ability to understand and assimilate information complex from various perspectives and has been linked to academic performance

The development and demands of this era of globalization should be the concern of the entire nation of Indonesia. In order to prepare superior, character and competitive human resources. Education is a path that can be taken in preparing the human resources needed in this era of globalization. Through various curriculum, learning model and teacher competence can form the students according to the demands of the times. As in the curriculum of outdoor education which is one of the objectives is to develop critical thinking skills.

According to Fiskum (2012, p 22) explained that "outdoor education encourages learners to understand the interactions and relationships between any part of the curriculum. This awareness promotes lifelong learning and develops critical thinking skills". According to Gustafsson (2011, p. 4) Outdoor education has the potential to become an

integrative, complementary education form in a pragmatic and progressive pedagogy tradition, which can offer students and teachers opportunities to learn on the basis of observations and experiences in authentic situations. Outdoor education provides an excellent opportunity for teachers and students to learn in authentic and real situations.

The problems that exist in outdoor education activities provide an authentic experience for learners. Outdoor education is an approach that utilizes the environment as a medium of learning. Outdoor educational activities conducted with various games and adventure activities make this activity fun. Dal am Taniguchi et al (20 14 : 10) disclosed that the outcome of outdoor education is enjoyment, confidence, social awareness, environmental awareness, activity skills, personal qualities, key skills, helath and fitness, increased motivation and appetite for learning; broadened horizon.

## 2 METHODS

The process of implementing outdoor education to improve critical thinking ability was conducted during 16 times meeting with population of this research is the second year of fourth semester students of STKIP Pasundan Cimahi. Sampling technique used is cluster random sampling, with the design of The One Group Pretest-Posttest Design according to Frankel (2012: 269).

<i>O</i>	<i>X</i>	<i>O</i>
<i>Pretest</i>	<i>Treatment</i>	<i>Posttest</i>

Figure 1: Research Design.

In this study, the experimental group participants were given treatment with recreational and outdoor educational materials conducted with hiking, climbing, orienteering, outbound and camping programs performed twice a week.

## 3 RESULTS AND DISCUSSION

Hypothesis testing with t test analysis through SPSS 18 using Paired Samples Test. T test using Paired Sample Test is used to determine the influence and outdoor education on critical thinking skills.

Table 2: Test Results of Paired Samples Test.

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Outdoor Education	-6.000	7.621	1.495	-9.078	-2.922	-4.014	5	.000

\*OE: Outdoor Education.

Conclusion: The value of Paired Samples Test result test on pretest and posttest outdoor education data on critical thinking ability showed a significance value of 0.000. Because of the significance of pretest and posttest outdoor education data on critical thinking ability is  $<0,05$ , it can be concluded that there is significant influence from outdoor education towards students' critical thinking skills.

This can happen because according to Field, Lauzon and Jhon (2016, p. 32) it is explained that outdoor education is an ideal choice for young people and adults to spend time. People are physically active in nature to achieve benefits related physical and mental health including critical thinking skills. Outdoor education presents physical activity that makes the critical thinking ability increase.

Activities undertaken such as exploration, hiking, climbing, orientering, and camping. In its activities, each material contains various difficulties, so it needs to be critical and analyze so as to find the right solution to solve it. In High Quality Outdoor Learning (2017, p. 11) it is mentioned that outdoor education impacts on students, as they:

- 1) Enjoy participating and reflecting in outdoor activities and adopt a positive attitude to challenge and adventure;
- 2) are enhancing their overall well-being by gaining personal confidence and developing character and resilience through taking on challenges and achieving success;
- 3) are developing their self-awareness and social skills, and their appreciation of the contributions and achievements of themselves and of others;
- 4) are becoming alive to the natural local and global environment and understand the importance of conservation and sustainable development;

- 5) are acquiring and developing a range of skills in outdoor activities, fieldwork, exploration, journeys and expeditions;
- 6) are demonstrating increased initiative and innovation, enthusiasm, curiosity, self-reliance, responsibility, perseverance, tenacity and commitment;
- 7) are developing and extending their key skills of communication, problem-solving, creativity, critical thinking, leadership and co-operation;
- 8) are learning to appreciate the benefits of physical activity and the lifelong value of participation in healthy leisure activities and reflection;
- 9) are displaying an increased motivation and appetite for self-directed learning that is contributing to raised levels of attainment in other aspects of their development, as well as becoming concerned, responsible and fulfilled citizens;
- 10) are broadening their horizons and becoming open to a wider range of employment opportunities and life chances.

This shows that outdoor education is able to develop various competencies on the perpetrators, including to increase the ability of critical thinking to students, since the ability to think critically will be influenced by several factors that exist in outdoor education. First the physical ability, physical ability obtained from outdoor education activities will be able to support the thinking of one's mind because with the prime physical condition, then one will be able to think well. Second, in each activity students are given different difficulties so it needs to be critical and able to analyze so that challenges can be solved. Third, instructors or lecturers provide learning that focuses on students so that the ability to think critically can increase.

Besides that, according to Hughes (2014, p. 32) Critical thinking is best seen as coextensive with

rationality related to various reasons. To be rational the person must understand the relevance of the various reasons for the assessment and evaluate the reasons correctly. Through learning outdoor education students are faced with a variety of problems that require analysis and consideration so as to increase the ability to think critically.

## 4 CONCLUSIONS

Based on data analysis that has been done about the implementation of outdoor education to the ability of critical thinking, obtained conclusion that, there is an influence of outdoor education on students' critical thinking skills.

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