

## **Effects of Integrated Learning Model Toward the Student Attitude in Solving the Environmental Issues at Primary School in Bandung City, West Java, Indonesia**

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**Abstract:** Problems concerning environmental issues may take various forms but all are commonly related to the mankind. One such problem, in Indonesia context is low level of awareness amongst students or households in society. Academicians in universities or top management in industries, private companies as well as the government officers in Indonesia in general are also have a very low level of awareness toward environmental issues. Concern about growing environmental degradation in Indonesia has called for the teachers to help promote the awareness of the environmental issues amongst the society members, particularly among students at primary or secondary schools. Integrated learning model is a learning strategy which involves some subject matters in order to develop the useful experiences for the students. The integrated learning model is given to the students in the hope that after the teaching and learning process, students will be able to look at something as a holistic thing. The objectives of this study are the following to describe the definition of integrated learning model, to explain the domains of the integrated learning process and to explore the expected result of the application of the integrated learning model. Information for this article is gathered through a secondary analysis conducted for a larger study to measure the different effect of integrated learning model in classroom at primary school student conducted in Bandung City, West Java, Indonesia. Results showed that the integrated learning model is a technique of teaching and learning which involves the integration of knowledge, skills and attitudes in the learning process. There are three domains in integrated learning process which are cognitive, affective and psychomotor. The expected result of integrated learning model is that the development of the attitude of students at the primary school level should be much wider than that of at the junior high school, high school or at the higher level of education. Thus, the development of attitude has to be shaped as early as the primary school to promote the awareness of the environmental issues amongst the society.

**Key words:** Integrated learning model, awariness, care, attitudes, point of view

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### **INTRODUCTION**

Mankind is the most important key in improving or decreasing the quality of the environment surrounding. There are some decreasing quality of the environmental life caused by the mankind such as water's surface pollution, air pollution, the unfinished garbage processing and not taken advantage from the waste. Problems concerning environmental issues take various forms but all are commonly related to the mankind. One such problem in Indonesia context is low level of awareness amongst students or households in society. Academicians in universities or top management in industries, private companies as well as the government officers in Indonesia in general are also have a very low level of awareness toward environmental issues. Concern about growing

environmental degradation in Indonesia has called for the teachers to help promote the awareness of the environmental issues amongst the society members, particularly among students at primary or secondary schools. Attitude, careless and narrowness of their point of view toward the environmental issue are also contributed to the environmental problems.

Following those problems, the researchers are eager to study the relationship between the Integrated Learning Model and the improvement of primary student's attitude toward the environmental issues in Bandung City, West Java, Indonesia.

Environment is defined as the whole things surrounding mankind and has a U-turn relationship with that mankind. That is why the environment has to be protected and to be ever lasted. By doing so, the

environment will give the positive contribution to the everlasting of human life. Within the environment there is an ecosystem which is an arrangement of the entire environment elements which are interconnected and shape the environmental balance, stability and productivity. To look after this kind of environment, it is needed that everybody has the awareness, care and good attitude toward that environment. Awareness, care and the good attitude toward the environment have to be built as early as childhood. They have to be accustomed and be conditioned toward the environment.

Currently, it is predicted that there are about 500 million to one billion plastic bags has been produced every year from the entire world (National Geographic News in 2003). Besides, it finishes 17 million barrels of oil and cut down 14 million of trees every year. It can be imagined that if waste of plastics spreaded out will cover the whole surface of the world National Geographic News in 2003). If there is no serious effort in dealing with that garbage, it will produce air pollution, soil polluted and will interference human healthiness. The effort of care toward the environment is considered as sustainable efforts. It can be imparting through environmental education by applying the Integrated Learning Model. The United Nation Environment Activists Meeting which was implemented from 5-16 June in 2015 in Stockholm and attended by 113 countries determined some environmental issue principles to be addressed. Beside, the 5th of June is decided as World Environmental Life Day United Nation and Climate Change in 2015).

Children, who will have the responsibility to continue the nation building in the future are best for them to be provided by knowledge, skills and capabilities concerning environment issues through environment education. Environment in which we live, must be free from pollution and damage. We as adulthood, should inherit the healthy environment to the next generation. Children, who are at the growing and developing phases, always imitate and pay attention to what the adults do and act. If the adult is throwing waste and garbage, then children are also throwing waste and garbage. As stated by Webb (2003), at the growing and the developing phase, children, who are at 6-10 years old, Begin to understand cause-and effect relationships. "Magical thinking" typical of preschoolers quickly fades around this age. But your child keeps an active imagination. In addition, they have the morale awareness to criticize and to imitate what the adults do and act, in term of dealing with waste and garbage problems.

To enable children, 6-12 years old, accustomed to throw the waste away will implant the children awareness. The awareness toward the environmental issue will reduce

the negative effects of environment degradation. The student's awareness to the throwing waste at the proper basins is the important factor of the healthy of environment learning. Charter (Northen, 1987) stated that environmental awareness is increasing in schools throughout Europe, with the introduction of environmental topics in a range of school syllabuses, together with wide recognition of the importance of environmental issues as a cross-curricular subject.

Integrated learning model can be applied through various approaches, whether as a discrete subject in the school curriculum, through thematic or interdisciplinary approach or embedded in various subjects in the school. It is hoped that through these approaches the students will have the ability to develop skills and attitudes needed for the quality of human resource. Thus, by applying the integrated learning model, it is hoped to increase student awareness toward the environmental life problems. The degree of children awareness will be influenced by their knowledge, attitude and behaviour toward the environmental life. Student, at the primary school as an individual or as a member of a group, cognitively, still at the operational concrete or tangible phase (Amin, 2006), begins to understand the use of symbols, like words. Student, at this phase, starts to think the correlation between cause and effect, the mutual effects between what was happen and what will be the results. To implant the student's attitude in order to be cared to the environment issue, it is integrated to some subject matters in the shape of learning process. In this learning process, the teachers use some methods which involve the student's activities directly.

The purposes of the involvement of the student's activities are to implant the student's attitude toward the environment and to give some basic skills about creating and to applying the student attitude and their behaviour toward the environmental issues. These purposes can be achieved by applying the integrated learning model.

ASEAN Environmental Education Action Plan 2000 2005 (Thornton, 2001) stated that, the students knowledge, concerning the environmental is begun by being carried out the environmental issues through education in the schools, especially at the primary schools. Education related to environmental life is as a vehicle which consists of learning materials, methods for conveying the thoughts, ideas, concepts, etc. For teaching the students. Within the school, the students will be able to understand and to practice the way how to deal with the environmental life problems. The students are next generation who will face and solve the environmental life problems in the future. They have to be provided by knowledge, skills, abilities, good attitude,

awareness and being care to environment. Efforts to develop the human resources, who have high quality have to be implemented in integrated and sustainable way. The availability of high quality human resources will has a great probability to shape a better society at every level of life. Good society is indicated by many indicators such as: ability to solve daily problem has a wide insight and knowledge and positive attitude toward the environment. Education is an effort to improve the quality of human resources. Education holds the very important role in improving the quality of human resources because through education, one's character can be shaped. The future of a nation is depended upon the education.

There are three interdependency factors within formal education, i.e., teacher, curriculum and student. At the very basic, students as the main target of education, should view everything as a holistic union, the students should not view everything as a part. Unfortunately, when they enter to the formal education such as a primary school, they are faced to the various subject matters partly, so that, they are not able to connect every part of subject matter which is learned partly. Eventually, they have difficulties in understanding the phenomenon which occurs surrounding us. In order to bring into reality of human resources who have high quality, every teacher demanded to implement the learning process by processing the teaching material that appropriate with the student's level of intellectual development. One of the learning models that have the possibility to improve the student's attitude toward the environment problem is integrated learning model.

The objectives of this article are the following to describe the definition of integrated learning model, to explain the domains of the integrated learning process and to explore the expected result of the application of the integrated learning model.

## **MATERIALS AND METHODS**

The present study was a result of quantitative study using a quasi-experimental design to measure the different effect of integrated learning model in classroom at primary school student conducted in Bandung City, West Java, Indonesia. The number of students who took part in that study was 900, divided equally between experiment and control class. Thus, the number of respondents for experiment as well as for control class was 450, respectively. Quantitative method or study is marked with numbers and analysis using statistical figures. Quantitative method is also called positivistic method because it is based on the philosophies of positivism (Sugiyono, 2014). The quantitative method is

also known as the scientific method because it meets scientific principles such as concrete, empirical, rational and systematic (Sugiyono, 2014). Data were collected through pre-test and post-test and analysed using a two way ANOVA. This study using Anova as it is a powerful tool to analyze the differences between mean. Anova analyzes the different attitudes of student's awareness, care as well as point of view for the environment between students in integrated learning model and students that did not in integrated learning model.

This study is basically a small portion of the larger study of measuring the different effect of integrated learning model in classroom at primary school student conducted in Bandung City, West Java, Indonesia. From that study there was a wide range of data that have been collected, including information gathered through secondary analysis such as definition of integrated learning models, the domain of integrated learning model as well as expected learning outcome that could be expected from teaching proses applying integrated learning model. All this information is especially important for new researchers as it could be used for their literature review. Thus, it is felt that this information should be kept through this article.

## **RESULTS AND DISCUSSION**

The discussion in this section is focused on three aspects; definition of integrated learning, domains of integrated learning model and expected results of integrated learning model.

**Definition of integrated learning model:** Integrated learning model is one of the various models in teaching. Teachers may use various forms of teaching models in classroom. What is important in teaching is that the teacher should be sensitive enough to help their student for the learning process to be happened. The learning process should be happened in three domains; knowledge, psychomotor and attitude. Learning is a process that is characterized by a change in a person in these three domains as a result of experience and training (Saefuddin, 2006). Changes as a result of learning arise in various forms such as changing knowledge, understanding, attitudes, behaviors, skills and abilities. Learning is a reaction to all circumstances surrounds the individual. The learning process is directed towards a goal and the process of doing through the experience. The learning process is a process of seeing, experiencing, observe and understand something that has examined to obtain results that are determined, through coaching, giving explanation, providing assistance and

encouragement from educators (Saefuddin, 2006). Integrated learning model is a learning strategy which involves some subject matters in order to develop the useful experiences for the students. Integrated learning model is a concept that can integrate one to the other subject matters as a package. Within this package the separateness of subject matters is not tangible. The integrated learning model gives the opportunities to the students to think critically. So, the students will be able to understand the problem, either the simple environment problem or the complex one. They will see the problem as a whole. At the integrated learning process, every student is guided to identify the problem, to observe it, to collect, to evaluate and to use the results of the learning process usefully. Integrated learning model demanded the holistic learning processes; student centered and serves the concept from various subject matters at one learning process.

The integrated learning model is given to the students so that they will be able to look at something as a holistic thing. The term integrated learning comes from integrated teaching and learning or integrated curriculum approach (John Dewey, in Beans, within Saefuddin, 2006) He argued that an integrated learning approach is to develop student's abilities in the formation of knowledge based interaction with the environment and experiences in life. Integrated learning approach helps student to learn to connect what they have learned and what they had just learned. Jacobs (Saefuddin) looked at integrated learning as an interdisciplinary curriculum. He defines integrated learning as "a knowledge view and curriculum approach that consciously applies methodology and language from more than one discipline to examine a central theme is sue, problem, topic or experience.

Based on the above various definitions, the researcher defines integrated learning as "an approach to learning as a process for linking and integrating teaching materials in a subject or between subjects with all aspects of child development, the needs and interests of children, the child's attitude and the needs and demands of the family and social environment. Integrated learning model is a learning strategy which involves some subject matters in order to develop the useful experiences for the students. The integrated learning model is given to the students because they look at something as a holistic thing. The physical development cannot be separated from the psychological development such as the way of their thinking, social and emotional development.

**Domains of learning process:** As learning process consists of three domains; cognitive (to know what), psychomotor (to know how) and affective (to know why),

the process of learning in the classroom should be assisted towards the changes in these three domains. Cognitive is basically related to knowledge, whilst psychomotor and affective are related to skills and attitudes. According to Resnick and John within Ministry of Education and Culture in 2013, cognitive is all mental processes are visible in the acquisition, adjustment of the results, the use of knowledge and mental processes escort. While Brunner (Saefuddin, 2006), defines cognitive is an internal process that is different from behavior which can be seen. Based on these definitions, cognitive is relating to or involving conscious mental or intellectual activities such as thinking, understanding, learning and remembering.

Affective domain refers to the attitude which will be shaped through education is begun by accepting, responding, valuing, organizing or internalizing and characterizing or actualizing. While skills shaped by observing, questioning, experimenting, associating and communicating. In addition, knowledge is shaped by knowing, understanding, applying, synthesizing, analyzing and evaluating. Psychomotor learning is the relationship between cognitive functions and physical movement. Psychomotor learning is demonstrated by physical skills such as movement, coordination, manipulation, dexterity, grace, strength, speed; actions which demonstrate the fine motor skills such as use of precision instruments or tools. Behavioral examples include driving a car, throwing a ball, playing musical and throwing garbage to the right place.

In psychomotor, attention is given to the learning of coordinated activity involving the arms, hands, fingers and feet while verbal processes are not emphasized. How motor behaviors are recorded? When an individual learns physical movements, this leads to changes in the motor cortex. The more practiced a movement is the stronger the neural encoding becomes. Psychomotor learning is not limited to the motor cortex, however.

**Expected results:** Teaching is a process of imparting knowledge (cognitive), skills (psychomotor) and affective (attitudes) as well as abilities for students to solve their daily problems. The integrated learning model is a mean to strengthen student's attitudes, knowledge, skills and abilities. There are two phases in integrated learning process that is during the action and during the shape. During the action period, the student's attitude will integrate their cognitive and psychomotor. This is the conditioning and cultivation phase by doing observation and evaluation. During the shape period, knowledge and skills shape the affective or the attitude through the learning process. The expected results of this research

are by applying the integrated learning model at the primary schools in Bandung City, students as well as other stakeholders will improve their awareness, their attitude, their view point and will be more careful toward the environmental life. So, the improvement of their habit will contribute to make environment more healthy, friendly and the Bandung City as well as the society will have valuable life, fresh water, clean air and the river more full. The applied of the integrated learning model influences the awareness of the students toward the environment.

The applied of the integrated learning model influences the sense of care of the students toward the environment. The applied of the integrated learning model also influences the attitude of the students toward the environment. Accordingly, the applied of the integrated learning model influences the point of view of the students to the environment.

### **CONCLUSION**

The development of attitude, awareness and care can be developed through education and the model of teaching appropriate to this is integrated learning model. Integrated learning model is a concept that can integrate one to the other subject matters as a package. Within this package the separateness of subject matters is not tangible. The integrated learning model gives the opportunities to the students to think critically. So, the students will be able to understand the problem, either the

simple environment problem or the complex one. They will see life problems as a whole. Every student is guided to identify the problem, to observe it, to collect, to evaluate and to use the results of the learning process usefully. Integrated learning model demanded the holistic learning processes; student centered and serves the concept from various subject matters at one learning process. To implement this concept, the integrated learning model needs the appropriate infrastructure and facilities, the professional teacher who is able to implement the model. It is hoped that the awareness, care and point of view of the students toward the environment can be improved through this model.

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