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THE COMPATIBILITY OF OUTDOOR STUDY APPLICATION OF ENVIRONMENTAL SUBJECT USING PSYCHOLOGICAL THEORIES OF INTELLIGENCE AND MEANINGFUL LEARNING IN SENIOR HIGH SCHOOL

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Abstract

The problem in this research relates to the learning theory that rarely considered as a basis in learning in Indonesia. learning plans and syllabus structure in the national curriculum is not included learning theory point. learning theory only has been less studied in the subjects in geography education undergraduate. This makes learning theory material less explored. Learning theory is also often forgotten in educational research undergraduate and postgraduate programs. Many research did not allude to the relevance of learning theory in learning. After graduating, they less develop or linking learning theory with the teaching profession. That condition makes learning essence should be strengthened to become weak or even disappear.This research aims to describe the compatibility when applying outdoor study environment subjects with the psychological theories of intelligence and meaningful learning theory in senior high school. This research used a qualitative methodology with the type of descriptive exploitative research. Data sources are students and geography teachers. The process of collecting data uses the method of observation and interviews. Data were analyzed with the 6 Cresswell's qualitative analyzing steps. The results show that the application of outdoor study is suitable both the psychological theories of intelligence and meaningful learning. The compatibility is reflected in the learning activities, there are: before, during, and after working in the outdoor. The teacher's ability to implement the basis of psychological theories of intelligence and meaningful learning makes learning more easily understood and meaningful for students.

Keywords: meaningful learning, outdoor study, psychological theories.

1. Introduction

Education aims to increase student skills in all domains, and there are: cognitive, affective, and psychomotor. The domain that has been formulated by Bloom and perfected by (Anderson & Krathwohl, 2015) can be achieved through the application of a variety of learning methods. One of the method being developed around the world, such as United Kingdom, Germany, Australia, United States of America, and Indonesia are outdoor study.

Outdoor study in the England, according to (Dillon et al., 2017) in the examined 150 pieces of research on outdoor learning published between 1993 to 2003, field studies council and partner organisations commissioned focus developing applying outdoor study. The outdoor study learniing more effective because experiencing or that the time not always spent in the classroom. The student with outdooe scored higher 72 per cent than traditional school. Implementation outdoor study in England also impact on student's attitude toward environment.

Australia is closely connected with the England because it is one of the commonwealth countries. It causes learning in Australia is also developed and implementing the outdoor study. According to (Dillon et al., 2017) an Australian study of school student's perception of learning in natural environments both primary and secondary school students experienced the new experience in learning. According to (Miles and Wattchow, 2015), one of the outdoor study application in Australia is sea kayak adventuring and implications for outdoor adventure education, in this case focus on people and culture trawn to the idea of adventure through adventure stories.

Outdoor study program in the United States of America is the outward bond. This program became the forerunner to outdoor study implementation in Indonesia. According to (Muhsin, Febriany, Hidayati, & Purwanti, 2015) Indonesia implemented the outward bond Indonesia and build great hall eco campus with the bamboo material that awareness in environment.

The curriculum in Indonesia (national curriculum) is student-centered. The way to develop the student's activity makes the teacher not only applying the learning in the classroom. The outdoor study is one of alternative learning makes students more active, enthusiastic, and motivated in the learning process. According to (Sudjana & Rivai, 2015) the advantages learn the environment in the more attractive learning process, so student motivation higher. According to (Thomas, 2019) 28-day outdoor education programmes in

Australia can construct student naturalistic inquiry, the students active, enthuasiastic, and experiential learning.

The outdoor study also makes learning more contextual as direct observing the surrounding environment. Direct observation makes students understand and appreciate the neighborhood environtment. Thats because students directly interact with subjects in the field related to the environment, both damage and preservation. This allows students to avoid destructive behavior and continue conservation efforts. Besides the outdoor study, there is also a laboratory nuanced testing activity in it, in this case, the karst rock test, although the test is not carried out in the laboratory but directly in the field. According to (Sejati et al, 2016), students can compare the goods and bad efforts areas representing damage and environmental preservation, the good efforts on the environment can improve the environmental awareness character. According to (Rowe, Dadswell, Mudie, & Rauworth, 2014) the outdoor study in the form of sailing ships could developed good character in the maritime environment. According to (Erika & Satu, 2018) in the outdoor education students connect with nature and their environment surrounding.

The problem in this research relates to the learning theory that rarely considered as a basis in learning in Indonesia. First, learning plans and syllabus structure in the national curriculum is not included learning theory point. Second, learning theory only has been studied by geography education undergraduate students in subjects the development of learners and or educational psychology. This makes learning theory material less explored in geography education undergraduate program curriculum. Third, learning theory is also often forgotten in educational research bachelor and master's, both classroom action research and quasi-experiment. Many research did not allude to the relevance of learning theory in learning. Fourth, after graduating, they no develop or linking learning theory with the teaching profession again. That condition makes learning essence should be strengthened to become weak or even disappear. According to (Sumarmi, 2015) the learning application must understand the basic or theoretical, for example, geography learning with mind maps must understand the noted methods developed by Buzan since 1970s.

Outdoor study in this research is practiced on environment subject. The environment, in this case, is the Kendeng karst hills zone near the student school location in Babat. According to Bemmelen in (Harsolumakso et al, 2019), one of the seven physiographic units in Java is Kendeng zone with the karst formations. According to (Sumarmi, 2015) the basic competencies that can be done with field study which describes the environment used related to sustainable development.

The authors are linking learning theory with outdoor study in every step of learning. Outdoor study learning steps according to (Sumarmi, 2015) include class preparation, selecting area, group dynamics, managing equipment in the field, working in the outdoors, back in the classroom, and final student report. This research aim is to discuss the compatibility between outdoor study environment subjects with learning theory in senior high school.

The outdoor study is important in the application of learning theory. First, to uncover facts and data in the field. Students directly observe the object learned in class or reference. Facts and data found on objects in the field are important to construct the dimensions of their knowledge. According to (Spillman, 2017), the apllying Australian outdoor education can explore students understanding about local aboriginal people from the data and the fact they collect in the field.

The outdoor study encourages student motivation in learning. Motivation arises when students interact directly with the objects. Student's curiosity to find phenomena in the field is harder, because what they have encountered is found in books. The changes they found related to environmental material hone their accommodation abilities. According to (Sudjana & Rivai, 2015), the benefits of environment studying are learning more interesting, so that student's motivation is higher. According to (Gough, 2016) outdoor and environment education is cobined from physical and conceptual that make students collect powerful ideas and motivated to enter the field.

The outdoor study can develop the student's abilities in cognitive, physical, and social. Cognitive is obtained through observing objects as a complement to the material being studied. Physical activities throughout the field directly activities such as walking and climbing. Social is in the form of sensitivity when observing the human element in the object. These three elements train meaningful learning dimensions in the environment around students, as well as the stage of assimilation of material and accommodation, in this case, the development of the field. According to (Boyes & Potter, 2015) outdoor study create student to improve their cognitive decision about the problems such as environment subject, outdoor study take student to the physical activities such as rock-climbing, and outdoor study improved their social in the form of interaction with people in the outdoor location. According to (Cooper, 2015) outdoor learning environment supports social emotional development such as social gathering.

The outdoor study makes student learning more meaningful. Meaningful learning because students can understand the importance of science in real life. According to Sudjana

& Rivai (2015), that there are many benefits derived from field study activities (especially the environment), one of which is the essence of learning is more meaningful because students are faced with real situations and circumstances.

The outdoor study method is suitable for geography subjects because geosphere phenomena are available directly in the field. The national curriculum by incorporating elements of learning theory is compatible with outdoor study in environmental material. According to (Sumarmi, 2015), for geographer fieldwork, is a key component for understanding objects.

2. The Methods

This research used quantitative methodology with the type of descriptive explorative research. The descriptive explorative research aims not manipulation one of the variable. The descriptive research means analyzing and presenting data systemically so that it can be more easily understood and concluded, while explorative means finding something new from the results of grouping symptoms, facts, and certain data. According to (Arikunto, 2016) explorative descriptive research does not aim to test certain hypotheses, but only describes the existence of a variable, symptom, or phenomenon.

Subjects were geography teacher and students XI IIS 1 class in Senior High School Muhammadiyah 1 of Babat-Lamongan second semester of 2015/2016. That class was got applying outdoor study (observations, interviews, images, and maps media). The data collected in this research is to get the psychological theories of intelligence and meaningful learning theory underlying outdoor study is reflected in the outdoor learning activities. Data obtained by observations and interviews on the research subject. Implementation of the data collection carried out for six weeks. According to (Cresswell, 2016), one of data collection on qualitative research is observation and interviews, then analyzed in descriptive ways. According to (Moleong, 2014) qualitative research methodology as a research procedure that produces descriptive data in the form of words both written and oral from people and also observable behavior.

Research instruments related to the application of outdoor studies in the form of learning devices with observation sheets, karst rock test equipment, and scientific work guidelines for reports. Instruments and tools in research to explore linkages with the outline of developing interview questions, cameras, and catalogs of data collection for coding processes. Observations in the form of observations by researchers during the process of applying outdoor study steps, both before in the outdoors (class preparation, selecting area, group

dynamics, managing equipment in the field), when working in the outdoors, and after outdoors (back in the classroom, and final student report). Interviews were conducted with geography teacher related to the outdoor study implementation from the educator's view, interviewing students regarding the outdoor study implementation from the educator participants' views.

Data were analyzed with qualitative steps (Cresswell, 2016). First, process and prepare data by transcribing all verbal data or behavior collected for analysis. Second, read the entire data by examining all data collected. Third, reduce data by selecting, concentrating, simplifying, abstracting, and transforming data that appears in the transcript. Fourth, analyze in more detail by setting units and coding data into components of the psychological theories of intelligence and meaningful learning. Fifth, analyze in more detail the psychological theories of intelligence and meaningful learning components based on the categories of coding results. Sixth, analyze things that are unique, interesting, and draw conclusions.

The phenomena were described in this research is applying outdoor study with the environment subject. Then it explored compatibility with all the psychological theories of intelligence and meaningful learning theory component. Below is the research flow diagram.

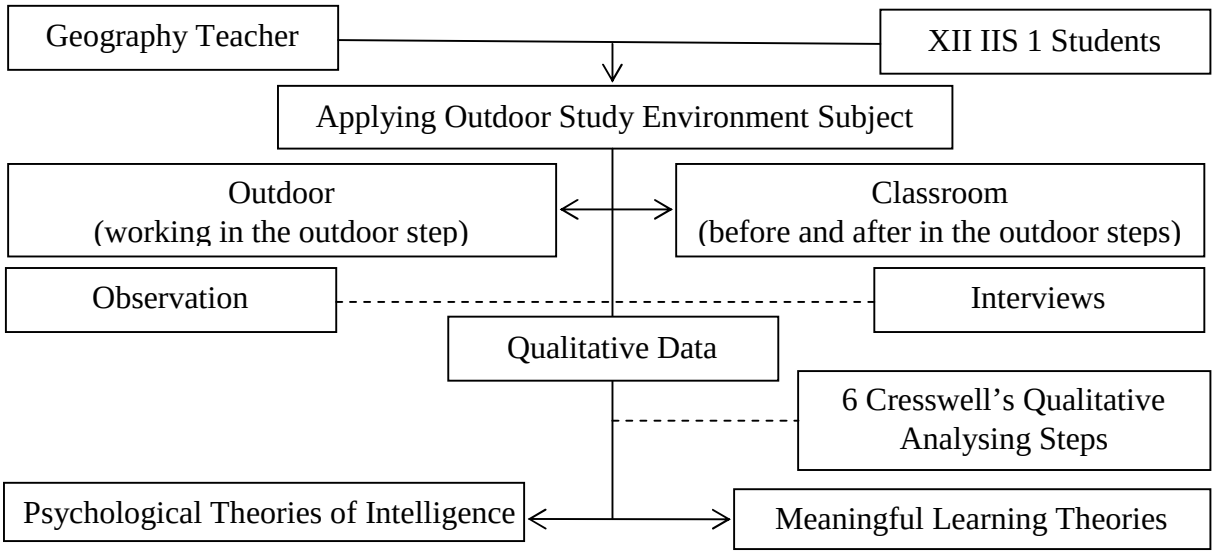

Figure 1. Research Flow Diagram

3. Results and Discussion

The results showed that outdoor study learning suitable with the psychological theories of intelligence by Piaget and meaningful learning by Ausubel. Compatibility reflected in the learning activities before, during, and after working in the field. The teacher ability to implement the basic psychological theories of intelligence makes learning easy to understand because it appropriates student cognitive development. Students cognitive

development grade XI (aged between 16-17 years) this case include the formal operational stage. This stage, students are able to experience the outdoor study learning with scientific research as a student report.

Students are also directed by teachers to experience assimilation and accommodation process. The assimilation process is obtained by students before, during, and after working in the field. The accommodation process is obtained by the student after working in the field step. The step before working in the field (preparation) includes: class preparation, selecting area, group dynamics, and managing equipment in the field. The step in the field (implementation) includes the step of working in the outdoor. The step after the field (evaluation) includes back in the classroom and final student report.

Below are the results of interviews with research subjects related to outdoor study environment to the psychological theories of intelligence stage before in the outdoors, there are: class preparation, selecting area, group dynamics, and managing equipment in the field.

Table 1. The Matric Forms of The Compatibility The Outdoor Study with The Psychological Theories of Intelligence Before Working in The Outdoor Steps

No.	Informant Name	Information obtained	Theme Founded
1	Elya Rosyidah (Geography Teacher)	”In implementing the outdoor study, the preparation step is important, can attract students' interest, provide initial knowledge, and determine the success of using this method”	The teacher understands the outdoor procedure so that students can reach the assimilation process in the before in the field steps.
2	Agam Budi Prasetya	”learn instruments to field preparation makes me comfort in learning”	Students experience the assimilation stage at the managing equipment in the field step.
3	Arif Rohman Hakim	”the concepts in books and jobsheet are easily understood by the practice of this equipment”	Student experience the assimilation stage at the managing equipment in the field step.
4	Liya Indah Wahyuni	”instruments that distributed plus my study book are very complementary”	Student experience the assimilation stage at the class preparation step.
5	Mufidatul Ummah	”I can't wait go to the field”	Student experience the assimilation stage at the class preparation, selecting area, group dynamics, dan managing equipment in the field steps.
6	Nanda Imroatus S.	”it's nice to learn new things with group number 3”	Student experience the assimilation stage at the group dynamics step.
7	Rieke Indah Triwahyuni	”I've passed on the *gunung pegat* but I never went inside, so I'm curious”	Student experience the assimilation stage at the selecting area step.

Sources: Ginsburg & Opper (2016)

Through this matrix, it can be found that the compatibility of the outdoor study with the psychological theories of intelligence stages when before in the field steps. In step preparation class, students learn the subject. Students also understand and able to fill out instruments and also using the equipment. This step student experience assimilation process, in this case, the students begin to understand the object generally like prior knowledge they have. Selecting area step, the students know the location will be observed: karst hills districts Babat-Lamongan (damage) and District Baureno-Bojonegoro (preservation). Students also understand the focus of the observed (physical and social). This steps students experience assimilation process, in this case, the students understand the object in a specific location, including focus observed.

Group dynamics step, the students divided into 11 groups of three to four for the interview process. This step students experience assimilation process, in this case, the students understand the object study in groups. Managing equipment in the field step, students understand and practice using the instrument to be used to collect data. Students also determine the equipment to be used (HCl, pipettes, and cameras). This stages students experience assimilation process, in this case the students understand the object and relate it to the way data collection.

Below are the results of interviews with research subjects related to outdoor study environment to the psychological theories of intelligence stages when working in the outdoors steps.

Table 2. The Matric Forms of The Compatibility The Outdoor Study with The Psychological Theories of Intelligence Stages when Working in The Outdoors Step

No.	Informant Name	Information obtained	Theme Founded
1	Elya Rosyidah (Geography Teacher)	”supervision in the field is very important, preventing students from playing outside this outdoor study context”	The teacher understands the function when in the outdoor, so that students can reach the assimilation and accommodation process when working in the outdoors steps.
2	Agam Budi Prasetya	”oh it turned out that the *gunung pegat* was full”	Students experience the accommodation stage at the working in the outdoors steps step.
3	Arif Rohman Hakim	”the karst rock test is a lot of foam”	Student experience the assimilation stage at working in the outdoors step.
4	Liya Indah Wahyuni	”horrified when hear that the miners have been hit by landslides, nature can destroy	Student experience the assimilation and

		too, like in the disaster chapter book"	accommodation stage at the working in the outdoors step.
5	Mufidatul Ummah	"I really understand what damage and preservation are"	Student experience the assimilation stage at working in the outdoors step.
6	Nanda Imroatus S.	"the better the *sendang gong* spring water source from Karan hill planting, suitable with the material in the class"	Student experience the assimilation and accommodation stage at the working in the outdoors step.
7	Rieke Indah Triwahyuni	"tired too up and down the hill, but exciting"	Students experience the accommodation stage at the working in the outdoors step.

Source: Ginsburg & Opper (2016)

Through this matrix, it can be found that the compatibility of the outdoor study with the psychological theories of intelligence stages when working in the outdoors steps. Working in the outdoor step, students take the data and observe the facts on the field. This stages students experience assimilation and accommodation process. Assimilation process occurs when students understand the object directly by observation and interviews. The accommodation process occurs when students know the changes that occur on the object.

Below are the tabel of the results of interviews with research subjects (geography teacher and students) related to outdoor study environment to the psychological theories of intelligence stages after work in the outdoor.

Table 3 The Matric Forms of The Compatibility The Outdoor Study with The Psychological Theories of Intelligence Stages after Working in The Outdoors Step

No.	Informant Name	Information obtained	Theme Founded
1	Elya Rosyidah (Geography Teacher)	"after working in the outdoor assistance is a finishing that makes the outdoor study perfect"	The teacher understands the function after work in the outdoor, so that students can reach the assimilation and accommodation process when back in the classroom and final student report step.
2	Agam Budi Prasetya	"this fits in with the extracurricular activities of the MUHIBA High School, the hill is clearly changing"	Student experience the assimilation and accommodation stage at the back in the classroom and final student report step.
3	Arif Rohman Hakim	"Mrs Elya patiens to help our group, so it's easy to understand this material"	Student experience the assimilation stage at the back in the classroom and final student report step.
4	Liya Indah Wahyuni	"my friend was very enthusiastic about the group discussion, I got excited to not be shy when presenting the work"	Student experience the assimilation stage at the back in the classroom and final student report step.
5	Mufidatul	"because I finished practicing yesterday on	Student experience the

	Ummah	the field, I really understood everything. When answering the questions in the presentation it was also clear"	assimilation stage at the back in the classroom and final student report step.
6	Nanda Imroatus S.	"we want to aspire preservation solutions in this scientific work to the school so that they are given to the head of Lamongan regent"	Student experience the assimilation and accommodation stage at the back in the classroom and final student report step.
7	Rieke Indah Triwahyuni	"hopefully with this work I can take part in a scientific research competition"	Student experience the assimilation stage at the back in the classroom and final student report step.

Source: Ginsburg & Opper (2016)

Through this matrix, it can be found that the compatibility of the outdoor study with the psychological theories of intelligence stages when after work in the outdoor steps. Back in the classroom and final student report step, students make scientific research related to damage and preservation karst hills environment. Teachers provide guidance at the same time, observing the students' activity in the working scientific research process. This step students experience the assimilation and accommodation process. The assimilation process occurs when students understand the object after processing data from the field and link it with the literature. The accommodation process occurs when students know the object changes from the field were examined in-depth by the literature.

The teacher ability to implement meaningful learning makes learning more meaningful for students, in the sense that students are able to apply the benefits of learning in daily activity. Students experience two dimensions of meaningful learning. The first dimension is obtained by students before and after working in the field. The second dimension obtained by student after working in the field and during working observations report.

Below are the results of interviews with research subjects related to outdoor study environment to the meaningful learning theory.

Table 4 The Matric Forms of The Compatibility The Outdoor Study with The Meaningful Learning Theory

No.	Informant Name	Information obtained	Theme Founded
1	Elya Rosyidah (Geography Teacher)	"I try from this outdoor, students can understand the meaning of environtment subject in daylife"	The teacher understands the function all outdoor steps, so that students can reach the first and second dimention of meaningful learning theory.
2	Agam Budi Prasetya	"material complement each other during this activity"	Student experience the first and second dimention before and

			when working in the outdoor.
3	Arif Rohman Hakim	”before on the field made me more prepared by learning material and practice tools and interview simulations”	Student experience the first and second dimention before in the outdoor.
4	Liya Indah Wahyuni	”when see the difference in *Gunung Pegat* and Karan hills, it seems clear that its function is preservation”	Student experience the first and second dimention when working in the outdoor.
5	Mufidatul Ummah	”I don't want to damage the environment of my village like in *Gunung Pegat*”	Student experience the second dimention when and after working in the outdoor.
6	Nanda Imroatus S.	”quite complicated looking for literature that is suitable for my group's scientific research”	Student experience the second dimention after working in the outdoor.
7	Rieke Indah Triwahyuni	”I'm glad it turns out that my planting in a home is as beneficial as on the Karan hills”	Student experience the second dimention when and after working in the outdoor.

Source: Agra et al (2019); Gunarsa & Ningsih (2014); Levy, Peralta, Pozzi, & Tovar (2018)

Through this matrix, it can be found that the compatibility of the outdoor study with meaningful learning dimensions. In class preparation step students enter in the first dimension, in this case, the students prepare to get information input individually. Selecting area step students to enter the first dimension; in this case, the students prepare and obtain information object location to visit. Group dynamics step students enter the first dimension; in this case, the students prepare to receive input information in the groups.

Working in the outdoor step, students enter the first and second dimensions. The first dimension when students get information in the form of data and facts on the field. The second dimension when students collaborate the information with temporary knowledge that obtained class preparation step. Back in the classroom and student final report step students enter on the second dimension, in this case, the students collaborate information with a comprehensive knowledge through discussion and literature study.

The compatibility is between outdoor study with the psychological theory of intelligence by Piaget. Piaget is a cognitive psychological scientist from Switzerland who became one of the pioneering constructivist learning theories. Piaget's theory begins from disagreeing against empiricism and rationalism. The empiricism theory or seen from the biology view that the knowledge gained from the activity of the sense on the surrounding environment. The rationalism or general view is that knowledge comes from logical reasoning. According to (Ginsburg & Opper, 2016) It is therefore natural that the psychological theories of intelligence should come to be placed among biological theories of adaptation and theories of knowledge in general. Piaget theorized that the process of gaining

knowledge is a combination of empiricism and rationalism view is referred to as the psychological theories of intelligence.

The outdoor study is observation process with senses directly and also conducting logical reasoning. Direct observation of geography objects in the field involves many senses experienced by students, rather than just in the classroom. Student reasoning process can be obtained on all of the outdoor learning steps. That reasoning there are when before to the field, during working in the field, and after from the field. The activities related to karst hills environment subject. This indicates that the outdoor study in suitable with the psychological theories of intelligence. According to (Badakar et al, 2017; Ensar, 2014) Piaget describe that prelogical reasoning and observating are important to construct more elaborate concept and more complex images.

Observation and logical reasoning according to (Ginsburg & Opper, 2016) through two processes, namely assimilation and accommodation, is an essential point in the learning. Assimilation is a process to understand the object. Accommodation means that the student thought process against the object changes. This is consistent with the student aim doing the outdoor study in order to understand the real environment directly and observe the change. According to (Gunarsa & Ningsih, 2014) "that assimilation and accommodation occur together and complement each other, each time the child adaptation with the environment." According to (Zhou & Brown, 2015), assimilation and accomodation can formed and return to students equilibrium.

The psychological theories of intelligence are also discussed the cognitive or intellectual development stages or namely construction of operations. The first stage at age <2 years, second aged 2 to 7-8 years, the third 7-8 to 11-12 years, and the fourth> 11-12 years. Each stage has a certain ability to acquire knowledge. The higher stage, the child receives knowledge of more complex (Ginsburg & Opper, 2016; Hebe, 2017).

These research subjects age between 16-17 years, or enter the four stages of intellectual development. The fourth stage or the formal operational stage, children have the ability to think hypothetically, logical, and based on the theoretical. That ability consists at the making scientific research elements. This is shown that learning by Piaget theory at this stage suitable for training student writing ability scientific researchs. According to (Zhou & Brown, 2015) in the formal operational stage students understand well about abstract, concept, using the systematic ways, and formulating hypotheses. According to (Sumarmi, 2015) outdoor study has the power to test the hypothesis with empirical methods.

The compatibility is between outdoor study with meaningful learning theory by Ausubel. Meaningful learning has two dimensions. The first dimension is knowledge input gained by self or with the teacher's guidance: the second dimension, student linking input on existing cognitive structure. According to (Voogt & Knezek, 2015) with two dimensions can help students to assess the significance of matter, in this case relating to computer science. According to (Levy, Peralta, Pozzi, & Tovar, 2018) in interdiciplinary environment teacher can ekslpore the meaningful learning multidimensional.

The compatibility this theory with the outdoor study is currently at two learning dimensions. The first dimension is information input (observations and interviews) obtained by self and with little teacher guidance while working in the field. The information is then processed by the student at second dimension, meaning students collaborating information with geography material in the school (concepts that already exist). The second process can be put in the form of the scientific research. Both of these things make student field observations process meaningful for students self. According to (Gunarsa & Ningsih, 2014) that Ausubel and Sullivan in 1968 show interactional relation between concept and basic structurally development. According to (Arsyad, 2014) that direct observations provide the complete impression and meaningful on existing information and ideas.

The outdoor study makes students learning meaningful. Meaningful learning is because students can understand the importance of knowledge to real-life after observing the phenomenon in the field. Knowledge, in this case, the importance of the karst hills environment to life. According to (Sudjana & Rivai, 2015) that the many benefits can get from field study activity (specially environment), one of which is the essence of learning more meaningful because the students are faced with the situation and the real situation. According to (Becker et al, 2017) outdoor study can developed the social skill and a favourable attitude toward the environment.

Meaningfulness of learning is reflected in the student scientific research, especially in the preservation solution. Students write alternative solutions that demonstrate concern and awareness of their surroundings karst hills environment. Giving solutions according to what is observed in the field (contextual) to be more value in student scientific research. According to (Prasetya, 2014) the process of learning in outside the classroom can provide a direct experience so that lessons more concrete and real, means of learning more meaningful. According to (Gilchrist, Passy, Waite & Cook, 2016), outdoor environment learning can construct the positive attitude towards the natural environment.

Based on observations by the author that Piaget and Ausubel is the most powerful learning theory that was underlying the outdoor study. In addition to the two theories, small linked especially behaviorism learning theory. The Figures are such as, Watson, Pavlov, Thorndike, Hull, Guthrie, and Skinner. The theory of these figures generally says that learning comes from changes in the behavior of children (students) committed by an adult (teacher). The theory is obtained mostly from testing on animals first. According to (Zhou & Brown, 2015) that the behaviorism theory children rule be object, the response only using habituation and can be more powerful if there is reward-punishment.

Teachers knowledge to effort suit the learning theory with learning process make learning more structured and leads to a clear purpose. In fact, teachers tend to ignore the theoretical basis of existing learning and doing teaching activities as usual. This makes the learning process tends to be routines activity and dominated memorize. The history of education is important and should be the basis for learning. According to (Dillon et al., 2017), outdoor stype from school gardens to school journey, then developed in the form of field work and outdoor educational or outdoor study. This means that the development of education today should not forget the concept of the past, which it is based.

4. Conclusion

The results showed that outdoor study implementations suitable to the psychological theories of intelligence and meaningful learning. The compatibility is reflected in the learning activities before, during, and after working in the field. The teacher ability to implement the basic psychological theories of intelligence and meaningful learning makes learning more easily understood and meaningful for students. Teacher, when implementing learning models or method should consider the basic theory underlying the study. It aims to learn more structured and leaded to a clear purpose.

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