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React (Relating, Experiencing, Applying, Cooperative, Transferring) Strategy to Develop Geography Skills

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Abstract
The purpose of this paper is to develop Geography skills for learners in high school. It is based on the demands of the Curriculum 2013 which emphasizes the achievement of competence. Curriculum 2013 is designed to provide the broadest possible learning experience for students in developing the ability to behave, to have the understanding, to have the skill, and to act. REACT (Relating, Experiencing, Applying, Cooperating, Transferring) strategy is able to bring new atmosphere and the learners are motivated to enrich learning experiences that increase learning for better outcomes. Currently, Geography in high school is focused on the acquisition of knowledge so that less attention to the mastery of skills and Geography perspectives. This research was conducted in grade XI-IIS-1 of SMA Negeri 15 Surabaya. The application of REACT strategy in Geography proved to be effective in developing the skills of Geography. This is indicated by the average score of individual skills in a learning Geography which is 84.33. The learners' participation and response in learning are very good.
Keywords: REACT Strategy, Geography skills, learning experience.

1. Introduction

Learning is a form of interaction between the individual and the environment which will give the experience of the real situation. This kind of interaction results in a series of learning experiences. This is in line with the statement of Burton (2006), which suggests "a good learning situation consist of a rich and varied series of learning experiences around a vigorous unified purpose and carried on in interaction with a rich varied and provocative environment".

Learning shows the interaction between learners and the other learners, learners and teachers and learning resources in a learning environment. Learning in the educational unit is organized in an interactive, inspiring, fun, challenging, motivating the students to participate actively. Learning will give learners the opportunity to develop initiative, creativity and independence in accordance with their talents, interests and physic and psychological development. Each educational unit must plan, implement, and learning assessment to improve the efficiency and effectiveness of the achievement of competencies of graduates.

Learning is a process of giving a learning experience that leads to the achievement of competence of learners. Swan (2005), Koohang (2009) stated that meaningful learning will provide a powerful learning experience. Powerful learning experience will improve the interpersonal, intrapersonal and knowledge-related competencies. Article 35 of Law Number 20 Year 2003 stated that the competence of graduates is the ability of graduates which includes attitudes, knowledge, and skills in accordance with National Education Standards.

Achievement of competence is conducted by developing a learning experience which provides opportunities for students to develop the ability to act, have the knowledge, have the skill, and act (Regulation of Minister of Education and Culture Number 69 Year 2013). Individual learning experiences will become the learning outcomes for the learner while learning outcomes of all students will become the curriculum outcomes.

2. Literature Review

Piaget and Vygotsky (in Slavin, 2011) stated that in a constructivist concept, the essence of learning is the meaning of knowledge and the extracting of meaning, not just the acquisition of knowledge or knowledge transfer. It is as proposed by Spigner and Anderson (in Collins, 2008) which stated that the constructivist theory puts the learner at the center of the learning experience. Learners learn by doing (learn by doing). Teachers should organize and facilitate learning that support learners to get more information.

According to Slavin (2011), Sumarmi (2012), constructivism learning is part of a contextual approach in which students prepare and develop their own understanding and comprehension of new experiences based on prior knowledge possessed. Constructivism learning emphasizes the process, a bottom-up instead of top down, cooperative learning, discovery learning, critical thinking and asking. Learners will learn very well when they learn actively, using a holistic approach, direct experience, integrated and practical with the guidance of teachers. According to Henson (2003), the learning conditions must be created by teachers so that students are free to build knowledge, feel comfortable, get interested and challenged. Therefore constructivist learning should be encouraged including teaching materials which are designed based on constructivism way.

Constructivism emphasizes the importance of learners who have to associate experiences, phenomena, and new facts into the system sense that someone already has before. It implies that the constructivist learning is

meaningful learning that emphasizes the importance of assimilation of new experiences into concepts or understanding that has been mastered by the learner.

Learning strategies should be directed to facilitate the achievement of competence which has been designed in curriculum documents for each individual to be able to become independent lifelong learners and in turn they become an essential component to create a learning society. Another quality that is developed should be reflected in the learning process, among others are creativity, independence, cooperation, solidarity, leadership, empathy, tolerance and life skills of students in order to form the character as well as the increase of civilization and dignity of the nation. (Annex III Regulation of Minister of Education and Culture Number 59 Year 2014)

Achievement of quality that has been designed in curriculum documents, learning activities need to use principles: (1) learner centered, (2) developing the creativity of learners, (3) creating fun and challenging conditions, (4) values, ethics, aesthetics, logic, and kinesthetic based content, and (5) providing a diverse learning experience through the application of various strategies and methods of fun, contextual, effective, efficient, and meaningful learning.

In lessons, students are encouraged to find their own and transform complex information, check the new information with the existing ones in his memory, and to develop into the information or ability to conform to the environment and the time of the place and time of his life. Based on the principle of competence-based learning consider that contextual learning with a constructivist approach is seen as one of the strategies that meets based competence learning (BSNP, 2006)

Research by Faisal (2005), Rohati (2011), proved that learners who learn to use teaching materials developed by REACT strategy (Relating, Experiencing, Applying, Cooperating, Transferring) is able to bring new atmosphere, students are motivated to enrich the learning experience so that learning outcomes increased. While Sharon (2008), Koohang (2009), stated teaching materials developed by the design of constructivist give a lot of opportunities for learners to undertake activities to get knowledge with new information, more diverse learning activities because it is designed for projects, field study, presentation and reflection, problem solving, group interaction.

REACT strategy is contextual learning which is the core of the constructivism principles (Crawford, 2001), Sumarmi (2012). CORD (1999), describes the REACT strategy component in learning, namely:

Relating: Learning in the context of life experience, or Relating, is the kind of contextual learning that typically Occurs with very young children. As children grow older, however, providing this meaningful context for learning Becomes more difficult,. The curriculum that attempts to place learning in the context of life experiences must, first, call the student's attention to everyday sights, events, and conditions. It must then relate Reviews those everyday situations to new information to be absorbed or a problem to be solved.

Experiencing: Experiencing-learning in the context of exploration, discovery, and invention-is the heart of contextual learning. However motivated or tuned-in students may Become as a result of other instructional strategies such as video, narrative, or text-based activities, Werner Reviews These are relatively passive forms of learning. And learning Appears to "take" far more quickly intervening when students are Able to manipulate equipment and materials and to do other forms of active research.

Applying: Applying concepts and information in a useful context Often projects students into an imagined future (a possible career) or into an unfamiliar location (a workplace). In contextual learning courses, applications are Often based on occupational activities. This happens most commonly through text, video, labs, and activities. Although, in many schools, Reviews These contextual learning experiences will be Followed up with first hand experiences such as plant tours, mentoring arrangements, and internships.

Cooperating: Cooperating-learning in the context of sharing, responding, and communicating with other learners-is a primary instructional strategy in contextual teaching. The experience of cooperating not only helps the majority of students learn the material, It also is consistent with the real-world focus of contextual teaching. Employers espouse that employees who can communicate Effectively, who share information freely, and who can work comfortably in a team setting are highly valued in the workplace. We have ample reason, therefore, to encourage students to develop Reviews These cooperative skills while they are still in the classroom. Also students must cooperate to complete small-group activities. Partnering can be a particularly effective strategy for encouraging students to cooperate.

Transferring: Learning in the context of existing knowledge, or transferring, uses and builds upon what the student already knows. Such an approach is similar to Relating, in that it calls upon the familiar. Most traditionally taught high school students, however, rarely have the luxury of avoiding new learning situations; they are confronted with them every day. We can help them retain Reviews their sense of dignity and develop confidence if we make a point of building new learning experiences on what they already know.

Swan (2005), Koohang (2009) stated that in order to facilitate the learners to solve problems, learners should be given active roles in learning. Roles include as participants of discussion, experimentation actors, presenters of discussions and experiments results, project implementers, which are outlined in the teaching

materials.

Rohayati (2013) expressed a deep understanding of the concepts developed through authentic and meaningful learning experiences where the teachers ask questions to students to encourage the activity of thinking. Learning should be packed into the process of constructing and not receiving knowledge. In the process of learning, learners construct their own knowledge through active involvement in the learning process. Learners become the center of activity, not the teachers who dominate the learning process. Learning is designed in the form of learners' work, the practice of doing something, practice physically, essay writing, demonstrating, creating ideas, and so on.

3. Methodology

This research is a quasi-experiment research which is located in SMAN 15 Surabaya. Experimental class is grade XI IIS-1 consisting of 24 students (9 men, 15 women). Data of Geography skills were collected through performance tests, performance, preparation of papers and the ability to communicate. Data were analyzed by using N-Gain score and descriptive techniques.

4. Result and Discussion

Finch and Crunkilton (in Torres, 2015) suggested that things to achieve competency are the changes of learning strategies in the learning process and providing learning facilities, learning resources, media that can give meaningful learning experiences. In this case the researchers conducted experiment by using REACT strategy that is expected to improve the learning skills of students of Geography Grade XI.

The National Geography Standards (1994) identify five skills that will guide a geographic inquiry. These five skills enable geographers to (1) ask questions about spatial geographic distributions and processes, (2) acquire geographic information about distribution, (3) organize geographic information, (4) analyze geographic data and (5) answer geographic questions.

The further strategy used is authentic assessment. Relating strategy is used to link a new concept to something completely unknown to students (Caine and Caine, 1993). Wahyu (2013) say, it is expected that students learn in the context of one's life experiences or preexisting knowledge. This strategy is effective to teach speaking Because they communicate about Reviews their experience. Experiencing strategy is intended to the make the students learning by doing through exploration, discovery, and invention (Crawford, 2001).

In this study, REACT strategy was implemented in the material of "distribution of minerals in Indonesia". According to Brown (2006), learning resources that help to improve the geography skills are globes, maps, data in the table of observation, the data in the chart on the observation. Geography skills developed in learning geography grade XI SMA Negeri 15 Surabaya, among others through the provision of assignment to make the map of mining products distribution in Indonesia, analyzing data on potential strategic natural resources, writing a paper on the theme "the potential of the natural resource capital development"

The results of the REACT strategy implementation show that the activity and participation of learners in grade XI IIS-1 SMA Negeri 15 Surabaya increased compared with previous learning model. The results of this study are consistent with the research by Saka (2011), Ultay (2011) and Rohayati (2013) which stated that learning with REACT strategy gave the impact on learners to be more enthusiastic, more fun, effective and increase student engagement in the learning process.

Geography skills of learners is very good (average 84.47) after following the lesson with REACT strategy. The results of performance tests to determine the geography skills can be seen in Figure 1 below.

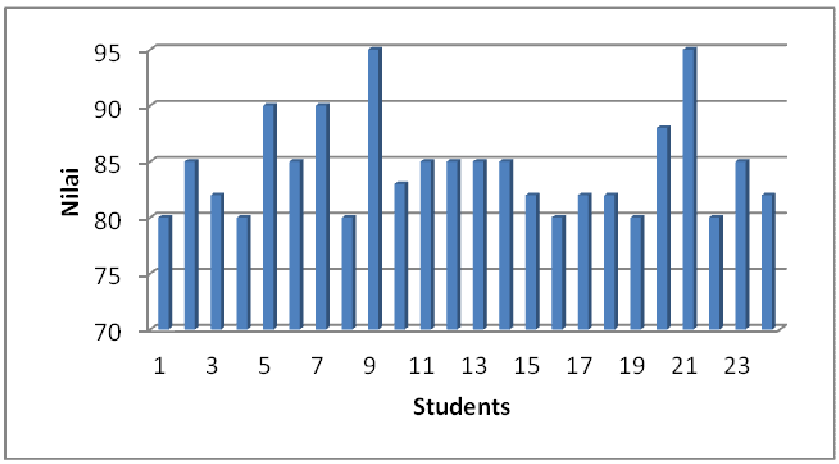

Figure 1. The Score of Geography skills

The results are consistent with research by Davtyan (2014), teachers can maximize the outcomes of this type of learning by successfully applying the REACT strategies in their everyday lessons: relating what is being taught into the context of the real world, experiencing the new knowledge, applying new concepts to the real world situations, solving problems by communicating with each other, and transferring that knowledge to an experience that they will have in the future. Research by Ultay (2011) stated that the REACT strategy is able to raise the curiosity, communication skills and social competence. While Rohayati (2013) stated that learning with REACT strategy can improve communication skills, problem solving and expression of students when communicating the results of learners' performance.

The effectiveness of REACT strategy to improve of geography skills can be seen in Figure 2 which shows the geography skills of the initial average was 76.08 and increased at the end of learning with an average score of 84.41.

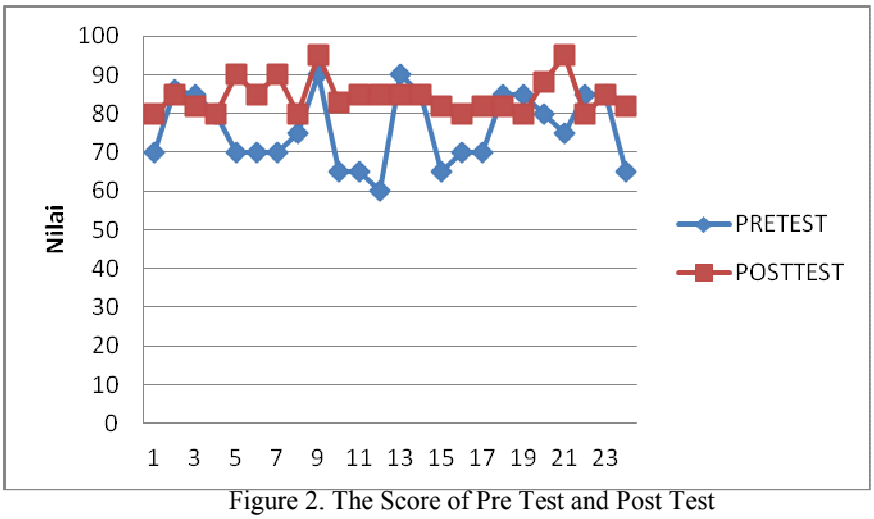

Figure 2. The Score of Pre Test and Post Test

The use of REACT strategy in improving geography skills are reviewed based on comparison of normalized gain score (N-gain). N-gain is the difference between the posttest and the pretest, the gain indicates the increase on understanding or mastery of concepts, learners' skills after learning. Scores of N-gain in grade XI IIS-1 are shown in Table 1 below.

Table 1. N-gain Score

Grade XI IIS-1	Pre Test Average Score	Post Test Average Score	N-Gain Score	Remark
27 students	76,08	84,41	0,901	high

Source: Test Performance

In a Geography lesson at SMAN 15, the score of the pre-test average was 76.08 and a post test score was 84.41, the score of N-gain 0.901. According to the Hake criteria (1999), the score of N-gain of 0.90 is categorized high category (N-gain> 0.70), which means that the REACT strategy that is implemented can improve the geography skills of students in grade XI IIS-1 SMAN 15 on high level.

In a geography lesson that implements REACT strategy, learners can become more actively involved in the learning process (Stolk et al. 2009), so they will be more willing to learn. Positive learning motivation and learners actively participate in the group discussion. REACT strategy affects learning motivation and attitudes of learners (Saka, 2011; Ültay N, 2012). In addition, REACT strategy contributes to obtain a more positive learning environment (Crawford, 2001; Costu, 2009). In this study, many teachers give assignments as a hands-on activity and mind on activities related to geography skills such as drawing a map of the distribution of natural resources and analyzing the potential of natural resources in Indonesia. These activities make the learners have the opportunity to learn abstract concepts to be more concrete. Davtyan (2014) stated that learners learn new knowledge by connecting it to the experience and/or experiments, communicate with others and positive reinforcement will get high meaningful learning experience and learning outcomes.

5. Conclusion

It is important to achieve learning competencies to develop learning experiences by providing opportunities for learners to master the competencies necessary for life in the present and the future. Learning must also be designed to provide the widest possible learning experience for students in developing the ability to act, have knowledge, get skilled, and act. One of the efforts is to apply REACT strategy in learning Geography which is proved that it can increase learning motivation and participation. REACT strategy can improve the geography skills of students in grade XI IIS-1 SMA 15 at a high skill level

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