

---

9-7-2019

## Building Constructivist Learning Environment at Senior High School in Indonesia

Harjali Harjali

State Institute of Islamic Studies, luc\_ky\_09@yahoo.co.id

Follow this and additional works at: <https://nsuworks.nova.edu/tqr>

 Part of the [Arts and Humanities Commons](#), [Educational Methods Commons](#), [Educational Technology Commons](#), and the [Teacher Education and Professional Development Commons](#)

---

### Recommended APA Citation

Harjali, H. (2019). Building Constructivist Learning Environment at Senior High School in Indonesia. *The Qualitative Report*, 24(9), 2197-2214. <https://doi.org/10.46743/2160-3715/2019.4001>

This Article is brought to you for free and open access by the The Qualitative Report at NSUWorks. It has been accepted for inclusion in The Qualitative Report by an authorized administrator of NSUWorks. For more information, please contact [nsuworks@nova.edu](mailto:nsuworks@nova.edu).

---



## Building Constructivist Learning Environment at Senior High School in Indonesia

### Abstract

Constructivist learning environment enhances students to be actively participating in the classroom activity. The way is through relating students' real-life situation with the knowledge that will be learned, thus, students are able to develop their comprehension of constructing a conceptual meaning of knowledge. It is essential to consider the students' perspectives toward constructivist learning since they are the center of learning. The objective of this study is to investigate the teachers' perception towards the implementation of constructivist in a language lesson. Six teachers were selected as the participants using purposive sampling technique. The data were obtained through in-depth interviews and participant observations. The data were evaluated and analyzed using observation, documentation, and filed note into relevant themes through triangulation strategy. The result of this study indicates that most of students' participation to learn was influenced by some factors such as teachers' supports, task-oriented in learning, deliberating cooperative activities, cohesively and closely related to their life using relevant, critical, and negotiable learning. By implementing constructivist classroom learning, the teachers and the students engaged in mutual positive relationship especially in building the students' motivation.

### Keywords

Constructivist Classrooms Learning Environment, Positive Relationship

### Creative Commons License



This work is licensed under a [Creative Commons Attribution-Noncommercial-Share Alike 4.0 International License](https://creativecommons.org/licenses/by-nc-sa/4.0/).

## Building Constructivist Learning Environment at Senior High School in Indonesia

Harjali Harjali

State Institute of Islamic Studies of Ponorogo, East Java, Indonesia

---

*Constructivist learning environment enhances students to be actively participating in the classroom activity. The way is through relating students' real-life situation with the knowledge that will be learned, thus, students are able to develop their comprehension of constructing a conceptual meaning of knowledge. It is essential to consider the students' perspectives toward constructivist learning since they are the center of learning. The objective of this study is to investigate the teachers' perception towards the implementation of constructivist in a language lesson. Six teachers were selected as the participants using purposive sampling technique. The data were obtained through in-depth interviews and participant observations. The data were evaluated and analyzed using observation, documentation, and filed note into relevant themes through triangulation strategy. The result of this study indicates that most of students' participation to learn was influenced by some factors such as teachers' supports, task-oriented in learning, deliberating cooperative activities, cohesively and closely related to their life using relevant, critical, and negotiable learning. By implementing constructivist classroom learning, the teachers and the students engaged in mutual positive relationship especially in building the students' motivation.*

*Keywords: Constructivist Classrooms Learning Environment, Positive Relationship*

---

### Introduction

Constructivist learning environment has been considered helpful to enhance students' participation in learning activities and to assist the students to construct the knowledge. Gunduz and Hursen (2015) define that constructivism belongs to the teaching and learning approach in which it is based on the cognition in learning as the result of mental construction. They add that constructivism means how knowledge is gotten and how the participants may actively be involved in classroom activities. Thus, teachers' role in transmitting the knowledge and guiding the students to construct the knowledge becomes the crucial discussion in education.

An important restriction of education is that teachers cannot simply transmit knowledge to students, but students need to actively construct knowledge in their own minds. That is, they discover and transform information, check new information against old, and revise rules when they do not longer apply. This constructivist view of learning considers the learner as an active agent in the process of knowledge acquisition.

In accordance with the importance of education, Aziz (2011) argued that the human development and the future is decided by the quality of education. Thus, through education, the nation is hoped to able to improve the quality of people life in all aspects including in economic and industrial development that for the welfare of citizens. Education is implemented through the curriculum as a tool in teaching for teachers and in the future, in preparing workforce production (Udosen, 2014, pp. 40–50). It can be inferred that education success depends on two aspects: (1) effective and relevant curriculum, and (2) teachers'

instructional method or performance in implementing the curriculum to achieve the goal of learning. In other words, it is the teachers who possess the prior role in applying the curriculum. Thus, teachers should be well-prepared in comprehending the curriculum to be implemented in an instructional model in the classroom.

Strategies of the instructional method have to be considered by teachers to apply the curriculum successfully. In the field of a constructivist learning research, this study has contributed significantly in offering in-depth comprehending of teachers' and students' perception about the constructivist learning environment and how their perception brings into line with teaching practices and also the circumstances proposed by the school's English curriculum.

Students' needs and personalities are varied for each since they have unique characteristics that need a creative, stimulating, and supportive environment to learn. Thus, the support from teachers is really needed by students in order to achieve successful learning result for their emotional, intellectual, social, and physical development. The support might be in implementing constructivist classroom environment in which students are given opportunities to be actively involved individually and socially (group work) in both learning process and learning planning. Furthermore, as teachers, it is indeed compulsory to stimulate, motivate and inspire students' learning motivation and confidence. Thus, teachers should aware in teaching students in term of implementing the particular method and utilizing learning atmosphere to acquire the aim of learning.

Classroom atmosphere and layout are influential to achieve successful learning toward students' intellectual, emotional and social development (Porter, 2007, p. 206). Hence, teachers are demanded to make every student who owns different characteristics, abilities, and intelligence successful in learning. This equal teaching can be achieved by providing a relevant learning environment. It is supported by a statement of Kelyy, Lyons, Butterfield, and Gordon (2007) that the relevant learning environment may enhance the effective environment of learning in order to develop students' learning involvement and positive attitude.

Pedagogical approach is needed to implement for creating meaningful learning and enhancing a classroom environment by teachers and students. Qualified learning environment also produces a supportive connection between teachers and students. Thus, teachers should provide a relevant environment to allow students involved actively in the learning and to develop their positive relationships, values, and respects. The thinking process towards content and context cannot be the main focus of the literacy component, thus, it is also significant to consider the product of the thinking process. Learning content and material should be well-prepared and well-organized before being transferred to students in order to uphold students' thinking. Students' literacy development will be achieved if teachers prepare well the content of learning during the teaching process which then produces a satisfying learning result.

Learning model of constructivism concerns on students' independence on recognizing, interpreting and constructing knowledge (Windschitl, 2002). Thus, it is important to provide students with an effective environment to allow them to explore, observe, construct, and conclude knowledge (Jonassen, 1999). Responsibility towards education can be achieved by students through engaging in the learning environment of constructivism. Marlowe and Page (2005, p. 193) emphasized that relevant learning tools access is needed by students in order to question, solve problem and conduct research. Hence, it can be summarized that constructivism approach which is implemented in the learning activities may produce benefits towards students' learning development in term of critical thinking, creativity, confidence, meta-cognitive, problem-solving, and independency. The results of this study display that constructivism approach is able to enhance individual

learning improvement explained by Piaget. In short, implementing constructivism learning environment is tremendously significant to improve students' learning ability.

In constructivism, the main focus is students themselves who can construct the learning concept and meaning. It means that the independence of students is concerned with acquiring knowledge. Jenlick and Kinnucan (1999) asserted that receiving and thinking process of experiences and ideas is defined as learning. Richardson (1999) added that in learning, it is also important to develop students' social interaction through social constructivist classroom environment. Thus, the focus and data interpretation of this study is social constructivism. The researcher emphasizes the study on two points; the significance of constructivism use in enabling each student to construct meaning in the learning process, and the collaborative process between teacher and students to produce a culture of learning. It means that aspects of learning result for students as attitudes, thoughts, behaviours, and values are integrated into learning activities.

The expectation of constructivist learning is students' active participation in the learning process. Thus, besides their weaknesses, students are supposed to break down the limits of learning by performing in an optimum way in the classroom. At first, performing actively in the classroom may be hard for students in term of the neglect from other students who are passive. However, in this case, it is the duty of teachers to create an active atmosphere in the classroom for each student by implementing the constructivist approach in order to make all students involved in the learning process. It is in accordance with a study that revealed students who are actively participating and performing in learning are those who own self-confidence and other students' or peers' support (Collins, 1996, p. 23). Conducting effective instruction delivering and communication with students are also significant in upholding the knowledge construct. Communication conducted by teachers to students is useful to determine their previous knowledge related to the current knowledge that they are going to learn, thus, they will be able to relate and construct the previous knowledge and the latest one. Cazden (1988, p. 67) argued that the problem of students' ignorance has occurred since long ago. Hence, teachers are expected to conduct engaging communication for every single student to be involved in the learning activities instead of conducting conventional teaching instruction which is one-way communication.

Furthermore, this study explored more on the environment of the classroom learning conducted at a senior high school in East Java, Indonesia. Then, it could be believed as an effort and the challenge to merge both curriculum and classroom learning environment aspects in which are essential to the students' learning. Under the new English curriculum framework, the constructivist view shall be reflected in this classroom learning environment. Thus, the constructivist orientation has the contribution to the conceptual of classroom learning in which the students are the central position in the learning context where it happens. Since the students and the teachers have the same perspectives in primary part on classroom environment, thus, this study offers both perceptions that have an urgency to be researched.

Moreover, the primary objective of this study is to investigate the teachers' experience in establishing the constructivist classroom learning environment at senior high school in East Java, Indonesia. In order to look at the objective of the study, the following research question has been set. What do experienced teachers notice about constructivist learning environment since it closely relates to their classroom language teaching? So, the development of non-cognitive and cognitive learning outcomes can be gotten through constructivist learning environment research which has an impact on the result found. The key purpose of this study is to offer the indication of the classroom environment status of a constructivist classroom and its relationship with the teaching practice of teachers and its implication.

## Literature Review

Piaget and Vygotsky theories include constructivism as one of the modern learning theories. Its emphasis' concept of "how do learners acquire knowledge?" is a reason for constructivism known as a learning theory. Gijbels and Loyens (2009) divided constructivism into four classifications; authentic learning task, cooperative learning, meta-cognition, and knowledge construct. The definition of the classifications are: (1) authentic learning task are related to the tasks relevant to the real-life situation given to the students to solve them, and (2) cooperative learning is constructing new knowledge by communicating and collaborating with others.

Vygotsky (1986) stated that interaction with people in the society is formed with knowledge. He emphasized that it is significant for students as the human being to have Zone of Proximal Development (ZPD) producing individual new knowledge construct through others' help. An individual needs a helper in constructing knowledge because it is above a level of understanding when an individual reaches ZPD. What is mentioned as the helper can be a teacher or other students? Thus, another prior duty of teacher instead of facilitating students is upholding them for optimum learning outcomes of their ZPD. (3) Meta-cognition is the students' responsibility for themselves' knowledge acquisition and learning consisting of self-regulation, goal, and self-assessment, while 4) knowledge construct is students' self-construct for the pre-knowledge. It indicates that students own background knowledge to enhance new knowledge and ideas that they are able to learn in a cognitively way (Gijbels & Loyens, 2009).

Constructivist knowledge is an achievement of the internal phenomenon while the external factor cannot be reached (Schunk, 2011). Boghossian (2006) argued that knowledge of an individual is different from another one since an individual mind constructs knowledge and ideas by his or her own internally. Wood (2004, p. 54) clarified Piaget's theory that an individual's pre-knowledge constructs a schema of the internal phenomenon. He elaborated that in the schema, the pre-knowledge and new knowledge are in conflict since children had been through the different development of cognitive stages existing in balance. Schema receives the conflicting knowledge into a balanced form.

Constructivism is divided into two parts; individual or cognitive constructivism and social constructivism (Powell & Kalina, 2009). Thus, the individual and group are able to conduct constructivism of knowledge. Individual constructivism is Piaget's theory that emphasizes the way of individual's knowledge construct individually or cognitively that is also known as an autonomous or individual method of the student. Meanwhile, social constructivism is discovered in Vygotsky's social interaction theory which believes that language and society are the main interaction elements. In the school, it is known as the group work method. However, group work and individual methods can be developed by another method that can uphold individual and social constructivism that is a question-answer method.

The stages of children cognitive development are divided into four due to the levels of ability in constructing knowledge (Piaget as cited by Powell & Kalina, 2009). A sensory-motor stage is the first stage in an age of 0-2 in which the physical forms and limited environment are able for students to sense. The pre-operational stage is the second stage that happens to the children in the age of 2-7 who starts to have language skills although their weakness on other ideas and thoughts are still obvious. A Concrete operational stage is the third stage that occurs for children in the age of 7-11. The reasoning of logic in stating the reason for their action or the development of thoughts occurs in this stage. In the last stage of 11 to adulthood is a formal operational stage (Powell & Kalina, 2009). Problem-solving skill can be achieved in this stage by applying the high-level thinking. It means that learners are

able to receive distinct knowledge based on the cognitive stage they encounter. In other words, the ideas of cognitive stages should be a concern of teachers' teaching practice in order to produce effective learning for students.

The main idea of cognitive constructivism is an individual-work method. Vygotsky explained social constructivism as cited in Powell and Kalina (2009). He argued that the interaction of one and another construct knowledge as between student and students or teacher and students. Vygotsky also stated that knowledge in ZPD is constructed by scaffolding. Scaffolding is an effort of constructing new knowledge by a student through a help of the teacher or another student. Giving an assignment which is familiar for students that they are able to conduct with the teacher's support can be a beginning.

It is possible for students to finish the assignment with the teacher's help or the support system. Among students, cooperative learning of social constructivism is relevant to be applied. Knowledge is constructed and internalized well in cooperative learning since students conduct social interaction. Thus, the main form of group-work method is social constructivism. In short, individual and social constructivists are valuable for teachers in conducting inquiry teaching method applying the question-answer process.

Active participation of students produces a constructivist learning environment in which students strive to link the knowledge with the real-life experiences that develop their conceptual comprehension. Constructivist classroom and traditional or conventional classroom are different. The focus of constructivist classroom is student-centered learning and interaction (students' point of views) that students are able to interact and discuss with other students and even teacher, conducting teaching assessment for teachers, and on how students construct the knowledge through the interaction. Meanwhile, basic skills become the prior concern of conventional classroom that means the main role is the teacher himself, student assessment is frequently done by test and the work of students is done individually without group work or interaction between students or teacher. Hence, meaningful learning can be achieved by implementing a constructivist learning environment as a new learning environment. Therefore, the teacher is able to conduct the meaningful learning in the classroom. However, it is only can be implemented on constructivism. In other words, teachers should organize interactions which are able to trigger students being actively participating in the classroom by constructing knowledge regarding constructivism criteria and tools.

The role of teachers in the environment of constructivist learning should be a mentor and an enabler, not a director or a dictator (Powell & Kalina, 2009). Deliberating Piaget and Vygotsky theories, the implementation of the constructivist learning environment can be for all subjects since teachers comprehend the strategy and psychological tools for conducting the constructivist learning environment. The methods or tools that can be used for the teachers are conversation, discussion or inquiry to engage students in communicative and thoughtful learning. Comprehending communication strategies and methods, teachers can improve individual and collaborative (social) learning method.

The common principles of constructivism are conducted by most teachers (Lew, 2010). Developing students' leadership and freedom is the first principal. Thus, students' ideas should be considered by teachers before transferring instructions (Lew, 2010). Teachers provide students with a chance to conduct the learning. Teachers are given an opportunity to have a discussion with the teacher and other students. Teachers provide students with an opportunity to present their opinions and understanding the result. Teachers and students utilize the time efficiently. Teachers conduct questions for students to trigger students' pre-participation and understanding. Teachers ask students to have a reflection on them and on the curriculum. Then, teachers are able to discover misconceptions and alternatives of students, and able to design the lesson.

Meanwhile, according to Olsen (2000), teachers can be included in constructivist teachers if they complete several principles. Olsen adds that constructivist teachers should implement three steps in term of students' activities, those are predicting, analyzing and developing. Students' thinking is triggered by a current case or conflicting ideas. Teachers may gather students in the group in accordance with their intelligence. Moreover, constructivist teachers should motivate students for learning by inserting values into the knowledge and enhance students' awareness of learning by providing cases or problems that make them involved actively in learning. In short, teachers can be decided whether they are constructivist teachers or not through the description of constructivist teachers' principles above.

Honebein (1996) categorized pedagogical goals of constructivist learning environments into seven goals. (1) The first is to develop students' constructing process of knowledge with their background knowledge (students' learning self-determination); (2) to conduct reward for numerous experiences and perspectives (alternative solutions evaluation); (3) to deliver real-life experiences into the learning process (authentic assignment); (4) to uphold students' right in delivering ideas in learning (learning of student-centered); (5) to include learning into group work (collaborative method); (6) to utilize various media like images, audios, videos, etc.; and (7) to make students understand the process of constructing knowledge (meta-cognition, reflection).

Some researchers have conducted the same topics as the constructivism approach in their field. Tuwoso (2016) argued that students' average learning outcomes are achieved higher after conducting the constructivist approach or student-centered than the control group or teacher-centered. In term of teachers, Ongowo, Indoshi, and Ayere (2015) have conducted a research on the perception of teachers toward a real and favored environment of constructivist learning. The data collection was taken from 41 biology teachers at Gem district, Kenya as a sample. Among the five scales of the constructivist learning environment in the findings, uncertainty, student negotiation, and personal relevance were the significant scales statistically (RO, 2013, pp. 1–6). Meanwhile, the scales of shared control and critical voice were not different statistically.

Furthermore, Honebein (1996) describes several benefits of the constructivist learning environment. (1) Students participate actively in the classroom that they are able to learn more and more; (2) Since the focus is on understanding and thinking process instead of memorizing, the outcomes of learning will be optimum. In addition, the constructivism focuses on how students can understand and think; (3) Students are able to construct their own principles that they can apply not only in the classroom but also outside of the classroom or society since the characteristic of constructivist learning belongs to transferable; and (4) As questions, explorations and self-assessment of students are autonomously conducted by students, the knowledge that they have studied will be stick in long-term on themselves.

Forms of students' self-assessment in a constructivist classroom are physical models research reports, artistic representations, and students' journals to engage the students' ideas and individual investments. Students' skills in elaborating knowledge in distinct ways are improved by involving their creative instincts. Moreover, the new knowledge that students have acquired will also be implemented in the real-life situation; (5) in constructivism, students are involved in the learning process since the learning design is authentic or based on the context of the real situation. In other words, students are given the opportunity to make questions about something and implement them into the real life; and (6) students will gain social skills since constructivism allows them to work in a group, to interact with other students collaboratively by solving the group project together and sharing the ideas. The benefits that students may possess in this social environment is an ability to express their ideas to the teammate, negotiate ideas with other students in the group and assess themselves

on the contribution in the group work in a justifiable behavior. These advantages will be beneficial for students not only in the classroom but also most importantly, in the real life or society that requires students to be well-prepared in living socially with society especially in expressing and negotiating ideas (Honebein, 1996).

All in all, those current studies above as used the view for the researcher to seek broader in other areas. To do so, the objective of this study is to investigate the teachers' perception towards the implementation of constructivist in a language lesson. It explores more on the environment of the classroom learning conducted at a senior high school in East Java, Indonesia. Moreover, it might be believed as a struggle and the challenge to unite both curriculum and classroom learning environment aspects in which are fundamental for the students to learn.

### **Research Methodology**

A research design that the researcher used was a phenomenological philosophical perspective since the main object of the research was to investigate the experience of Indonesian young people towards their care. This research was in line with Husserl who argued that people can consciously reveal themselves from their experience. The results of this research are more general instead of using of all phenomenological methodologies following their characteristic result. Hence, the overall procedures of the research used qualitative research procedures (Creswell, 2012, 2014).

Here, besides as researcher, he also becomes the informed investigator since he is an academic and a researcher at Ponorogo who has been acknowledged the field of education in Indonesia. The researcher considers a paradigm shift about the progressive philosophy of education in Indonesia for the preservation of local culture. For this reason, parents and Javanese educators are required to have detailed information about young Indonesian people nowadays in responding to see the reality in suitable care for positive results. Thus, this study was done to bridge the lack of references above.

### **Qualitative Phenomenological Design**

Qualitative research is a method of research using descriptive way in collecting the data instead of numerical data in which describing the data focusing on the inductive technique and the point of view of the subject. The objective of the qualitative research method is analyzing and describing informal to formal functioning in the daily life situation (Graziano & Raulin, 2007, p. 133). Ary, Jacobs, and Razavich (1972, as cited in Graziano & Raulin, 2007) also argued that qualitative research aims at completely exploring the phenomenon instead of forming it as a variable. Thus, the goal is to picture the analysis holistically with deep data comprehension. Thus, in this study, qualitative research is used to describe the research problem in a descriptive way that concerns on the inductive technique and the point of view of the subject. The focus of the study is the ideas of teachers in implementing a constructivist learning environment. Hence, the researcher uses the research design of phenomenology to analyze the case. This research dealt with the teachers' perception of their experience in the constructivist language learning environment.

The researcher uses phenomenology method because it enables the researcher to reveal various realities that occur in subjects' standpoints. The objective of this study is to describe the subjects' experience and perspective which stand distinctively for the sake of data provision. Graziano and Raulin (2007) stated that the experience of the subject as the inquiry center is the main element of phenomenology that differs from other qualitative methods.

Phenomenology focuses on the comprehensiveness. Since phenomenology begins with the consciousness perspective as a way to achieve the comprehensiveness (Giorgi, 2009), it is argued as the crucial element in this study. As a consequence, phenomenology can include the quantitative and qualitative study to make research becoming accurate numerically and meaningful (Fisher & Stenner, 2011).

To make the data easier to conduct, the teachers' perspectives and experience were deliberated using the phenomenological perspective. Thus, the participants would be getting direct feedback regarding their feelings and real-life experiences. The focus of phenomenological design is the comprehensiveness. A manner to reach the comprehensiveness on phenomenology can be started by the consciousness perspective as (Giorgi, 2009). In addition, Fisher and Stenner add that phenomenology can be take in quantitative and qualitative research in which generates an accurate and meaningful result (Fisher & Stenner, 2011). The perspective of phenomenological in this research is implemented to recognize teachers' experiences and perspectives. Moreover, the participants' experience life will be elaborated without difficulty in getting feedback that has run into their real life.

### **Subject of Research**

The researcher performed the information ethically. Moreover, in this study, the researcher maintained the school and the participants name, the participants' confidentiality, privacy, and safety.

Thus, since the samples were homogenous, the researcher used purposive sampling in selecting the participants. It was done in order to get the appropriate sample or subjects in which they were qualified as the research criteria being aimed in this study. Those samples were gotten according to some consideration choices that were suitable with this research need. Thus, six teachers at a senior high school in East Java, Indonesia were recruited as the participants of the study. The participants were those who had experienced in teaching between five and fifteen years. The number of teachers with 10 years of teaching experience was the highest. Meanwhile, those with 5 years of teaching experience were the lowest.

The experienced here means that teachers have been taught at least five or more years in their experience to teach. Elliot, Stemler, Sternberg, Grigorenko, and Hoffman (2011) argue that the criteria of participants in the classroom learning environment have fulfilled by the teachers who experience in teaching for five or more years.

### **Research Setting**

The research was conducted at a senior high school in East Java, Indonesia which the new curriculum has been implementing in those schools since 2015. This setting was selected because of some reasons. First, this setting showed that it was interesting classroom environment and fun learning as the result in the beginning observation. Second, some students were argued as feeling very comfortable while learning in the classroom supported by physical classroom management. Then, some teachers implemented active learning based in order to produce conducive learning classroom. Furthermore, teachers managed classroom interaction into good productive learning and creative activities.

Puskurbuk (2012) asserted that human resources' creativity, effectiveness, productivity, and innovation, can be acquired through learning that focuses on improving learners' spiritual and social competence (attitude), intelligence or skill and knowledge. Thus, the latest curriculum, which is relevant to the constructivism approach, should be implemented because of its effectiveness of student-centred learning instead of the teacher-

centred one. Besides, the curriculum also applies an authentic assessment to assess the students' attitude and abilities instead of only assessing based on the results of the examination.

### **The Instrument of Data Collection**

The researcher collected the data through field notes, participant observations, reflections, and documentation. In addition, the interview was the main data collection while observation was used to collect the data through field notes. The tape recording and interview had done by five teachers and then, recording transcription did verbatim. The data about the teachers' perspective on the constructivist learning implementation was also gotten through the interview. Classroom observation gathered with an interview to assimilate the teachers' done in the classroom. In addition, various learning strategies were considered by the teachers to assist the language classroom learning.

Getting the data from the interview, there are some teachers who have been teaching for about 5 years later that have the close issue of several studies in language learning environment at Senior High School in East Java. According to some research, the environment of classroom learning should be a consideration since they can convey the students' achievement. However, no serious effort has been produced to involve the learning environment as a discourse or a unit element in the development programs, especially in an education world. Involving the students' in subject learning is the feature in most favorable learning.

Moreover, the discussion above can be the starting point for the answer to the question "what should the teachers do to encourage the students' engagement in learning activity through the effective learning model?" Thus, we argue that it requires to explore and to investigate the teachers' experience in establishing a constructivist classroom learning environment (Phenomenological Study at Senior High School in East Java, Indonesia).

The study involved the English learning environment in the classroom in both teachers' and students' perception at a senior high school in East Java, Indonesia was importantly needed. Under the pressure of changing new English curriculum and the students' performance at school, those provide the chances to conduct the research. Thus, it is hoped that the result of this research will offer the positive effect on the better performance of students' learning and how teachers modify their teaching performance in English education (Fraser, 1998).

In this study, the researcher used an observation to get the information related the teachers' performance on their teaching which they made in each class. Creswell (2012) argued that observation is used as the observing process to observe the place, situation, and people in the research area and open-ended gathering in which it has the positive sides including to know the actual behavior, to investigate anything happening in a research area, to look for the individual difficulties in presenting the ideas, and etc. It was done to get to know whether they were building a constructivist classroom learning environment or not. Again, the observation offered a chance for the observer or researcher gathered in the classroom where the environment of constructivist learning was being created. It was done to check whether the environment of constructivist learning was really created in the classroom by the teachers and to define the activities, setting, strategies, methods, events, and relationships that were implemented. Patton (2002) argued that observations can be used to tell the method scope in establishing classroom learning situations. Thus, the researcher added the field notes used in observation can be used to record various situations such as the students' participants, the teaching-learning content, and the structures used from the observer's point of view. Then, to get more reflection and an additional idea to do, those

notes were in the form of handwritten and were transcribed (Creswell, 2007). In addition, this study used documentation to capture the learning situation or environment and other important actions.

### **Data Analysis**

Creswell (2007) argues that phenomenology talks about the important thing to recognize how people interpret the world and what the people experience. Furthermore, to analyze the data, the observation field notes and the interview transcriptions were categorized and analyzed into relevant themes by the researcher. In addition, the triangulation strategy was used in this research to contrast and compare the data between the interview result and the observations' findings. To support this strategy, the researcher implemented the field notes and data transcription. To make an effective interview and observation, the use of memo in two-column forms was made and deliberated the notation process (Creswell, 2007). The researcher deliberated the responses and information to clearly interpret, explain, and analyze the teachers' perceptions. Then, to create the environment of a constructivist learning in the classroom, the specific highlighting was distributed to interpret the teachers' point of views in the learning process. In addition, the interview and direct observation were conducted to examine the data reliability. To support the data, documentation was also conducted as an instrument for reliability, transferability, credibility, and conformability.

## **Research Findings**

### **Support and Challenge of Teachers**

The environment of English learning, based on the interviews with some teachers, was affected mostly by the interest and motivation of students. It means that teachers will be well-performed in teaching if students show great enthusiasm and performance too. However, teachers revealed that motivating and upholding students in learning is a complicated thing to conduct. Meanwhile, in the practical condition, students were less aware and motivated to participate actively toward the learning activities. Moreover, students tend to share hardly their learning difficulties to the teachers when they are asked to do so. Thus, "I have created a portfolio containing the compilation of questions from students in forms of papers since I taught English for the first time. However, several students do not come to the classroom. Hence, they did not fulfill the questions. We would say that they are not interested in doing it."

The other ideas were from other teachers' confession that it is the high-intelligence students who tend to actively participate and involve in the learning process compared with the low-intelligence students including in having positive support from teachers. Thus, the teachers commonly approach the low-intelligence ones to motivate them. It is based on an interview with some teachers who stated "The students who have high understanding and intelligence of the materials usually get to the front and ask questions related to the materials they do not understand yet. Meanwhile, the students with low level of understanding tend not to do the same thing; they keep their difficulties in learning by themselves. Hence, I should come myself to the students and invite them to share their difficulties." In short, teachers' teaching practice should suit to the learning environment.

## **Support from Students' Peers**

The interview result revealed that concerned on learning cohesiveness was high for teachers and students. The finding showed that support on the cohesiveness of students was coming from both students and teachers. The interview was also conducted for students, in which most students revealed that group work and activities support their learning achievement since they acquire support from other students. It meant that students would achieve successful learning by supporting each other. It indicates that the satisfaction of having peers' support is significant among students.

The students endeavored to relate their own experiences in the learning process of English subject that they are able to gain support from the peers. It is in line with what the perspectives of social constructivist concerns, that is the gaining of insight or knowledge is conducted through the process of individual and social acts. It means that, based on the interview result, students have implemented the idea of social constructivism in form of cooperative learning with peers. The cooperative learning is also shown in the students' statement of "we, as the ones who understand more about the instructions, usually explain to our friends (other students) who hardly comprehend the instructions. In the same way, when we are not sure we ask them. Moreover, when they have difficulties, we will help them to ease as long as we are able to do that. However, we will ask for help to the teacher when we do not find the way."

The group work and cooperative learning with peers by students needed significant support from the teacher as the main subject that makes peers activities effectively conducted. This statement was based on what one of the teachers stated, "Students performed well in learning. Input of materials was first conducted in a short time, and then I asked them to do the individual activities and group or pair works in which they are able to conduct social and cooperative learning that they can learn and solve problems with their peers." It indicated that the cohesiveness perspectives from teachers and students were positive. Hence, the concept of belonging and united was formed in every single student. Thus, the influence of social habit or culture affected the cooperative learning among students.

In the curriculum, the focused elements essential in the learning process are a teacher, students, and assignment of learning. However, the main concern of learning on the constructivist concept was the students. The three elements were important to achieve the objective of the curriculum through the innovative practice in the learning process.

Based on the research, perspectives from teachers on the environment of learning presented the significance of theoretical and contextual aspects at a senior high school in East Java. The current study is expected to produce benefits for students those are building students' motivation toward the learning, strengthen students' and teachers' communication, innovating learning practice, and develop students' achievement. Moos (1974) asserted that the constructivist concept of learning, cohesiveness, and negotiation is able to construct a cooperative atmosphere of teacher and students. Thus, the teacher's and peers' role in supporting students will be able to succeed in their learning.

## **The Orientation of Students' Task**

Based on the interviews, most students are motivated and interested in accomplishing the task. Meanwhile, some of them did not feel the same as the majority of students. It might happen due to the approach of pedagogy applied by teachers in providing students with the task in term of the aims, nature, amount, and instruction of the task. The finding displayed that students had to be given chance on group work to do the task in order to build students' social awareness and learning achievement through interaction and solving problems with

peers. The data also showed that teachers concerned on students' awareness on taking apart and contribution to the group and on accomplishing the aims of the group task. Moreover, the finding revealed that satisfaction of teachers toward the students' achievement of the team works in the learning process of English subject is achieved significantly. It was proved by the statement uttered by one of the participants of the study, "Students' sense of belonging when they become a part of a team was arisen after they were given task on the group work." Thus, they gave their full effort to contribute well in the group as stated by one of the students: "I must take a part in a maximum endeavor in the group." In the narrowest sense, it is effective to implement activities of pair and teamwork in the learning process.

Similar to the previous explanation, the result of the interview showed that students were aware of doing the tasks related to the topic of the English subject along with understanding the goal and significance of the tasks. Thus, the understanding on the nature of tasks produced positive knowledge of the students toward the tasks. Hence, when teachers gave them other extra tasks, they were ready to accomplish them. It was proved by a statement of some students: "I do not hesitate to ask the teacher if I do not understand the instruction of the task, because it is important to comprehend the instruction and questions problems of the tasks in order to succeed the accomplishment of the task."

The tasks that were concerned by students were not only the given tasks in the classroom, but also the tasks in forms of homework related to the previous English instruction in terms of the amount, the way to finish it and the score of the homework. Based on the interview, most of them were aware of accomplishing the task in the due time although it was complicated. The statement was proved by a response from some participants of students: "I strive to finish my task in the due time although actually, it was hard to do."

Therefore, although the observation revealed that students took a big concern on the tasks as believed by both students and teachers, based on the interviews, some students were still lack of understanding on the instruction and motivation on doing the given tasks. Hence, it is teachers' responsibility to provide students with an effective task in terms of the number, the instruction and the focus of the task in order students are able to acquire the aims of it.

### **Orientation of the Group Work**

The finding of the study revealed that through the students' and teachers' interview results, they believed that students conducted cooperative learning with each other in doing the English tasks. The perspectives of students and teachers were similar and related to one another. The perspective displayed that students had implemented the learning environment of constructivism in the learning process of English subject.

It meant that students would be able to conduct constructivist learning as long as they were provided with learning activities in forms of peers or group works instead of with individual activities. Students had their own opportunity to have cooperation with others when they were demanded to conduct group work activities. It was believed by all teachers as participants of the study who one of them stated "I concern more to the students who need to be arisen due to their lack of academic achievement rather than the high-level ones. I also concern more on students to cooperate with each other in learning. I made fun in making the assessment by observing the students on how they try to collaborate with each other to solve the problems together and to finish the aim of the task. As a facilitator, I was also able to develop their attitude and potentials during through their actions in the group."

The participant of teacher added "students performed well in learning. The input of materials was first conducted in a short time, and then I asked them to do the individual activities and group or pair works in which they are able to conduct social and cooperative learning that they can learn and solve problems with their peers. Thus, the students conducted

a good performance in doing the group work activities from which they were also able to implement constructivist learning through the group work.”

The perspectives of students and teachers towards the environment of learning revealed that the latest curriculum has provided a positive influence on students' learning especially on the implementation of constructivist learning.

Furthermore, the teaching concept of teachers is displayed in this study in order to complete the weakness of the method and the importance of an effective environment in learning. Meanwhile, the suggestions and instructions on something that teachers have to conquer to develop better learning practice in term of its environment and activities are provided in the recommendation.

The positive classroom environment perception both teachers and students imply the joyful in learning especially in the classroom in which may establish the positive attitudes and interactions, values, and emotions (Gyabak & Godina, 2011). In contrast, Lyubomirsky & King (2005) claim that negative emotions and attitude can create bored and uninteresting in classroom learning.

## Discussion

The discussions of the research are divided into some sections. Those are explained below. First, the latest curriculum development has been a concern for several senior high schools in East Java, Indonesia. The implementation of the latest curriculum seems difficult to be practiced by teachers in the learning process. The different curriculum challenges teachers and provides high expectations for them. Learning performance and activities are conducted by teachers and their responsibilities. Teachers' and students' perceptions toward the learning influence significantly to the learning performance of students and teaching professionalism of teachers. The influence of classroom learning environment plays a significant role on the students' development. The successful learning affected by the atmosphere, environment, and conditions of the classroom has been a long-lasting discussion by experts and teachers through the centuries up to this time (Fraser, 1998). It deals with the facts that most teachers own weakness in the assessment and evaluation awareness toward both the learning atmosphere and achievement of students.

Most teachers take significant account of the environment of classroom learning due to its tremendous influence on the effective participation and performance of teachers and students. Hence, it becomes a concern in the application of the new English curriculum. However, Fraser (1998) doubted the influence of a new curriculum on the learning environment. He argued that the quality of learning is the primary concern in the learning process. In other words, he stated that effective learning is based on the way of teachers implementing the curriculum. Hence, the new curriculum is not working if teachers do not perform well in implementing the curriculum in term of interpreting it and practicing it in the learning process with exact and suitable methods.

Second, Senior high school of East Java tremendously concern on the implementation of 'support from peers' and 'cooperative learning'. The habit has become a culture in the school since the students like to support their peers in solving the problems of learning, including in being helpful for foreigners.

The habit of cooperative learning can be reflective acts of students from the behaviors of the family and the citizens. It can be stated that the latest curriculum of English subject allows students to implement and possess social values of being cooperative. It is proved by activity provided in every unit of the curriculum in which there must be group work activity that invites students to work in peers or groups in order to develop students' sense of social skill. Social constructivist focuses on students who are accepted full attention and opportunity

to actively participate in the learning process (T. Howard, Mazintas, & Kanai, 2009). The process of students' cognitive development is conducted internally in the minds of them. Hence, external supports from teachers and peers are essential to succeed in the cognitive process in building their attitude, motivation, mentality, and learning achievement. Thus, it is necessary for students and students or students and teachers to own positive interaction during the learning. Gray (2005) illustrates that method of teaching that provides this interaction and communication in the curriculum is task-based from which the interaction and relationship between one student and other students or teacher and students are built effectively.

Third, the orientation of the task concerns on how students accomplish the learning objective and activities. It is significant in order to make students own exact aims for their short and long benefits, as the power for them to actively involve in the learning process. Teachers' provision of learning tasks also influences students' learning indirectly. Moreover, teachers should lead the class and provide students with appropriate classroom environment with an effective instructional delivering performance in order to improve students' learning involvement and the result (Muhonen, Ruohoniemi, Katajavuori, & Ylanne, 2011).

Teacher's role is to make sure that students are able to achieve the goal of the task in the given duration through clear explanation on the task objective and related encouragement and feedback. However, if it is possible for students to be given longer time to accomplish the task, the teacher should explain it.

Thus, it is important to apply TO (Task Orientation) and PR (Personal Relevance) based on the curriculum for improving students' skills of pre-instruction (T. Howard, Mazintas, & Kanai, 2009). The provided tasks should be meaningful that is the topic and material of the task should relate to their experience or facts in the real life. Thus, it is the duty of teachers to provide a meaningful assignment to the students. The two approaches above are tools to examine the correlation between the tasks, experience, and learning. In the last stage on providing students with the relevant task, teachers must be able to create effective assessment and evaluation toward the tasks as the ways to achieve the learning and task goal successfully.

Forth, the learning atmosphere of constructivism concerns on students' cooperation with peers in the group work instead of the competition among them. This environment allows students to have collaborative learning by supporting and negotiating with peers and finding problem-solving of the tasks from which they are able to build the positive relationship in having mutual learning.

This group learning will not only be beneficial for the students' learning development but it will also make me easier to assess them individually through direct observation when they are discussing and doing the group work. Students are able to cooperate well with their teammates in their group in achieving the goals of the tasks through interaction and discussion. They are aware that group task is essential in allowing them to have mutual learning with other members of the group.

## **Conclusion**

The result on how teachers and students' recognition on the environment of their classroom learning has been contributed to the study of constructivist perspective. For the sake of students' learning quality in English, this study illustrates the new curriculum which has been implemented in the school to provide an extremely potential for motivation, engagement, and enhancement. Thus, it reveals the practical significance in learning improvement using the approach of social constructivist in teaching and learning process. In addition, the English education quality can be ensured as well. However, in this scope, it

becomes very crucial to refer the contextual matters to produce a better result in which those are rather difficult to solve.

The study puts a significant concern on the teachers as the main actor in teaching-learning activities in facilitating students with appropriate learning method, approach, and environment, especially in triggering students to be engaged in the learning process. Teachers should provide equality for all students to have the same rights in delivering ideas, opinions, and discussion related to the materials in order to build respect for students and teachers. Hence, it is important to measure teachers-students learning engagement by Critical Voice (CV), Equity (EQ) and Teacher Support (TS) which is implemented based on teachers' and students' perspective on them.

In the field of a constructivist learning research, this study has contributed significantly in offering in-depth comprehending of teachers' and students' perception about the constructivist learning environment and how their perception brings into line with teaching practices and also the circumstances proposed by the school's English curriculum. The finding might be beneficial for other English teachers at the senior high school in East Java and offer the support to build up positive language classroom climate. In order to carry on the contribution in education context towards the English education improvement in the school, hopefully, other researchers may pursue the result of this study as the reference support and attach the example which the researcher has been displayed in the holistic picture of the classroom learning environment.

The students of the senior high school in East Java are hoped to always engage and motivate to learn more about English in the classroom in which is task-oriented in learning, deliberating cooperative activity, unity, and closely related with their life using, relevant, negotiable learning, and critical. The study offers practically and theoretically significance in establishing an effective classroom learning by providing some ways to give positive effects at the senior high school in East Java, Indonesia.

In addition, the findings convey that there was a lack of direction in teaching and most English teachers toward professional training in order to be applied to the new paradigm of the classroom learning environment. However, the teachers aware that there is a need for the workshop or training related to the implementation of the new curriculum and the best way to implement it according to their own professional ability in teaching. Moreover, this foundation can enhance the teachers' classroom practice development and improve the better classroom learning understanding at the senior high school in East Java especially in English education context.

Since the school of the senior high school in East Java indicated as a national goal of philosophy, the whole finding of this study conveyed the positive perceptions both teachers and the students in the classroom learning environment. Moreover, it can be concluded that the research of the English classroom environments at a senior high school in East Java runs well while the improvement in some aspects such as classroom condition and facility in learning in which create joyful learning and a social learning growth will be deliberated as well.

## References

- Aziz, A. (2011). Curriculum development in Indonesian education. *Madrasah*, 3(2). <http://103.17.76.13/index.php/madrasah/article/view/1312>
- Boghossian, P. (2006). Behaviorism, constructivism and socratic pedagogy. *Educational Philosophy and Theory*, 38(6), 713-722.
- Cazden, C. (1988). *Classroom discourse*. London, UK: Heinemann.
- Collins, J. (1996). *The quiet child*. London, UK: Cassell.

- Creswell, J. W. (2007). *Qualitative inquiry & research Design: Choosing among five approaches*. Thousand Oaks, CA: Sage.
- Creswell, J. W. (2012). *Educational research: Planning, conducting and evaluating quantitative and qualitative research* (4th ed.). Boston, MA: Pearson Education.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative and mixed methods approaches* (4th ed.). Thousand Oaks, CA: Sage.
- Elliot, J. G., Stemler, S. E., Sternberg, R. J., Grigorenko, E. L., & Hoffman, N. (2011). The socially skilled teacher and the development of tacit knowledge. *British Educational Research Journal*, 37(1), 83-103.
- Lew, L. Y. (2010). The use of constructivist teaching practices by four new secondary school science teachers: A comparison of new teachers and experienced constructivist teachers. *Science Educator*, 19(2), 10-21.
- Fisher, W. P., & Stenner, A. J. (2011). Integrating qualitative and quantitative research approaches via the phenomenological method. *International Journal of Multiple Research Approaches*, 5, 89-103.
- Fraser, J. (1998). Classroom environment instruments: Development, validity, and applications. *Learning Environments Research*, 1(1), 7-34.
- Gijbels, D., & Loyens, S. (2009). Constructivist learning (environments) and how to avoid another tower of babel: Reply to Renkl. *Instructional Science*, 37, 499-502.
- Giorgi, A. (2009). *A descriptive phenomenological method in psychology: A modified Husserlian approach*. Pittsburgh, PA: Duquesne University Press.
- Gray, A. (2005). *Constructivist teaching and learning* (SSTA Research Centre Report No. 97-07). Regina, SK: Saskatchewan School Trustees Association.
- Graziano, A. M., & Raulin, M. L. (2007). *Research methods: A process of inquiry* (6th ed.). Boston, MA: Allyn & Bacon.
- Gunduz, N., & Hursen, C. (2015). Constructivism in teaching and learning: Content analysis evaluation. *Procedia - Social and Behavioral Sciences*, 191(392), 526-533. <https://doi.org/10.1016/j.sbspro.2015.04.640>
- Gyabak, K., & Godina, H. (2011). Digital storytelling in Bhutan: An qualitative examination of new media tools used to bridge the digital divide in a rural community school. *Computers & Education*, 57(4), 2236-2243. <https://doi.org/10.1016/j.comedu.2011.06.009>
- Honebein, P. C. (1996). Seven goals for the design of constructivist learning environment. In B. G. Wilson (Ed.), *Constructivist learning environment: Case studies in instructional design* (pp. 11-24). Englewood Cliffs, NJ: Educational Technology Publications.
- Howard, T., Mazintas, T., & Kanai, T. (2009). *The constructivist classroom: Venue for social change*. Chesapeake, VA: Corwin.
- Jenlick, P., & Kinnucan, W. K. (1999). Learning ways of caring, learning ways of knowing through communities of professional development. *Journal for a Just and Caring Education*, 5(4), 367-386.
- Jonassen, D. H. (1999). Designing constructivist learning environments. In C. M. Reigeluth (Ed.), *Instructional design theories and models: A new paradigm of instructional theory* (pp. 215-239). Mahwah, NJ: Lawrence Erlbaum Associates.
- Kelyy, M. A., Lyons, G., Butterfield, N., & Gordon. (2007). *Classroom management: Creating positive learning environments*. South Melbourne, Australia: VIC: Cengage Learning.
- Kim, J. S. (2005). Effects of constructivist teaching approach on student academic achievement, self-concept and learning strategies. *Asia Pacific Education Review*, 6(1), 7-19.
- Lyubomirsky, S., & King, L. (2005). The benefits of frequent positive affect: Does happiness

- lead to success? *Psychological Bulletin*, 131(6), 803-855.
- Marlowe, B. A., & Page, M. L. (2005). *Creating and sustaining the constructivist classroom*. Thousand Oaks, CA: Corwin Press.
- Muhonen, H., Ruohoniemi, M., Katajavuori, N., & Ylanne, L. (2011). Comparison of students' perceptions of their teaching-learning environments in three professional academic disciplines: A valuable tool for quality enhancement. *Learning Environment Research*, 14(2), 155-169. <https://doi.org/10.1007/s12009-0984-011-9087-x>
- Ni'am, M. J., Waluya, S. B., & Sugianto. (2016). Analysis of humanist and constructivist learning, character, and mathematics literacy ability (Case Studies on Grade X of High School 1 Mayong, Jepara, Indonesia). *International Journal of Contemporary Applied Sciences*, 3(3), 331-340.
- Ongowo, R. O., Indoshi, F. C., & Ayere, M. A. (2015). Perception of constructivist learning environment: Gender and school type differences in Siaya County, Kenya. *AIR*, 4(1), 15-26.
- Olsen, D. G. (2000). Constructivist principles of learning and teaching methods. *Education*, 120(2), 347-355.
- Patton, M. C. (2002). *Qualitative research & evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.
- Porter, L. (2007). *Behavior in school: Theory and practice for teachers*. Berkshire, UK: Open University Press.
- Powell, C. K., & Kalina, J. (2009). Cognitive and social constructivism: Developing tools for an effective classroom. *Education*, 130(2), 241-250.
- Puskurbuk. (2012). *Pergeseran paradigma Belajar Abad 21*. Retrieved from <https://www.scribd.com/doc/304783590/Pergeseran-Paradigma-Belajar-Abad-21>
- Richardson, V. (1999). Teacher education and the construction of meaning. In G. Griffen (Ed.), *The education of teachers* (pp. 145-166). Chicago, IL: The National Society for the Study of Education.
- RO. (2013). Secondary school teachers' perceptions of a constructivist learning environment in Gem district, Kenya. *International Journal of Educational Research and Technology*, 4(2), 1-6.
- Schunk, D. (2011). *Learning theories, An educational perspective*. Boston, MA: Pearson Education.
- Tuwoso. (2016, October). The implementation of constructivism approach for physics learning in vocational high school. *AIP Conference Proceedings*, 1778(1), 030057. <https://doi.org/10.1063/1.4965791>
- Udosen, A. E. (2014). Learner autonomy and curriculum delivery in higher education: The case of University of Uyo, Nigeria. *International Education Studies*, 7(3), 40-50.
- Vygotsky, L. S. (1986). *Thought and language*. Cambridge, MA: The Massachusetts Institute of Technology.
- Windschitl, M. (2002). Framing constructivism in practice as the negotiation of dilemmas: An analysis of the ConceptAziz. Curriculum development in Indonesian education. *Madrasah*, 3(2).
- Wood, D. (2004). *How children think and learn: The social context of cognitive development*. Oxford, UK: Blackwell Publishers.

### **Author Note**

Harjali is a Lecturer at State Institute of Islamic Studies (IAIN) Ponorogo, East Java, Indonesia. He holds a Ph.D. (Dr.) from The State University of Malang on Instructional Technology in 2015. He is the author of several papers published in the national journals in Indonesia. His primary research interests include theories of learning and instruction. Correspondence regarding this article can be addressed directly to: luc\_ky\_09@yahoo.co.id.

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

The author received no financial support for the research, authorship, and/or publication of this article.

Copyright 2019: Harjali Harjali and Nova Southeastern University.

### **Article Citation**

Harjali, H. (2019). Building constructivist learning environment at senior high school in Indonesia. *The Qualitative Report*, 24(9), 2197-2214. Retrieved from <https://nsuworks.nova.edu/tqr/vol24/iss9/7>

---