

Building an Experiential Teaching Model for Geography to Meet the Requirements of General Education Renovation

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ABSTRACT

Renovating the general education program in the direction of competency development is the philosophy of the General Education Program 2018 of Vietnam. In order to successfully carry out the renovation of the new curricula and textbooks, teacher is not only a provider, imparting knowledge to learners, but also has the duty in helping learners develop their qualities and competencies. In teaching, students can experience in practice, or simulate knowledge-building situations, contemplate and apply the knowledge into practice. Therefore, this is considered as one of the ways to effectively develop the qualities and competencies of learners, and becomes an educational trend of many advanced countries in the world and Vietnam. Geography is a subject associated with the reality of nature, economy - society, so it is favorable for organization of experiential activities. However, this activity in the practice of teaching Geography in high schools still has a lot of limitations due to many reasons. Among them, the main reason is that we do not have the theoretical model of experimental teaching to apply to Geography. In the scope of this research paper, the authors focus on clarifying the process, methods and results of building an experiential teaching model for Geography, as a basis for applying to teaching Geography in high schools in Vietnam, in order to meet the requirements of general education renovation.

KEYWORDS;-*Geography,clarifying the process, methods and results of building an experiential teaching model for Geography*

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I. INTRODUCTION

In 1971, the theory of “experiential learning” by D.Kolb was officially published for the first time as a relatively comprehensive theory of a method of cumulative learning and experience transformation, based on the inheritance and development of learning theories related to the experience of educators such as John Dewey (1859-1952), Mary Parker Follett (1868-1933), Kurt Lewin (1890-1947), Jean Piaget (1896-1980), Lev Vygotsky (1896-1934), Carl Jung (1875-1961), Carl Rogers (1902-1987), Paulo Freire (1921-1997), and other educators from all over the world. Up to now, “experiential learning” has been not only applied widely in many fields in numerous countries with advanced education in the world but also considered as the educational philosophy of many countries, and is being continued to develop in the current period [6]. The studies by Colin M. Beard, John Peter Wilson, 2006; Melvin L. Silberman, 2007; Scott D. Wurdinger, 2005; Scott D. Wurdinger and Julie A. Carlson, 2009, etc. have been carried out in the direction of applying experiential learning theory to learning and teaching at various levels. The application of the experiential learning cycle model of the previous classic studies has become more flexible, not completely stereotyped under D.Kolb’s experiential learning cycle, but still ensured the basic elements of experiential learning.

In Vietnam, research on experiential teaching has been paid attention to in the current educational innovation process. Recently, experiential activities in teaching Geography have been chosen by many students as their graduation thesis, such as Master’s thesis in education by Cao Thi Hoa (Hue University of Education) in 2016, on organizing creative experience activities in teaching 10th grade Geography in high schools, mentioned the research on the theoretical basis of organization of creative experience activities in teaching 10th grade Geography, thereby finding out the actual situation of organization of creative experience activities, and studying the contents and methods of organizing creative experience activities in teaching 10th grade Geography in high

schools. Master's thesis by Nguyen Thi Thu Trang (Thai Nguyen University of Education, Thai Nguyen University) with the topic: Organizing creative experience activities in teaching 12th grade Local Geography at high schools in Vinh Phuc, specifically studied the theoretical and practical basis of organizing creative experience activities in teaching Geography, the current situation and some measures in organizing creative experience activities for students. Nguyen Thi Phuong Linh (Hue University of Education), in 2016, with the topic of *organizing creative experience activities in after-school teaching for 11th grade Geography at high schools*, systematized the theoretical and practical basis of organizing creative experience activities, proposed and tested some ways to effectively organize creative experience activities in after-school teaching for 11th grade Geography at high schools. Luc Trieu Dieu Huong (Quy Nhon University) in 2018, *studying the natural features of the coastal strip of Binh Dinh to serve organization of educational activities, extracurricular activities of Geography for high school students*, supplemented the practical basis for research on creative experience activities outside the classroom. Ho Nhu Tram (2018), with the *research on contributions of the natural features of Tuy An district, Phu Yen province, to organization of creative experience activities for high school students*, also contributed to enriching the aforementioned research approaches.

However, in the practice of teaching Geography in high schools, experiential activities are still limited because of many reasons, of which the main reason is that we do not have a theoretical model of experiential teaching in order to apply to Geography. Within the scope of this research paper, the authors focus on clarifying the process, methods and results of building an experiential teaching model for Geography, as a basis for applying to teaching Geography in high schools in Vietnam, in order to meet the requirements of general education renovation.

II. Research Content And Results

2.1. Experiential teaching with development of students' competencies

2.1.1. Experiential teaching

Vietnamese dictionary defines "*Experience/ Trải nghiệm*" as follows: "*Trải*" means "*having ever done or known*" [p.1309], and "*nhệm*" means "*contemplating, deducing that something is true through practical experience*" [p.874]. Thus, experience means the process by which the subject is directly involved in activities and gains experiences for themselves. In the Cambridge Dictionary, experience is "*the process of getting knowledge or skill from doing, seeing, or feeling things*".

Experiential teaching: According to the Association for Experiential Education (AEE) (1977): "*Experiential teaching is a category that covers many methods in which teachers encourage learners to participate in practical experience, then reflect, summarize to enhance understanding, develop skills, shape living values, and develop personal potentials, then make positive contributions to the community and society*". *Experiential teaching can take place inside and outside the classroom: In the classroom*, it is the process in which students experience through *communication and cooperation activities, visual aids (videos, photos, models, etc.), teaching situations, practical activities, experiments; outside the classroom, the experience space is extremely rich and diverse (sightseeing, outdoor games, exchanges, arts, community activities, etc.)*. In each space, there are certain differences in activity, method of organization, and educational purpose; however, it is not outside of the general goal of development of learners' competencies and qualities.

2.1.2. Characteristics of experiential teaching

Experiential teaching encourages students to work actively and proactively. Experiential teaching mainly creates experiences for students to discover their own creativity step by step. Experiential teaching has the following characteristics: Experiential teaching is social, local, and flexible in content and form, towards human values. It teaches students how to learn and think. Experiential teaching helps students develop the ability to detect and solve problems, have a positive attitude to access and process information that has been learned, experienced or is being directly experienced.

Experiential teaching is held during and outside class time with active teaching methods: discussion, debate, games, sightseeing, field trip, contests, competitions, and clubs. Each form has its own advantages and disadvantages. Depending on the educational content, students, school's conditions, teachers will choose the appropriate methods and forms.

2.1.3. Advantages of experiential teaching of Geography for development of students' qualities and competencies

Experiential teaching facilitates the development of students' qualities and competencies in the new general education program:

a) In terms of qualities:

Experiential teaching contributes to the development of students' qualities: *patriotism* is shown through actively and proactively mobilizing others to participate in activities to protect nature, and promote

cultural heritage values; *kindness* (solidarity, love, sympathy, sharing with other people when facing natural disasters or epidemics); *hard-studying* (actively explore and create in learning); *responsibility for the living environment* (understand the meaning of saving for sustainable development; have the awareness of fighting and preventing acts of indiscriminate and wasteful use of materials and resources; proactively and actively mobilize others to participate in propaganda activities for nature protection, natural disaster prevention, response to climate change, sustainable development).

b) In terms of competencies:

- *General competencies:*

Self-control and self-study: Always proactively and actively perform learning tasks in a voluntary manner; set learning goals to require efforts to achieve them; make and implement the study plan in a serious and orderly manner; implement effective learning methods; correct mistakes and limitations when performing learning tasks through self-assessment or suggestions from teachers and friends; actively seek support when having learning difficulties.

Problem-solving competency and creativity: is the ability to identify problems, establish problem spaces, determine different methods, and then select and evaluate how to solve problems as a basis for necessary correction.

Communication and cooperation competency: Know how to choose the content, methods and attitudes of communication to achieve the purpose of communication, and bring satisfaction to the persons involved in communication.

Cooperation competency: Know how to proactively propose the purpose of cooperation to solve a problem suggested by yourself or others, etc.

- *Professional competencies:*

+ *Geo-science cognitive competency:* perceive the world from a spatial perspective, explain geographic phenomena and processes.

+ *Geographic research competency:* use tools of Geography, organize learning in the field trip, and exploit the Internet for subject.

+ *Competency to apply the learned knowledge and skills:* update information and relate them to reality, conduct learning topics discovered from practice, apply geographical knowledge to solve practical problems.

- *Experiential activities also contribute to developing the competency to organize and participate in activities, the career-oriented competency for students.*

2.2. Building an experiential teaching model for Geography

2.2.1. Experiential teaching model

According to Vietnamese Dictionary, the model is defined as “*An object with the same shape but much smaller, simulating the structure and operation of another object for presentation and research*”. This definition means physical model. It is used to simulate the structure and operation of the object being studied. The purpose of modeling is to study the object. The model is also defined as “*the form of expressing very concisely the main characteristics of an object in a certain way to study that object*” [6, p.819]. The model herein is also described in language (writing, diagrams, pictures, etc.), used to describe the main characteristics of the object studied.

Thus, the term of “*model*” is defined in two forms: *the model simulated by material* (referred to as *the material model*), and the model described in language, generalization, abstraction, theory (referred to as *the theoretical model*). Whether described in material or in language (writing, diagrams, pictures, etc.), the “*modeling*” is also to clarify and easily visualize the object to be studied. The above definition also shows that both simulating “*structure*”, “*operation*” of the object (in the material model) and describing “*the main characteristics of the object*” are the basic requirements when considering a certain model [5].

From the aforementioned analysis, the term of “*experiential teaching model*” used in this topic does not mean a material model, but it is *a theoretical model which uses language to describe the characteristics of “experiential teaching” in order to promote students’ competencies*, which is to form and develop the qualities, general competencies, and professional competencies for learners. It is used for the purpose of clarifying the experiential teaching in Geography. The term of “*experiential teaching model*” herein will be used to describe in language how to organize and operate the interactive relationship between the basic elements of the experiential teaching process, making this process work and develop to achieve the teaching purpose which is to promote students’ competencies and qualities. Therefore, there are some factors that need to be limited when referring to “*experiential teaching model*” as follows:

- 1) Output products with different competencies and qualities are formed and developed through experiential teaching;
- 2) Standardized input “materials” are the necessary and sufficient conditions for organizing experiential teaching, including legal basis, duration; requirements of teachers’ competencies; abilities of students; materials, and material conditions for organizing experiential teaching.
- 3) An organization and operation mechanism between the basic elements of the experiential teaching process in the direction of competency development.

Thus, *the experiential teaching model is understood as a simulated image generally and visually showing the characteristics, structure, way of organization of elements in the experiential teaching system, and how to operate the relationships between them in order to develop competencies and qualities of learners to meet the requirements of general education renovation.*

2.2.2. Model characteristics

The theoretical models are created to satisfy the needs of practical renovation and transformation. The most important property of the model is to generally show the elements, functions and relationship between them in order to introduce an overall picture of the studied object. At the same time, the theoretical models need to ensure the visual property to easily recognize the structure of the object [5]. To build an experiential teaching model which meets the above properties of theoretical models, the system-structure approach is chosen for this research. This is the approach to the research object by analyzing and finding the structure, discovering the dialectical relationship of the objects and components in the system [5]. The system is a set of certain factors which have dialectical relationship to form a complete and stable whole with laws of movement and synthesis. The structure of a system consists of the components and the relationships between them in terms of the content and process of the studied object.

2.2.3. Model building process

The system-structure approach in building experiential teaching model is applied under the following process:

2.2.3.1. Determination of the overall structure of the model:

The experiential teaching model is a structural system consisting of many components with close relationship and connection to form a unified whole. Therefore, in order to build an experiential teaching model for Geography in our country, the first thing is to determine the overall structure of the model. The overall structure of the model is the major components, acting as sub-systems of the model, which exist relatively independently of each other. To identify the subsystems of the model, first of all, it must be based on the research viewpoints of the topic, in which the system viewpoint is emphasized; based on the concept and characteristics of experiential teaching, and the concept of experiential teaching model to determine the overall structure of the model. On that basis, the topic identifies 3 important components of the model from the perspective of teaching technology: 1) Input factor is the *basis and conditions of experiential teaching*; 2) The process is the *organizational form and cycle of experiential teaching*, and 3) Output products are the *oriented competencies formed in the experiential teaching process*. These are the three major components, also known as 3 sub-systems of the model.

2.2.3.2. Determination of characteristics and parameters of components in sub-systems:

Experiential teaching model is a system including the sub-systems as defined above. Each sub-system is considered as a subsystem which consists of components with different specific functions and activities. Therefore, it is necessary to study to establish the characteristics and parameters of each component of sub-system.

+*The first sub-system: Basis and conditions of experiential teaching*: The goal set out in this step is to identify, select the components, and establish the characteristics and parameters of each component. To achieve the goal set out, the topic has identified the factors that affect experiential teaching, conducted a survey of stakeholders’ opinions, and organized research group seminars to identify the components and characteristics of the conditions of experiential teaching.

Thus, in terms of the content structure of the sub-system of *Basis and conditions of experiential teaching*, through analysis, evaluation and synthesis, the topic has identified four important components, including *Legal Basis, Teachers, Students, Managers and Facilities*.

Table 1. Characteristics of the components in the sub-system of Basis and conditions of experiential teaching

| No. | Components | Characteristics |
|-----|------------------|---|
| 1. | Legal basis (LB) | The experiential teaching plans are approved by the Department, the School for implementation. |
| 2. | Teachers (T) | Have good qualifications, organizational skills, enthusiasm and creativity; have ability to motivate students in experiential teaching. |
| 3. | Students (S) | Have ability to use ICT; be positive, proactive, and self-conscious; have ability to work independently and cooperatively; have ability to present, persuade, and debate. |
| 4. | Managers (M) | Care and create favorable conditions for experiential teaching. |
| 5. | Facilities (F) | Have enough minimum facilities for ICT to serve experiential teaching; Funding is mobilized from Schools, Classes, and Parents Association. |

+ *The second sub-system:* The forms of experiential teaching in Geography and the experiential teaching cycle in Geography:

The forms of experiential teaching in Geography are diverse, including the forms during and after class time. Under the impact of the Fourth Industrial Revolution, there will be new forms of experience such as experience through virtual models.

Table 2. Characteristics of the components in the form of experiential teaching in Geography

| No. | Components | Characteristics |
|-----|----------------------------------|--|
| 1. | Clubs | It is the form of extracurricular activities for groups of students based on their interests, needs, talents, etc. under the direction of teachers. |
| 2. | Games | It is an experiential form of learning through play. Games can be held during and after class time, integrated into other forms of experience. |
| 3. | Sightseeing, field trips | It is a typical form of experience in teaching Geography with different levels: sightseeing and field survey. |
| 4. | Projects | It is the experiential form in which students work in groups to solve practical problems with specific products. This form is a combination of teaching during and after class time with active teaching methods and techniques. |
| 5. | Discussion, debate, role-playing | It is the simplest form of experience in teaching Geography. Students work in groups to learn and research learning problems. |
| 6. | Case studies | It is a form of experience by role-playing to handle situations. Through it, students can develop their perception, practice skills in handling practical situations. |
| 7. | Experience with a virtual model | It is a form of experience through virtual models, thereby helping students to approach the reality that they have not experienced in current conditions. |
| 8. | Contests | It is a form of experience with competition among individuals, groups or collectives. The form of contests is very diverse, such as The Road to Olympia, Ring the Golden Bell, etc. |
| | ... | |

The experiential teaching cycle in Geography

The characteristics of the components in the experiential teaching cycle in Geography are identified on the basis of the experiential learning cycle of David Kolb [4] and the characteristics of experiential teaching in Geography.

Table 3. The characteristics of the components in the experiential teaching cycle in Geography

| No. | Components | Characteristics |
|-----|---------------|--|
| 1. | Experience | Experience the specific things, phenomena, or geographical processes through direct or indirect observation. |
| 2. | Contemplation | Comment, analyze, compare, and contemplate the things, phenomena, geographical processes experienced. |
| 3. | Abstraction | Systematize, generalize into concepts, relationships, and geographical laws. |
| 4. | Application | Apply/ test the learned knowledge into real life and learning. |

+ *The third sub-system:* Qualities and competencies formed in the process of experiential teaching

Based on the qualities and competencies identified in the new general education program of Geography, combined with the analysis of students' ability to develop qualities and competencies through experiential teaching.

Table 4. The characteristics of the components in Qualities and Competencies formed in experiential teaching in Geography

| No. | Components | Characteristics |
|------|-----------------------------|---|
| 1. | Qualities | Patriotism (protect nature, preserve and promote heritage values, protect sovereignty, etc.); Kindness (love people, respect differences, etc.); Hard-studying (actively explore and create in learning; etc.); Honesty (in learning, assessing learning outcomes, etc.); Responsibility (for themselves, family, society, etc.). |
| 2. | Competencies | |
| 2.1 | General competencies | Self-control and self-study; Communication and cooperation; Problem solving and creativity. |
| 2.2. | Professional competencies | Realizing the worldview from the spatial perspective; Explaining geographic phenomena and processes; Using geography tools, and organizing learning in the field trip; Ability to collect, process and transmit geographic information; Applying geography knowledge and skills into practice. |
| 2.3 | Experience-based competency | Designing and organizing activities; Career orientation; Adapting to life. |

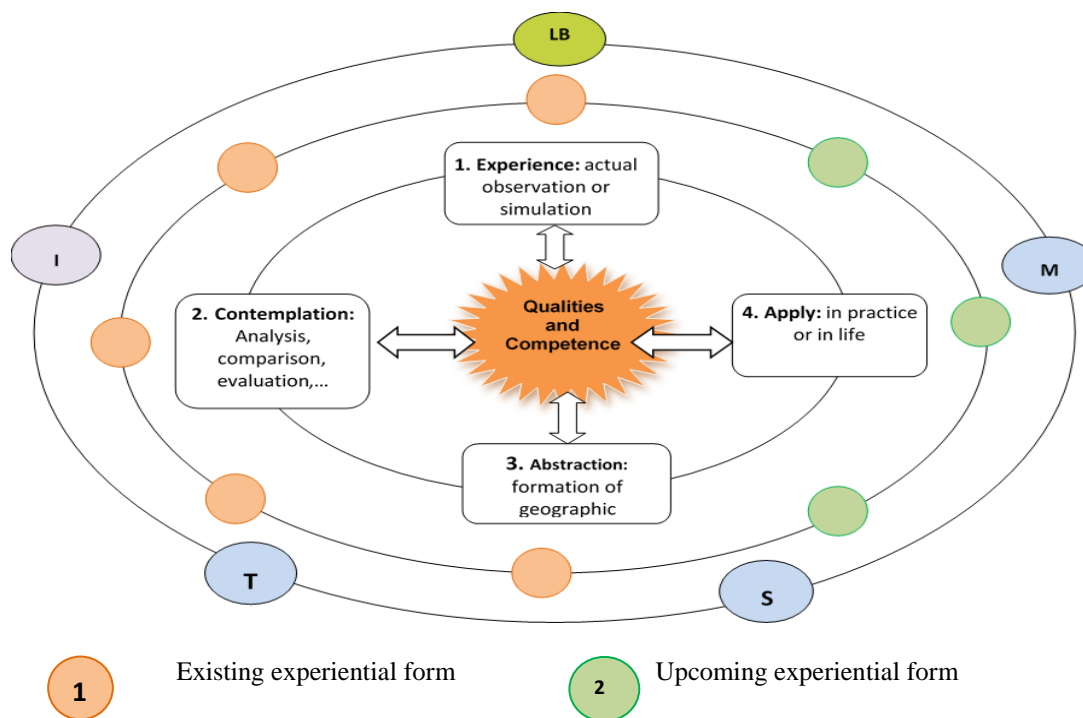
2.2.3.3. *Determination of the relationship between the components in the model:*

The competency development-oriented model of experiential teaching is a structural system which includes a lot of components as defined above. Among those components, there is also a close relationship and connection with each other to form a unified whole. Therefore, to build a model, it is not only necessary to identify the components of the model, but also to determine the relationships between them.

In general, the three subsystems of the model are related to each other according to the perspective of teaching technology, in which the subsystem (1) is the Basis and Conditions of Experiential Teaching which plays the role of “input materials”(Input); the subsystem (2) is the Form and Process of Experiential Teaching(Process); and the subsystem (3) is the Oriented Competencies and Qualities formed in the Experiential Teaching process, which is the “Output Products” (Output); therefore, they have a linear relationship: (1) → (2) → (3).

2.2.3.4. *Expression of the model by a generalized and visual diagram:*

Because the experiential teaching model is a system including many components that have close relationship with each other, the most suitable form of model expression is a diagram. Moreover, this is an experiential teaching model for Geography, so the model will be simulated under the solar system diagram. The sun is the center and the planets move in elliptical orbits from west to east.



The experiential teaching model for Geography

- The central part of the model is the oriented qualities and competencies formed in the experiential teaching process. The expressed form is the image of the Sun which is the orientation for geographic experience activities.

- The experiential teaching cycle consists of 4 components, which are developed under a spiral. This is the most important feature of experiential teaching.
- The experiential teaching forms include both teaching forms during and after class time. These forms are very diverse and can change from time to time; therefore, the model shows both existing forms and upcoming forms.
- The outermost orbit is the conditions for organizing experiential teaching, including legal basis, human resources and facilities, and funding for experiential teaching.

III. Conclusion

Building an experiential teaching model for geography plays a fundamental role in applying in teaching practice in high schools. By using the methods such as systematic and structural analysis, observation, survey, and research group seminar, an experiential teaching model for geography has been established. The model is simulated in the form of the Solar System, in which the Sun is the center, the other planets revolve around the Sun from west to east, generally and visually showing the components and structure of the experiential teaching: Qualities and competencies are considered as the goals - the output products of experiential teaching; a working cycle of components, stages in experiential teaching; the experiential teaching forms, as well as the necessary and sufficient conditions to organize experiential activities.

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