

Design and Organization of History Teaching and Learning in High School in Vietnam aiming at Developing Competence with the Supports of Information Technology

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Abstract This article reflects the authors' research findings on the design and organization of history teaching and learning activities in high schools (Viet Nam) with the support of information technology (IT). On the basis of research, accessing new reference sources, the author proposes criteria for assessing history teaching and learning when applying IT through the Learning Activity Rubrics (LAR) toolkit. At the same time, the author also clarified the design process and organization of history teaching activities in high school in the direction indicated.

Keywords: activity design, teaching-learning activities, activity organization, history teaching, information technology application

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1. Introduction

Since the 1990s, education-oriented capacity development has become an international general trend. In Vietnam, on July 28, 2017, the Ministry of Education and Training adopted a new general education curriculum focusing on the formation, development of five qualities and three pairs of general competencies for learners [1]; 6-7]. The new school curriculum targets 5 qualities (patriotism, kindness, hard work, honesty, responsibility) and 3 pairs of competencies (autonomy and self-study, communication and cooperation, problem solving and creative). In the 2019-2020 school year, the new general education curriculum began to apply in practice, which means that teachers must actively pioneer access to resources on innovative teaching methods for capacity development to meet the requirements. In order to realize the transformation of teaching method from what students know what they can do to their students, what they can do in practice, teachers need to actively use the means, contemporary engineering equipment into teaching, including IT. History of the high school in the field of social science has many advantages for teachers to apply this tool into the design and organization of classroom activities to bring high efficiency. However, the practice shows that many teachers have misconceptions about the application of IT in history, especially in design and organization historical teaching and learning activities

aiming at developing competence with the support of IT [2-8]... Therefore, on the basis of approaching relevant sources, author specified steps in the process to and develop of student capacity, proposes criteria for assessing teaching and learning activities aiming at developing competence in high school with the support of IT and clarify the design process, teaching and learning activities organization the direction indicated (through a specific example in class 11, high school).

2. Content

2.1. The Steps of the Process of Forming and Developing Students' Competency in Teaching History in High School

2.1.1. The Concept of Competence and the Relationship between Components of Competence

Vietnamese Dictionary defines: "competency is the ability, the subjective or natural condition available to perform an activity" [9]; 1125]. According to the Wiki Dictionary: "competency is the ability to work well, due to ethical qualities and expertise". Recently, many experts in the fields of Sociology, Education, Philosophy, Economics ... also discussed and tried to come up with a unified definition. Many local researchers view competence as a profound integration of knowledge, skills, and attitudes

that make it possible to perform a specialized job, demonstrated and verified in a particular environment. [2,3,4,11]... At the Symposium on Fundamental Capabilities of the Council of Europe, after analyzing many definitions, F.E. Weinert concludes: *Throughout the subjects, competence is expressed as a system of ability, proficiency or essential skills that can help people qualify for a specific purpose.* "At this forum, J. Coolahan argues that competence is *"fundamental capacities based on the knowledge, experience, values and propensities of a human being developed through the practice of education"* [12]. The World Bank (WB) considers the XXI century to be the era of Skill Based Economy and emphasizes that each person's competences are expressed in three aspects *"knowledge, skills and attitudes"* [11]...

By approaching these perceptions, we assume that: Competency is the ability to master the knowledge, skills, techniques, attitudes, and operations (connect) them appropriately to successful implementation task or effectively solve the problem of life [[13]; 25]. Formation and development of a capacity always takes place in a spiral pattern, in which pre-existing competences are used to create new knowledge; In turn, new knowledge lay the foundation for the formation of new competences.

Between the components of competence (knowledge, skills - skills and attitudes) are closely related, interacting with each other. In particular, knowledge, skills - techniques are the basis (conditions) necessary to form the capacity in a certain field of activity, but not identical with competency. For example, students can not have mathematical competence without mathematical knowledge and practiced in various forms of math. Competent students will contribute to the process of acquiring knowledge, skills and skills when participating in activities is quick, convenient and easier. Competent students (in that field) have knowledge, skills - skills, but have knowledge, skills - skills do not necessarily have the capacity. Teaching practices show that learners must effectively use knowledge, skills and skills combined with their attitudes, values and responsibilities to successfully perform tasks and solve problems. Addressing problems arising in changing contexts. We can summarize the relationship between the components of capacity as shown in the diagram below [[13]; 26]:

$$\frac{\text{Knowledge + skills - skills + attitudes}}{\text{Proven (through practical context)}} = \text{Competency (about a certain filed)}$$

Obviously, no competency is universal, only one substitutes for all other competency, and the competency to perform only one task of the practice. In the process of teaching history in high school, teachers should consider creating creative competency for students to innovate their self-learning, but first we need to understand the steps in the process of forming and developing learner capacity.

2.1.2. Steps of Formation and Development of Student Competencies

In the process of teaching in general and teaching history in high school in particular, in order to recognize and appreciate students' competences, teachers must rely on the simultaneous convergence of three basic elements: knowledge, skills - skills and attitudes. Knowledge is the knowledge that students acquire through books, from learning and from experiences of life. Skill is the student's initial use of the knowledge gained in the practice to carry out an activity. Skillful skills are repeated many times to the point of maturity, allowing people not to focus more on the work they are doing [[14]; 121 - 122].

In historical study, it refers to the competency of a student to speak about the ability to perform, which means that learners not only know - remember, or know- what but also know -how and apply knowledge in life. Of course, the action (do, execute) of the student must be associated with consciousness and attitude, must have knowledge, skills - specific techniques, not a "dogmatic", "arbitrary" [[14]; 122]. As such, the competency of the student to be formed and developed must go through a rigorous process of learning tasks assigned by the teacher. For a specific time, they have to participate in learning activities and practice, to get skills - techniques. This means that when teachers design a teaching and learning activity, they must focus on the steps (from low to high) in the process of developing and developing students.

Dirk Schneckenberg, Johannes Wildt and his research collaborators modeled the formation process, developing student competence and career competence through seven steps from low to high [15].

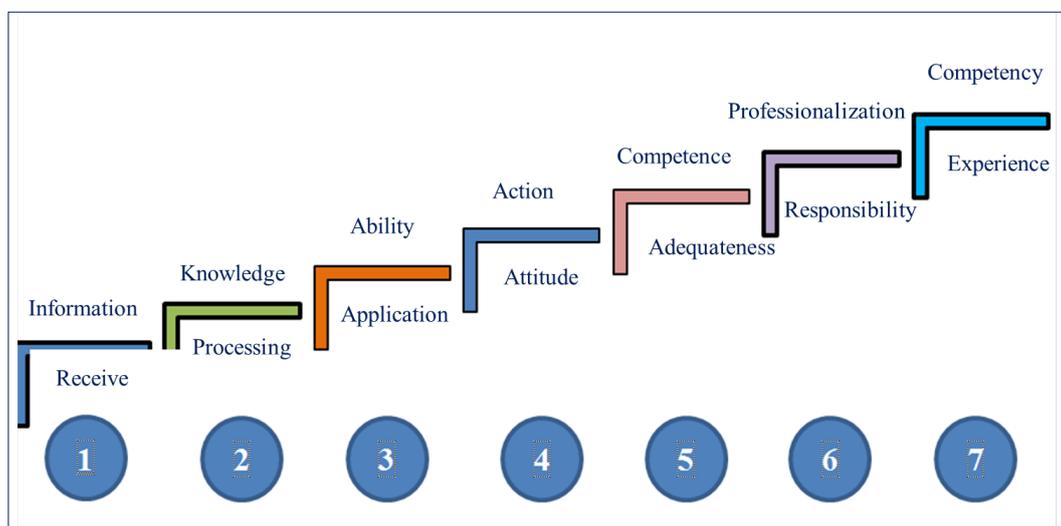


Figure 1. Diagram of the steps in the process of formation, capacity development (According to Dirk Schneckenberg and Johannes Wildt, 2006)

1- Receive knowledge / information (the beginning of teaching and learning activities);

2 - Knowledge / information processing (demonstrates the understanding of each student participating in the activity);

3 - Applying / applying knowledge (demonstrating each student's ability to participate in the activity);

4 - Attitude awareness (manifested through action, specific behavior of students when participating in activities);

5 - When students combine / achieve all 4 steps on the formation of competency;

In order to gain professionalism in a certain field, the learner needs to add a lot of skills to combine and learn more new experiences that will gradually form the professional competency.

6 - Demonstrate responsibility to create professionalism, proficiency;

7 - Combined with experience / experience to form professional competency.

The above diagram is a guideline and orientation for pedagogical methods for teachers when designing and organizing learning activities of students. It must be associated with the steps in the process of formation and capacity development.

2.2. Design and Organization of Teaching and Learning Activities in History at the High School of Vietnam with the Support of IT

2.2.1. The Conception of Teaching and Learning Activities

Many educators have come up with the definition of activity and activities of teaching and learning in high schools [2,3,4,16] but we can basically understand: teaching and learning activities are the ways and tasks of the teacher assigned to the student must perform in the course of learning a specific content, in order to achieve the goal of teaching [[14]; pp.119]. In general teaching, history in high school in particular, teaching and learning activities are usually taught by teachers and may be self-organized by students, conducted in class, or in the form of homework assignments (part of a learning project). For the teachers, the design and evaluation of teaching and learning activities is very important: It not only provides feedback to the teacher to be able to adjust their teaching accordingly and it is a good way to learn about the student, but also to guide the teacher how to design and organize the activity better later, helping the student actively participate in the learning process.

2.2.2. Criteria for Evaluating Teaching and Learning Activities in the Direction of Competency Development with the Support of IT

At present, there is no document that tells us exactly what the specific criteria for assessing a teaching and learning activity in the direction of competency development are with the support of IT. However, the results of the Innovative Teaching and Learning (ITL) research are funded by the Microsoft Partner in Learning program, The Teacher Assignment / Student work (Bill & Melinda Gates Foundation) will be a channel information for the educational researchers and history teachers when building criteria for assessing history teaching and

learning. Accordingly, teaching-learning activities with the support of IT that is effective (oriented towards the development of student capacity) must be evaluated based on five criteria, through the LAR toolkit (Learning Activity Rubrics) [17,18]:

The LAR Toolkit examines five different aspects of a teaching and learning activity, including: (1) Knowledge building, (2) Cooperation, (3) IT application, (4) Self-regulation, (5) Solving practical problems. In every aspect of the LAR toolkit there is a rating scale with low to high score codes, 1 through 4 respectively.

(1) Criterion 1 "Knowledge building" will answer the question: What is the level of learning activity that stimulates students to build knowledge? Is that the interdisciplinary knowledge not? The process of knowledge building takes place when students mount new information with existing knowledge of them to generate ideas and insights are new to them using at least one of the manipulation such as thinking as explaining, analyzing, synthesizing, or evaluating / evaluating... If student is merely required to reproduce the information they have read or heard from lectures, textbooks, or through contact with the internet, the media is not considered knowledge.

(2) The "Cooperation" criterion will answer the question: How does the teaching and learning activity require the student to cooperate with others? This aspect considers whether the student works with others in the teaching and learning activity and the quality of the collaboration (to either help each other or share responsibilities with each other when doing the work, or make important decisions about the overall product of the group...).

(3) The criterion "Use of IT " will answer the question: Does the teacher use IT to design and organize teaching - learning activities that support students to build knowledge? Can students achieve the same knowledge without using the IT in activity? This aspect focuses on the student's use of IT to support his new knowledge activity, not on how the teacher uses IT in the lecture. The level of use of IT in teaching and learning activities can be arranged from low to high, including:

- Students do not have the opportunity to use IT (1.0 point);
- Students use IT to reproduce knowledge (2.0 points);
- Students use IT to support knowledge (3.0 points);
- Students use IT as a tool to build knowledge (4.0 points).

(4) The "self-regulation" criterion will answer the question: How long does teaching and learning activities? Can the student plan and evaluate his or her own work? This aspect considers whether activity gives learners the opportunity to practice self-regulation skills, such as planning, control and self-assessment skills, as well as progress of yourself or not. The teaching and learning activities that meet that are usually long-term activities, lasting about a week or more (in the form of project-based learning). Teachers can enhance the practise of these skills by assigning tasks and allowing the student to determine the role of the team members, planning their own actions. In addition, the teacher should provide advance assessment criteria to help students better orientation and self-assessment of their work.

(5) The "Problem Solving Criteria" will answer the question: Does the teaching and learning activity require solving practical problems? Are the student's solutions implemented in practice, connected and applied in practice? Previously, the knowledge that students learned

from teaching and learning activities is often separated from reality. Therefore, this aspect considers teaching and learning activities requiring students to solve problems, using data or contexts from the real world. The teacher assigns tasks to the student to solve a variety of problems, such as: providing a solution to a new problem related to reality, carrying out a task that the student has not been taught how to do, or designing a complex product requires collaboration from multiple resources and goes through stages ranging from a few days to several weeks.

2.2.3. Criteria for Assessing Historical Teaching and Learning Activities in the Direction of Capacity Development with the Support of IT

From the analyzes of the results of the study the criteria for evaluating a teaching and learning activity above and the practice of history teaching at Nguyen Tat Thanh High School (Hanoi Capital) for many years, we believe that to evaluate a teaching and learning activity in the direction of developing students' capabilities with the help of IT, the teachers should rely on the following key features:

- The purpose of teaching and learning activities should be to describe the expected learning outcomes (the ability and ability of the student to achieve after the completion of that activity), not the content of the project, to be made by the teacher, transmitting after the end of activity;

- Desirable abilities and competences to form and develop in the student are clearly defined in terms of measurement verbs (both qualitative and quantitative), requirements for possible products observation, evaluation. They are considered as criteria for evaluating results (output for each learning activity);

- IT assisted to design and organize teaching and learning to improve the interaction of teachers and students and students and students to encourage the students to exchange price, sharing of views / experiences, promoting / promoting spirit of cooperation, teamwork skills;

- The application of IT in the design and organization of teaching and learning activities need to create a friendly learning environment, the students feel comfortable (without being imposed, encouraged to express / freely present Personal opinion, students feel their opinions are recognized, respected ...), excitement, confidence;

- Activities emphasize on understanding, exploring, and experiencing, especially the application of knowledge to situations in real life contexts, in different contexts; Focus on developing higher-order thinking skills such as problem solving and creativity, critical thinking...;

- Activities of teaching and learning-technology-informed learning activities must be improved in student learning guidelines for studying, learning and learning (practice, experience, problem solving, seeking / information, self-study);

- When teaching and learning activities with the support of IT, the main role of the teacher is not only to provide and update new knowledge... But also to change learners in The degree of readiness to acquire new concepts, positive interaction, experience, think about how to think... Enhance the excitement, confidence, stimulate creative thinking of learners.

- At the end of activity, students feel themselves changed and know how to change, re-create themselves... (output of teaching and learning activities to meet goals about knowledge, skills and attitudes, thereby contributing to the formation and development of learner competency).

2.3. Design and Organization of Historical Teaching and Learning Activities at the High School (Vietnam) in the Direction of Competency Development with the Support of IT

2.3.1. Design of Historical Teaching and Learning Activities in the Direction of Competency Development with the Support of IT

A general teaching and learning activity must be structured in a way that reflects the function and task of the participant, the interactions between the teacher and the student and between the student and the student... With teaching and learning activities with the support of IT, teachers also have to use the technology in the process of designing, giving pedagogical ideas to enhance visual acuity when teaching. It includes:

- Calling the Activity and the Form of the Activity: The activity of teaching and learning must begin with a "verb" towards the goal, set by the gospel to assign the task to the student. The verb of activity must measure the level of awareness of the student based on a 4-level scale from low to high (recognize → understand → low-level application → high-level application). Thus, the teacher should properly call the verb names in the levels of assessment: awareness (enumerate, indicate, reproduce, learn...); understanding (analysis, interpretation, explanation, proof, summary...); application and high-level application (comment, compare, evaluate, express opinions, manipulate, design...).

- On the form of teaching and learning activities, the teacher must clearly define the lesson plan (group-individual, or class-individual, or couple...).

- Time and date of the teaching and learning activity (how long it is expected to be held).

- Determine the goal (output) and product type for each activity that the faculty assigned to the student must report: Any learning activity must have a goal – the ultimate aim. What does that activity look like? (What is the potential for the student to do in this teaching and learning activity, not on the supply or transfer of knowledge?) After the completion of this activity, students will be required to report on what type of product (answer by question, thinking diagram, or report on A4 paper, A0...).

- Design teaching and learning on computer by software utility (such as Powerpoint, Mindmap, Flash, Prezi...). When designing activities on computer software, teachers must have to understand the principles when applying IT to teaching, including font selection, image, color matching, transition effects ...

- Selecting methods and techniques to organize teaching and learning activities in accordance with activity (tentative): In historical teaching, what knowledge content will correspond to the selection of method and technique of teaching. At the same time, the teacher wants to determine which capabilities need to be formed and developed for the student will also choose the teaching methodology and the corresponding organizational technique. For example, teachers want to work towards cooperative capacity, they must choose methods and techniques to teach group teaching; Teachers who want to focus on language competence and problem solving ability will use the project teaching method in combination with other teaching techniques.

- Describe the specific work of the operator and take part in the teaching activities in order from the beginning until the end of the activity (Step 1..., Step 2... Step 3... student...). The "assignment" scenarios of the work of the participants will help teachers always take the initiative and handle the pedagogical situation when teaching.

2.3.2. The Process of Historical Teaching and Learning Activities in the Direction of Competency Development with the Support of IT

On the basis of differentiating the concept of teaching and learning activities, the evaluation criteria for historical teaching and learning activities in the direction of capacity development with the support of IT, we propose the process of organizing historical learning activities in the direction indicated, which goes through five steps, corresponding to specific pedagogical measures:

Step 1: The student will be screened on the screen asking for (the name activity) to orient the target students and output after the teaching and learning activities. At this stage, when the activity organization, the teacher should answer: What is the purpose of this activity, directed toward the capability for students (other than the purpose of equipping, providing knowledge what for student as before)? Here, the teacher needs to carefully study the knowledge (knowledge, skills required by the program) to determine what the goal is towards capability (student capacity form knowledge, skills – tricks and attitudes). This is the basis for the teachers to choose the methodology for the activity.

Step 2: Teacher assigns tasks and organizes, directs and directs the student how to access the resources. The student must be obtained by the teachers, tasking in the first learning activity of learning and learning, and accessing the resources to resolve the problem. Without access to resources, students can not solve the tasks assigned in teaching and learning activities. There are many ways that the teacher guides the student to access resources such as video observation, pictures, screening diagrams, perceptual materials in textbooks, study cards, on the Internet...

Step 3: Teacher learning guidelines for students to solve the problem, student responses to test the resources based

on accessibility materials. The resources / information provided by the teacher will be handled by the student when addressing the learning task, but will depend on the individual's ability to process. Students will be able to solve the problem easily and quickly if the teacher has a teaching methodology, good pedagogical profession, and the student must also have a positive attitude, active participation in activities.

Step 4: Teacher learning the student presents and reports the results - the tasks they have solved. Through the student report (from product quality, methodology - reporting skills and actions), the teacher will have a basis for assessing whether the student has achieved capability or not, which is at what level in the diagram above.

Step 5: Teachers comment, evaluate, summarize activity teaching and learning. In this step, the teacher will comment on the spirit and attitude of participating students activities; evaluating the results of the performance of the tasks assigned by the teacher; At the same time concludes and sums up the problem on the screen for the whole class to monitor and equip students with additional information and scientific knowledge that the student does not understand. Teachers must highlight the superiority of information technology in summarizing teaching and learning activities in terms of verity, visual aesthetics, aesthetics, logic... At the end of step 5, the teacher will evaluate the product the output of teaching and learning activities, whether the student has achieved the goal or not.

2.4. The Example Illustrates the Process of Designing and Organizing Historical Teaching and Learning Activities in High School in the Direction of Capacity Development with the Support of IT

From the theoretical and practical backgrounds discussed above, we give specific example when teaching Section II. The economic crisis of 1929 - 1933 (Unit 13, America between the two world wars (1918-1939), from History textbooks class 11, standard curriculum), Teachers design and organize teaching and learning activities as follows:

Design of teaching and learning activities (lesson plan)	The process of teaching and learning activities (execute on class)
<p>- <i>Name and form of activity:</i> Exploring and evaluating the economic crisis of 1929-1933 (group, individual)</p> <p>- <i>Time:</i> 10 minutes</p> <p>- <i>Objectives, outputs:</i></p> <ul style="list-style-type: none"> - Indicate expressions of the 1929-1933 economic crisis in the United States; - The cause and effect explanation is the influence and impact of the crisis on the United States; - Contact Vietnam's economy at this stage; - Practice visualization, reflection and thinking skills history; <p>Product Type: Report on A0 paper</p> <p>→ Facilitate collaboration, problem solving and creativity for students.</p> <p>- <i>Methodology, teaching techniques:</i> students watch video, combine learning studies, group discussions, reports on "5" technique and "321" technique.</p> <p>- <i>Work of teachers, students in activity:</i></p> <ul style="list-style-type: none"> + Step 1: teachers divide and assign tasks according to 4 groups: Groups 1 and 3 learn about signs of economic crisis and explain causes; Groups 3 and 4 assess the impact of the economic crisis on the United States. Step 2: Organize, guide students to watch the video about the economic crisis in America, combine reading the textbook to solve. Step 3: Teacher organization, organizing for 4 group of discussion to solve the problem. Step 4: Teachers guide, control the product reports, and comment on each other. Step 5: Teachers comment, evaluate, summarize. 	<ul style="list-style-type: none"> - <i>Step 1:</i> Teacher lead in teaching of teaching II. The economic crisis of 1929 - 1933, shown on the slide screen about the target, output of activity. - <i>Step 2:</i> Teachers divide the class into 4 groups, assigning tasks to the students as designed script. - <i>Step 3:</i> Organize, direct orientation for the students in the class to watch the video about the 1929-1933 economic crisis in the US, combining read the textbook to access different sources. The video depicts the images and figures of the economic crisis America has suffered and its implications for American society. Then, teacher guides and controls 4 assigned task teams based on the source materials provided; Targeted by the target, the product mentioned above. <i>Step 4:</i> At the end of the time, the group organizes and directs each group to report in accordance with the "5" technique (hello, ask permission, apologize, ask for comments, thank you) and comment on the "321" technique (3 compliments for your team, 2 more comments and 1 product related question). - <i>Step 5:</i> Teachers review, assess mentality, consciousness, learning methods, product performance of students, finally pinpoint the problem on the screen and summarize the activity.

Thus, the design and organization of teaching and learning activities with the support of IT must aim at the highest goal is to train and develop the learning capacity for students, not change from "read to copy" to "show for copy". But teachers need to be aware that when designing and organizing the activity, we have clearly defined the target (output), the ability to achieve, so it is easy to choose the form, The method of organizing teaching and learning in class and assessing the effectiveness of that activity.

3. Conclusion

Designing and organizing teaching and learning activities in the high school with the support of IT is a new issue because no research has been done yet. Therefore, the content of the author's article should continue to study, both from the approach, the bases to determine the process and structure of teaching and learning activities. Only when we agree, there is a common voice, we propose the appropriate forms, methods and methods of renewal suitable and effective, thereby contributing to improving the quality of teaching history.

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