Formulation and development of it ability for students in primary school, vietnam through history and geography subjects

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Abstract- Nowadays, ICT competence is one of the fundamental competencies such as those to calculate and write. This requires teachers not only to know how to apply ICT in improving teaching quality but also to pay attention to training and improving the competency to use ICT for their students. This article focuses on presenting theoretical background relating to competence development through subject curriculum and specific measures to develop IT skills (one component of ICT competence) in the subjects of History and Geography through a case study of History and Geography at primary schools. To achieve the results above, several research methods were used, including document analysis, pedagogical observation, survey at primary schools in Dak Lak province.

Keywords: Information technology, information technology intergration in teaching, teaching history and geography, students' competency development.

I. INTRODUCTION

Since the 90s of the twentieth century, information technology (IT or ICT) capabilities have been studied in many countries around the world. Realizing the impact of ICT on many fields of economy, culture, education, society, health..., many researchers have considered ICT competency as an important and fundamental competency of learners when entering. 21st century (David 1990, Felipe 2011)... UNESCO and the European Union emphasize: ICT competencies are the core competencies of citizens in the twenty-first century, will have a strong impact in most education and career fields (UNESCO 2011).

In Vietnam, this issue is also of concern, especially since the early years of the twenty-first century. Many articles and works have gone into depth clarifying the role of IT competencies in the fields of education and management (Nguyen Manh Huong, 2011).... issued (2006), the Ministry of Education and Training (Ministry of Education and Training) adopted the theme of the 2007 - 2008 school year as "The year of information technology" to launch the teaching-learning movement with IT application (Doan Nguyet Linh, 2020).

General education program - The general program issued together with the Circular No. 32/2018 / TT-BGDÐT dated December 26, 2018 by the Minister of Education and Training has identified the informatics capacity as one of 7 special enemies need to be formed and developed for students (students). From Primary level, IT capacity is one of the capacities that need to be formed and developed for students, through Informatics subject and other related subjects.

According to the General Education Program 2006 (Primary level applies from the school year 2000 - 2001) and the General Education Program 2018 (Primary level applies from the school year 2020-2021), students in grades 4 and 5 studied History and Geography. This is a study with many advantages to apply IT in teaching - learning, thereby contributing to the formation and development of informatics capacity for students. If the teacher (teacher) is well aware of the problem, has good professional skills, pedagogical skills and computer skills, it will help students practice computer skills that are suitable for specific subjects, practice self-study skills, apply the knowledge learned in solving learning tasks.

II. METHODOLOGY

This study mainly uses qualitative methods, with synthesis, analytical and inductive methods, combined with historical and dialectical materialism analysis methods.

III. MAIN RESULTS

• Requirements on Informatics Competency for Students of Primary Schools in Vietnam

In the general education program of Vietnam has clearly identified: "NL is a personal attribute formed and developed through the available qualities and the process of learning, training, allowing people to mobilize synthesize knowledge, skills and other personal attributes such as excitement, belief, will, ... successfully perform a certain type of activity, achieve desired results under specific conditions "[14]. According to the General Education program 2018, informatics capacity is one of the competencies that students need to achieve when completing high school programs. Informatics capacity includes 05 elements: (1) Use and manage information technology and communication media; (2) Appropriate behavior in a digital environment; (3) Solve the problem with the assistance of information and communication technology; (4) Apply information and communication technology in learning and self-study; (5) Collaboration in a digital environment. NL is developed through teaching topics with levels appropriate to each class level.

In order to form and develop students' capacities and qualities, including informatics capacity, primary teachers require, in addition to applying IT to improve the quality of teaching, to form and distribute elementary school students.

• The basis for Proposing Measures

• Contents of the Program in IT and the Curriculum of History and Geography Subjects at Primary Vietnam Level

Informatics programs (the current program and the 2018 program clearly define the target to be achieved: Let students first become familiar with the computer according to the motto "play but learn". Currently is organized to teach through elective form (applicable to students in grades 3, 4, 5); Informatics subject in the General Education Program 2018 allows elective with students in grades 1, 2 and compulsory in grades 3, 4, 5. Informatics capacity is one of the required competencies of students after completing high school program To form and develop informatics capacity for students, IT subject is taught with 6 subjects. Subject: (A) Computers and children; (B) Computer networks and the Internet; (C) Organizing the storage, search and exchange of information; (D) Ethics, law and culture in digital environments; (E) Informatics application and (F) Problem solving with the help of a computer.

Through studying the computer program, students in grades 4 and 5 have been equipped with basic skills in: drafting documents; searching for information on the Internet and storing information; create slideshows...

History and Geography 4, 5 (both current and 2018) are compulsory. The content of the course provides students with basic knowledge about Vietnamese History, Vietnamese Geography and the world.

The basic difference between the two programs: if the current program is divided into two subjects of History and Geography, the 2018 program integrates historical knowledge with geographic knowledge. Specifically, the current program contents: History sub-subject in grades 4 and 5 learn Vietnamese history from the beginning of the nation's construction up to now. Geography Subject Grades 4 and 5 learn about Vietnam Geography and World Geography. The 2018 program oriented educational content includes: Getting familiar with learning facilities in LS & DL subject; Localities and regions of Vietnam; The country and people of Vietnam; The first countries in the territory of Vietnam; Building and defending the country of Vietnam; Neighboring countries; Learn the world and build it together.

Based on the knowledge and skills to equip students in two subjects, in the teaching process of History and Geography, the teacher may ask students to use computer skills to perform the tasks. learning: Searching and storing information about events and phenomena. History, Geography: Documents, pictures, videos ...; using text editing skills to prepare reports, design journals and presentation skills to prepare appropriate presentations in History, Geography: Revolts, Resistance; local geography ... The appropriate application of IT not only improves teaching - learning efficiency but also contributes to help students have a lot of technology experiences in many diverse situations in different subjects, to develop skills. computer skills for students through subject teaching

• Psychological Characteristics of Elementary School Students with the Problem of Using Information Technology

The ages of elementary school students are from 6 to 11 years old. In elementary school students, visual memory - iconography is more developed than verbal and logical memory. They remember and recall visual materials better than verbal documents, remember and recall what was directly influenced by it better than what was just being explained or listened to. In other words, their memory is visual, concrete, and direct.

The imagination of elementary school students is often associated with the images that were perceived by them. If before that, they have rich images, the details in their imaginary images are also plentiful.

Thinking of elementary school students is specific thinking, that is thinking process must be associated with specific visual images. It is a cognitive process through which students can understand and analyze the nature of things and phenomena in the learning process.

With the psychological characteristics of elementary school students, "the past", the spatial nature of History & Geography is one of the obstacles and difficulties in the cognitive process. When students cannot "directly observe", "vivid visualization" of the past or objects, historical and natural phenomena have occurred. The effective application of IT through multimedia environment (learning through pictures, videos, documentary films ... will help create historical and geographical symbols and improve awareness efficiency for elementary school students. That teaching process, teachers need to give students opportunities to have a lot of experiences and apply IT knowledge for learning.

• Practice of Developing Skills in Using Information Technology for Elementary Students in Studying History and Geography

Through practice and many research projects, it has confirmed the importance of applying IT in teaching History and Geography. In teaching process, teachers not only apply IT but need to equip IT application skills in learning, learning history is extremely necessary. However, in practice, the current teaching of History and Geography at primary level has modest results, often considered a "minor subject" beside the main subjects of Mathematics and Vietnamese.

To clarify the practical basis of the research problem, we surveyed 55 teachers in some primary schools in Dak Lak province via Google Form. Along with sending questionnaires, we also went to a number of elementary schools for in-depth interviews, direct discussions with the School Boards and teachers. The specific investigation results are as follows:

* Do you assess the need for developing skills in using information technology for students through History and Geography?

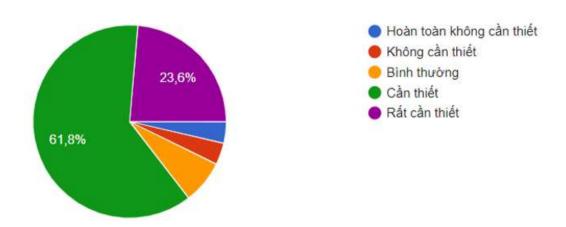


FIGURE 2.1. Assessment of the necessity of developing computing skills / competencies for students through History and Geography (survey data source)

As can be seen from the above chart, teachers are aware of and appreciate developing skills in using IT through History and Geography with more than 80% of them saying it is necessary and very necessary. In addition, some teachers also evaluate that the development of computer skills / competencies for students through History and Geography is completely unnecessary or unnecessary.

* What degree do you give students the opportunity to use information technology in the classroom to perform academic tasks in History and Geography?

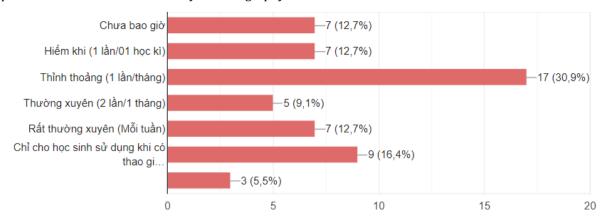


FIGURE 2.2.The level of teacher gives opportunities for students to use information technology in learning LS & DL

The level of teachers giving opportunities for students to use IT in studying History and Geography is still limited, of which never before and only once per semester accounts for 25.4%. In addition, 12.7% of students are used every week, this figure is in private schools, or in areas right in the city such as Hoang Viet Inter-school, Victory, Le Dai Hanh, To Hieu ...

* Have you allowed your students to use technology in the course of studying History and Geography? Teachers say that it is very important for students to use IT to improve learning efficiency, practice skills for students, especially in searching for materials / information on the Internet, searching videos, tran photos and students prepare reports and presentations.

We find out the cause of the above situation through survey data and in-depth interviews with the following questions:

* Which of the following equipment is available in the classroom / classroom teacher / teacher is teaching (select all available equipment)?

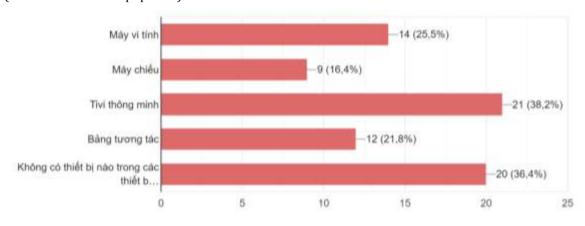


FIGURE 2.3. Teaching facilities and equipment in each Classroom

* What difficulties / barriers do you meet in the process of developing computer skills / competencies for students through History and Geography? (Can choose from many options)

Bảng 1. Kết quả điều tra những khó khăn của GV khi phát triển kĩ năng sử dụng công nghệ thông tin cho HS thông qua môn Lịch sử và Địa lí												
	cong ngay taong	Mức độ										
STT	Khó khăn/rào cản	Không gặp khó khăn này Ít khó khăn		Bình thường		Khó khăn		Rất khó khăn				
		SL	%	SL	%	SL	%	SL	%	SL	%	
1	Tầm nhìn, chiến lược của Nhà trường với vấn đề ứng dụng công nghệ thông tin.	13	23,6	3	5,5	28	50,9	9	16,4	2	3,6	
2	Sự hỗ trợ về kĩ thuật từ Nhà trường.	12	21,8	8	14,5	24	43,6	7	12,7	4	7,3	
3	Cơ sở vật chất của Lớp học/Trường	13	23,6	5	9,1	20	36,4	12	21,8	5	9,1	
4	Các khóa tập huấn, bồi dưỡng về CNTT do Nhà trường hoặc các đơn vị phối hợp tổ chức.	8	14,5	7	12,7	32	58,2	4	7,3	4	7,3	
5	Năng lực ứng dụng CNTT của bản thân Thầy/Cô	9	16,4	14	25,5	28	50,9	4	7,3	0	0,0	
6	Sự hỗ trợ từ phía phụ huynh HS về cơ sở vật chất cho lớp học.	8	14,5	8	14,5	17	30,9	18	32,7	4	7,3	
7	Hoàn cảnh gia đình để học sinh có thể sử dụng CNTT ngoài lớp học.	6	10,9	9	16,4	16	29,1	20	36,4	4	7,3	
8	Năng lực/kĩ năng tin học của học sinh.	4	7,3	8	14,5	28	50,9	10	18,2	5	9,1	
9	Khả năng tự học của HS với các nhiệm vụ học tập có sử dụng CNTT.	4	7,3	7	12,7	29	52,7	11	20,0	4	7,3	

Nguồn: Số liệu điều tra

Through survey data and in-depth interviews, teachers believe that the biggest difficulties come from the physical conditions of the School, Class and the condition of parents. Therefore, many primary schools, although learning information technology, mainly study theory. Parents' circumstances are very difficult, so there is no support for schools as well as students in computer practice. Another factor stemming from many students in many schools is ethnic minority students. At primary level, students' computer skills are limited beside language barriers.

• Some Basic Solutions to Develop Informatics Competencies for Elementary Students through History and Geography - Case Study at Primary Schools in Dak Lak, Vietnam

From the above theoretical and practical researches, in order to contribute to the development of students' computing capacity through History and Geography, we propose 03 groups of solutions directly related to Primary schools.teachers and students are as follows:

Group of General Solutions from the School Side

Firstly, the school needs to build a vision and strategy associated with promoting the application of information technology in school activities and teaching activities. This must be considered as one of the core factors to ensure the development of the School. This also requires Leaders (Board of Directors) to build vision, strategy, take the lead in IT application as well as create all the best conditions for IT application in the university.

Second, it is important to attach importance to upgrading the information technology infrastructure, ensuring modernity, synchronism and access to new achievements of science and technology to serve teachers' teaching activities well., student learning. This is the most mentioned issue in the current situation of applying IT in teaching as well as developing computer skills for students. When properly aware of this issue, the school will invest in facilities and upgrade modern information technology

infrastructure to suit the requirements of each activity, including teaching activities. To upgrade the information technologyinfrastructure, the Primary School Board of Directors can utilize and take advantage of many resources: deducting regular operating funds, sponsorship projects, agreements and signing with businesses in the area and coordinate with students' parents to promote the implementation of the policy of socialization of education....

Third, the Primary School needs to regularly organize training courses to improve the level of information technology application in teaching for teachers to meet the requirements of educational innovation. The brand and quality of a school in general depend on four core factors (human resources - people, training programs, material resources - facilities, information resources - information capture). That human is considered the leading determinant for development. Primary School can use a combination of many human resources to implement information technology fostering and training for teachers. The content and training program should be periodic, focusing on integrated methods, suitable for each subject group (History and Geography, Nature and Society subjects; Mathematics; Language Vietnamese ...) and grade by grade. The training can be supported between colleagues, teachers of information training or through learning communities, support for schools such as Mie Expert Vietnam of Microsoft Corporation ...

Especially, besides the training, the school should pay attention to technical support for teachers because technical issues are also one of the biggest barriers affecting the application of IT in the classroom. learn. If the teacher does not apply it, it is difficult for students to be given the opportunity to experience technology in the classroom.

Fourth, the Primary School encourages IT application activities in teachers and students of the School such as competitions, technology playgrounds, encourages the application of IT in experience initiatives, scientific research.

• Group of Solutions from the Teacher's Side

To meet the innovation requirements in general, to develop students' computing capacitythrough History and Geography in particular, the key issue is the teacher. Because, all technology equipment available in schools today will be of no value if teachers do not know how to use them effectively. It is the teachers who bring magic, not the computer. IT is only a universal tool, means and device, not a universal one. It is the user (teacher) to decide effectively, through organizing teaching and learning activities [9].

Therefore, in order to develop students' computing capacities and skills, first of all, teachers need to raise awareness, a sense of responsibility for their careers and always actively grasp and update information technology and regularly respond using IT in the classroom, becoming a role model and example for students. Teachers need to be aware of the importance of developing informatics capacity through subjects including History and Geography.

Teachers need to regularly discuss with parents, especially in parent conferences, especially parent conferences at the beginning of the year, in groups such as Zalo, Facebook ... for general orientation and help. Together the school deployed to parents on socialization of education. Helping parents to be aware of the importance of IT in today's era and to coordinate with teachers and schools in equipping students' computing platforms, skills and capacities.

At the same time with special students of primary school age, the teacher is always a role model, "idol" of students. Teachers need to be aware of the importance of IT and have guidance for students to build motivation and learning style with IT support. Teachers' guidance does not stop at reminding and guiding students to use IT properly, avoiding dangers in the process of using the Internet. In teaching History and Geography, with searching information, video materials, and pictures, teachers can give specific instructions, providing official websites for students.

Or give specific links to document pages. In preparing the report, teachers give appropriate learning tasks, ask students to prepare the content of the report in articles with simpleknowledge, at knowing level. Teachers base on the set teaching objectives to consider contents / lessons that are capable of applying IT (on the teacher's side) and can give opportunities for students to apply IT to perform learning tasks. Examples are types of articles that explore economic, cultural, local achievements or the local historical or geographic content in the program. Besides, teachers need to combine with other teaching means, as well as other teaching methods and techniques because there is no "universal" method that can replace all of them.

On the basis of reference to the authors' research on the instruction to design teaching-learning activities in History subject with the support of information technology, Proposal on teaching plan framework for teachers to design teaching plans as follows:

Lesson plan					
Course:	Name:				
Class	Date:				
Topic	Duration:				
_					

Target

Lesson / lesson objectives: Answer the question: What do students need to achieve / do after this lesson / lesson? (Knowledge, competence and quality)

- * A technology target will answer the following questions:
- Does the use of IT support students to form the competencies and qualities of the subject? Can students achieve the same goal without IT?
- Is it possible in this lesson to give students the opportunity to use IT in the classroom and develop their computer skills / skills?

Content: What do students need to learn / use / practice (in technology) to achieve their goals?

Teaching methods and forms

- Using teaching methods / techniques, teaching forms to promote positivity and suit the differentiation of students in order to achieve the set teaching objectives?
- Determine when, when, where technology needs to be used in the classroom.

Teaching facilities

- * Requirements for technology: To do that (impart content, test evaluate, manage class ...) what application / medium should be used?
- * Other resources: What other means and teaching aids need to be prepared?
- * Required technology skills: What skills do teachers and students need? Do teachers need to guide students? Instructions like? In this aspect to develop informatics skills for students, teachers not only focus on teachers but also use IT to support learning activities.

Evaluate students

- Use which evaluation tools to assess whether students have achieved the set goals?
- What applications / software help teachers evaluate student learning results?

Plan for teaching-learning activities

The structure when designing an activity must have (in logical order):

- Objective: (aim towards also known as the required requirement of the activity).
- Content: (briefly stating what students do in this activity).
- Product: (Teacher gives the final product orientation after finishing the activity that students need to create).
- Organize the implementation: (Teacher operates the organization through 4 steps: 1- Teacher transfers tasks / introduces problems and provides materials for students; 2- Students perform / solve tasks. 3 Teacher organizes and shows students to report tasks / products and discusses and discusses; 4- Teacher comments, evaluates, concludes / closes the problem. Teacher can use many different methods, teaching techniques, but must have 1 method, the main teaching technique.

Self-assessment of lesson plans

• Group Solutions from the Parents' Side and Elementary Students

The development of informatics capacity through History and Geography should not only come from the School and the teachers, but also need great support from Parents and Students. The support from parents is not only through educational socialization but also through parent cooperation with teachers and schools, through the care and facilitation of parents with the learning of students. facilities as well as using technology equipment.

Students need to be aware of the importance of IT and have a proper way of using IT to avoid the dangers of using the Internet related to health, affecting learning. Since then, building my own motivation and learning style has the support of IT in learning subjects in general, History and Geography in particular.

IV. CONCLUSION

The development of computer skills / competencies for students in the current context, the requirement of the industrial revolution 4.0 is a very urgent requirement in general teaching, and teaching History and Geography at elementary level. study in particular. To accomplish this requirement is the synergy of many factors from family, school and society. In the fundamental and comprehensive development and renovation of Vietnam's education, teachers in general, and primary school teachers in particular, in particular, need to be a pioneer in applying IT in teaching and needing. responsibility for training and development gives students opportunities to use IT in the classroom in accordance with teaching conditions. These are the first foundations for students to apply their study skills to master's degree and lifelong learning with the support of IT. However, the article is still limited, only research in a small number and focusing on surveying with teachers at some primary schools in Dak Lak province. We will

continue to do research in other articles, by expanding the scope of the research into both the scope and the subject of the study (teachers, students, and parents) to increase research reliability and availability. Examination of proposed measures.

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