

Developing Digital Competencies for Primary School Students through Teaching History and Geography



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ABSTRACT: Digital competence of students is understood as the ability to effectively use information and communication technologies to access, manage, and create information in a digital environment. This competence not only enables students to perform learning tasks efficiently but also equips them with essential skills to adapt to an increasingly technology-dependent society, allowing them to contribute positively to their communities and develop personally in the digital age. The purpose of this paper is to explore measures for developing digital competence among elementary school students through the subjects of History and Geography. A qualitative research methodology was employed to examine relevant literature. Based on this analysis, several measures have been proposed to enhance digital competence for students, including: 1) establishing learning objectives that promote digital competence; 2) selecting instructional content that provides opportunities for developing digital skills; and 3) utilizing teaching methods and techniques that foster digital competence through the teaching process in History and Geography. This document serves as a valuable reference for researchers and elementary educators in the context of digital transformation in education.

KEYWORDS: Digital competency, development, student, primary, History and Geography

I. INTRODUCTION

In the Fourth Industrial Revolution context, digital competence has become essential in equipping the younger generation with the necessary skills for future success. According to Alkali et al. (2004), digital competence is defined as the ability to use software and operate digital devices, encompassing various complex skills such as cognitive, motor, social, and emotional skills that users need to interact in a digital environment [2] effectively. Ala-Mutkha (2011) posits that digital competence includes the ability to understand information, media, the Internet, and computers, as well as providing knowledge and skills related to hardware and software [1]. Furthermore, Ferrari (2012) describes digital competence as a set of knowledge, skills, and attitudes, including abilities, strategies, values, and awareness, necessary for using information technology and digital media. These elements facilitate the execution of tasks, problem-solving, communication, information management, collaboration, content creation and sharing, as well as the effective, appropriate, and creative construction of knowledge [6]. Digital competence is not only a vital survival skill but also a valuable knowledge asset in the digital age.

Today's students are growing up in a modern technological context that profoundly impacts how they interact and learn [12]. They possess the ability to create and manage content and information, control media tools, and solve technological problems. These skills enable students to become more dynamic and competitive, better meeting the demands of modern society [4]. Previous studies have primarily focused on students' digital competence across various educational levels [7], [9], [11], [14], as well as investigating factors influencing students' digital competence [3], [8], [13], [14]. However, there is a scarcity of research on measures to develop digital competence specifically for elementary school students.

Developing digital competence for students is a process of equipping them with the necessary skills, knowledge, and attitudes to effectively, safely, and responsibly use information and communication technology in their learning and daily activities. Currently, Vietnam is placing great emphasis on establishing a digital competence framework for students in general education to enhance learners' digital skills. The digital competence framework for elementary school students in Vietnam includes: (1) using digital devices; (2) skills related to information and data; (3) communication and collaboration; (4) creating digital products; (5) digital safety; (6) problem-solving; and (7) career orientation competencies [10]. This paper will propose several measures to develop digital competence for elementary school students through the teaching of History and Geography, aiming to enhance learners' capabilities in the digital age.

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II. METHODOLOGY

To conduct this research, we employed a qualitative research methodology. Based on a review of relevant literature and practical activities, we proposed measures to develop digital competence for elementary school students.

III. RESULTS

A. Designing learning objectives to develop students' digital competence in History and Geography

a) Purpose

The identification of learning objectives in History and Geography plays a crucial role in developing students' digital competence. Clearly defined objectives enable teachers to determine both the general teaching activities and the specific activities aimed at enhancing students' digital skills.

b) Procedure

To construct learning objectives that foster digital competence in the subjects of History and Geography, the following steps should be undertaken:

Step 1: Define the Learning Outcomes

The learning outcomes should be identified based on the curriculum, which articulates these outcomes through behavioral indicators related to historical and geographical competencies, general competencies, and character traits to be developed in students.

Step 2: Select Outcomes that Promote Digital Competence

Identify learning outcomes that provide opportunities for developing students' digital competence. For example, behaviors related to students collecting historical and geographical information, and evidence from cultural, economic, and social contexts to express their personal viewpoints on specific issues.

Step 3: Identify Behavioral Indicators of Digital Competence

In this step, it is essential to analyze the specific indicators of digital competence that can be formed and developed through the lesson's learning outcomes. To effectively execute this step, teachers should address the following questions:

- + What data, information, and digital content can students share during the lesson?
- + How do students use digital technology to collaborate while accomplishing learning tasks?
- + In what ways do students create and edit digital content in various formats?
- + Are students able to modify, refine, improve, and integrate information and content into their existing knowledge to create new, original, and relevant products?
- + Do students engage in activities to browse, search, and filter data, information, and digital content?
- + Is there a need to assess the accuracy and reliability of the digital information content?
- + Do students manage data, information, and digital content effectively?

c) Example

When teaching the topic "Hung Kings' Temple Festival and Hung Kings' Death Anniversary" (History and Geography for Grade 4), the learning outcomes are defined as follows:

After completing the lesson, students will be able to:

* Historical and Geographical Competencies:

- + Identify the geographical location of the Hung Kings' Temple relics on a map or diagram.
- + Use a diagram to present some of the main architectural structures within the Hung Kings' Temple area.
- + Observe maps and charts to learn about the structures in the Hung Kings' Temple site.
- + Collect images and videos related to the Hung Kings' Temple and the Hung Kings' Death Anniversary.
- + Utilize historical and geographical documents to express their views on the Hung Kings' Temple.

* General Competencies:

Develop communication and collaboration skills; problem-solving and creativity through group activities and completing learning tasks.

*Qualities:

Foster qualities of patriotism, diligence, and responsibility.

* Digital Competence:

- + Create and edit a video introducing the Hung Kings' Temple Festival.
- + Share images and videos related to the Hung Kings' Temple and the Hung Kings' Death Anniversary.
- + Browse, search, and filter data, information, and digital content by identifying the need to collect images and information about the Hung Kings' Temple and the festival.
- + Assess the authenticity and reliability of sources of images and information regarding the Hung Kings' Temple and the festival.

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+ Store images and videos of the Hung Kings' Temple and the Hung Kings' Death Anniversary on digital platforms for reporting purposes.

B. Developing History and Geography curriculum content to enhance digital competence

a) Purpose

The construction of appropriate teaching content plays a crucial role in developing students' digital competence. Well-designed curriculum content enables students to effectively access digital tools and information sources. Not all teaching content provides opportunities for students to develop their digital skills. Only specific lessons with suitable resources allow teachers to guide students in using the internet to search for information, thereby enhancing their data search and processing skills. Through analyzing various information sources, such as articles, videos, and online materials, students will learn to evaluate the reliability of the information.

b) Procedure

For this measure, when designing the content for History and Geography lessons, the focus should be on the following student requirements:

+ Describe various cultural aspects (e.g., housing, customs, festivals, clothing, cuisine), production activities, the beauty of significant landmarks/architectural works, and how people adapt to natural features and production activities.

+ Select and simply introduce a typical dish, type of clothing, or festival from the local area or region.

+ Narrate stories about historical figures, legends, or historical events related to specific landmarks.

+ Present some advantages and challenges posed by natural features in relation to local production activities.

Propose measures to preserve, improve, and promote historical and geographical values.

Collect and use historical resources (such as images and excerpts), presenting notable achievements and demonstrating understanding of certain historical and geographical issues.

c) Example

For example, when teaching the topic "Hue Ancient Capital" (History and Geography for Grade 4), teachers can design content that requires students to introduce the beauty of Hue. To fulfill this task, teachers may ask students to:

+ Create a video showcasing the architectural works and scenic spots of the Ancient Capital of Hue.

+ Write a promotional message about the beauty of the Ancient Capital of Hue.

+ Draw a picture depicting the beauty of the Ancient Capital of Hue.

C. Selection of teaching methods and techniques

a) Purpose

Each teaching method and technique has specific advantages in developing the competencies and qualities of elementary school students. In the context of modern education, enhancing digital competence has become an important requirement. To achieve optimal effectiveness in developing digital skills, teachers need to select methods and techniques that align with the intended learning outcomes.

b) Procedure

* Utilizing the document collection method

The document collection method in teaching History and Geography is an active approach that encourages students to independently seek, gather, and analyze various sources of information to support their learning. This method not only fosters self-directed learning by allowing students to expand their knowledge from diverse sources such as books, newspapers, online materials, and local documents, but it also develops their skills in analyzing and synthesizing information, enabling them to gain a deeper understanding of historical events and geographical phenomena. Furthermore, collecting documents enhances students' sense of responsibility towards their learning, linking knowledge to practice through the search for local information or participation in community activities.

* Employing the "Gallery" technique

The "gallery" technique is an instructional strategy where students' learning products are displayed as an exhibition. Here, "artwork" encompasses not only drawings but also diagrams, charts, short writings, or outlines that clearly present the learning content. Students move around, observe, and interact with their classmates' products, asking questions and providing feedback. The teacher organizes the evaluation of the completion of learning tasks at both individual and group levels.

The "gallery" technique can be effectively applied in a digital classroom environment, particularly in teaching History and Geography. This method not only creates a dynamic learning space but also encourages creativity and interaction among students.

b) Procedure

+ Create an online exhibition space for learning products using tools such as Microsoft Teams, Padlet, or Canva. Students can upload products such as images, writings, and videos related to historical and geographical figures, stories, and events.

+ Encourage students to create diverse products such as infographics, presentation videos, or blog posts, which will help develop their creativity and technological skills.

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+ Organize opportunities for students to comment, ask questions, and evaluate the learning products of their peers.

c) Example

When teaching the lesson "Central Highlands Gong Festival" (History and Geography for Grade 4), the teacher can organize an activity where students use digital devices to collect images, videos, or edit and splice video clips related to the Central Highlands Gong Festival. Students would submit their products through a designated product storage link (e.g., Google Drive, Padlet, or Google Classroom designed by the teacher). Students would then display their learning products on the Padlet link, allowing group members to explore, evaluate, and provide feedback on their classmates' products.

IV. CONCLUSION

To develop students' digital competence in History and Geography, it is essential to propose scientific measures that align with the cognitive characteristics of students for practical implementation. These measures must adhere to certain requirements, including: 1) ensuring the learning objectives of the curriculum are met; 2) fostering the development of subject-specific competencies; and 3) ensuring feasibility and effectiveness. Based on this foundation, we have proposed several measures as follows: First, designing learning objectives that promote the digital competence of students in the History and Geography; Second, developing the content of instruction to enhance students' digital competence in the teaching of History and Geography; and third, selecting appropriate teaching methods and techniques to foster students' digital competence in the teaching of History and Geography; This research serves as a valuable reference for educational administrators in developing teacher training programs, and it is also a significant resource for primary school teachers to apply these measures in their teaching practice.

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