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RESEARCH ARTICLE

Digitalisation of History Education and Historical Thinking Skills (HTS): A Conceptual Framework

Nur Anis Zafirah Mhd Zain, Shakila Che Dahalan
Department of History, Faculty of Human Sciences, Universiti Pendidikan Sultan Idris, Malaysia
Correspondence Author: shakilacd@fsk.upsi.edu.my

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Abstract

The digitalisation of history education has become an essential strategy for promoting meaningful learning and developing students' higher-order historical thinking competencies in the context of twenty-first-century education. Despite the increasing adoption of digital technologies in educational settings, existing studies have predominantly examined technology integration from general pedagogical perspectives, while the conceptual relationship between digitalisation and the mastery of Historical Thinking Skills (HTS) remains insufficiently explored, particularly in primary history education. This study aims to examine the relationship between the digitalisation of history education and the development of HTS through a systematic literature review and conceptual analysis. Relevant literature was identified from peer-reviewed journal articles, policy documents, and scholarly publications, which were critically synthesized to identify key themes, research trends, and theoretical relationships. The findings indicate that digital technologies—including interactive multimedia, virtual simulations, digital archives, online learning platforms, and collaborative learning tools—significantly enhance student engagement and facilitate the development of core HTS dimensions, including chronological reasoning, historical interpretation, evidence evaluation, cause-and-effect analysis, and historical empathy. Nevertheless, the review reveals the absence of an integrated conceptual model that systematically explains how digitalisation supports HTS development, particularly in primary education contexts. Addressing this gap, the study proposes a conceptual framework that integrates digital pedagogical components with the cognitive dimensions of HTS. The proposed framework contributes theoretically by extending current understanding of digital history education and provides practical guidance for educators, curriculum developers, and policymakers in designing technology-enhanced history learning environments. Furthermore, it establishes a foundation for future empirical studies examining the effectiveness of digital interventions in fostering historical thinking competencies.

Keywords: Conceptual Framework; Digitalisation; Digital Pedagogy; Historical Thinking Skills; History Education.

INTRODUCTION

The widespread proliferation of digital technology has led to significant changes in education and other sectors such as communication networks and healthcare (Rozhkova, 2020). All aspects of educational development are substantially influenced by advancements in digital technology (Ding & Wu, 2024). The National Digital Education Policy (NDEP), announced on 23 November 2023 (Ministry of Education Malaysia, 2023), aims to ensure a more comprehensive effort in further digitalising the education landscape.

Digital education encompasses knowledge, skills, and values related to digital technology, as well as its application in teaching and learning to produce a generation that is digitally fluent, integrated, creative, and innovative. The first thrust of the Digital Education Policy 2023 (DEP) emphasises digitally literate students, aligning with global frameworks such as UNESCO's Digital Literacy Global Framework (DLGF), which highlights individuals' ability to access, manage, understand, and use technology critically, creatively, and ethically (UNESCO, 2018).

Although digital transformation has become a global priority in education, evidence suggests that the integration of digital technologies does not automatically improve students' higher-order disciplinary thinking. Several international reports indicate that digitalisation often focuses on technological adoption rather than meaningful pedagogical transformation. Consequently, the challenge is no longer whether digital technologies should be implemented, but how digitalisation can effectively support disciplinary competencies such as Historical Thinking Skills.

In line with international standards that require both technical mastery and deep digital literacy, Malaysia's DEP stresses the integrated, innovative, creative, responsible, and ethical use of technology. Research indicates that the COVID-19 pandemic has enhanced the digital skills of teachers and students while transforming learning patterns into more dynamic forms (Mohd Fadzil Mohd Salleh et al., 2023). This effort should continue post-pandemic, as digital applications play a crucial role in strengthening Historical Thinking Skills (HTS) through the analysis and interpretation of historical sources.

Digitalisation in education is now essential, as evidenced by the shift from face-to-face learning to virtual learning environments. Therefore, both teachers and students must enhance their digital competencies, as these skills support the integration of Historical Thinking Skills (HTS) in analysing and interpreting digital sources. This article aims to: (1) To analyse the relationship between digitalisation in History education and the mastery of HTS. (2) To propose a conceptual framework linking digitalisation and HTS.

The literature review was conducted by referring to previous studies related to the digitalisation of the History subject and the use of digital technology in teaching and learning, particularly in History education. It also includes an examination of existing studies related to Historical Thinking Skills (HTS) and their mastery in the context of primary education.

Since the emergence of personal computers in the 1980s, digital technology in education has gained increasing attention (Pedro, Barbosa & Santos, 2018). The global history of educational digitalisation began with the use of computers in education in the mid-20th century. Initially, technology was limited to Computer-Assisted Instruction (CAI), primarily used for drill-and-practice activities. Although basic, it marked the beginning of digital tool integration in education.The introduction of early educational software and personal computers into classrooms in the 1980s became a significant milestone, enabling wider use of technology among students and teachers (Faig, 2023). The emergence of the Internet in the early 1990s further expanded opportunities for web-based learning, increasing access to educational resources. Concurrently, e-learning platforms developed, allowing institutions to offer courses digitally.

The use of Learning Management Systems (LMS) such as Blackboard, Moodle, and WebCT in the late 1990s and early 2000s further enhanced digital integration in education (Al-Fraihat et al., 2020). These systems structured content delivery, monitored student progress, and facilitated communication between instructors and learners, forming the foundation of modern digital learning environments.The concept of digital learning was popularised in 1999 by Jay Cross, who introduced various terminologies to describe technology integration in classroom instruction, particularly in Western countries (Nur Syarafina Abdul Rahman, 2020).

The digitalisation of history education gained traction in the mid-1990s, particularly in higher education institutions in the United States and Europe (Shakila Yacob et al., 2016). Leading universities such as Stanford University and the University of Oxford established specialised centres focusing on digital humanities. Additionally, Geographic Information Systems (GIS) have been used since the late 1980s and became more prominent in the 1990s.

In Malaysia, the adoption of GIS in history education is relatively recent, with broader academic and digitalisation projects emerging around 2015. Government initiatives, including the ICT Strategic Plan,

reflect ongoing efforts to integrate digital technology into education.Furthermore, digital simulation and digital libraries have been utilised to enhance history learning, enabling students to engage more deeply and critically with historical materials (Mohamad Rahimi Mohamad Rosman & Mohd Nasir Ismail, 2023).

Unlike mathematics or science, history education requires students to evaluate competing interpretations, analyse historical evidence, consider multiple perspectives, and construct evidence-based arguments. Consequently, digital technologies should not merely facilitate information delivery but should support disciplinary historical inquiry. This distinctive characteristic makes history education an important context for examining how digitalisation influences higher-order cognitive competencies.

Digital technology, however, does not inherently generate historical thinking. Its educational value depends on whether students are required to interrogate sources, evaluate authorship, contextualise evidence, corroborate competing accounts, and construct evidence-based interpretations. Tally and Goldenberg (2005) demonstrated that digitised primary sources can foster sourcing, inferencing, corroboration, and evidence-based reasoning when they are embedded within appropriately designed historical tasks. Similarly, Reisman (2012) showed that document-based historical inquiry can significantly improve students' historical thinking, factual knowledge, reasoning, and reading comprehension. These findings suggest that the critical variable is not digital access itself, but the disciplinary practices through which students engage with digital historical materials

Recent studies indicate a significant positive relationship between digital media usage and HTS mastery ($r = 0.631$, $p < 0.01$) (Revadhi Shumugam & Mohd Mahzan Awang, 2026). Similarly, digital learning modules incorporating AR, videos, and interactive elements have shown high effectiveness in enhancing student engagement and historical thinking (Khairi Mahyudin & Hermansyah, 2025). Digital tools such as Canva, Google Classroom, YouTube, and smartphone applications have also been shown to improve student motivation, engagement, and achievement in History learning.

Historical Thinking Skills (HTS) involve the ability to critically analyse, evaluate, and interpret historical information. Key constructs include understanding chronology, exploring evidence, and making interpretations (Renuka Ramakrishnan et al., 2014). Studies show that digital historical sources significantly enhance students' ability to explore evidence and interpret information. Additionally, HTS elements such as imagination, inquiry, and empathy make History learning more engaging and meaningful.The application of inquiry-based learning encourages students to ask questions such as what, when, who, where, why,and how, fostering deeper understanding.

HTS also promotes open-mindedness, critical thinking, and the ability to analyse complex and abstract ideas (Sunthararaju et al., 2024). Research also highlights the effectiveness of Web 2.0 tools in improving students' attitudes, interest, and mastery of HTS. Moreover, teachers demonstrate a high level of competency in implementing Higher-Order Thinking Skills (HOTS), which supports the development of HTS among students. Overall, HTS is a crucial element in History education, transforming learning from rote memorisation into a more analytical, interactive, and student-centred process aligned with 21st-century educational demands.

Recent international scholarship has substantially expanded the discussion of digitalisation in history education beyond the simple use of digital tools toward technology-enhanced historical inquiry and higher-order thinking. Studies have demonstrated that digital technologies—including virtual reality, augmented reality, digital archives, geographic information systems (GIS), interactive multimedia, and online collaborative platforms—can promote historical reasoning, source evaluation, evidence-based interpretation, and historical empathy when integrated through inquiry-oriented pedagogies (Lee, 2022; VanSledright, 2021; Thünemann et al., 2023; Wiley & Smith, 2022). Recent reviews further indicate that digital history education is increasingly associated with disciplinary literacy, historical consciousness, and digital historical inquiry rather than merely improving student motivation or academic achievement (Saye & Brush, 2017; Breakstone et al., 2021; Reisman et al., 2023). Simultaneously, educational technology research has shifted toward examining how digital pedagogies foster critical thinking, collaborative learning, and authentic problem-solving in line with twenty-first-century competencies (Bond et al., 2020; Crompton & Burke, 2023). These developments suggest that digitalisation should be understood as a pedagogical ecosystem that supports disciplinary learning rather than simply as technological innovation.

Despite the growing body of literature, several important research gaps remain. First, existing studies predominantly evaluate the effectiveness of individual digital technologies—such as augmented reality, multimedia learning, virtual museums, or learning management systems—without explaining how these technologies collectively contribute to the development of Historical Thinking Skills (HTS). Second, previous

research generally investigates student engagement, motivation, or academic achievement, whereas the relationship between digitalisation and the cognitive dimensions of HTS, including chronological reasoning, historical evidence evaluation, interpretation, historical empathy, and historical significance, has received comparatively limited scholarly attention. Third, most international studies focus on secondary schools or higher education, while conceptual discussions concerning primary history education remain scarce. Consequently, there is still no comprehensive conceptual framework that systematically explains the pedagogical mechanisms through which digitalisation enhances HTS in primary history classrooms.

Addressing these limitations, the present study offers three principal contributions. First, it synthesises contemporary international literature to establish a comprehensive conceptual understanding of the relationship between digitalisation and Historical Thinking Skills within primary history education. Second, unlike previous studies that examine digital technologies separately, this study integrates digital content, digital pedagogy, instructional strategies, and learning technologies into a unified conceptual framework linked explicitly to the multidimensional constructs of HTS. Third, the proposed framework is theoretically grounded in Constructivist Theory and Mayer's Cognitive Theory of Multimedia Learning, thereby providing an integrated pedagogical model that explains how digitalisation supports the development of historical thinking. This framework serves as a theoretical foundation for future empirical research and offers practical guidance for curriculum development, teacher professional learning, and technology-enhanced history instruction.

METHOD

This study employed a library research design using a systematic literature review (SLR) combined with conceptual analysis to examine the relationship between the digitalisation of history education and the mastery of Historical Thinking Skills (HTS). Library research enables researchers to critically analyse, compare, and synthesise existing knowledge in order to identify theoretical developments, conceptual relationships, and research gaps within a particular field (Fauzi Hussin et al., 2014). Unlike empirical studies, this approach focuses on generating conceptual understanding by integrating evidence from previous scholarly works.

Relevant literature was systematically identified from peer-reviewed journal articles, scholarly books, government policy documents, curriculum reports, and international organizational publications. The literature search primarily focused on publications discussing digitalisation in education, history education, digital pedagogy, educational technology, and Historical Thinking Skills. To ensure the relevance and quality of the reviewed literature, priority was given to publications indexed in internationally recognised databases, including Scopus, Web of Science, ERIC, and Google Scholar, complemented by official policy documents published by the Ministry of Education Malaysia, UNESCO, and OECD. The literature search mainly covered publications published between 2014 and 2025, while seminal theoretical works were included when necessary to establish the conceptual foundations of the study.

The literature selection followed predefined inclusion and exclusion criteria. Included sources were (1) peer-reviewed journal articles, scholarly books, and official policy documents; (2) publications discussing digitalisation, educational technology, history education, or Historical Thinking Skills; (3) studies written in English or Malay; and (4) publications providing conceptual, empirical, or theoretical contributions relevant to the study objectives. Conference abstracts, opinion papers, duplicate publications, and studies unrelated to history education or digital pedagogy were excluded from the analysis.

Following the literature selection process, the collected documents were analysed using a thematic synthesis approach. Initially, relevant studies were reviewed to identify recurring concepts related to digitalisation, digital pedagogical practices, and HTS. Similar concepts were subsequently grouped into broader themes, including digital learning technologies, instructional strategies, constructivist learning, multimedia learning, historical inquiry, evidence evaluation, chronological reasoning, historical interpretation, and historical empathy. The relationships among these themes were then critically examined and synthesised to develop an integrated conceptual understanding of how digitalisation supports the development of Historical Thinking Skills.

The final stage involved constructing a conceptual framework by integrating findings from the literature with the theoretical perspectives of Constructivist Theory and the Cognitive Theory of Multimedia Learning. The proposed framework explains the relationships between digitalisation components, pedagogical practices, and

the multidimensional constructs of Historical Thinking Skills in primary history education. Through this theory-driven synthesis, the study provides a comprehensive conceptual model that can serve as a theoretical foundation for future empirical investigations and contribute to curriculum development and technology-enhanced history teaching

RESULTS AND DISCUSSION

1. Proposed Conceptual Framework

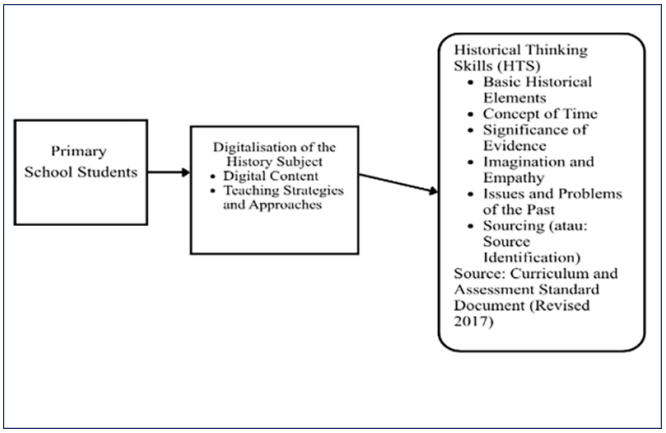


Figure 1: Conceptual Framework

The conceptual framework of this study is developed based on a synthesis of the literature review related to the digitalisation of the History subject and its relationship with the mastery of Historical Thinking Skills (HTS) among primary school students, as illustrated in Figure 1. This framework systematically explains the interaction between the main variables of the study, namely primary school students as the research subjects, the digitalisation of the History subject as the independent variable, and Historical Thinking Skills (HTS) as the dependent variable. This relationship suggests that students' mastery of HTS is significantly influenced by the level and quality of digitalisation implemented in the teaching and learning process of History.

The digital environment may also modify the nature of historical thinking itself. Goulding (2021) found that although sourcing, corroboration, and contextualisation remain fundamental to historical inquiry, their application changes when historical information is encountered online. Evaluating historical websites requires learners to combine disciplinary historical heuristics with strategies for assessing digital information, producing what Goulding describes as "hybrid" heuristics. This distinction is important for the present framework because digital Historical Thinking Skills should not be conceptualised simply as conventional HTS performed through electronic devices. Rather, digital environments introduce additional demands related to navigating, comparing, contextualising, and evaluating the credibility of online historical information

In this study, the digitalisation of the History subject consists of several interrelated components, including the use of digital content, innovative teaching strategies, and pedagogical approaches applied by teachers. These include history simulations, interactive media, animations, video-based learning, and access to various online digital resources. Digitalisation is not limited to the use of technology alone but also involves effective instructional design to ensure meaningful integration. This approach is aligned with Constructivist Theory, which emphasises active and student-centred learning, where students play a central role in constructing knowledge through interactive learning experiences.

In addition, the Cognitive Theory of Multimedia Learning supports the use of multiple media formats in enhancing students' ability to process information effectively through the integration of visual and verbal elements. The implementation of digitalisation aims to create a more dynamic, interactive, and engaging learning environment, thereby increasing student participation in History learning. Such a technology-based learning environment also supports 21st-century education requirements, which emphasise higher-order thinking skills, digital literacy, and critical and creative problem-solving abilities. In this context, teachers play a crucial role as facilitators who design and implement systematic and effective technology-based instruction.

Furthermore, the impact of digitalisation is measured through the mastery of Historical Thinking Skills (HTS), which is a core element in History education. HTS includes several key dimensions such as understanding basic historical concepts, mastering chronology and the concept of time, evaluating the credibility and significance of historical evidence, applying imagination and empathy in understanding past perspectives, analysing historical issues and problems, and sourcing, interpreting, and critically evaluating historical materials. These dimensions are aligned with the Curriculum and Assessment Standard Document (Revised 2017), which emphasises the development of critical, analytical, and reflective thinking among students.

Overall, this conceptual framework suggests that the digitalisation of the History subject has significant potential to enhance the mastery of HTS among primary school students. This approach not only helps students

understand historical content in a more meaningful way but also promotes critical, analytical, and reflective thinking skills. Therefore, the systematic integration of digitalisation, supported by strong pedagogical principles and effective teaching practices, is essential in ensuring successful History learning outcomes. Ultimately, this contributes to producing students who are not only knowledgeable in History but also digitally literate and capable of critically interpreting historical events in contemporary contexts.

2. Theoretical Framework

Digitalisation in the History subject refers to the use of digital technology as a supporting medium in the teaching and learning process to enhance students' mastery, particularly in Historical Thinking Skills (HTS). In this context, Constructivist Theory, developed by Jean Piaget (1973) and Lev Vygotsky (1978), serves as an important foundation, emphasising that learning occurs actively when students construct new knowledge based on prior experiences. Accordingly, the use of digital materials such as simulations, interactive videos, and multimedia resources enables students to connect prior knowledge with new concepts in a more meaningful way while encouraging active engagement and critical thinking in historical learning. This approach is supported by findings from Xinyi Wang et al. (2024), which show that augmented reality (AR)-based learning "encourages active participation and exploration," thereby reinforcing student-centred learning principles.

In addition, the Cognitive Theory of Multimedia Learning by Richard Mayer (2009) further supports the importance of digitalisation in History education. This theory explains that learning becomes more effective when information is presented through a combination of visual and verbal elements. In History education, the integration of text, animation, audio, and video helps students understand abstract concepts and improves memory retention. Wang et al. (2024) further emphasise that AR technology provides multisensory learning experiences—visual, auditory, and kinesthetic—creating a more immersive learning environment.

Moreover, AR technology enhances student motivation and engagement by allowing learners to actively explore content and construct knowledge through direct interaction. This aligns with both Constructivist Theory and Multimedia Learning Theory, which emphasise experiential learning and multisensory stimulation. Digital technologies such as AR also support the development of Historical Thinking Skills (HTS) through exploration, analysis, and interpretation of historical information.

Overall, Constructivist Theory and Cognitive Multimedia Learning Theory strongly support the integration of digital technology in History education, as both emphasise active learning and multisensory engagement. Properly designed digitalisation can enhance historical understanding and strengthen critical historical skills such as interpretation, evidence evaluation, and chronological reasoning. Therefore, digital integration in History teaching should be further strengthened to ensure interactive, meaningful, and 21st-century aligned learning.

3. Discussion

The present study sought to examine the conceptual relationship between the digitalisation of history education and the mastery of Historical Thinking Skills (HTS) through a systematic synthesis of previous literature. The findings suggest that digitalisation should not be understood merely as the incorporation of technological tools into classroom instruction but rather as a pedagogical transformation that reshapes how students interact with historical knowledge. Consistent with the constructivist perspective, digital technologies provide opportunities for learners to actively construct historical understanding through inquiry, collaboration, interpretation of multiple sources, and evidence-based reasoning rather than passive memorisation of historical facts. This finding aligns with previous international studies demonstrating that digital learning environments enhance higher-order cognitive engagement by facilitating authentic historical inquiry and student-centred learning (Saye & Brush, 2017; VanSledright, 2021).

The review further indicates that contemporary digital technologies—including interactive multimedia, virtual museums, digital archives, Geographic Information Systems (GIS), augmented reality, collaborative online platforms, and multimedia learning applications—provide significant opportunities to strengthen the multidimensional constructs of Historical Thinking Skills. Previous studies have shown that digital historical sources improve students' abilities to evaluate evidence, compare historical perspectives, analyse chronology, construct historical explanations, and develop historical empathy (Breakstone et al., 2021; Reisman et al., 2023). Similarly, multimedia-rich instructional environments have been found to reduce cognitive overload while simultaneously increasing conceptual understanding and

learner engagement when instructional design follows established multimedia learning principles (Mayer, 2021). Therefore, the effectiveness of digitalisation depends not solely on technological availability but also on how digital resources are pedagogically integrated into inquiry-oriented history instruction.

A notable finding emerging from this review is that the current body of literature remains fragmented. Most previous studies evaluate the effectiveness of individual digital technologies, such as learning management systems, augmented reality, mobile learning, or Web 2.0 applications, without explicitly examining how these technologies contribute to the development of Historical Thinking Skills as an integrated cognitive construct. This observation is consistent with broader international reviews indicating that educational technology research frequently measures learning motivation, academic achievement, or technology acceptance while paying comparatively less attention to disciplinary thinking competencies (Bond et al., 2020; Crompton & Burke, 2023). Consequently, there remains limited theoretical understanding of the mechanisms through which digitalisation supports chronological reasoning, historical interpretation, source criticism, historical significance, and historical empathy.

Another important issue concerns the limited attention given to primary history education. Most empirical investigations have been conducted within higher education or secondary school settings, whereas primary education remains comparatively underrepresented despite its critical role in establishing foundational historical literacy. International literature increasingly recognises that early exposure to inquiry-based history learning contributes significantly to students' long-term historical reasoning and civic understanding (Wineburg, 2018; Seixas & Morton, 2013). However, there remains insufficient evidence explaining how digital pedagogies can be adapted to the developmental characteristics of younger learners. This gap highlights the need for age-appropriate digital learning models that combine technological innovation with pedagogical strategies suitable for primary classrooms.

The conceptual framework proposed in this study addresses these limitations by integrating digitalisation components—including digital learning resources, instructional technologies, interactive pedagogies, and digital learning environments—with the multidimensional constructs of Historical Thinking Skills. Unlike previous studies that examine digital tools independently, the proposed framework explains the pedagogical pathways through which digitalisation facilitates the development of historical inquiry, evidence evaluation, interpretation, chronological reasoning, and historical empathy. From a theoretical perspective, this framework extends Constructivist Theory and the Cognitive Theory of Multimedia Learning by illustrating how technology-mediated learning environments can promote disciplinary historical thinking rather than simply improving technological competence.

The findings also have important practical implications for educational stakeholders. For teachers, successful digitalisation requires not only technological proficiency but also pedagogical competence in designing inquiry-based learning experiences that utilise authentic historical sources. Teacher professional development should therefore emphasise the integration of digital literacy with historical pedagogy rather than focusing exclusively on technology operation. For curriculum developers, the findings support embedding digital historical inquiry, digital archives, and evidence-based historical investigation into curriculum standards. Furthermore, educational policymakers should ensure equitable access to digital infrastructure, provide sustained professional learning opportunities, and establish policy frameworks that promote ethical, inclusive, and pedagogically meaningful digital transformation in history education.

At the same time, greater access to digital historical information introduces new epistemic challenges. Online environments expose students to sources whose authorship, authority, evidence, and contextual reliability may be difficult to determine. Research on online reasoning demonstrates that effective evaluation requires learners to move beyond surface features of websites and actively investigate source credibility through comparison and verification across multiple sources. Accordingly, digital history education should develop not only students' ability to access historical information but also their capacity to question where information originates, who produced it, what evidence supports it, and how it compares with other accounts. Digitalisation may therefore strengthen HTS only when technological access is accompanied by explicit instruction in critical source evaluation.

Despite these contributions, the present study has several limitations. As a conceptual study based on literature review, the proposed framework has not yet been empirically validated. The reviewed literature also predominantly represents studies conducted in developed educational systems, potentially limiting the generalisability of the proposed framework across different educational contexts. Future research should therefore empirically examine the proposed conceptual

model using quantitative, qualitative, or mixed-method approaches. In particular, future investigations should explore the mediating roles of digital literacy, teacher digital competence, learning motivation, and historical inquiry, as well as moderating variables such as school infrastructure, socio-economic context, and teacher pedagogical experience. Such studies would provide stronger empirical evidence regarding the effectiveness of digitalisation in promoting Historical Thinking Skills within diverse educational settings.

CONCLUSION

This study examined the conceptual relationship between the digitalisation of history education and the mastery of Historical Thinking Skills (HTS) through a systematic synthesis of previous literature. The findings demonstrate that digitalisation extends beyond the integration of technological tools into classroom instruction and represents a pedagogical transformation that supports inquiry-based, student-centred, and meaningful history learning. Digital learning resources—including interactive multimedia, digital archives, virtual simulations, and collaborative online platforms—provide opportunities for students to engage more actively with historical evidence while fostering essential HTS dimensions, such as chronological reasoning, historical interpretation, evidence evaluation, and historical empathy. These findings reinforce the view that digitalisation can contribute not only to students' technological competence but also to the development of higher-order historical thinking.

From a theoretical perspective, this study contributes by proposing a conceptual framework that integrates digital pedagogical components with the multidimensional constructs of Historical Thinking Skills. The framework extends existing discussions on digital history education by explaining the pedagogical mechanisms through which digital technologies facilitate the development of disciplinary historical thinking. Consequently, it provides a theoretical foundation for future empirical investigations into technology-enhanced history learning.

The study also offers important practical implications. For educators, the findings emphasise that effective digitalisation requires pedagogically meaningful integration of technology rather than merely increasing the use of digital devices. For curriculum developers and policymakers, the proposed framework provides guidance for designing digitally enriched history curricula, strengthening teacher professional development, and promoting equitable access to high-quality digital learning environments that support historical inquiry and critical thinking.

Nevertheless, this study is limited by its conceptual nature and reliance on existing literature. The proposed framework has not yet been empirically validated in classroom settings, particularly within primary history education. Future studies are therefore recommended to examine the proposed model using quantitative, qualitative, or mixed-method research designs, while exploring the mediating and moderating roles of teacher digital competence, students' digital literacy, learning motivation, and school technological infrastructure. Such investigations will provide stronger empirical evidence regarding the effectiveness of digitalisation in promoting Historical Thinking Skills across diverse educational contexts.

Rather than viewing digitalisation simply as technological adoption, this study argues that digitalisation should be conceptualised as a pedagogical ecosystem that facilitates disciplinary historical inquiry. Consequently, future history education should integrate technology, pedagogy, and historical thinking as inseparable components of meaningful learning.

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