

A PEDAGOGICAL MODEL FOR DEVELOPING HISTORICAL THINKING THROUGH DIGITAL HERMENEUTICS IN HISTORY TEACHER EDUCATION

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Abstract

The rapid digitalization of education has transformed the ways historical knowledge is accessed, interpreted, and taught. In history education, digital historical resources have created new opportunities for developing historical thinking and critical analysis. However, the pedagogical mechanisms through which digital hermeneutics contributes to the formation of historical thinking among future history teachers remain insufficiently explored. This study aims to develop a pedagogical model for fostering historical thinking through digital hermeneutics in teacher education. The research employs conceptual analysis, comparative analysis, synthesis, and pedagogical modeling to examine contemporary scholarship on digital history, digital literacy, historical thinking, and hermeneutic pedagogy. The findings reveal that historical thinking develops through a five-stage digital hermeneutic process consisting of digital source access, source verification, hermeneutic interpretation, historical reasoning, and reflective evaluation. The proposed model integrates cognitive, interpretative, digital, critical, and cultural dimensions of learning. The study concludes that digital hermeneutics provides a comprehensive framework for developing historical thinking in digitally transformed educational environments and offers practical guidance for history teacher education programs.

Keywords: digital hermeneutics, historical thinking, history education, digital history, critical thinking, teacher education, digital literacy, inquiry-based learning, historical interpretation, cultural heritage

Introduction. The digital transformation of education has significantly influenced history teaching and learning across the world. Digital archives, virtual museums, online repositories, collaborative platforms, and multimedia resources have expanded opportunities for historical inquiry and interpretation. As a result, future history teachers are expected not only to possess historical knowledge but also to develop competencies that enable them to critically engage with digital historical information and facilitate meaningful learning experiences for students. Historical thinking has become one of the primary goals of contemporary history



education. It involves the ability to analyze evidence, contextualize events, evaluate historical claims, and construct reasoned interpretations of the past. According to Burgos-Videla et al. (2025), historical discourse and historical methods play a central role in developing critical thinking and analytical reasoning in social studies education. Therefore, preparing future teachers to foster historical thinking requires innovative pedagogical approaches that integrate historical inquiry with digital technologies. The concept of digital hermeneutics has emerged as a promising framework for understanding how digital environments influence interpretation and meaning-making. Fickers et al. (2022) describe digital hermeneutics as an interdisciplinary approach that combines traditional interpretative practices with digital methods and technologies. Similarly, digital tools have been shown to support inquiry-based learning by enabling students to investigate historical questions and engage with multiple perspectives (Lee, 2023). Despite growing interest in digital history and digital literacy, limited research has focused on the pedagogical structures through which digital hermeneutics can support the development of historical thinking among future history teachers. Therefore, this study aims to develop a pedagogical model that explains how digital hermeneutic practices contribute to historical thinking in history teacher education.

Methodology. This study employed a conceptual and model-building research design. Rather than testing a specific intervention, the research sought to develop a theoretically grounded pedagogical model by synthesizing findings from contemporary studies on digital hermeneutics, history education, digital literacy, and critical thinking. The methodological framework was based on four complementary methods: literature analysis, comparative analysis, synthesis, and pedagogical modeling. Literature analysis was used to identify major theoretical concepts related to digital hermeneutics and historical thinking. Comparative analysis enabled the examination of similarities and differences among existing educational approaches. Synthesis was employed to integrate theoretical perspectives into a coherent framework, while pedagogical modeling was used to construct a practical model for history teacher education. The primary sources included studies on digital history, digital literacy, inquiry-based learning, collaborative technologies, hermeneutic pedagogy, and historical understanding. Particular attention was given to research addressing digital interpretation, cultural heritage, critical thinking, and teacher preparation. The resulting model was evaluated in terms of theoretical consistency, pedagogical relevance, and applicability to contemporary history education. This





methodological approach provided a systematic basis for identifying key mechanisms that connect digital hermeneutics with the development of historical thinking among future history teachers.

Results. The analysis of the literature resulted in the development of a pedagogical model designed to foster historical thinking through digital hermeneutics. The model conceptualizes learning as an interpretative process in which students actively engage with digital historical sources, construct meaning, and reflect upon historical evidence.

The proposed model consists of five interconnected stages:

The first stage focuses on identifying and accessing relevant digital historical materials. Students interact with online archives, digital libraries, virtual museums, databases, and collaborative platforms. This stage promotes digital literacy and information-seeking competencies, which are fundamental for effective historical inquiry.

The second stage emphasizes critical evaluation of historical sources. Learners examine authenticity, reliability, authorship, and bias within digital materials. Through source criticism, students develop the ability to distinguish credible information from unreliable content and strengthen their critical thinking skills.

Third stage, students engage in meaning-making processes. Historical texts, visual materials, and digital artifacts are interpreted within their historical and cultural contexts. Learners analyze perspectives, intentions, and symbolic meanings while constructing informed interpretations. This stage represents the core of digital hermeneutic practice.

The fourth stage involves connecting evidence to broader historical explanations. Students compare sources, identify relationships between historical events, and develop reasoned arguments. Historical reasoning transforms interpretation into structured historical understanding.

The final stage focuses on reflection and self-assessment. Students critically examine their interpretations, consider alternative perspectives, and evaluate the strengths and limitations of their conclusions. Reflection supports deeper historical understanding and lifelong learning.

Table 1.

Pedagogical Model of Digital Hermeneutics

Stage	Learning Activity	Educational Outcome
Digital Source Access	Exploration of digital historical resources	Digital literacy



Source Verification	Evaluation of source credibility	Critical thinking
Hermeneutic Interpretation	Meaning construction and contextual analysis	Historical understanding
Historical Reasoning	Evidence-based explanation	Historical thinking
Reflective Evaluation	Reflection and assessment	Reflective competence

The model incorporates five interrelated dimensions. The cognitive dimension supports knowledge construction; the interpretative dimension facilitates meaning-making; the digital dimension develops technological competence; the critical dimension promotes analytical evaluation; and the cultural dimension strengthens understanding of historical heritage and collective memory. Together, these dimensions create a holistic framework for developing historical thinking within digitally transformed educational environments.

Discussion. The findings suggest that digital hermeneutics provides a valuable pedagogical foundation for history teacher education. The proposed model aligns with previous studies emphasizing the importance of interpretative learning and critical inquiry in history education. Sebbowa, Ng'ambi, and Brown (2014) demonstrated that collaborative digital environments such as wikis support interpretative engagement and historical understanding. Their findings indicate that digital platforms can facilitate active participation and collective meaning-making. Similarly, Lee (2023) emphasized the role of digital tools in supporting inquiry-based learning and historical investigation.

The proposed model also corresponds with Mkrtchyan's (2025) findings regarding the relationship between digital-historical literacy and critical thinking. Source verification and reflective evaluation are particularly important for developing the competencies required to navigate contemporary information environments characterized by information overload and misinformation. The concept of hermeneutic rationality discussed by de Macedo Santos et al. (2023) further supports the model by highlighting the importance of interpretation in digital learning environments. Historical understanding is not achieved through information access alone but through reflective interpretation and contextual analysis.



Martelli (2022) emphasized the role of analytical-hermeneutic approaches in fostering empathetic and transformative historical understanding. This perspective is reflected in the interpretative and reflective components of the proposed model. Likewise, Arriazu (2018) argued that hermeneutic approaches strengthen critical thinking in post-truth contexts, where individuals must evaluate competing narratives and interpretations. The model is also consistent with the concept of digital hermeneutics developed by Fickers et al. (2022) and Van Den Akker et al. (2011), who viewed digital technologies as tools for interpreting cultural heritage and historical knowledge. By integrating these perspectives, the proposed framework extends existing scholarship and provides a practical approach for history teacher education.

Conclusion. This study developed a pedagogical model for fostering historical thinking through digital hermeneutics among future history teachers. The model consists of five interconnected stages: digital source access, source verification, hermeneutic interpretation, historical reasoning, and reflective evaluation. Together, these stages create a systematic framework for developing historical thinking in digitally transformed educational environments. The study demonstrates that digital hermeneutics extends beyond technological usage and represents an interpretative approach to historical learning. Through engagement with digital historical sources, learners develop critical thinking, contextual understanding, evidence-based reasoning, and reflective competence. These abilities are essential for future history teachers who must prepare students to navigate complex historical information and diverse perspectives. The theoretical contribution of the study lies in integrating digital history, hermeneutic pedagogy, inquiry-based learning, and critical thinking into a unified educational framework. The practical contribution involves providing history teacher education programs with a structured model for designing learning experiences that promote historical thinking through digital environments.

Future research should examine the implementation of the proposed model in different educational contexts and explore how emerging technologies such as artificial intelligence and advanced digital heritage platforms may further enhance digital hermeneutic learning. The findings suggest that digital hermeneutics can play a significant role in modernizing history education and strengthening the professional preparation of future history teachers

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