

Crossing the Traditional Wall: A Consilient Framework for Interdisciplinary Historical Reconstruction of Pre-Recorded Eras

Melintasi Tembok Tradisi: Kerangka Konsiliens bagi Rekonstruksi Sejarah antara Disiplin untuk Era Pra-Rekod

*MOHD HASFARISHAM ABD HALIM¹, SHAIFUL SHAHIDAN², MOKHTAR SAIDIN³ & ASYAARI MUHAMAD¹

¹ Institute of the Malay World and Civilization, Universiti Kebangsaan Malaysia

² Faculty of Social Sciences and Humanities (FSSK), Universiti Kebangsaan Malaysia

³Geopark and Geotourism Creative Solution, Malaysia

*Corresponding author: email address: mhasfarisham@ukm.edu.my

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ABSTRACT

Traditional historiography has been mostly reliant on textual and documentary evidence as the major foundation for its historical claims and findings. The text-centered approach is crucial in producing a faithful record of information about nations and civilizations through a strict stress on factual validity, but it runs into fundamental epistemological issues when used for eras without pre-recorded written documentation. This paper is a theoretical and methodological discussion of interdisciplinary historical reconstruction across the traditional disciplinary boundaries through “crossing the traditional wall” the systematic integration of independent streams of evidence from archaeology, natural science, and material analysis to reinforce historical inferences. The aim of this research is to build a theoretical and methodological framework for reconstructing pre-recorded historical frameworks, employing convergent and multi-evidence procedures that are more accurate and epistemically robust than single-disciplinary methods. This consistent multidisciplinary approach allows historians to collect and understand historical information according to several separate lines of evidence, and thus overcomes the limitations of the conventional assumption that historical data without textual records are inherently unreliable or invalid. This study is a case study of archaeological research data from the Ancient Kedah sites in Bujang Valley, Kedah, to demonstrate the implementation of this paradigm. The findings demonstrate that consistent interdisciplinary techniques are an essential prerequisite in contemporary historical research to achieve factual accuracy, epistemic validity, and holistic interpretation. The “crossing the traditional wall” paradigm enriches the approach to historical research and provides new aspects in understanding past societies, especially eras without written records.

Keyword: Historical methodology, consilient interdisciplinarity, archaeology, pre-recorded research, historiography, epistemology

ABSTRAK

Pensejarahan tradisional kebanyakannya bergantung kepada bukti tekstual dan dokumentari sebagai asas utama bagi dakwaan dan penemuan sejarahnya. Pendekatan berpusatkan teks ini penting dalam menghasilkan rekod maklumat yang tepat tentang negara dan tamadun melalui penekanan yang ketat terhadap kesahihan fakta, namun ia menghadapi masalah epistemologi yang mendasar apabila digunakan untuk era tanpa dokumentasi bertulis. Kertas ini merupakan perbincangan teori dan metodologi tentang rekonstruksi sejarah antara disiplin merentasi sempadan disiplin tradisional melalui apa yang diistilahkan sebagai “melintasi tembok tradisi” iaitu integrasi sistematik aliran bukti bebas daripada arkeologi, sains semula jadi, dan analisis material bagi mengukuhkan inferens sejarah. Tujuan kajian ini adalah untuk membina kerangka teori dan metodologi bagi merekonstruksi kerangka sejarah pra-rekod, dengan menggunakan

prosedur konvergen dan pelbagai bukti yang lebih tepat serta kukuh dari segi epistemik berbanding kaedah satu disiplin. Pendekatan pelbagai disiplin yang konsisten ini membolehkan sejarawan mengumpul dan memahami maklumat sejarah berdasarkan beberapa baris bukti yang berasingan, seterusnya mengatasi batasan andaian konvensional bahawa data sejarah tanpa rekod tekstual adalah pada dasarnya tidak boleh dipercayai atau tidak sah. Kajian ini merupakan kajian kes data penyelidikan arkeologi dari tapak arkeologi Kedah Tua di Lembah Bujang, Kedah, bagi menunjukkan pelaksanaan paradigma ini. Dapatan kajian menunjukkan bahawa teknik antara disiplin yang konsisten merupakan prasyarat penting dalam penyelidikan sejarah kontemporari bagi mencapai ketepatan fakta, kesahihan epistemik, dan interpretasi yang holistik. Paradigma “melintasi tembok tradisi” ini memperkayakan pendekatan penyelidikan sejarah dan membuka dimensi baharu dalam memahami masyarakat lampau, terutamanya era yang tidak mempunyai rekod bertulis.

Kata Kunci: Metodologi sejarah, antara disiplin konsisten, arkeologi, penyelidikan pra-rekod, pensejarahan, epistemology

INTRODUCTION

Historical records provide the foundation for understanding human civilizations, retaining knowledge of earlier civilizations, and understanding the progress of nations and cultures (Misbah 2018; van Driel et al. 2024; Aluda 2024). Historians can trace the history of societies, comprehend cultural transformations, and establish relationships between the past and the present by systematically recording historical occurrences (Cruceanu 2015; Shahin 2016; Wulan et al. 2022). The traditional historiography has often depended on texts and resources as a basis for historical statements and conclusions (Cernin 2020). This text-centered approach is necessary for developing accurate narratives of nations and civilizations, with an emphasis on factual accuracy, but it creates substantial epistemological challenges when used for periods that lack written records (McLoughlin & Santos 2024).

The limits of text-dependent historiography become more evident when considering pre-literate periods, when the absence of written materials creates significant gaps in our understanding of history (Gupta 2021; Carvalho & Agosto 2024). This methodological limitation resulted in the exclusion of entire eras and civilizations that lacked writing or had lost their written records. Therefore, there is a pressing need for new analytical approaches to the development of historical narratives that do not depend mainly on textual evidence (Collingwood 1985; Carr 1965; Boldt & Alinia 2020). Such frameworks can only be constructed by stepping outside the usual academic boundaries and incorporating several independent streams of knowledge from various disciplines (van der Dussen 2016; Tamburaka 1999; Pehlivan & Sener 2014).

Interdisciplinary techniques are increasingly considered key instruments for historical reconstruction in order to comprehend times before they were documented (Ingram, Rao & Silverman 2022; Rohani Ab. Ghani 2023). The systematic integration of evidence from archaeology, natural sciences and material analysis provides a powerful counterweight to text-based historiography (Huvila, Skold & Borjesson 2021; Krmnicek 2023; Tavangar & Forghani 2023). This consilient strategy, where a constellation of independent evidences converge to confirm historical judgments, has higher epistemic warrant and factual correctness than single-discipline approaches (Croce 1941). The confluence of multi-evidence approaches enables historians to question the established premise that historical data that does not have a written record is automatically wrong or false.

Research on archaeological sites in Malaysia has demonstrated the efficacy of employing interdisciplinary methodologies to reconstruct pre-recorded history (Abd Halim et al. 2024). One of the best examples of the conciliar technique is based on archaeological studies in the Bujang Valley, Kedah, whose civilization began around the 6th century BC. Archaeological studies at the Kedah Tua archaeological site have recorded physical evidence of early Southeast Asian civilizations in their technological, economic and cultural achievements. For example, the industrial, trade and religious monument that allows for an understanding of pre-literate Malaysian history which cannot be gleaned from literary sources alone (Kansa & Kansa 2022).

Interdisciplinary historical reconstruction is theoretically founded on consilience, the convergence of facts from independent sources supporting major historical claims (McCormick 2011; Symons 2022). This strategy suggests that the many disciplinary techniques produce different sorts

of evidence, with their strengths and flaws (Costa & Reghin 2023). That is, when multiple independent lines of evidence point to the same conclusion in history, that conclusion is more robust than any single line of evidence (Miller 2023; Rasmussen 2022). This methodological framework addresses the epistemological issues of reconstructing pre-recorded history by setting rigorous criteria for evidence assessment and synthesis (Romero 2026; Huang 2024).

In this paper, this research examines theoretically and methodologically interdisciplinary historical reconstruction, which exceeds the usual academic boundaries, “crossing the traditional wall”. The technique is based on a systematic integration of diverse kinds of evidence from archaeology, natural sciences and material analysis to support historical interpretations (Ohrvik & Sarti 2024; Foqara 2025). This research aims to build a theoretical and methodological framework for the reconstruction of pre-recorded historical narratives based on convergent and multi-evidence approaches, which are more precise and epistemically robust than single-disciplinary methods (Burchardt 2024; Sucu 2024). The ancient Kedah archaeological sites is used as a case study to highlight the importance of consilient interdisciplinary techniques to attain factual correctness, epistemic validity, and holistic interpretation in current historical research (Srimaal 2023; Westberg 2025). The “crossing the traditional wall” paradigm enhances historical research methodologies and presents new insights for the understanding of previous societies, especially during periods without written record (Eze 2025).

CROSSING THE TRADITIONAL WALL

“Crossing the traditional wall” is a phrase introduced by Ranke (Kuang & Paul 2025) in historical research, adopted here as a framework grounded in explicit theory and methodology for systematic historical reconstruction. In its broadest sense, the phrase captures the act of overcoming epistemological, institutional, and ontological barriers that have long separated text-based historiography from material-based archaeology and the natural sciences.

The framework operates through four interrelated mechanisms. First, epistemic transfer moves concepts and methods across disciplinary boundaries, allowing them to be reconfigured in new contexts rather than simply transplanted. Second, conceptual integration produces boundary

and interlanguage concepts - that is, shared concepts that bridge disciplinary vocabularies - enabling meaningful cross-disciplinary communication. Third, methodological pluralism coordinates complementary research methods to generate independent streams of evidence. Fourth, convergent verification through consilience brings multiple independent lines of evidence together to strengthen historical inferences beyond what any single discipline could achieve alone.

This framework proves especially valuable in reconstructing poorly documented historical periods, where textual evidence is absent or insufficient - circumstances particularly relevant to prehistoric contexts such as shell midden sites and pre-literate communities that left no contemporaneous written records. By doing so, it elevates material, archaeological, and scientific data from incidental supporting sources to the fundamental epistemic basis of historical knowledge.

This general applicability is reflected in how the framework is operationalized in this study. Here, “crossing the traditional wall” denotes a consilient mode of historical inference in which independent evidence streams - textual, archaeological, chronometric, environmental, and material-scientific - are first analysed within their own disciplinary protocols, then integrated through explicit triangulation rules to test a historical claim. The “wall” itself represents the inherited separation between text-centered historiography and the material or scientific evidentiary domains essential for reconstructing pasts without contemporaneous written records. The framework therefore rests on three linked principles: evidentiary independence (each evidence stream is assessed on its own disciplinary terms before integration), inferential convergence (independent lines of evidence are brought to bear on a single historical claim), and transparent conflict resolution (where evidence streams diverge, disagreements are explicitly acknowledged and methodologically adjudicated).

THEORETICAL FOUNDATIONS: DEFINING ‘CROSSING THE TRADITIONAL WALL’

1. Conceptual Definition and Theoretical Justification

The notion of “crossing the traditional wall” is the systematic transcendence of disciplinary boundaries in historical research through the integration of independent evidentiary streams, analytical

methods, and interpretive frameworks from multiple disciplines to achieve epistemic robustness and factual accuracy that single-discipline approaches cannot attain. This concept is grounded in three theoretical premises, such as the following:

- a. The traditional disciplinary boundary in historical research includes the division between text-based historiography and material-based archaeology. It is an epistemological “wall” that artificially constrains the evidentiary basis, analytical methods, and interpretive possibilities available to historians (Ash 2019). The discipline historically arose from the professionalization and institutionalization of academic disciplines in the 19th and 20th centuries (Ash 2019), which generated distinct methodological traditions, evidentiary standards, and interpretive conventions that frequently operated in isolation from one another.
- b. There are times in history, such as prehistoric periods, where there is no written record. Textual sources alone are not only insufficient but also epistemologically impossible; historical knowledge must include tangible evidence, archeological procedures, and natural science approaches as main rather than secondary forms of information (Eze 2025). This criterion changes interdisciplinary from a growing choice into a basic requirement for the historical reconstruction of the documented times of the past.
- c. Systematic integration of distinct streams of information from different fields, termed ‘consilient crossing,’ might improve historical findings by convergent validation. This permits consistent interpretations; therefore, the historical reconstructions can be more epistemically strong than any one piece of evidence can be (McCormick 2011). The principle of epistemic consilient crossover provides theoretical justification for transcending discipline borders.

2. Conceptual Framework for Interdisciplinary Historical Reconstruction

This study will present a conceptual framework for interdisciplinary historical reconstruction, consisting of four interlocking components. This conceptual framework draws upon four key strands of evidence: textual and documentary sources, archaeological material evidence, scientific data, and experimental and hands-on reconstructions. Each stream of evidence is collected by various

disciplinary approaches and gives independent knowledge on historical cultures.

The approach also employs a systematic process for integrating evidence across disciplinary boundaries. Explicitly identifying research concerns that call for a multi-evidence strategy, including the selection of appropriate analytical methods that match the evidence and research questions, and systematic documentation and data management that allows comparisons across disciplines. Interdisciplinary integration has to be systematic and reproducible, but not arbitrary (Westberg 2025). Cross-validation techniques are used to refine repeated interpretations based on the convergence and divergence of the procedure and to triangulate distinct lines of evidence.

The epistemic transformation framework recognizes that the interdisciplinary integration radically transforms the understanding of history by expanding the temporal and spatial scales of analysis beyond documents and by adding environmental, material and technological dimensions to historical narratives. The shift from text-based descriptive narratives to multi-evidence problem-based perspectives shows causal mechanisms and processes that are hidden in textual sources alone. This undermines traditional periodization and interpretive frameworks, which are mostly based on textual evidence. This is an epistemological change, a qualitative change in the understanding of history and not just an addition of quantitative facts (Srimaal 2023).

This framework is based on a clear reflexive awareness of: i) the epistemological assumptions and constraints of each disciplinary method, ii) the potential biases, gaps and uncertainties in each body of evidence, iii) the difficulties in synthesising evidence across different scales, resolutions and formats, iv) the limitations of inference and interpretation drawn from the evidence available, and v) the constant need for methodological enhancement and theoretical advance.

METHODOLOGY FRAMEWORK

This section explains a methodological protocol for systematically integrating archaeological research as evidence in the reconstruction of historical narratives. This framework consists of several principle and methodological components (Table 1) that are rationally interrelated with each other and has specific procedures for completing the findings of the study data (Table 1).

TABLE 1: Application of consilient methodology, framework components and key methodology principles in interdisciplinary historical research

Aspect	Description
a) Key Methodological Principles	
Evidence Convergence	The strongest inferences from history are made from several independent sources of evidence that point to the same or mutually reinforcing interpretations.
Epistemic Independence	Each line of evidence should be collected and analyzed independently before integration to avoid confirmation bias and ensure the validity of triangulation.
Methodological Transparency	All methods, procedures, and analytical processes should be clearly and transparently documented to enable verification and replication by other researchers.
Epistemic Openness	Researchers should be open to the possibility that evidence from different disciplines may produce different or conflicting conclusions, and this should be critically analyzed.
Systematic Integration	Integration of evidence from interdisciplinary should be done systematically using a clear theoretical framework, not ad hoc or arbitrarily.
Contextual Awareness	The evidence should be interpreted in the context of the discipline from which it originated and the wider historical context to avoid misinterpretation or misuse of evidence.
b) Methodological Framework Components	
Consilience as Epistemic Principle	The principle states that the most robust conclusions arise when multiple independent disciplines converge on the same conclusion.
Methodological Pluralism as Operational Framework	The systematic and coordinated use of multiple research methods from different disciplines.
Epistemic Transformation as Analytical Result	This change in historical understanding and interpretation results from integrating multiple disciplines.
Textual/Documentary Sources	Written records, manuscripts, inscriptions, and historical documents that provide narrative information and cultural context.
Archaeological Material Evidence	Artifacts, structures, sites, and material remains that provide physical evidence of past activities, technology, and social organization.
Scientific Data	Scientific analyses such as radiocarbon and OSL dating, geochemical, palynological investigations, DNA analysis and other material science procedures, which yield objective and measurable data.
Experimental/Hands-on Reconstructions	Archaeological experiments and practical reconstructions to understand technological processes, manufacturing techniques, and past activities through direct experience.
c) Consilient Methodology in Interdisciplinary Historical Research Application Purposes	
Primary Purpose	To create a theoretical and methodological framework for reconstructing pre-recorded historical frameworks through convergent and multi-evidence approaches more accurate and epistemically robust than single-disciplinary methods.
Systematic Integration	Combining independent sources of data from archaeology, natural science, and material analysis in a systematic way to support historical inferences across the conventional divides of disciplines.
Overcoming Traditional Historiography Limitations	Overcoming constraints of text-based techniques, which have basic epistemological problems when used to periods without prior written documentation.
Multi-Source Evidence Collection	It permits historians to gather and interpret historical material along numerous independent lines of evidence, thus challenging the traditional premise that historical data without textual documents is intrinsically inaccurate or invalid.
Epistemic Transformation	It is revolutionizing the way that historians study and interpret the past by combining several disciplines to arrive at a more holistic knowledge and epistemically robust conclusions.
Comprehensive Historical Reconstruction	A systematic strategy to reconstructing the history of societies and civilizations that do not have enough written documents, using converging data from several fields.
Research Rigor	
Convergent Procedures	The employment of convergent and multi-evidence approaches, which are more accurate and epistemically resilient than single-disciplinary techniques, and the validity of which is guaranteed by the triangulation of data from independent sources.
Cross-Validation	Applying cross-validation processes to triangulate independent lines of information, such that each result is supported by many mutually reinforcing sources of data.

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Methodological Pluralism	Methodological pluralism as a way of integrating qualitative and quantitative methods across different fields to improve precision.
Systematic Documentation	Systematic documentation and thorough data management ensure that every finding can be confirmed, repeated, and critically assessed by other researchers.
Consilience as Epistemic Principle	Using consilience as an epistemic principle that requires historical conclusions to be established by the convergence of data from diverse fields and so strengthening epistemic validity.
Scientific Material Analysis	Providing objective and measurable data through scientific investigations such as radiocarbon and OSL dating, geochemical analysis, palynological studies, and other material science procedures.
Robust Theoretical Framework	A strong theoretical framework based on three theoretical dimensions: consilience as the epistemic principle, methodological pluralism as the operational framework, and epistemic transformation as the analytical consequence.
Research Benefits	
Overcoming Text-Centered Historiography Limitations	Overcoming the limits of text-based historiography that cannot supply sufficient material for pre-recorded eras, creating new frontiers of historical knowledge.
Factual Accuracy	Offering a double check of numerous sources of evidence to improve the factual correctness, therefore lowering the danger of biased or wrong interpretations based on a single source.
Epistemic Validity	Greater epistemic validity by making sure that historical conclusions are supported by converging data from other disciplines, which makes us more confident about the findings.
Holistic Interpretation	Enabling a holistic interpretation of previous cultures, taking into account material, environmental, social, economic, and cultural variables for more thorough understanding.
Enriching Historical Research Approaches	Augmenting the techniques of historical study by offering new perspectives on comprehending ancient societies, especially those ages without written documentation.
Opening New Knowledge Dimensions	Revealing information that cannot be obtained through textual sources alone, such as technology, trade, and social organization, opening new aspects in historical knowledge.
Enhancing Academic Credibility	Enhancing the academic credibility of pre-recorded historical research by establishing a solid and scientifically verified evidentiary base.
Practical Applications	Allowing for practical applications in heritage management, archaeological site conservation, cultural tourist development, and more accurate and meaningful historical teaching.

Source: The Authors

The methodology of this study, “Crossing the Traditional Wall,” is a consilience strategy designed to surmount the constraints of traditional text-based historiography. It combines independent evidence streams across multiple disciplines to produce epistemically stronger historical findings. The methodological framework rests on three theoretical dimensions (ontology, epistemology, and axiology) and four lines of convergent evidence, namely archaeology, natural science, material analysis, and contextual evidence, that operate independently yet in mutual support. Six major methodological principles underpin this approach: (i) independence of evidence streams, (ii) systematic convergence, (iii) epistemic triangulation, (iv) robustness of inference, (v) cross-disciplinary validity, and (vi) holistic integration.

Operationally, this framework is enacted through a seven-stage methodological workflow. In the first stage, the study formulates a specific historical claim

that cannot be resolved through textual evidence alone. In the second stage, it identifies the evidence streams relevant to that claim and articulates why each is necessary. In the third stage, each stream is collected and analyzed independently to preserve evidentiary autonomy and reduce confirmation bias. In the fourth stage, the chronology, provenance, analytical assumptions, and limitations of each dataset are explicitly documented. In the fifth stage, convergent and divergent findings are systematically compared across datasets. In the sixth stage, conflicts among data streams are adjudicated through explicit criteria, including source provenance, contextual integrity, analytical precision, and reproducibility. In the seventh and final stage, the historical inference is presented together with its confidence level, remaining uncertainty, and the reasoning for preferring one interpretation over competing alternatives.

Taken together, this interdisciplinary consilience methodology enables a more accurate, valid, and comprehensive reconstruction of prehistoric eras than standard single-discipline approaches can offer.

TOWARDS CONSILIENT FRAMEWORK FOR HISTORICAL RECONSTRUCTION

As a whole, the study provides the first formal theoretical explanation and conceptual context for defining the phrase “crossing the traditional wall” in historical methodology. Although previous research has recognized the importance of an interdisciplinary approach (Srimaal 2023), no framework has yet been proposed that systematically captures this boundary crossing as a particular methodological strategy grounded in the epistemic principle of consilience (McCormick 2011). This study addresses this gap in the theoretical literature by formulating ‘crossing the traditional wall’ as a systematic framework rather than an ad hoc technique.

The study also introduces a broad conceptual model that encompasses three theoretical dimensions: i) conciliation as an epistemic principle that legitimizes the convergence of independent streams of evidence (Symons 2022), ii) methodological pluralism as an operational framework that allows systematic interaction between historical, archaeological, and natural science methods (Costa & Reghin 2023), and iii) epistemic transformation as an analytical result where interdisciplinary integration fundamentally redefines historical interpretation by providing new scales of analysis, exposing hidden causal mechanisms, and challenging text-centered narratives (Miller 2023). This three-dimensional model is a solid theoretical basis for interdisciplinary historical research.

This work also concerns the explicit methodological rules for continuous integration in historical reconstructions previously recorded. Earlier interdisciplinary historical research sometimes employs numerous techniques, but without a coherent explanation of the reasoning, methodology, or cross-validation procedures (Rasmussen 2022). This study addresses these methodological gaps by detailing issues related to i) the rationale for choosing particular analytical techniques; ii) an integrated workflow linking archaeological excavation, material characterization, chronometric dating, and paleoenvironmental reconstruction; and iii) a cross-validation procedure to triangulate independent lines of evidence.

This protocol provides a replicable methodological framework for future research and this makes historical interdisciplinary research more objective. In addition, this study also aims to demonstrate how interdisciplinary integration fundamentally changes the interpretation of history and not just by adding new data sources. This integration allows epistemic changes in the types of questions asked, the causal vocabulary used, and the scale of explanations achieved (Romero 2026) to be determined. This study illustrates how the bridging of disciplinary boundaries takes historians from descriptive narratives to integrative and problem-driven accounts that link human behaviors to the environment, technology, and material structures (Huang 2024).

The application of this consistent framework to concrete case studies such as the ancient Kedah archaeological sites is expected to demonstrate how the systematic integration of textual sources, archaeological evidence, material analysis, chronometric dating and paleoenvironmental reconstruction enables robust historical reconstructions of the pre-recorded era that would be impossible through any single disciplinary approach. This empirical demonstration validates the theoretical framework and methodological protocols developed in this research.

This makes this study a collective contribution to establishing a new theoretical and methodological foundation for interdisciplinary historical reconstructions of the pre-recorded era, going beyond previous scholarship that has acknowledged the importance of interdisciplinary studies without systematically theorizing its conceptual foundations, epistemic principles or methodological protocols.

HISTORIOGRAPHY VS ARKEOLOGICAL CONCEPT

History serves as a tool for understanding past, present, and future behavior (Cairns & Garrard 2024). It is a comprehensive record of the past, including literature, law, building, and social, religious, and philosophical aspects of a society (Sobana 2008). Herodotus and Thucydides (Adjepong 2017) also document the same events, offering insight into history as a study of a nation’s or civilization’s rise and fall. Meanwhile, Aristotle (Trang & Quynh 2021) perceives history as a system that scrutinizes the emergence of a civilization, encompassing chronological issues, events, records, and tangible evidence. Humans must have carried out this task

in the past (Ahlskog 2019), necessitating a thorough set of guidelines for future research. It is crucial to continuously study and research history, particularly the history of a nation's civilization, as it not only satisfies curiosity about a community and the lives of its characters and heroes but also fosters admiration for human life in the past.

Furthermore, studying history can offer insights into a particular issue or matter, facilitate comparisons with contemporary life, and foster a sense of identity and admiration for one's nation and homeland (Carr 1965). Understanding the importance of this, the study of history in Malaysia has expanded its scope, not only focusing on the evidence of manuscript writing in archives, libraries, and galleries, but also supporting evidence to strengthen the writing record, which has become a necessity. Therefore, the field of historiography urgently requires the expertise of archaeologists and similar professionals to gather evidence, thereby bolstering and validating the current writing records.

Archaeology in general is also no different from the study of historiography in its basic principles. This is because archaeology itself is a field of knowledge about humans and past societies based on a systematic analysis of materials and the remains of artifacts found in the field (Hardesty 2010). It is also an international discipline that combines literature, science, and technology across borders in search of new meanings for human antiquity and ancient civilizations. It can be concluded that archaeology is a discipline that studies humans' past, cultures, and their environments through cultural and natural remains, using a systematic research methodology and various approaches from other disciplines (Fagan 2016) to bolster existing historical data.

Cultural remains focus not only on man-made material aspects like artifacts and features but also on non-human-made aspects indirectly produced by human actions in building their culture, such as ecofacts (Peregrine 2017). Since the fields of pure history and archaeology share the same basic line of inspiring past events based on facts, archaeology has become the primary method for historians to validate data, as it is capable of excavating the past and reconstructing it based on a systematic study of field findings.

SOURCES

In the study of historiography, textual sources and records constitute the most important documents describing past events (Kipping, Wadhwani &

Bucheli 2013). Textual sources often contain data findings that are often referred to as chronicles, official records, manuscripts, printed books, pamphlets, broadsheets, letters, diaries, registers, and archives (Ohrvik & Sarti 2024). But so often there is also an ambiguity of textual evidence that makes knowledge related to the past become limited and not comprehensive.

On the need to clarify the value of historiography, historians often express the views and concepts of "it really happened" (Boldt & Alinia 2020), "history is a science" (van der Dussen 2016), and "history is an art" (Pehlivan & Sener 2014) to compile and complete historical data. After the 19th century, then consciousness-related "the possibility of knowing the past" and is it possible to tell the truth about "what really happened?" began to be put into practice, which opened a new chapter towards a more dynamic and interdisciplinary historical study carried out.

Burke (1998) has brought the attention of historians to debates and questions related to history and fiction as well as questions related to authenticity, form, and bias in historical and historical sources. This phenomenon allows various writing genres to emerge, one of which is in the form of novels based on the historical fiction genre (Maurya 2021) and historical literary texts (Yusmadi et al. 2025). However, both sources still require a process of analysis of the validity of the source to verify the authentic value of the data. This is because the text in question is sometimes full of imaginary stories, fables, and so on (Akhmetbekova, Auyesbayeva & Ibrayev 2018) that require a screening process to be carried out to ensure that only reliable data is used in the interpretation of historiography.

In addition, one of the primary fields that supports the existence of historical sources is archaeology. The establishment of several study centers at the university level, especially in Malaysia (Salleh 1989), has placed serious emphasis on the study of historiography, with the aim of conducting research and providing appropriate interpretations of the national and global historiography framework. The Ministry of National Unity established the Department of Museums Malaysia, the National Archives of Malaysia, and the Department of National Heritage under the Ministry of Tourism, Arts, and Culture (MOTAC) to preserve, maintain, continuously monitor, and exhibit heritage collections and historical materials (Ramli 2015), with the aim of positively influencing the values and morals of society through national history. Thus, the

empowerment of applied history involves the use of archaeological studies, especially in the field, to strengthen existing documentation records.

TEXTUAL SOURCES, ARCHAEOLOGICAL EVIDENCE AND INTERDISCIPLINARY INTERPRETATION

The results of the discussion above show that the writing record is important in proving historical events, but in some studies it cannot be used as a backup and requires other disciplines as a tool to complete the historiography framework. For this reason, archeology is seen as one of the areas that highlights helping to complete chronology and historical events through its multidisciplinary approach. This is because the archaeological study itself is divided into several sub-units, including prehistoric (Watkins 2021), protohistoric (Gataullina et al. 2016), early civilization (Constantin & Baias 2015), historical archaeology (Beaune & Abadia 2018), ethnoarchaeology (Abdul 2018), urban archaeology (Ruepke & Raja 2021), and public archaeology (Cho, Zoh & Woo 2024), which can help complete the historiography data.

Among the evidence that supports archaeological studies complementing the historical data can be seen based on archaeological studies of the ancient Kedah civilization as an example. Some scholars say the historiography of ancient Kedah dates back to the 2nd century AD (Rodziadi Khaw & June 2021), but the data findings have been supplemented through archaeological studies at the Sungai Batu Archaeological Complex, which show this civilization has started since the 6th century BC (Abd Halim et al. 2025a; Abd Halim et al. 2025b;). The findings have also corroborated written and trade records from Indian sources such as Tamil poetry (Zvelebil 1973), Sanskrit literature (Whetley 1961), inscription sources (Rodziadi Khaw 2011), and Arabic sources (Tibbetts 1979), which record evidence of the kingdom's involvement in early industrial and trade activities.

The Ancient Kedah case illustrates why interdisciplinary integration changes interpretation rather than merely adding information. Read in isolation, textual traditions provide only partial and uneven evidence for chronology, exchange, and polity formation. Archaeological context, materials analysis, survey data, and dating evidence instead make it possible to test those traditions, refine chronology, and reconstruct technological

and economic activity that the textual record alone underdetermines. In this sense, interdisciplinarity does not simply supplement historical narrative; it reorganizes the evidentiary hierarchy on which that narrative rests.

So in particular, the initial record can be filtered for truth with archaeological evidence in the field into physical evidence against the evaluation of the record. It is a process that allows the criticism of sources to be carried out simultaneously, which ultimately allows the data and the interpretation of the study to be reinforced. This proves that nowadays most historical studies have begun to conduct research based on “across the traditional wall,” which emphasizes the application of various branches of knowledge that help strengthen the historical framework of a civilization.

CONCLUSION

This article has argued that periods without contemporaneous written records should not be treated as historically inaccessible or methodologically weak. Rather, robust historical reconstruction becomes possible when historians integrate independent textual, archaeological, material-scientific, and environmental evidence through a transparent consilient framework. The Ancient Kedah case demonstrates that such integration can refine chronology, substantiate evidence for industrial and exchange activity, and move interpretation beyond the limits of text-centred historiography. In doing so, interdisciplinary research does not merely add new information to historical narratives; it restructures the evidentiary basis through which those narratives are formed, tested, and justified.

The principal contribution of this article is therefore not a general call for interdisciplinarity, but the formulation of a clearer methodological framework for interdisciplinary historical inference. By emphasising evidence convergence, epistemic independence, methodological transparency, and systematic cross-validation, the proposed framework offers a way to structure, evaluate, and justify historical interpretations of pre-textual or poorly documented periods. This approach strengthens the role of archaeology and related scientific methods in historical research while also expanding the methodological foundations of historiography itself.

ETHICAL STATEMENT

The authors confirm that all procedures were performed in compliance with relevant laws and institutional guidelines. Also, appropriate consents, permissions and releases were obtained by the individuals that are participated in this manuscript for any personal information or images of individuals.

CREDIT AUTHORSHIP CONTRIBUTION STATEMENT –

Mohd Hasfarisham Abd Halim & Shaiful Shahidan: Analyzed, interpreted the data and wrote the paper
Asyaari Muhamad: Methodology
Mokhtar Saidin: Conceived, designed the experiments and wrote the paper
All authors have read and agreed to the published version of the manuscript

DECLARATION OF COMPETING INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper

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REFERENCE

- Abd Halim, M.H. & Saidin, M. 2025. Ancient Kedah Kingdom: interpretations based on archaeological studies. *Herança History, Heritage and Culture* 8(1): 1-19. <https://doi.org/10.52152/heranca.v8i1.984>
- Abd Halim, M.H., Talib, N.K., Masnan, S.S.K. & Saidin, M. 2024. Using survey methods to understand how environment is associated with river jetty at Sungai Batu archaeological complex (SBAC), Kedah, Malaysia. *Journal of Cultural Heritage Management and Sustainable Development* 16(4): 743-764. <https://doi.org/10.1108/JCHMSD-11-2023-0178>
- Abd Halim, M.H., Zakaria, I.I., Masnan, S.S.K., Shahidan, S. & Saidin, S. 2025a. Revisiting the 2,600-Year-Old Ancient Kedah River Jetty Site of Sungai Batu Archaeological Complex, Bujang Valley, Kedah, Malaysia. *International Journal of Nautical Archaeology* 54(2): 566-594. <https://doi.org/10.1080/10572414.2025.2450784>
- Abd Halim, M.H., Mohd Mokhtar, N.A., Masnan, S.S.K. & Saidin, M. 2025b. New Evidence of Ancient Kedah Iron Smelting Sites at Sungai Batu Archaeological Complex (SBAC), Bujang Valley, Kedah, Malaysia. *L'Anthropologie* 129(1): 103342. <https://doi.org/10.1016/j.anthro.2024.103342>
- Abdul, K. 2018. A study on ethnoarchaeology. *Academic Journal of Archaeological Studies* 1(1): 1-9.
- Adjepong, A. 2017. Herodotus and Thucydides: "The Fathers" of the science of the past. Dlm. Kuffour, P.A. (pnyt.). *Concise Notes on African and Ghanaian History*, hlm. 18-39. Kumasi: K4 Series Investment Ventures.
- Ahlsgog, J. 2019. Collingwood and the philosophy of history: the metaphilosophical dimension. Dlm. Dharamsi, K., D'Oro, G. & Leach, S. (pnyt.). *Collingwood on Philosophical Methodology*, hlm. 209-227. Springer.
- Akhmetbekova, A., Auyesbayeva, P. & Ibrayev, S. 2018. Turkic "Hikaya" genre and its characters. *Opción, Año* 33(85): 87-106.
- Aluda, O. 2024. An overview of the contribution of written historical records to education. *International Journal of Innovative Development and Policy Studies* 12(2):75-80.
- Ash, M.G. 2019. Interdisciplinarity in historical perspective. *Perspectives on Science* 27(4): 619-642, 2019. https://doi.org/10.1162/POSC_A_00318
- Beaune, S.A. & Abadia, O.M. 2018. Introduction. Epistemology, history and philosophy of science: interdisciplinary perspectives on the history of archaeology (part II). Dlm. Beaune, S.A., Guidi, A., Abadia, O.M. & Tarantini, M. (pnyt.). *Proceedings of the XVIII UISPP World Congress*.
- Boldt, A. & Alinia, A. 2020. Perception, depiction and description of European history: Leopold von Ranke and his development and understanding of modern historical writing. *Research in History* 9(3.4): 83-97.
- Burchardt, J. 2024. Source criticism, bias, and representativeness in the digital age: a case study of digitized newspaper archives. *Digital Humanities in the Nordic and Baltic Countries Publications* 6(1): 1-16. <https://doi.org/10.5617/dhnpub.11512>
- Burke, P. 1998. Two crises of historical consciousness. *Storia della Storiografia* 33: 3-16.
- Cairns, R., & Garrard, K. A. 2024. Learning from history is something that is important for the future: why Australian students think history matters. *Policy Futures in Education* 22(3): 369-382. <https://doi.org/10.1177/14782103231177615>
- Carr, E.H. 1965. *What Is History*. London: Pelicon Book.
- Carvalho, D. & Agosto, M.B. 2024. Tools of archaeology: toward an integrated history of archaeology. *Bulletin of the History of Archaeology*, 33(1):1-20. <https://doi.org/10.5334/bha-703>
- Cernin, D. 2020. Historical methodology and critical thinking as synergised concept. *Disputatio, Philosophical Research Bulletin*, 9(13): 1-34.

- Cho, D., Zoh, M. & Woo, J. 2024. Excavation programmes for the public: a comparative study of mock excavation programmes in South Korea and amateur and community archaeology in the UK. *Public Archaeology* 22(1): 21-38. <https://doi.org/10.1080/14655187.2024.2355730>
- Collingwood, R.G. 1985. *Idea sejarah [Historical Ideas]*. Kuala Lumpur: Dewan Bahasa dan Pustaka. Kementerian Pendidikan Malaysia.
- Costa, V. & Reghin, S. 2023. Interdisciplinaridade entre as ciências históricas. *História da Historiografia* 16(43): 112-138. <https://doi.org/10.15848/hh.v16i43.2024>
- Costantin, E.C. & Baias, C.C. 2015. Reasons for studying the ancient cultures in technical universities. *Procedia-Social Behavioral Sciences* 197: 437-444. <https://doi.org/10.1016/j.sbspro.2015.07.162>
- Croce, B. 1941. *History as the Story of Liberty*. London: George Allen and Unwin Limited.
- Cruceanu, M.T. 2015. Learning by researching historical documents and relics. *Procedia - Social and Behavioral Sciences* 180: 286-292. <http://doi.org/10.1016/j.sbspro.2015.02.118>
- Eze, E.C. 2025. Reconstructing Nigerian history: a multidisciplinary exploration of historiography. *Journal of Advanced Social Sciences and Policy Research* 13(3): 11-23. <https://doi.org/10.5281/zenodo.15863049>
- Fagan, B.M. 2016. *Archaeology a Brief Introduction*. New York: Routledge.
- Foqara, M. 2025. Anthropology as a tool for teaching history. *International Journal for Scientific Research* 4(1): 57-65. <https://doi.org/10.59992/IJSR.2025.v4n1p4>
- Gataullina, I.A., Gilmudinova, O.M., Kozlova, O. & Sychenkova, A. 2016. Prehistory and protohistory of humanity: challenging Issue of modern scientific knowledge. *Indian Journal of Science and Technology* 9(42): 1-9. <https://doi.org/10.17485/ijst/2016/v9i42/104256>
- Gupta, R. 2021. Archaeology, a tool to know history. *Global Science Research Journals* 6(1): 14-15.
- Hardesty, D.L. 2010. Goals of Archaeology, Overview. *Encyclopedia of Archaeology* 1414-1416. <http://doi.org/10.1016/B978-012373962-9.00121-7>
- Huang, J. 2024. Application of natural science methods in social science research. *Science Technology and Social Development Proceedings Series* 2: 132-138. <https://doi.org/10.70088/mk10f430>
- Huvila, I., Skold, O. & Borjesson, L. 2021. Documenting information making in archaeological field reports. *Journal of Documentation* 77(5): 1107-1127. <https://doi.org/10.1108/JD-11-2020-0188>
- Ingram, P., Rao, H. & Silverman, B. 2012. History in strategy research: what, why, and how? *Advance in Strategic Management* 29: 241-273. [http://doi.org/10.1108/S0742-3322\(2012\)0000029012](http://doi.org/10.1108/S0742-3322(2012)0000029012)
- Kansa, E.C. & Whitcher, Kansa, S. 2022. Promoting data quality and reuse in archaeology through collaborative identifier practices. *Pnas* 119(43): e2109313118. <https://doi.org/10.1073/pnas.2109313118>
- Kipping, M., Wadhvani, R.D. & Bucheli, M. 2013. Analyzing and interpreting historical sources: a basic methodology. Dlm. Bucheli, M. & Wadhvani, R.D. (pnyt.). *Organizations in Time: History, Theory, Methods*. hlm. 305-329. Oxford: Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199646890.003.0013>
- Krmnicek, S. 2023. Contextual numismatics: a post-processual approach illustrated by application to Roman coins. *Heritage Science* 11: 256. <https://doi.org/10.1186/s40494-023-01081-5>
- Kuang, M. & Paul, H. 2025. Images of Leopold von Ranke in twentieth-century China: a story of global interactions. *Global Intellectual History* 1-26. <https://doi.org/10.1080/23801883.2025.2464540>
- Maurya, P. 2021. The nineteenth century revis(it)ed: the new historical fiction by Ina Bergmann. *Rupkatha Journal on Interdisciplinary Studies in Humanities* 13(4): 1-4. <https://doi.org/10.21659/rupkatha.v13n4.24>
- McCormick, M. 2011. History's changing climate: climate science, genomics, and the emerging consilient approach to interdisciplinary history. *Journal of Interdisciplinary History* 42(2): 251-273. https://doi.org/10.1162/JINH_A_00214
- McLoughlin, S. & Santos, A.A. 2024. Excavating the fossil record for evidence of leaf mining. *New Phytologist*, 242(6): 2391-2393. <https://doi.org/10.1111/nph.19652>
- Miller, N. 2023. Theory of History, Epistemic Transformations, and Presentism. *The Historical Journal*, 66: 916-918. <https://doi.org/10.1017/S0018246X23000146>
- Misbah, M.M. 2018. The interpretation of historical facts: the study of historical writing in the perspective of exposition paragraph. *Insaniyat. Journal of Islam and Humanities*, 3(1): 47-58. <http://doi.org/10.15408/insaniyat.v3i1.8420>
- Ohrvik, A. & Sarti, C. 2024. Approaches to textual sources in cultural history. *Rethinking History* 28(2): 181-193. <https://doi.org/10.1080/13642529.2024.2370137>
- Pehlivan, S. & Sener, D.K. 2014. Photography and art history: the history of art born from photography. *Procedia-Social and Behavioral Sciences* 122: 210-214. <http://doi.org/10.1016/j.sbspro.2014.01.1329>
- Peregrine, P.N. 2017. *Archaeological Research a Brief Introduction*. United Kingdom: Routledge.
- Ramli, Z. 2015. Kelestarian warisan semula jadi di Malaysia: peranan jabatan warisan negara dan jabatan perancangan bandar dan desa memelihara warisan semula jadi. Dlm. Razman, M.R., Emrizal & Ramli, Z. (pnyt.). *Kelestarian Alam Sekitar di Malaysia dan Indonesia Pendekatan Pengurusan dan Undang-Undang*, hlm. 87-105. Tanjung Malim: Penerbit Universiti Pendidikan Sultan Idris.
- Rasmussen, S.C. 2022. Evolving multidisciplinary approaches to the historical study of chemistry. *Bulletin for the history of chemistry/Division of the History of Chemistry of the American Chemical Society* 47(1): 85-90. <https://doi.org/10.70359/bhc2022v047p085>
- Rodziadi Khaw, N. 2011. *Pensejarahan Kedah Tua: satu analisis sosioekonomi*. Disertasi S.S., Universiti Sains Malaysia, Pulau Pinang.
- Rodziadi Khaw, N. & Jun, G.L. 2021. The Sungai Batu archaeological complex: re-assesing the emergence of Ancient Kedah. *Kajian Malaysia* 39(2): 117-152. <https://doi.org/10.21315/km2021.39.2.6>
- Rohani Ab.G. 2023. Sejarah gunaan: pendekatan baru pensejarahan di Malaysia. *Applied History Journal of Merong Mahawangsa* 1: 1-8. <https://doi.org/10.32890/ahjmm2023.1.1>
- Romero, E.D. 2026. Between support and reactance: epistemic and effective stance-taking in polarised digital public responses to reclamation discourse. *International Journal of Politics, Culture, and Society* 1-30. <https://doi.org/10.1007/s10767-026-09571-7>

- Ruepke, J. & Raja, R. 2021. Introduction: urban archaeology. *Religion in the Roman Empire* 7(2): 217-220. <https://doi.org/10.1628/rre-2021-0016>
- Salleh, B. 1989. Pembelajaran sejarah di Institusi Pengajian Tinggi. *The Asia Pacific Journal of Educators and Education* 10(1): 1-9.
- Shahin, M. 2016. The historical review on the process of national identity formation. *Mediterranean Journal of Social Sciences* 7(1): 111-120. <http://doi.org/10.5901/mjss.2016.v7n1s1p111>
- Sobana, H.A. 2008. Metode penelitian sejarah. Materi Penyuluhan Workshop Penelitian dan Pengembangan Kebudayaan. Anjuran Balai Pelestarian Sejarah dan Nilai Tradisional (BPSBP). Bandung, 15-17 Julai.
- Srimaal, P. 2023. Interdisciplinary construction of historical narratives. Dlm. Chacko Chennattuserry, J., Deshpande, M. & Hong, P. (pnyt.). *Encyclopedia of New Populism and Responses in the 21st Century* hlm. 1-6. Singapore: Springer. https://doi.org/10.1007/978-981-16-9859-0_277-1
- Sucu, A.E. 2024. History is written by the winner. Asude Eslem Sucu, April 19, 2024.
- Symons, X. 2022. Why conscience matters: a theory of conscience and its relevance to conscientious objection in medicine. *Res Publica* 29: 1-21. <https://doi.org/10.1007/s11158-022-09555-2>
- Tamburaka, R.E. 1999. *Pengantar Ilmu Sejarah, Teori Filsafat sejarah, Sejarah Filsafat & Iptek*. Jakarta: Rineka Cita.
- Tavangar, M. & Forghani, A. 2023. A critical analysis of urban development using the application of genealogy over metropolitan city of Mashhad Iran. *Earth Science* 12(3): 53-64. <http://doi.org/10.11648/j.earth.20231203.11>
- Tibbetts, G.R. 1979. *A Study of the Arabic Texts Containing Materials on South East Asia*. Leiden: E. J. Brill.
- Trang, D.T.T. & Quynh, L.T.N. 2021. The historical conditions for the forming of Aristotle's political thought. *Linguistics and Culture Review*, 5(S4): 2535-2544. <http://doi.org/10.21744/lingcure.v5nS4.2114>
- van der Dussen, J. 2016. Collingwood's claim that history is a science. Dlm. van der Dussen (pnyt.). *Studies on Collingwood, History and Civilization*, hlm. 137-152. Switzerland: Springer International Publishing. http://doi.org/10.1007/978-3-319-20672-1_6
- van Driel, J., van Driel, J. & van Boxtel, C. 2024. Writing about the significance of historical agents: the effects of reading and writing instruction. *Read Writ* 37: 2173-2199. <https://doi.org/10.1007/s11145-022-10404-0>
- Watkins, T. 2021. Can Prehistoric Archaeology be a Scientific Discipline? Dlm. Sinan, G.D.M. & Ozbasaran, M. (pnyt.). *Arkeoloji Bilimleri Dergisi Journal of Archaeological Sciences*, hlm. 3-21. Istanbul: Zerobooks.
- Westberg, J. 2025. Historical methods in educational research: sources, contextualisation, periodisation and analysis. *Paedagogica Historica* 61(6): 994-1014. <https://doi.org/10.1080/00309230.2025.2473704>
- Wheatley, P. 1961. *The Golden Khersonese: Studies in the Historical Geography of the Malay Peninsula before A. D. 1500*. Kuala Lumpur: University of Malaya Press.
- Wulan Dari, Y.S., Rachmadani, N.T., Wahdi, A.K., Cahyani, A., Gusman, R. & Asbari, M. 2022. Growing historical awareness among the young generations of the Indonesian nation. *Journal of Information and Management* 1(5): 43-52.
- Yusmadi, Y., Isa, M., Hasan, D.H. & Darmadi, D. 2025. Hikayat Prang Sabi: the narrative of history and religion as a tool for mobilizing social movements in Aceh. *Electronic Journal of Education Social Economics and Technology* 6(1): 22-26. <https://doi.org/10.33122/ejeset.v6i1.388>
- Zvelebil, K. 1973. *The Smile of Murugan on the Tamil Literature of South India*. Leiden: E.J. Brill.