



Reframing History Education through Scaffolded Microlearning Toward an Inclusive and Dialogic Oral History-Based Pedagogy

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Abstract. Contemporary history education remains largely dominated by monologic narratives and content transmission, offering limited space for student voice, dialogic engagement, and diverse historical perspectives. Digital learning environments have expanded access to historical content but often reproduce rather than transform traditional pedagogical structures, while oral history's potential to amplify marginalized voices remains underdeveloped within digital pedagogy. This study addresses this gap by proposing a reframing of history education through the integration of scaffolded microlearning and oral history-based pedagogy. Adopting a pilot design-based research (DBR) approach structured around a single iterative design cycle, the study involved the design, implementation, and evaluation of five microlearning video modules grounded in instructional scaffolding principles, delivered to twenty-four undergraduate students in a higher education history course. Data were collected through classroom observations, student reflective responses, and field notes, and analyzed through iterative thematic analysis. Rather than pursuing generalizable statistical outcomes, the study emphasizes design insights and pedagogical implications. Findings indicate that scaffolded microlearning functioned as a mediating structure that activated dialogic engagement, catalyzed student voice, and fostered inclusive engagement with historical narratives, particularly through oral testimonies that enabled students to connect course content to their own community histories. These findings inform a three-dimensional conceptual framework — structural, dialogic, and inclusive — offered as a design heuristic for scaffolded, oral history-based history education. The study contributes an empirical account of how instructional scaffolding can extend microlearning beyond content delivery toward dialogic and inclusive pedagogy, and illustrates the potential of design-based approaches in bridging digital innovation with transformative educational practice.

Keywords: Microlearning, Scaffolding, Oral History, Dialogic Pedagogy, Inclusive Education.

1 Introduction

History education occupies a unique and consequential position within the broader educational landscape. As a discipline, it is tasked not only with transmitting knowledge of the past but also with equipping learners to interpret competing

narratives, engage with diverse perspectives, and develop a historically informed understanding of the present. Yet despite these ambitious intellectual aspirations, history pedagogy at the tertiary level has remained stubbornly resistant to transformation. Decades of scholarly critique have documented the persistence of monologic instructional models, wherein historical knowledge is framed as a closed, authoritative corpus delivered from teacher to student, with little opportunity for genuine dialogic inquiry or the inclusion of counter-narratives [22, 29].

The proliferation of digital learning technologies over the past two decades promised a fundamental rethinking of this paradigm. Learning management systems, digital archives, and multimedia platforms have expanded access to historical sources and enabled new modes of content delivery. Nevertheless, a substantial body of research indicates that digital adoption in history education has largely been characterized by the digitization of existing monologic practices rather than by genuine pedagogical transformation [8, 10]. Students continue to engage with historical content as passive consumers rather than as active meaning-makers, and the structural constraints that marginalize diverse and subaltern voices within historical narratives persist in digital environments.

In this context, two distinct but potentially complementary pedagogical traditions offer productive resources for reframing history education. The first is the microlearning paradigm, which involves the delivery of instructional content in brief, focused, and modular units designed to optimize cognitive engagement and facilitate flexible, self-directed learning [17, 13]. When scaffolded through principled instructional sequencing, microlearning modules can serve not merely as containers for content but as structured mediating spaces that scaffold inquiry, stimulate reflection, and support collaborative meaning-making. The second is oral history pedagogy, which draws upon first-person testimonies, community narratives, and lived experience as primary historical sources, thereby positioning learners in direct engagement with the voices that formal historiography has frequently silenced or marginalized [32, 30].

Despite the theoretical resonance between these two traditions, their empirical integration within higher education contexts has received relatively limited scholarly attention. Existing literature has explored oral history in K-12 settings and the use of microlearning for skills-based training, yet the potential of scaffolded microlearning as a pedagogical architecture that can activate the dialogic and inclusive dimensions of oral history-based teaching remains largely uncharted territory.

This study is motivated by three interrelated research problems. First, how can history education at the tertiary level be structurally reframed to facilitate genuinely dialogic, rather than merely transmissive, pedagogical practices? Second, in what ways can instructional scaffolding be embedded within microlearning design to foster student voice, reflective engagement, and collaborative historical thinking? Third, to what extent can oral history-based content, when mediated through scaffolded microlearning modules, create conditions for more inclusive historical understanding among university students?

This study addresses this gap by advancing three specific contributions. First, whereas prior scholarship has largely treated microlearning and oral history as theoretically compatible but empirically disconnected resources, this study proposes instructional scaffolding as the structural mechanism through which the two can be

deliberately integrated within a single pedagogical design. Second, it operationalizes this integration through a pilot design-based research cycle situated in an Indonesian higher education history course — a context in which scaffolded, oral history-based digital pedagogy remains largely undocumented. Third, it distills the resulting empirical insights into a three-dimensional conceptual framework — structural, dialogic, and inclusive — offered as a design heuristic for future scaffolded microlearning interventions in history education. In this way, the study moves beyond establishing the theoretical resonance between microlearning and oral history toward specifying how their integration can be concretely designed, implemented, and iteratively refined.

To address these questions, the study adopts a pilot design-based research (DBR) approach, involving the iterative design, implementation, and reflective analysis of scaffolded microlearning video modules in a higher education history course. The study does not claim statistical generalizability; rather, it offers conceptual and empirical insights intended to inform the ongoing design of transformative digital history pedagogy. The remainder of this article proceeds as follows: Section 2 reviews the relevant literature across the three theoretical domains of microlearning, instructional scaffolding, and oral history pedagogy. Section 3 describes the methodological framework and research design. Section 4 presents and discusses the study's principal findings. Section 5 concludes with pedagogical implications and directions for future research.

2 Theoretical Framework

2.1 The Enduring Challenges of History Education: Monologism and the Problem of Inclusion

History education has long been subject to scholarly critique for its tendency to present the past through singular, authoritative master narratives that privilege the perspectives of dominant social, political, and cultural groups [3, 40]. Wineburg's foundational research on historical thinking established that the discipline demands sophisticated interpretive capacities — the ability to contextualize, source, and corroborate — that are rarely developed through conventional transmissive pedagogies. This monologic orientation not only limits students' epistemological engagement with history but also perpetuates the structural exclusion of marginalized voices: those of women, indigenous communities, colonial subjects, and other groups whose experiences remain peripheral to dominant historical narratives [33, 36].

At the tertiary level, these structural tendencies are compounded by the pressures of curriculum coverage and assessment standardization, which incentivize surface-level content transmission over deep historical inquiry [37]. Research in higher education pedagogy has further documented the limitations of lecture-centred approaches in fostering the critical historical literacy that students require both as citizens and as professional practitioners [16, 29]. The challenge, therefore, is not merely technical — a matter of updating delivery mechanisms — but fundamentally pedagogical: it requires a reconceptualization of the relationship between students, historical knowledge, and the voices embedded within historical sources.

2.2 Microlearning: Theoretical Foundations and Pedagogical Potential

Microlearning, broadly defined as the delivery of learning content in small, focused units typically ranging from two to fifteen minutes in duration, has attracted growing scholarly and practitioner attention as a response to the cognitive and motivational limitations of longer instructional formats [18, 13]. Drawing upon cognitive load theory [35], microlearning proceeds from the premise that human working memory has finite capacity, and that the segmentation of instructional content into discrete, coherent modules can reduce extraneous cognitive load while enhancing germane processing and long-term retention.

Recent scholarship has sought to move beyond purely cognitive accounts of microlearning's effectiveness to explore its social and dialogic dimensions. Bruck, Motiwalla, and Foerster [7] demonstrated that mobile-delivered microlearning units could stimulate peer discussion and collaborative sense-making when designed with explicit prompts for social engagement. Similarly, Jomah, Masoud, Kishore, and Aurelia [19] argued that microlearning's modularity enables learners to re-engage with content at points of meaning-making difficulty, thereby supporting self-regulated learning and metacognitive reflection.

Nevertheless, critics have cautioned against an uncritical embrace of microlearning as a panacea for educational design. Shail [31] observed that in contexts prioritizing efficiency and scalability, microlearning can degenerate into fragmented content delivery that undermines the development of extended critical reasoning. This critique is particularly salient for disciplines such as history, which demand the sustained analysis of complex causality, multiple perspectives, and *longue durée* change over time. The resolution of this tension, this study argues, lies in the principled application of instructional scaffolding to microlearning design — a theoretical synthesis explored in the following section.

2.3 Instructional Scaffolding: From Vygotskian Roots to Digital Mediation

The concept of scaffolding, introduced to educational discourse by Wood, Bruner, and Ross [41] in their elaboration of Vygotsky's zone of proximal development (ZPD), describes the contingent, adjustable support provided by a more capable other to enable a learner to perform tasks that would otherwise exceed their independent capacity. In its original formulation, scaffolding was conceived as a dyadic, interactional process, fundamentally social and dialogic in character [38, 41].

Subsequent scholarship has extended the scaffolding concept to encompass both interpersonal and instructional dimensions. Instructional scaffolding in digital environments involves the embedding of structural supports — advance organizers, guiding questions, sequenced tasks, reflective prompts, and collaborative activities — within learning materials themselves, such that these materials serve as a mediated environment capable of supporting learner development in the absence of real-time tutor interaction [20, 14]. This shift from interpersonal to instructional scaffolding is theoretically significant: it extends the ZPD concept to encompass designed environments, positioning digital learning materials not merely as information repositories but as active mediators of cognitive and social development.

Within the domain of history education specifically, scaffolding research has demonstrated that structured prompts for sourcing, contextualization, and close

reading can substantially enhance students' historical thinking competencies [9, 24]. When integrated into microlearning design, such scaffolding principles can transform brief video modules into generative learning experiences that support inquiry, stimulate dialogue, and create space for the emergence of student voice — particularly when the content of those modules centres on oral history testimonies.

2.4 Oral History as Pedagogy: Voice, Inclusion, and Democratic Historical Understanding

The oral history tradition has a rich and documented history in both archival practice and educational application. As a methodology, oral history privileges first-person testimony and lived experience as legitimate historical evidence, thereby challenging positivist historiographic traditions that have privileged documentary sources and elite perspectives [26, 28]. In educational contexts, oral history has been advocated as a powerful tool for developing students' historical empathy, their appreciation for evidential complexity, and their understanding of the relationship between individual experience and broader social and political forces [30].

The pedagogical value of oral history is particularly pronounced in relation to inclusion and representation. By bringing non-elite, marginalized, and subaltern voices into the classroom as primary historical sources, oral history-based pedagogy directly contests the exclusionary logic of dominant master narratives [12, 36]. For students from historically marginalized communities, encounters with oral testimonies that reflect their own ancestral experiences can be profoundly transformative, fostering a sense of historical belonging and agency that conventional textbook-centred pedagogy rarely provides [34].

The integration of oral history with digital technologies has received increasing scholarly attention, particularly in relation to digital storytelling, podcast-based historical inquiry, and community-based archival projects [21, 15]. However, systematic examinations of oral history integration within scaffolded microlearning frameworks in higher education remain sparse. This lacuna constitutes the primary theoretical and empirical motivation for the present study.

2.5 Dialogic Pedagogy and the Imperative of Student Voice

The theoretical framework underpinning this study draws additionally upon dialogic pedagogy, particularly as articulated in the traditions of Bakhtin [4] and Freire [11]. For Bakhtin, all utterance is inherently dialogic — shaped by prior utterances and oriented toward anticipated responses — and genuine learning requires an encounter with the irreducibly alien voice of the other. For Freire, transformative education requires the replacement of the banking model of knowledge transmission with a dialogic encounter in which both teacher and student become co-investigators of their shared reality.

In the context of history education, dialogic pedagogy implies a pedagogy in which students are not merely recipients of historical knowledge but active interlocutors with historical sources, including oral testimonies, who bring their own interpretive frameworks, community knowledge, and lived experiences to bear upon the meaning-making process [1, 39]. Scaffolded microlearning, when designed with

explicit dialogic intent, can create the structural conditions for such pedagogical encounters — even within the constraints of asynchronous digital environments.

3 Method

3.1 Research Design: Pilot Design-Based Research

This study employs a pilot design-based research (DBR) approach, a methodology that has been extensively applied in educational technology research as a means of developing, testing, and refining pedagogical interventions in authentic educational settings [2, 5]. DBR is characterized by its iterative nature, its commitment to both theoretical development and practical intervention, and its emphasis on the collaborative involvement of researchers and practitioners in the design process. In contrast to experimental methodologies that prioritize internal validity and statistical generalizability, DBR prioritizes design validity — the alignment between theoretical principles, design decisions, and observed learning outcomes — and aims to generate both local practical knowledge and broader theoretical insights [25, 27].

The pilot character of the present study reflects a deliberate methodological choice. Rather than pursuing comprehensive implementation across multiple sites and cohorts — which would require resources and timelines beyond the scope of the current investigation — the study focuses on the design, limited implementation, and reflective analysis of an initial prototype set of scaffolded microlearning modules. This approach is consistent with the early-phase DBR cycle, which prioritizes the identification of design principles and pedagogical insights that can inform subsequent, more extensive iterations [23].

Consistent with the DBR tradition, the present study operationalized a single iterative design cycle comprising four phases. The initial design phase involved the research team translating the theoretical synthesis presented in Section 2 into the pedagogical architecture and scaffolding prompts underlying the five microlearning modules (Section 3.3). The implementation phase consisted of the limited pilot delivery of these modules to twenty-four undergraduate students across three synchronous sessions. The evaluation phase comprised the analysis of classroom observations, student reflections, and field notes to assess the modules' capacity to activate dialogic engagement and inclusive historical understanding (Section 4). The revision phase distilled these evaluation findings into concrete design principles — recalibrating excerpt duration, strengthening peer-accountability structures for asynchronous discussion, and incorporating explicit epistemological scaffolding for the evidentiary status of oral testimony (Section 4.3) — intended to inform the subsequent design iteration. As a pilot study, this article reports the completion of one full design cycle; subsequent iterations that test and refine these design principles fall outside its present scope.

3.2 Research Setting and Participants

The study was conducted within a higher education history course at a state university in Indonesia. The course, which forms part of the undergraduate curriculum for students majoring in history education, focuses on contemporary Indonesian history

with particular attention to post-independence social movements, community-based narratives, and the politics of historical memory. The course was selected for its theoretical alignment with the study's emphasis on oral history and inclusive historical pedagogy.

Participants comprised twenty-four undergraduate students enrolled in the course during the semester in which the pilot was conducted, along with the course instructor, who collaborated in the design process as a co-practitioner. Student participants ranged in age from eighteen to twenty-two years and represented diverse regional and socioeconomic backgrounds. Purposive sampling guided the selection of the course to maximize the theoretical relevance of the research context.

3.3 Design and Development of Microlearning Modules

A set of five scaffolded microlearning video modules was designed and developed collaboratively by the research team. Each module was structured according to a consistent pedagogical architecture comprising four sequential components: (1) a brief contextual orientation (approximately ninety seconds) positioning the module's content within the broader course narrative; (2) an oral history excerpt (three to five minutes) drawn from recorded testimonies of community members with direct experiential knowledge of the historical events under study; (3) a set of scaffolded reflective questions embedded within the video interface using an interactive annotation platform; and (4) a collaborative discussion prompt directing students to a structured peer exchange activity conducted through the course's learning management system.

The scaffolded questions embedded within each module were designed in accordance with De La Paz's [9] model of disciplinary thinking scaffolds, and incorporated prompts for sourcing (Who is speaking? What is their social position and relationship to the events described?), contextualization (How do the narrator's experiences illuminate the broader social and political context of this period?), and corroboration (In what ways does this testimony confirm, challenge, or complicate the accounts you have encountered in other sources?). These prompts were sequenced to progressively scaffold students' movement from comprehension to interpretation to critical evaluation — a progression aligned with the cognitive taxonomy of historical thinking articulated by Seixas and Morton [30].

3.4 Data Collection

Data collection proceeded through three complementary instruments. First, focused classroom observations were conducted during three synchronous sessions in which students engaged with module content and participated in structured discussions. Observation protocols focused on indicators of dialogic engagement: instances of student-initiated questioning, elaboration of peers' contributions, explicit engagement with the testimonies' evidential claims, and articulation of counter-perspectives. Second, student reflective responses were collected following each module, comprising brief written reflections (150–250 words) in which students articulated their engagement with the oral testimony, identified questions raised by the testimony, and connected the testimony's content to their prior historical understanding. Third, detailed field notes were maintained throughout the implementation period,

documenting the instructor's pedagogical decisions, moments of productive pedagogical challenge, and emergent patterns of student engagement.

3.5 Data Analysis

Data were analysed through an iterative thematic analysis process informed by Braun and Clarke's [6] reflexive thematic analysis framework, adapted for the design-based research context in accordance with McKenney and Reeves [23]. Initial open coding of observation notes and student reflective responses was conducted independently by the principal researcher and a research assistant, followed by collaborative theme development through a series of analytical discussions. Initial open coding generated descriptive codes such as sourcing language use, questioning behaviour, self-referential historical connection, and emotional engagement with testimony. Through iterative comparison across the observation, reflection, and field-note data sets, related codes were clustered into candidate themes — for instance, sourcing language use and questioning behaviour converged into the theme of scaffolded microlearning as a mediating structure for dialogic engagement (Section 4.1), while self-referential historical connection and emotional engagement with testimony converged into the theme of oral history as a catalyst for student voice and inclusion (Section 4.2). Candidate themes were then reviewed against the full data set and refined through discussion between the principal researcher and research assistant before being finalized. Emergent themes were evaluated against the study's theoretical framework — particularly the dialogic and scaffolding dimensions — to assess the degree of theoretical coherence and to identify design insights for subsequent iterations. Trustworthiness was enhanced through methodological triangulation across the three data sources and through member-checking procedures in which preliminary interpretive summaries were shared with the course instructor.

4 Result and Discussion

4.1 Scaffolded Microlearning as a Mediating Structure for Dialogic Engagement

The most consistent and prominent finding across all three data sources concerns the capacity of the scaffolded microlearning modules to function as mediating structures that activated and sustained dialogic engagement among students. In contrast to the passive viewing behaviour typically observed in conventional lecture-format video instruction, students who engaged with the scaffolded modules exhibited markedly higher rates of questioning behaviour, evidential reasoning, and interpretive elaboration during subsequent discussion sessions.

Observation data documented numerous instances in which students explicitly referenced specific moments in the oral testimonies as the basis for interpretive claims, employing the sourcing and contextualization vocabulary introduced through the scaffolded prompts. This represents a meaningful qualitative shift from the surface-level content recitation characteristic of students' prior discussion behaviour, as noted in the course instructor's field notes. The scaffolded questions appeared to serve a dual function: they modelled the disciplinary practices of historical thinking

while simultaneously creating a structured invitation for students to voice their own interpretive perspectives.

This finding resonates with the theoretical proposition, advanced by Jonassen and Rohrer-Murphy [20] and elaborated by Hannafin et al. [14], that digital learning environments scaffolded according to principled instructional design principles can serve as functional analogues to the interpersonal scaffolding of the Vygotskian ZPD. The oral history testimonies, in particular, appeared to function as generative interlocutors — voices that students addressed directly in their reflective responses and discussions, enacting precisely the dialogic encounter with the irreducibly alien other that Bakhtinian theory posits as the basis for genuine learning.

4.2 Oral History Testimony as a Catalyst for Student Voice and Historical Inclusion

A second major theme concerns the specific role of oral history content in catalysing the emergence of student voice and fostering more inclusive orientations toward historical understanding. Analysis of student reflective responses revealed a pronounced pattern of self-referential historical engagement — students frequently drew explicit connections between the oral testimonies and their own familial histories, community narratives, and regional identities. This pattern was particularly pronounced among students from rural and peri-urban backgrounds, whose communities and social experiences are systematically underrepresented in formal textbook narratives of Indonesian history.

Field note data documented several pedagogically significant moments in which students expressed, often with evident emotional engagement, that the oral testimonies had provided them with a sense of historical recognition — a perception that their own communities' experiences were legitimate historical knowledge, rather than irrelevant local detail peripheral to the main currents of national history. These moments of historical recognition constitute precisely the inclusive pedagogical outcomes that oral history advocates such as Frisch [12], Portelli [26], and Stanton [34] have theorized as central to oral history's democratic educational potential.

The integration of oral history content within the microlearning format appeared to play a specific enabling role in this process. The brief, focused character of each module, combined with the reflective scaffolding prompts, created a structured space in which students were invited to engage with the testimony as evidence requiring active interpretation, rather than as content to be passively absorbed. This architectural feature — the combination of oral history content with scaffolded interpretive prompts within a modular format — represents a key design insight with implications for future iterations.

4.3 Iterative Design Insights and Limitations

Consistent with the iterative logic of design-based research, the pilot implementation also yielded a set of critical design insights pertaining to the limitations of the current prototype. Three issues emerged as priorities for revision in subsequent iterations. First, the duration of several oral history excerpts exceeded students' sustained attention within the microlearning format, suggesting that more careful calibration of excerpt length — with attention to narrative arc and evidential

density — is required. Second, the asynchronous collaborative discussion prompts generated highly variable participation, with a substantial minority of students producing brief, superficial responses that suggested limited engagement with the dialogic intent of the design. Enhanced peer-accountability structures and more explicit facilitation of asynchronous discussion appear warranted.

Third, and most theoretically significant, observation data revealed persistent difficulties among a subset of students in reconciling the oral testimonies' subjective, experiential character with their prior understanding of historical evidence as primarily documentary and authoritative. This tension — between experiential testimony and evidentiary legitimacy — reflects a deeper epistemological challenge that the current scaffolding design did not adequately address. Future iterations should incorporate explicit epistemological scaffolding that supports students in theorizing the nature and status of oral testimony as historical evidence, drawing upon the historiographic literature on oral history methodology [26, 28].

4.4 Toward a Conceptual Framework: Scaffolded Microlearning for Inclusive Dialogic History Education

Synthesizing the empirical findings with the theoretical frameworks reviewed in Section 2, this study proposes a conceptual framework for understanding the pedagogical architecture of scaffolded microlearning in oral history-based history education. This framework identifies three interdependent dimensions through which scaffolded microlearning can support inclusive and dialogic historical learning: the structural dimension (the modular, sequential organization of content that reduces cognitive load and enables iterative engagement); the dialogic dimension (the embedding of scaffolded prompts that position students as active interlocutors with historical voices); and the inclusive dimension (the deliberate selection of oral testimonies that represent diverse, counter-hegemonic perspectives and that invite students to connect historical understanding to lived experience).

This three-dimensional framework offers a conceptual tool for guiding both the design of future scaffolded microlearning interventions in history education and the evaluation of their pedagogical effectiveness. It is proposed not as a generalizable instructional model but as a theoretically grounded design heuristic — consistent with the DBR tradition of generating middle-range theoretical insights grounded in specific but principled practical interventions [5, 25].

5 Conclusion

This study has argued for and empirically illustrated a reframing of history education through the integration of scaffolded microlearning and oral history-based pedagogy. Drawing upon a pilot design-based research approach in a higher education context, the study has demonstrated that scaffolded microlearning modules, when grounded in the theoretical principles of instructional scaffolding and informed by the dialogic and inclusive dimensions of oral history pedagogy, can function as mediating pedagogical structures that extend beyond content delivery toward genuine dialogic and inclusive learning.

The principal findings indicate that the scaffolded architecture of the microlearning modules was instrumental in activating dialogic engagement, modelling disciplinary historical thinking practices, and creating structured invitations for student voice. The integration of oral history content within this architecture proved particularly effective in fostering students' sense of historical inclusion and in catalysing connections between formal historical knowledge and lived community experience. These findings contribute to the growing scholarly conversation on transformative digital history pedagogy and offer practical design insights for educators and instructional designers working in this domain.

At the same time, the study's findings reveal important limitations in the current design prototype — particularly in relation to the calibration of excerpt length, the facilitation of asynchronous dialogic participation, and the need for explicit epistemological scaffolding to support students in theorizing the evidentiary status of oral testimony. These limitations constitute a productive agenda for subsequent DBR iterations, in which the three-dimensional conceptual framework proposed in Section 4 can serve as a guiding heuristic for design refinement.

Broader implications for history education practice and policy concern the need to move beyond an instrumentalist conception of digital learning technologies as mere delivery mechanisms, toward a view of digital design as a fundamentally pedagogical and political act — one that either reproduces or contests the structural exclusions embedded in dominant historical curricula. Scaffolded microlearning, as this study has sought to demonstrate, offers one promising and under-explored resource for enacting this more ambitious vision of inclusive, dialogic, and transformative history education.

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