

# Digital Legacy and Accessibility: Identifying a Research Gap Through a Systematic Literature Review

**Alberth Araujo da Silva<sup>1</sup>, Carlos Eduardo Almeida Feitosa<sup>1</sup>  
Marcelo Martins da Silva<sup>1</sup>, Cristiano Maciel<sup>2</sup>**

<sup>1</sup> Universidade Federal do Ceará - Campus Quixadá (UFC)  
Av. José de Freitas Queiroz, 5003 – Quixadá – CE – Brazil  
CEP 63902-580

<sup>2</sup>Universidade Federal de Mato Grosso (UFMT)  
Av. Fernando Corrêa da Costa, 2367 – Boa Esperança – Cuiabá – MT – Brazil  
CEP 78060-900

alberth@alu.ufc.br, carloseduardo.research@gmail.com,

martins2016eng@gmail.com, cristiano.macie@ufmt.br

**Abstract.** *Introduction:* In the field of digital legacy, ensuring accessibility is crucial for equitable participation. **Objective:** This Systematic Literature Review (SLR) investigates how accessibility and digital legacy are addressed in academic literature and explores the intersections between them. **Methodology:** The process involved three phases: an initial exploratory search, refinement of keyword combinations, and adjustments based on relevance. The research questions focused on the relationship between the two themes, their contexts, and methodological approaches. The review included studies published in Portuguese or English between 2010 and 2025. **Results:** The results show extensive research on accessibility but limited integration with digital legacy, highlighting a gap for future exploration.

**Keywords** Digital Legacy, Accessibility, Literature Review.

**Resumo.** *Introdução:* No campo do legado digital, garantir a acessibilidade é fundamental para uma participação equitativa. **Objetivo:** Esta Revisão Sistemática da Literatura (RSL) investiga como acessibilidade e legado digital são abordados na literatura acadêmica e explora as interseções entre eles. **Metodologia:** O processo envolveu três fases: uma busca exploratória inicial, refinamento das combinações de palavras-chave e ajustes com base na relevância. As questões de pesquisa focaram na relação entre os dois temas, seus contextos e abordagens metodológicas. A revisão incluiu estudos publicados em português ou inglês entre 2010 e 2025. **Resultados:** Os resultados mostram extensa pesquisa sobre acessibilidade, mas integração limitada com o legado digital, destacando uma lacuna para exploração futura. **Palavras-Chave** Legado Digital, Acessibilidade, Revisão Sistemática.

## 1. Introduction

Investigar como acessibilidade e legado digital são abordados na literatura, identificando interseções, lacunas e oportunidades de integração — especialmente

em plataformas digitais e redes sociais [Maciel e Pereira 2013, Beppu e Maciel 2020, Kalbag e Pickering 2017, Hedvall et al. 2025, W3C Web Accessibility Initiative 2023].

A análise revelou que, embora exista vasta produção científica sobre acessibilidade e crescente interesse pelo legado digital, são raros os estudos que integram ambos os temas.

A acessibilidade aparece de forma superficial em pesquisas sobre legado digital [Doyle e Brubaker 2023];

É mais bem abordada no contexto do patrimônio digital e cultural [Antón et al. 2024, Sotirova-Valkova 2022, Pisoni et al. 2021, Bavi e Gupta 2022];

Não foram encontradas metodologias consolidadas que unam usabilidade, inclusão e gestão do legado digital. ————— A relação entre acessibilidade e legado digital ainda é pouco explorada [Doyle e Brubaker 2023].

Pesquisas em patrimônio digital avançam em práticas inclusivas, mas o legado digital mantém foco em aspectos legais e tecnológicos [Carvalho et al. 2021, de Oliveira e Zaina 2025].

O design acessível é frequentemente deixado de lado em estudos sobre legado digital.

Existe uma lacuna teórica e metodológica que precisa ser preenchida.

É necessário desenvolver frameworks, diretrizes e práticas que garantam experiências digitais éticas, inclusivas e acessíveis no contexto pós-morte.

In the field of digital legacy [Maciel e Pereira 2013, Beppu e Maciel 2020], ensuring accessibility [Kalbag e Pickering 2017, Hedvall et al. 2025, W3C Web Accessibility Initiative 2023] is crucial for equitable participation. Yet, it is unclear whether academic research adequately addresses this intersection. This Systematic Literature Review (SLR) investigates how the two themes overlap and highlights research gaps [Biolchini et al. 2005].

The review followed three phases: 1) **initial search**—independent mapping of terms; 2) **refined search**—keyword combinations targeting both topics; 3) **final adjustments**—review and refinement of terms. Research questions focused on: a) how accessibility and digital legacy appear in academic publications; b) which aspects of one are considered in studies of the other; c) whether explicit relationships, methodological integrations, or solutions exist; d) which platforms (e.g., social media) link these themes; e) whether methodologies integrate accessibility evaluation and digital legacy design; and f) whether studies propose practical solutions or theoretical frameworks.

Inclusion criteria were works in Portuguese or English (2010–2025). Exclusion criteria were studies addressing only one theme, focusing solely on legal/patrimonial issues without usability, or outside the language scope. Data were retrieved from Google Scholar and the ACM Digital Library.

## 2. Search Strategy

Keywords were first defined independently. On Google Scholar, the term digital legacy returned 2,760 results, while accessibility terms produced millions. To refine descriptors,

we drew on the DAVI project<sup>1</sup> and excluded terms such as digital inheritance or digital archive due to their legal focus.

In the ACM Digital Library, refined queries (e.g., ("digital legacy" OR "digital heritage") AND "accessibility" AND ("universal design" OR "inclusive design")) yielded few results. Most papers addressed either accessibility or digital legacy separately. Some used heritage in cultural contexts [Shim et al. 2024], or accessibility as service access [Briggs e Thomas 2015], while others discussed ethics [Carvalho et al. 2021] or immersive environments [de Oliveira e Zaina 2025] without directly linking both themes.

Overall, explicit connections between accessibility and digital legacy were rare. Accessibility was usually treated broadly, and heritage often referred to cultural content rather than posthumous data. Combined queries produced only 27 results, and searches involving DLMS or WCAG returned 1–13, confirming the scarcity of works that integrate accessibility standards into digital legacy research.

### 3. Discussions

This review reveals a research gap in connecting *accessibility* and *digital legacy*. To investigate this gap, we analyzed related publications, structured around the following research questions.

**a. How are accessibility and digital legacy addressed in academic publications?** Accessibility is generally treated as a secondary concern in digital legacy research. Studies focused specifically on legacy data—such as digital memorials, post-mortem data management, and online accounts—mention accessibility only briefly, often lacking technical or methodological depth. For example, [Doyle e Brubaker 2023] points out that despite the importance of usability for older users or digital novices, few studies examine how accessibility constraints may prevent equitable engagement with digital legacy platforms: “we are struck that papers noting these types of limitations are not more common.” In contrast, in digital heritage and GLAM (Galleries, Libraries, Archives, Museums) contexts, accessibility is deeply integrated into the design of inclusive cultural experiences, as demonstrated in [Antón et al. 2024], [Sotirova-Valkova 2022], [Pisoni et al. 2021], and [Bavi e Gupta 2022].

**b. Is there an explicit relationship between these topics in the research?** No explicit relationship between accessibility and personal digital legacy was identified in the analyzed studies. The few publications mentioning both themes tend to treat them as parallel challenges rather than interconnected domains [Doyle e Brubaker 2023]. Conversely, institutional contexts, such as GLAMs, embed accessibility more thoroughly within broader digital transformation frameworks, as shown in [Sotirova-Valkova 2022]. However, these studies focus on collective heritage rather than personal digital data left by individuals after death.

**c. What aspects of accessibility are considered in digital legacy studies, and vice versa?** In digital legacy research, accessibility is mostly interpreted through the lens of usability—particularly for vulnerable groups such as older adults or digitally excluded users. [Doyle e Brubaker 2023] notes the limited attention to users who are unable to engage with legacy systems due to interface barriers or lack of digital skills. In

<sup>1</sup><https://lavi.ic.ufmt.br/davi/>

contrast, accessibility research in digital heritage covers a broader spectrum, including sensory, cognitive, and technological dimensions. For example, [Antón et al. 2024] employs virtual reality to grant access to otherwise inaccessible historical sites, while [Pisoni et al. 2021] proposes a conceptual framework leveraging human-centered AI to design accessible cultural heritage experiences. Similarly, [Bavi e Gupta 2022] highlights how gamification techniques, combined with 3D printed models, can promote engagement and experiential learning among blind and partially sighted museum visitors.

**d. Which areas (e.g., social media, digital platforms) most frequently discuss their relationship?** The convergence of accessibility and digital legacy is most commonly discussed in relation to posthumous digital presence on social media platforms and management of online accounts [Doyle e Brubaker 2023]. Debates focus on who has the right to access data, under which conditions, and technical limitations, yet evidence of accessibility-oriented system design in these platforms remains scarce. Meanwhile, in digital heritage fields, discussions emphasize virtual museum experiences and institutional repositories but do not address individual post-mortem digital rights or interactions.

**e. Are there methodologies integrating accessibility evaluation and digital legacy platform design?** No clear methodologies integrating accessibility evaluation with digital legacy platform design were found. [Doyle e Brubaker 2023] explicitly highlights the urgency of incorporating traditional usability and accessibility research into digital legacy systems. Conversely, inclusive design models and digital maturity frameworks—such as those presented in [Sotirova-Valkova 2022] and [Pisoni et al. 2021]—offer promising foundations adaptable to digital legacy contexts, particularly in relation to ethical data stewardship and equitable access.

**f. Do studies propose practical solutions, theoretical frameworks, or conceptual approaches?** Some studies do offer theoretical frameworks. [Doyle e Brubaker 2023] introduces a three-stage model of digital legacy data—*Encoding*, *Accessing*, and *Dispossessing*—that helps map research efforts and identify gaps. However, this model does not explicitly incorporate accessibility considerations. In digital heritage contexts, [Antón et al. 2024], [Pisoni et al. 2021], and [Bavi e Gupta 2022] provide applied frameworks and theoretical contributions that enhance accessible and participatory cultural experiences. Overall, while the field of digital accessibility is advancing and maturing within cultural heritage and GLAM sectors, it remains largely absent from digital legacy research. This gap is particularly concerning given that digital legacy systems often serve users facing emotional and cognitive challenges, such as bereavement, where accessible design is not only desirable but ethically imperative.

#### 4. Ethical Considerations

This study did not involve human participants, sensitive data, or personal information, as it is based solely on a Systematic Literature Review (SLR). Thus, ethics board approval was not required. Throughout the research, we ensured:

- Use of legitimate sources from recognized scientific databases (Google Scholar and ACM Digital Library);
- Proper citation of all works according to academic standards;

- Neutral analysis and synthesis, avoiding biased interpretations;
- Attention to the ethical and social relevance of accessibility and digital legacy, particularly regarding inclusion and respect for memory.

## 5. Conclusion and Future Work

This systematic review identified a theoretical and methodological gap at the intersection of digital legacy and accessibility. While accessibility is well explored in digital heritage and cultural institutions, it is rarely addressed in studies of personal digital legacy, particularly in designing inclusive platforms for equitable access to posthumous content. Conversely, digital legacy research often emphasizes legal, ethical, or technological issues while neglecting accessible design principles.

The findings show growing awareness of posthumous digital presence—especially on social media and cloud services—yet accessibility is usually reduced to general usability or ignored. The lack of practical frameworks highlights the need for interdisciplinary approaches that combine insights from human-computer interaction, digital ethics, archival studies, and inclusive design. Future work should focus on developing evaluation frameworks for legacy systems with accessibility indicators, guidelines for inclusive posthumous digital experiences, and qualitative studies with vulnerable users (e.g., bereaved individuals, elderly users). Collaboration with cultural institutions (GLAMs) that already apply accessibility best practices may also help adapt existing maturity models (e.g., POUR, FAIR, DEAI) to personal digital legacy platforms.

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