P-ISSN: 2541-6960; E-ISSN: 2549-8754
Yupa: Historical Studies Journal
Vol. 9 No. 3, 2025 (198-214)
http://jurnal.fkip.unmul.ac.id/index.php/yupa

Adaptive Reuse Strategies for Historic Aesthetic Elements and Interior Design: A Systematic Literature Review

Donny Trihanondo[1], Tri Haryotedjo[2]
[1]Telkom University, Bandung, Indonesia
[2] Telkom University, Bandung, Indonesia

[1]donnytri@telkomuniversity.ac.id, [2]triharyotedjo@telkomuniversity.ac.id

Received	Accepted	Published
05/12/2025	28/11/2025	30/11/2025

Abstract *Adaptive reuse is a key strategy for conserving heritage buildings while preserving cultural and historical values. Despite its importance, research on integrating adaptive reuse with interior aesthetic elements like reliefs, sculptures, and ornaments remains limited. This study addresses the gap through a systematic literature review, exploring how these elements can be preserved to extend building lifespans and improve user experiences. Case studies from diverse cultural contexts highlight the critical role of interior aesthetics in adaptive reuse. The findings call for collaboration among architects, artists, and conservation experts to ensure holistic and sustainable preservation. Recommendations are provided to harmonize adaptive reuse with conserving interior aesthetics, safeguarding the integrity and relevance of heritage buildings.*

Keywords: Adaptive reuse, Aesthetic elements, Interior, Strategies, Systematic Literature Review

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Abstrak *Adaptive reuse adalah strategi penting untuk melestarikan bangunan cagar budaya sambil menjaga nilai budaya dan sejarah. Namun, penelitian mengenai integrasinya dengan elemen estetika interior seperti relief, patung, dan ornamen masih terbatas. Studi ini mengisi kesenjangan tersebut melalui tinjauan literatur sistematis, mengeksplorasi cara melestarikan elemen tersebut guna memperpanjang umur bangunan dan meningkatkan pengalaman pengguna. Analisis studi kasus dari berbagai budaya menunjukkan pentingnya elemen estetik interior dalam adaptive reuse. Temuan menegaskan perlunya kolaborasi antara arsitek, seniman, dan ahli konservasi dalam pendekatan pelestarian yang holistik. Rekomendasi diberikan untuk mendukung strategi yang menyelaraskan adaptive reuse dengan konservasi estetika interior demi menjaga relevansi bangunan cagar budaya.*

Kata kunci*: Pemanfaatan ulang adaptif, Elemen estetika, Interior, Strategi, Tinjauan Literatur Sistematis*

INTRODUCTION

Adaptive reuse has emerged as a strategic approach to conserving heritage buildings, addressing the dual challenges of preserving cultural heritage and meeting contemporary functional demands (Webb, 2017).This method focuses on extending the lifespan of historic buildings by adapting them for new purposes, maximizing their utility within modern contexts while retaining their historical essence. As time progresses, the reuse of heritage structures has become a key solution to sustainability, offering a means to conserve resources and reduce environmental impact (Yung, 2012).

Within the framework of adaptive reuse, interior aesthetic elements—such as reliefs, sculptures, and decorative ornaments—play a crucial role in reflecting the identity and artistry of their historical context. These elements are not merely ornamental; they embody the cultural narratives, craftsmanship, and symbolic meanings of the era in which they were created (Risatti, 2009). However, their integration into adaptive reuse projects poses significant challenges. Reconciling these aesthetic features with new design styles requires careful consideration to maintain their authenticity while making them relevant to the building's new function. This tension reflects the broader challenge of balancing the identity of the past with the needs and tastes of the present.

Historical research forms the foundation of any successful conservation or adaptive reuse project. Thorough investigations into the building's history, original function, and cultural significance provide critical insights that inform the integration of aesthetic elements into new contexts (Wong, 2016). Identifying the appropriate new function for a building often places additional burdens on its existing historical features, necessitating thoughtful treatments to protect and preserve these elements. Conservation strategies must balance the building’s new role with the preservation of its aesthetic integrity.

Historical objects, such as reliefs, sculptures, and decorative ornaments, hold multifaceted values that transcend their physical presence. Their aesthetic value lies in their ability to showcase craftsmanship, artistic expression, and stylistic details of the periods in which they were created, often serving as timeless exemplars of cultural and artistic achievement (Risatti, 2009). Beyond aesthetics, these elements also possess utilization value, as they can be repurposed or integrated into new functional contexts, bridging the past and present in meaningful ways. Most importantly, their cultural value anchors them as tangible connections to collective memory and identity, encapsulating stories, traditions, and societal norms that define a community or civilization (Kirshenblatt-Gimblett, 2006). Preserving these values is not only an act of safeguarding heritage but also a way of enriching contemporary spaces, offering users an immersive experience that connects them to the historical narrative while fulfilling modern needs.

Advancements in digital technologies have introduced innovative means to effectively conserve and integrate existing aesthetic elements into new designs. Tools such as 3D scanning, virtual modeling, and digital archiving enable precise documentation and replication, ensuring that historical features are preserved and adapted with minimal risk of damage (Mudge, 2008). These technologies also facilitate creative design processes that harmonize modern functions with traditional aesthetics.

Given the growing significance of adaptive reuse in urban conservation (Wong, 2016), this research highlights the importance of finding the gap in knowledge regarding the integration of interior aesthetic elements in historic buildings. By focusing on these elements, the study aims to provide insights into their preservation and adaptation, ensuring that their historical, cultural, and artistic values are sustained within contemporary contexts. This research contributes to the broader discourse on heritage conservation, offering strategies to bridge historical authenticity with modern utility in adaptive reuse practices.

Addressing complexities and challenges of integrating interior aesthetic elements into adaptive reuse projects, a systematic literature review is essential to consolidate existing knowledge and identify gaps in research and practice (Knight, 2019). This approach enables a comprehensive understanding of the strategies, tools, and frameworks employed in preserving and adapting these elements within historic buildings. By synthesizing findings from diverse contexts, the review aims to provide actionable insights that inform future conservation efforts, bridge the gap between theory and practice, and contribute to the development of innovative methodologies. Through this systematic review, the research seeks to advance the discourse on adaptive reuse and its critical role in safeguarding the aesthetic and cultural heritage embedded in historic interiors.

METHOD

This study employs a systematic literature review (SLR) approach based on the Kitchenham methodology to address key research questions (RQs) related to adaptive reuse and historical interior aesthetic elements. The Kitchenham Systematic Literature Review (SLR) approach is a structured methodology widely used in software engineering and other fields to systematically collect, evaluate, and synthesize available research (Kitchenham, Barbara, & Brereton, 2013). It provides a rigorous framework for addressing specific research questions (RQs) and is particularly effective in ensuring the review process is repeatable, objective, and comprehensive. This study is guided by four key research questions designed to explore various aspects of adaptive reuse in connection with historical interior aesthetic elements. The RQs are formulated as follows: RQ1: What are the trends in adaptive reuse, especially in connection with historical interior aesthetic elements? (Focuses on identifying and mapping existing practices and

developments over time.) RQ2: What technologies are implemented in the adaptive reuse process? (Investigates methods and tools used for conservation and adaptation.) RQ3: How have contextual changes affected historical interior aesthetic elements in adaptive reuse projects? (Explores external factors such as urbanization, social needs, or policy shifts.) RQ4: What steps should be taken to protect historical interior aesthetic elements for the future? (Proposes strategies based on insights from reviewed literature.)

The PRISMA framework (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) is utilized to ensure transparency and reproducibility in the review process. The PRISMA framework was implemented to ensure a structured and transparent review process throughout the study (Page & J, 2021). The process began with the identification stage, where a comprehensive database search was conducted using refined keywords to gather a broad range of relevant literature. This was followed by the screening phase, which involved systematically filtering the identified articles based on their titles, abstracts, and keywords to ensure alignment with the research objectives. Next, the eligibility stage included a detailed full-text review to confirm that the selected studies directly addressed the formulated research questions. Finally, the inclusion phase resulted in the selection of studies deemed most relevant and appropriate for qualitative synthesis, providing a solid foundation for the analysis.

Data research strategy implementing these steps:

(1) The initial step involved a broad search using Google Scholar and the Publish or Perish tool to access relevant literature. The preliminary search used the keywords “adaptive reuse” and “interior design”, which generated 3,250 entries. To refine the results, the keyword “artworks” was added, narrowing the pool to 304 documents.

(2) Following the initial search, a more targeted set of keywords was applied to refine the literature selection process. The keywords used were “conservation” AND “adaptive reuse” AND “interior design” AND “artworks” AND “digital”, which yielded 105 documents for further analysis. A systematic inclusion and exclusion process was then implemented to ensure the relevance and quality of the selected literature. In the process, 15 documents are more focused for further extraction.

(3) The data extraction focused on several key aspects: the objectives of each study, which outlined what the research aimed to explore or achieve; the methods employed in the research, detailing the methodologies used for data collection and analysis; the focus areas, which centered on adaptive reuse and historical aesthetic elements; and the findings, which highlighted key results related to trends, technologies, contextual changes, and strategies for protecting aesthetic elements.

(4) Following the extraction, the data were analyzed using both descriptive and thematic analysis methods. In the descriptive analysis, trends and the frequency of themes across the

literature were examined, such as the prevalence of specific technologies or recurring challenges in conservation efforts. These themes included the integration of aesthetic elements into adaptive reuse projects, the role of digital technologies in conservation, the impact of contextual and functional shifts on heritage interiors, and strategic recommendations for future conservation practices.

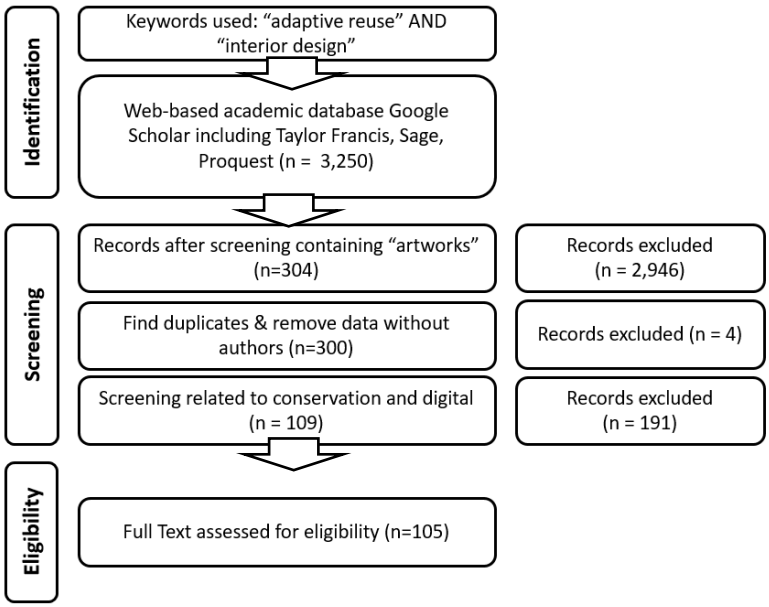

Figure 1. PRISMA-filtering Flow Chart for Initial Search

RESULT AND DISCUSSION

Descriptive Analysis

The VOSviewer program is utilized to process the bibliometric data collected using the Publish or Perish software. In the analysis, a threshold is set to ensure the relevance and significance of keywords; each keyword included in the network must appear at least four times within the dataset. This criterion helps to filter out less frequently used or less meaningful terms, allowing for a clearer visualization of the most prominent and interconnected keywords within the research field.

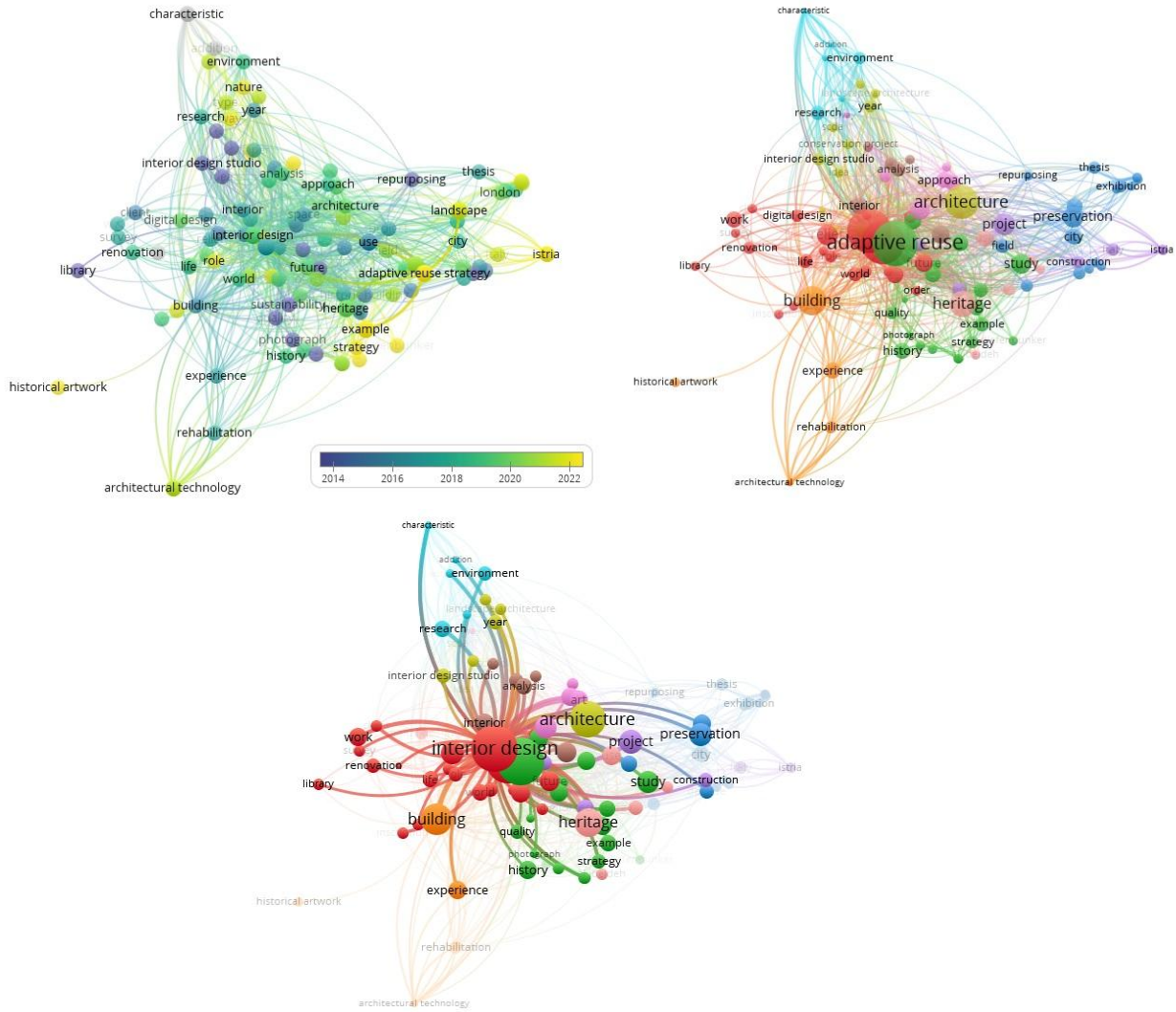

Figure 2. Keyword occurences on topic between 2003-2024, trend of occurences (top-left), overall occurences (top-right), relation to interior design (bottom).

The initial search identified 105 publications spanning from the year 2003 to 2024, comprising various types such as books, journal articles, and others. The year 2024 recorded the highest number of publications, with a total of 14, reflecting a strong and growing interest in the topic. In contrast, 2010 had the fewest publications. Collectively, these works have garnered 1,819 citations, with the highest number also occurring in 2024. Conversely, the years 2004, 2013, 2018, and 2023 recorded the lowest citation counts. Among the most frequently referenced sources, books.google.com ranks highest, followed by academia.edu and ProQuest. The overall trend suggests that the topic under investigation remains **highly relevant and in demand** within academic communities.

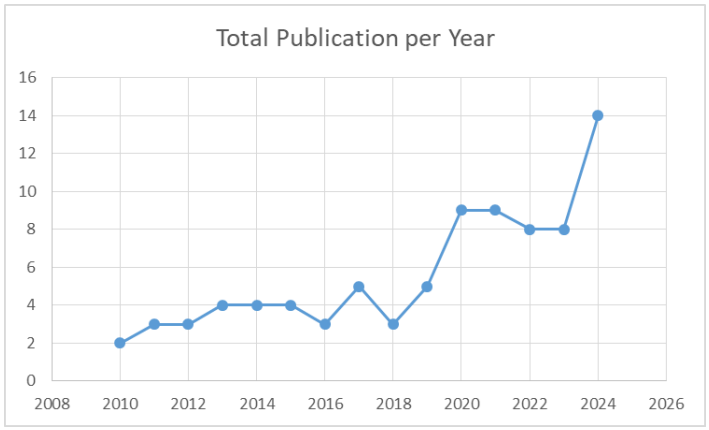

Figure 3. Total publication numbers per-year from 2010 – 2024

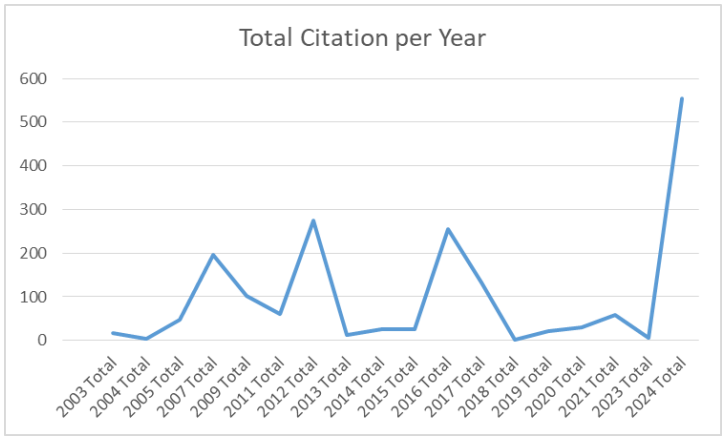

Figure 4. Publication citation numbers per-year from 2003 – 2024

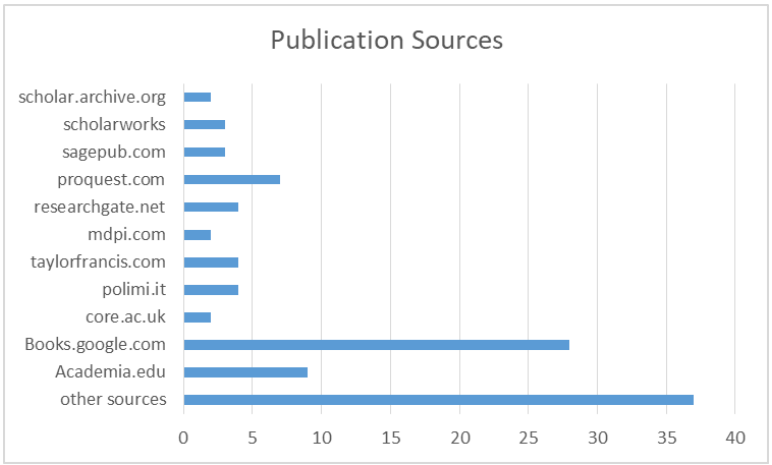

Figure 5. Publication sources numbers

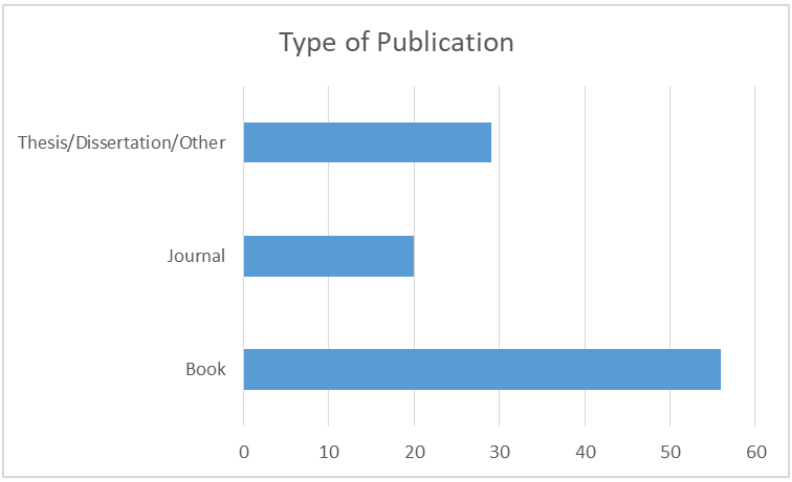

Figure 6. Type of Publication

Objectives within Collected Literature

The collected literature highlights a diverse array of objectives, focusing on the adaptive reuse of heritage buildings, the integration of aesthetic elements, and the role of technological and social dimensions in conservation practices.

Several studies emphasize the transformative role of adaptive reuse in preserving cultural heritage while accommodating modern needs. Ghandhari (2011) reimagines an abandoned theater into a public studio for ephemeral arts, aiming to resist the commoditization of art and foster individuality. Similarly, Asbagh (2021) proposes adaptive reuse of a Qajarid house in Iran as a museum, showcasing architectural and ornamental heritage while offering a model for revitalizing similar structures. Koopmans (2024) explores design challenges in monumental building transformations, focusing on sustainability across social, environmental, and economic dimensions.

The integration of aesthetic elements into adaptive reuse projects is central to the works of Ardhiati & Hasan (2024) and Mohamed (2016). Ardhiati and Hasan document methods to restore the Sarinah relief sculpture in Jakarta, overcoming limitations of time, space, and technology to preserve large-scale artworks. Mohamed, meanwhile, outlines approaches to adapt historical buildings into museums, ensuring aesthetic, symbolic, and functional values are preserved. The studies also investigate the role of digital technologies and evolving methodologies in conservation.

Husa and Harun (2023) stress the importance of historical studies in influencing conservation decisions, proposing frameworks to integrate historical knowledge into practical strategies. Lanz & Pendlebury (2022) review the theoretical evolution of adaptive reuse, shifting from practice-focused approaches to broader interdisciplinary perspectives. Through their objectives, they try to reveal the impact of contextual and functional shifts on heritage interiors.

Yanti (2020) and Gazali (2017) analyze public art and symbolic narratives in urban environments, showing how murals and reliefs act as cultural touchstones and tools for community engagement. These studies underscore the interplay of historical context, identity, and aesthetic communication in adaptive reuse.

Strategic recommendations across the literature aim to guide future conservation practices. Miran & Husein (2023) introduce a conceptual model for assessing heritage building preservation, incorporating sustainable adaptations like energy retrofitting. These approaches, along with Asbagh's museum proposal (Asbagh, 2021) and Koopmans' design frameworks (Koopmans, 2024), collectively advance the discourse on sustainable and culturally sensitive conservation practices.

Overall, the body of work demonstrates how adaptive reuse intertwines historical, aesthetic, and technological considerations, fostering sustainable and meaningful transformations of heritage spaces.

Methodologies within Collected Literature

The methodologies employed across the collected studies showcase a variety of approaches that integrate qualitative, quantitative, and interdisciplinary techniques to explore adaptive reuse and heritage conservation.

Qualitative methods dominate many studies, emphasizing observational, theoretical, and narrative analyses. Ghandhari (2011) employs a qualitative framework grounded in Frankfurt School theories, combined with precedent studies of cultural facilities, to explore design's role in shaping identity. Similarly, Yanti (2020) uses in-depth visual and narrative analysis to examine the symbolic and socio-political significance of Sudjojono's reliefs, while Gazali (2017) observes public murals as tools for environmental and cultural communication.

Architectural and conservation-focused studies rely heavily on documentation, physical analysis, and integration of advanced technologies. Asbagh (2021) provides a detailed architectural analysis of a Qajarid house, utilizing minimal intervention strategies to maintain authenticity. Ardhiati & Hasan (2024) combine invasive and non-invasive methods, including digital mapping, manual restoration, and 3D virtual modeling, to preserve and remaster the Sarinah relief sculpture, demonstrating the potential of blending traditional and digital tools.

Several studies adopt literature review methodologies to synthesize theoretical and practical insights. Lanz & Pendlebury (2022) critically examine adaptive reuse literature, exploring transformative processes like "shift" and "translation" through case studies of informal reuse strategies. Similarly, Husa & Harun (2023) analyze interdisciplinary heritage conservation studies, emphasizing historical data's role in informed conservation decisions.

Quantitative approaches also feature prominently, particularly in assessing the state of preservation. Miran & Husein (2023) use surveys and categorize building adaptations into physical preservation and adaptive reuse strategies, offering insights into conservation practices in the Erbil Citadel. Koopmans (2024) integrates literature review with case studies, analyzing design issues across Brand's building layers to identify solutions for monumental transformations.

The methodologies also underscore the increasing role of **digital technologies** in conservation. Ardhiati & Hasan (2024) use of tools like AutoCAD, ZBrush, and photogrammetry highlights advancements in digitally supported restoration. Meanwhile, Asbagh (2021) and Koopmans (2024) emphasize systematic documentation and analysis to bridge theoretical and practical conservation applications.

In summary, the methodologies reflect a rich interplay of qualitative, quantitative, and technological approaches. These diverse strategies not only deepen the understanding of adaptive reuse and conservation practices but also demonstrate the importance of integrating historical, cultural, and technical perspectives for sustainable heritage preservation.

Focus Area within Collected Literature

- *Integration of aesthetic elements into adaptive reuse projects*

The integration of aesthetic elements plays a crucial role in adaptive reuse projects, ensuring that cultural, historical, and artistic values are preserved while reimagining spaces for modern functions. Several studies emphasize the importance of preserving architectural and artistic integrity during adaptive reuse. Ghandhari (2011) reinterprets the Winnipeg Metropolitan Theatre into a public studio for ephemeral arts, carefully preserving and reconfiguring existing spatial and architectural features to challenge conventional design hierarchies. Similarly, Asbagh (2021) highlights the transformation of the House of Mirza Mehdi Farrashbashi into a museum of poets, balancing restoration and functional adaptation to retain its cultural and ornamental essence.

Artistic integration extends to public and urban spaces, as Gazali (2017) explores in the role of murals. These collaborative cultural expressions not only beautify urban environments but also foster community participation and environmental consciousness, serving as ethical and aesthetic tools for conservation. Yanti (2020) lanzunderscores the symbolic importance of Sudjojono's "Manusia Indonesia" relief, advocating for its preservation and inclusion in adaptive reuse projects to highlight historical narratives and local wisdom.

Architectural and functional harmony is a recurring focus, with Lanz & Pendlebury (2022) reimagining adaptive reuse as a transformative process that bridges old and new, addressing the social and cultural dimensions of neglected heritage. Mohamed (2016) aligns with this

perspective by showcasing the conversion of historical domestic buildings into museums, blending original design elements with modern needs to create functional yet historically respectful spaces.

- *The role of digital technologies in conservation*

Digital technologies have emerged as powerful tools in the conservation of heritage artifacts and the adaptive reuse of historical buildings. Ardhiati & Hasan (2024) exemplify this trend through the restoration and remastering of the Sarinah relief sculptures, combining digital mapping, 3D modeling, and manual restoration techniques. These methods not only facilitate the preservation of intricate details but also support education and public engagement through virtual models.

Technological integration is equally significant in ensuring sustainable heritage adaptation. Miran & Husein (2023) employ energy retrofitting and material reuse strategies to enhance the ecological and socioeconomic value of heritage buildings, highlighting green practices in adaptive reuse. Similarly, Koopmans (2024) addresses sustainability goals by integrating accessibility, energy efficiency, and material reuse into adaptive reuse strategies for monumental buildings.

Digital tools also support the reinterpretation of historical and cultural narratives. Mohamed (2016) integrates contemporary display technologies into museum design, ensuring accessibility and dynamic visitor engagement while preserving original furniture and architectural details. Husa & Harun (2023) further advocate for the use of historical studies augmented by digital documentation to inform conservation decisions, emphasizing the role of historical components like craftsmanship and materiality.

By combining traditional conservation approaches with cutting-edge technologies, these studies illustrate how digital tools not only aid in preserving physical heritage but also enhance its relevance and accessibility in the modern era.

Findings within Collected Literature

- *The impact of contextual and functional shifts on heritage interiors*

Heritage interiors are deeply influenced by changes in context and functionality, often necessitated by adaptive reuse projects aimed at preserving their significance while aligning them with contemporary needs. Ghandhari (2011) demonstrates how the transformation of the Winnipeg Metropolitan Theatre into a public studio redefined spatial hierarchies and identities. By prioritizing participatory artistic processes, this project resisted commodification and showcased the potential of ephemeral arts in shaping collective and individual experiences within a heritage setting.

Similarly, Asbagh (2021) highlights the adaptive reuse of the House of Mirza Mehdi Farrashbashi into a museum, where contextual shifts enhanced cultural and community value.

Minimal interventions ensured that historical aesthetics and structural integrity were preserved while promoting tourism and urban renewal. This approach illustrates how functional adaptation can mitigate risks of abandonment, ensuring the continued relevance of heritage interiors.

The integration of murals and relief sculptures into adaptive reuse projects further emphasizes the interplay of contextual and functional shifts. Yanti (2020) examines the symbolic narratives of the "Manusia Indonesia" relief, arguing for its preservation to reflect Indonesia's cultural identity. Gazali (2017) extends this idea to murals, which serve as visual communication tools in public spaces, fostering community engagement and environmental stewardship.

Finally, Lanz and Pendlebury (2022) emphasize the theoretical dimensions of adaptive reuse, framing it as a process that intertwines memory, identity, and heritage-making. The shift from a purely design-focused approach to one that engages social and cultural narratives reinforces the importance of contextual understanding in transforming heritage interiors.

- *Strategic recommendations for future conservation practices*

Future conservation practices must adopt holistic strategies that balance preservation with adaptation, ensuring both sustainability and cultural relevance. Ardhiati and Hasan (2024) showcase how combining traditional methods with digital technologies, such as 3D modeling and photogrammetry, can overcome material challenges and enhance the restoration of complex heritage artifacts like the Sarinah relief sculptures. This integration highlights the role of digital tools in creating educational and cultural opportunities.

Strategic frameworks like those proposed by Miran & Husein (2023) underscore the need for energy-efficient retrofitting and sustainable material reuse in heritage adaptation. Addressing gaps in energy-saving measures in historic buildings, they advocate for interventions that support both ecological goals and cultural preservation. Similarly, Koopmans (2024) outlines practical insights into reducing design conflicts through holistic approaches, emphasizing the importance of regulatory frameworks and flexible strategies to accommodate diverse conservation challenges.

Mohamed (2016) provides practical recommendations for adaptive reuse in museum contexts, emphasizing reversibility, distinguishability, and harmony. Design elements such as lighting, circulation, and accessibility must respect heritage values while accommodating contemporary technologies to ensure long-term sustainability. This aligns with Husa & Harun (2023) emphasis on the need for conservation decisions informed by historical studies and guided by social and symbolic values.

To advance these practices, Lanz & Pendlebury (2022) suggest expanding adaptive reuse beyond architectural concerns to include broader interdisciplinary perspectives. By addressing issues of memory, ownership, and cultural identity, future conservation practices can transcend

traditional boundaries, ensuring heritage interiors remain dynamic contributors to urban and cultural life.

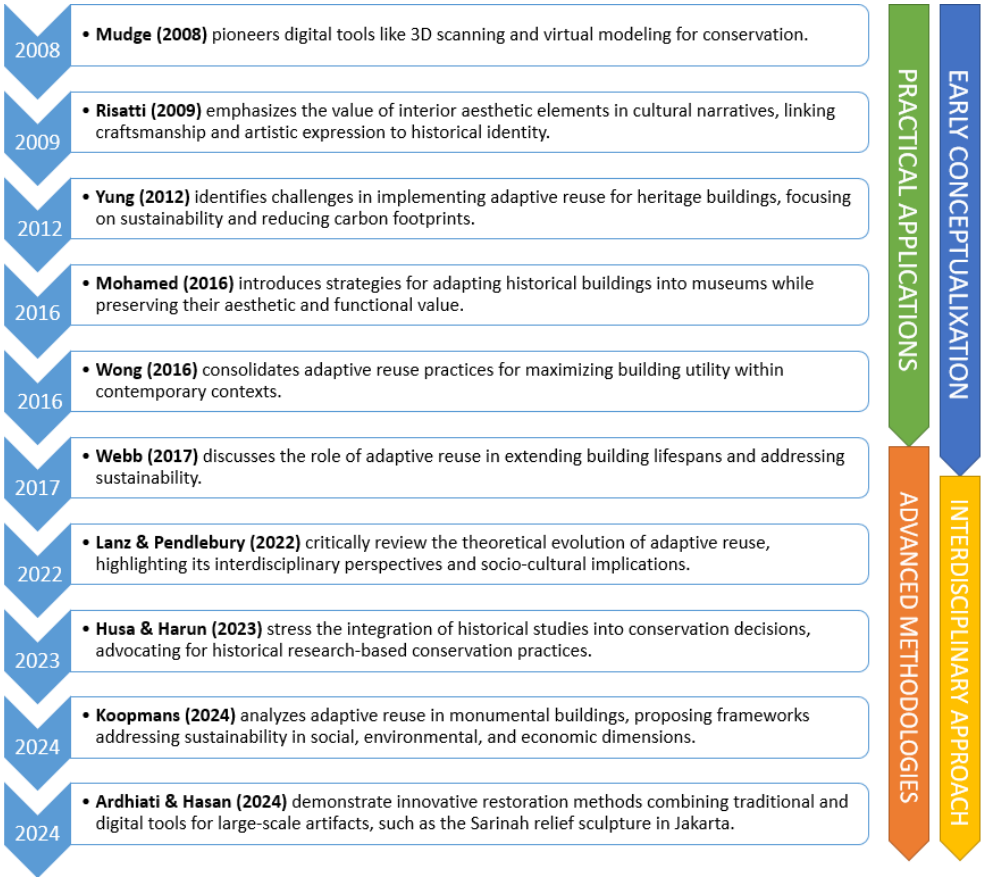

Figure 7. Timeline of Issues Development in Historic Interior Adaptive Reuse Approach

Recommended Protocols for Heritage Interiors

Conserving heritage interior aesthetic elements requires a structured approach that balances preservation with adaptation, ensuring sustainability and cultural relevance.

1. Documentation and Asessment for Balanced Preservation and Reversibility

   The process begins with a comprehensive pre-conservation assessment. Thorough documentation and historical research are essential to understand the cultural, social, and historical significance of the interior and its aesthetic elements. This involves consulting archival records, previous studies, and oral histories, as well as using high-resolution photography, sketches, and written descriptions to document the current state of the interior. Condition analysis is equally critical, employing both traditional methods and digital tools like close-range photogrammetry and 3D modeling to identify material challenges such as porosity, wear, and structural issues. Stakeholder engagement is a key step, involving local communities, cultural historians, and conservation experts to ensure

the conservation approach reflects the heritage's social and symbolic values. Collaborative planning with stakeholders helps balance preservation with adaptive reuse.

2. Sustainability

   Developing a conservation strategy requires integrating sustainability principles, ensuring adaptive reuse aligns with ecological goals. Strategies such as energy-efficient retrofitting and sustainable material reuse are vital, as are renewable energy systems like solar panels that respect heritage aesthetics. Adaptive reuse principles emphasize interventions that are reversible, distinguishable, and harmonious, with design elements such as lighting and circulation adhering to reversibility to avoid permanent impacts on heritage surfaces. Integrating contemporary technologies enhances accessibility, usability, and visitor experience without compromising historical authenticity. Digital and traditional techniques play a significant role, combining methods such as 3D modeling and virtual simulations to enhance restoration accuracy. Digital replicas provide opportunities for education and exhibitions, preserving the original artifacts while maintaining their cultural significance.

3. Holistic Approach

   Implementation demands a holistic approach, considering the interdependencies of design layers such as structure, layout, and materials. Retaining original layouts where possible minimizes design conflicts, while adaptations accommodate new functions. Non-invasive techniques for cleaning and restoration are prioritized to protect fragile materials, and every intervention is meticulously documented to ensure transparency and provide a basis for future conservation efforts. Interdisciplinary collaboration is vital, bringing together experts from fields such as cultural geography, memory studies, and social sciences to ensure the conservation process respects the broader cultural and identity aspects of the heritage site.

4. Regular Maintenance

   Post-conservation, regular monitoring and maintenance protocols must be established to assess the condition of preserved elements and address emerging issues. A maintenance schedule should include cleaning, minor repairs, and updates to sustainable technologies. Educational and cultural integration ensures continued public engagement, using digital tools like augmented reality to provide immersive learning experiences while minimizing physical interaction with fragile elements. Post-conservation evaluations measure the effectiveness of interventions, gathering feedback from stakeholders and visitors to refine future practices.

5. Collaboration among Stakeholders

Future-oriented recommendations focus on regulatory frameworks, advocating for flexible rules that address diverse conservation challenges while upholding heritage values. Collaboration with policymakers is necessary to integrate adaptive reuse principles into urban planning and conservation laws. Research and innovation should explore underdeveloped areas, such as the "site" and "stuff" layers in Brand's model, to enhance understanding of heritage conservation. Advancing digital tools and sustainable practices further improves conservation outcomes. Community involvement is crucial, encouraging long-term stewardship through participatory initiatives and public awareness campaigns. Heritage interiors must be promoted as dynamic contributors to urban and cultural identity, ensuring their continued relevance for future generations.

CONCLUSION

The study of adaptive reuse and the conservation of historical interior aesthetic elements reveals significant trends, methodologies, and strategies that shape current and future practices. Over time, adaptive reuse has evolved to incorporate interdisciplinary approaches, balancing preservation with modern functionality. Emerging trends highlight the importance of integrating historical and cultural narratives into design processes, ensuring the authenticity and relevance of heritage interiors. Technologies such as 3D modeling, photogrammetry, and energy-efficient retrofitting have revolutionized the adaptive reuse process, providing innovative tools to address material challenges and enhance restoration accuracy. Contextual shifts, including urbanization, social needs, and policy changes, have significantly influenced heritage interiors, necessitating adaptive strategies that respect both historical integrity and contemporary demands. To ensure the long-term protection of these aesthetic elements, holistic conservation strategies must prioritize reversibility, sustainability, and community engagement. By fostering collaboration among stakeholders, advancing digital tools, and promoting educational integration, the conservation of historical interiors can continue to serve as a bridge between cultural heritage and modern development.

ACKNOWLEDGEMENT

This research was supported by a grant from Telkom University, whose generosity and commitment to academic excellence made this study possible. We sincerely thank the university, along with its faculty and staff, for their invaluable support and encouragement throughout this process. This work aims to reflect Telkom University's vision and contribute meaningfully to the academic community.

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