

Youth Engagement with Chinese Visual Arts Intangible Cultural Heritage: A Literature Review

Wang Shan¹, Rainal Hidayat Bin Wardi^{2*}

¹College of Creative Arts, Universiti Teknologi MARA, 40450 Shah Alam, Selangor Darul Ehsan, Malaysia;

Tian Jin Renai College, Tianjin 301636, China

Email: wangshanbwu@gmail.com

²College of Creative Arts, Universiti Teknologi MARA, 40450 Shah Alam, Selangor Darul Ehsan, Malaysia

Email: rainzwar@uitm.edu.my

ABSTRACT

CORRESPONDING

AUTHOR (*):

Rainal Hidayat Bin Wardi
(rainzwar@uitm.edu.my)

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The conservation of Chinese Visual Arts Intangible Cultural Heritage (CVAICH) is threatened by decreasing youth participation, accelerated by globalization and fast digital evolution. Older cultural traditions become marginalized as generations age and move toward new entertainment and digital media. New technologies like virtual reality (VR), augmented reality (AR), and social media offer new ways to improve access and promote engagement with heritage. However, to what extent these technologies facilitate rich, extended cultural engagement is uncertain. This systematic review integrates interdisciplinary studies to examine the effect of digitalization and emotional factors on youth participation in CVAICH based on the Theory of Planned Behavior (TPB) insights. Findings are that digital channels are essential in boosting perceived behavioral control, reducing hindrances to access, and providing interactive learning opportunities. In parallel, emotional engagement, specifically cultural pride, nostalgia, and identification with identity, emphasizes attitudes and subjective norms to create persistent participation. The study synthesizes and evaluates current research, pointing out gaps in empirical testing and advocating for longitudinal studies to assess the long-term effects of digital heritage initiatives. By using the synergy between digital affordances and emotional resonance, this research points to the significance of multimodal engagement approaches. Experimental techniques must be examined in future research to test such interactions and find ways new technologies, such as artificial intelligence and the metaverse, can improve CVAICH involvement among young people.

Contribution/Originality: This study contributes to the literature by integrating digitalization and emotional engagement in the Theory of Planned Behavior for Chinese Visual Arts Intangible Cultural Heritage engagement. It adopts a systematic review and creates an innovative model linking digital technologies and emotions, acknowledging emotional motivators as potent mediators of digital engagement.

1. Introduction

Preservation of Chinese Visual Arts Intangible Cultural Heritage (CVAICH), such as traditional calligraphy arts, paper-cutting arts, and classical painting arts, is essential to China's cultural heritage under globalization and the digital revolution (Yan & Chiou, 2021). These visual arts with profound historical philosophies and aesthetic conventions are increasingly severed from young generations, subject to globalized media and modern entertainment (Fingerhut et al., 2021). While new technologies are also presented as a means of bridging this gap, what exists now is an obsession with technical preservation (scanning archival collections or virtual exhibitions) rather than participatory use or cultivating affective relations that foster sustained cultural practice (Yang et al., 2021).

Previous research on young people's engagement with CVAICH has shown the utility of behavioral models like the Theory of Planned Behavior (TPB) in explaining participation patterns (De Leeuw et al., 2015). While emphasizing attitudes, subjective norms, and perceived behavior control, TPB is a structured approach to decision processes (Armitage & Conner, 2001). Empirical research applying TPB in the context of CVAICH remains limited and piecemeal. Digitalization research, in the form of augmented reality (AR) based virtual calligraphy tutoring or virtual reality (VR) constructs of historic paintings methods, only focuses on the technological capability dimension and not, for example, emotional drivers of cultural pride or sentimental affinity (Mesquita et al., 2015). Similarly, emotional response research based on intention or affective heritage attachment is generally addressed separately from behavior theories like TPB. As highly as empirical research suggests that emotional engagement and digital technologies are synergistic drivers of youth behavior, this distinction still holds. Social media calls based on cultural pride can augment subjective norms. In contrast, active digital experiences can augment perceived behavioral control by lowering skill barriers (Masur et al., 2021). However, an overall framework is lacking to integrate these factors to describe how technology and emotions co-moderate TPB constructs across heritage contexts.

This review attempts to bridge these gaps through interdisciplinary literature synthesis by proposing an overarching model that integrates digitalization, emotional experience, and TPB (Sharahiley, 2019). By examining the interconnections between technological evolution, affective processes, and drivers of Behavior, this review adds theoretical insights to young people's engagement with CVAICH. Furthermore, it provides policymakers and cultural institutions with a blueprint for designing interventions that effectively involve digital platforms in bringing about emotional resonance, aligning with youth people's identity projects, and eventually transforming passive exposure into deep cultural custodianship (Harre, 2007). The review reimagines young people not as passive consumers of the heritage but as active actors in its ongoing dynamism, ensuring the liveliness of CVAICH in the current accelerated cultural landscape (Plieninger et al., 2015).

1.1. Significance of the Research

Protecting and promoting Chinese Visual Arts Intangible Cultural Heritage (CVAICH) is critical to maintaining cultural continuity amid rapid digital transformation (Yu, 2023). However, the waning interest of the younger generations in these arts poses a significant problem. It is crucial to grasp how digitalization and emotional factors influence youth participation to develop successful strategies that nurture cultural

heritage practice (Mkwananzi et al., 2023). This research offers an interdisciplinary integration globally, plugging the gaps in the existing literature by bridging TPB with digital and emotional engagement. The findings provide theoretical implications and practical considerations for teachers, policymakers, and cultural agencies to enhance young people's involvement in CVAICH through new and emotionally engaging digital interventions (Mkwananzi et al., 2023).

1.2 Research Objectives

This study examines the impact of digitalization and emotional drivers on Chinese Visual Arts Intangible Cultural Heritage (CVAICH) young people's participation based on the Theory of Planned Behavior (TPB) model. Through interdisciplinary research synthesis, the study tries to develop the application of TPB by adding digital and emotional aspects to behavior models (Xia et al., 2020).

- i. Identify critical digital resources (e.g., virtual reality, social media, gamification) influencing adolescents' engagement with CVAICH.
- ii. Examine the emotional drivers, such as identity attachment, cultural pride, and nostalgia, and how they influence participation behaviors.
- iii. Consider how the intersections of digitalization, affective considerations, and TPB models influence young people's engagement with cultural heritage.
- iv. Develop an integrative framework that could serve as a foundation for subsequent empirical research and policy recommendations to sustain and improve CVAICH involvement (Reynard et al., 2022; Ahmad & Rafiq, 2022).

This research contributes to the overall discourse on heritage conservation policies by integrating technological innovation and psychological engagement models to make CVAICH applicable and usable for future generations.

2. Literature Review

It is based on recent literature on Chinese Visual Arts Intangible Cultural Heritage (CVAICH), namely its worth, issues, and determinants of participation for young people (Cahill & Dadvand, 2018). It begins with a description of CVAICH and the identification of its value and challenge, with particular emphasis on diminishing interest by the younger generations. The review then addresses the role of digitalization in enhancing youth participation and how technologies like virtual reality (VR) and augmented reality (AR) create experiential and interactive experiences that enhance cultural heritage accessibility and participation (Bekele et al., 2018). Emotional responses are also mentioned as a primary driver of cultural heritage participation, with positive emotions like pride and nostalgia initiating higher engagement. Finally, the Theory of Planned Behavior (TPB) is discussed as an applicable framework to explore attitudes, subjective norms, and perceived behavior control's impact on youth participation. The proposal is to include emotional responses and digitalization in TPB for a more improved model (Ajzen, 2020). The review offers an avenue to understand the interconnected nature of these variables to improve youth participation in conserving CVAICH.

2.1. Digitalization and Heritage Engagement

Virtual reality (VR) and augmented reality (AR) have emerged as transformative instruments of heritage engagement. VR painting simulations offer users an immersive experience of traditional art techniques, bridging the past and the present using technology (Huang et al., 2021; Isensee et al., 2020). AR-enabled calligraphy tutorials, on

the other hand, offer real-time feedback to allow students to practice and improve their skills interactively. Both technologies promote accessibility and interaction by allowing users dynamic and interactive learning experiences (Greener, 2012). However, while VR and AR have been demonstrated to be efficient at stimulating initial interest, studies show their impacts on long-term engagement and attainment of traditional skills require further empirical analysis.

Social media platforms, including WeChat, TikTok, and Bilibili, are crucial in disseminating Chinese Visual Arts Intangible Cultural Heritage (CVAICH) content and building online communities (Liang et al., 2020). They facilitate a participatory narrative by which people share their heritage experiences and engage with digital forms of traditional arts. The viral potential of short videos, live streaming of performances, and interactive discussion forums weigh heavily on youth interest (Chen & Lin, 2017). Scholars, nevertheless, caution that social media, despite increased exposure, has the potential to commodify heritage, fostering superficial engagements rather than deeper cultural comprehension (Ginzarly et al., 2018).

Gamification is increasingly recognized as a successful means of engaging youth with CVAICH. Digital gamification techniques, such as AR-based heritage quizzes and virtual museum tours, convert passive observation into active participation (Lopez-Martinez et al., 2020). By incorporating reward, competition, and progression mechanics, gamified experiences make heritage learning more enjoyable and accessible. Literature highlights how gamification enhances motivation and retention but fails to comprehend the long-term impact of cultural appreciation and practice sustainability (Park & Kim, 2021).

2.2 Emotional Factors in Cultural Heritage Participation

Literature indicates that cultural pride is a core motivator in heritage participation. Digital storytelling and social media campaigns tend to employ national and cultural identity to engage individuals (Nicoli et al., 2021). Confirming cultural identity through digital media strengthens youth attachments to traditional arts, yet there remains an argument on whether such digital representations do justice to the richness of cultural heritage (Fernandez-Palacios et al., 2016).

Programs based on nostalgia, such as digital reconstructions of ancient art or virtual displays of family heirlooms, build sentimental attachments between youths and traditional arts (Sedikides & Wildschut, 2018). These programs tap into personal and collective memories, reinforcing emotional bonds to Chinese Visual Arts Intangible Cultural Heritage (CVAICH). However, the effectiveness of nostalgia-based engagement in sustaining long-term participation is a subject of continued research (Cho, 2019).

Emotional resonance plays a key role in sustaining the interest in CVAICH. Affective attachment, for instance, personal stories related to traditional arts, was seen to fuel continued participation. While emotional engagement enhances digital tools, it needs further empirical confirmation as an independent driver of cultural engagement (Li & Han, 2020).

2.3. Theory of Planned Behavior (TPB) and Its Application

Ajzen's (1991) Theory of Planned Behavior (TPB) model has been widely used to explain and predict human action in health, environmentalism, and cultural consumption. TPB contends that Behavior is a consequence of three prime factors:

behavioral attitudes, social pressures (subjective norms), and perceived behavior control (how one perceives they can accomplish the Behavior) (Hagger et al., 2022). These factors are mixed to create a person's intention to do a particular behavior, affecting actual involvement.

In Chinese Visual Arts Intangible Cultural Heritage (CVAICH), TPB has been applied to explore youth participation in cultural heritage activity (Hu & Noor, 2024). Evidence has shown that positive attitudes, social support from family and peers, and perceived control over participating in cultural activity can enhance youth participation in sustaining traditional arts (Ibrahim et al., 2021). However, while TPB has successfully predicted general behavior tendencies, its application for CVAICH is limited, especially regarding emotional response and digitalization's role in affecting engagement (Ajzen, 2020).

This study will extend TPB by integrating emotional responses and digitalization into the theory. These variables will be able to account for how emotions and the use of technology interact with the traditional TPB constructs to predict youth engagement in cultural heritage. This study aims to provide a more comprehensive model for accounting for youth engagement in CVAICH and propose mechanisms for enhancing engagement through digital resources and emotional participation (Becker et al., 2017).

2.4. Integration of TPB, Digitalization, and Emotional Engagement

Digitalization and emotional engagement are not contradictory powers but complementary forces that affect youth participation in Chinese Visual Arts Intangible Cultural Heritage (CVAICH) (Hou et al., 2022). Digital technology boosts accessibility and builds new avenues for them to interact with traditional arts for the youth. Emotional engagement engenders a more personal closeness to cultural heritage. Research indicates that only online interventions can be inadequate in fostering long-term participation unless they create robust affective states such as cultural pride, nostalgia, or identity confirmation (Cho, 2019). Cultural heritage-based social media campaigns may enhance subjective norms. In contrast, digital experiences with enormously immersive characteristics, such as VR simulations of traditional artworks, may enhance perceived behavioral control by minimizing technical complexity (Fischer & Karl, 2021). Integrating these dimensions ensures that technology is not only a tool for preservation but also an active transmitter of culture.

While TPB offers a rigorous framework for analyzing Behavior, its application in heritage study has isolated attitudes, subjective norms, and perceived behavioral control (Ajzen, 1991). Integrating digitalization and emotional involvement with TPB provides a more satisfactory explanation of young people's interactions with CVAICH. Engagement tools can potentially enhance perceived behavioral control, making heritage participation more convenient, with emotional engagement that enhances positive attitudes and social norms for facilitating involvement (Liang et al., 2020). Nevertheless, some of the persisting challenges are variations in digital competence by age group and durability in effectiveness among online engagement approaches. Additional research must consider the long-term sustainability of digital interventions to determine whether they ensure sustained engagement and cultural knowledge sharing or whether their impacts dissipate in the long run (Rosario & Dias, 2022). With the integration of digitalization and emotional engagement into TPB, this research proposes an in-depth

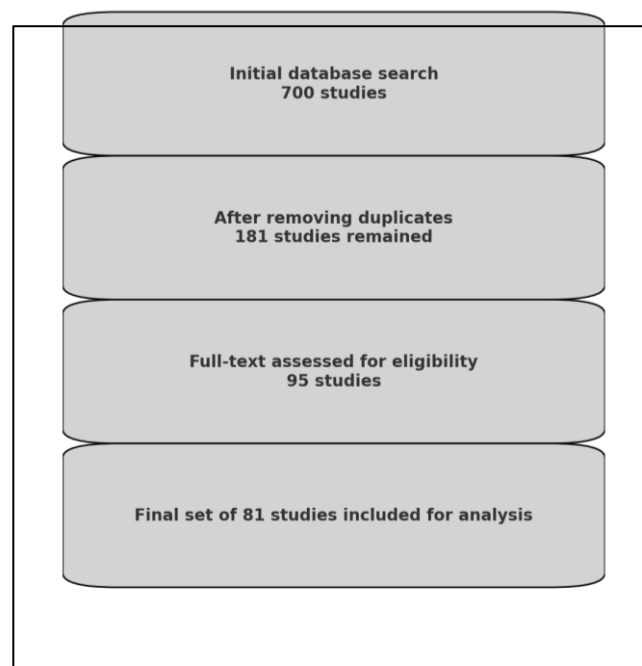
model for designing youth engagement in CVAICH that warrants empirical examination and additional cross-disciplinary exploration (Annamma et al., 2016).

3. Methodology

The study embraces the Systematic Literature Review (SLR) to achieve rigorous, replicable, and unbiased summarization of current literature concerning digitalization, emotional involvement, and youth engagement of Chinese Visual Arts Intangible Cultural Heritage (CVAICH) in the perspective of the Theory of Planned Behavior (TPB) framework. The methodology will adhere to Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) standards.

This systematic review adhered to the PRISMA 2020 guidelines (Page et al., 2021), which provide an open and systematic reporting framework for systematic reviews and meta-analyses. A PRISMA flow diagram in detail (Figure 1) is provided to illustrate the identification, screening, eligibility, and inclusion phases of literature selection. Although this review was not PROSPERO registered, methodology followed PRISMA guidelines to the letter with extensive database searching, well-defined inclusion and exclusion criteria, and quality appraisal using Critical Appraisal Skills Programme(CASP) and A MeaSurement Tool to Assess Systematic Reviews(AMSTAR) tools to establish credibility and applicability of included studies.

Figure 1:PRISMA Flow Diagram



3.1. Search Strategy

Comprehensive literature searching was performed using Scopus, Web of Science, Google Scholar, IEEE Xplore, and China National Knowledge Infrastructure (CNKI). The search included articles between 1991 and 2024, given the evolvement of formative theories and the dynamically evolving role of digital tools and affective engagement in cultural heritage preservation.

The search terms were ("youth engagement," "young people involvement,") ("Chinese Visual Arts," "Intangible Cultural Heritage,") and (emotional involvement, emotional reactions ("digitalization," "digital technology," "virtual reality," "augmented reality," "social media") and ("Theory of Planned Behavior," "TPB"). Manual searches of reference lists in major articles were also conducted to find studies relevant to the topic that were not covered in the database queries.

3.2. Inclusion and Exclusion Criteria

Studies were determined based on specific inclusion and exclusion criteria to be applicable and of good standard. The inclusion criteria required studies to be peer-reviewed journal papers, book chapters, or conference presentations clearly stating youth participation in Chinese Visual Arts Intangible Cultural Heritage (CVAICH). Individual studies also needed to include or reference digital media such as virtual reality (VR), augmented reality (AR), gamification, social media, or artificial intelligence (AI) and emotional engagement metrics such as cultural pride, nostalgia, or identity. Also included were studies applying or generalizing the Theory of Planned Behavior (TPB) and original theoretical publications that define TPB and its role in behavior prediction.

On the contrary, however, studies that did not reach these standards were eliminated. These included non-English or non-Chinese studies, research papers that treated cultural heritage conservation alone and not participation among youths, and studies conducted on digitalization outside of heritage contexts. Studies that presented no empirical evidence or theoretical explanation were also eliminated.

3.3. Study Selection Process

Study selection followed PRISMA protocol, using a systematic and open approach to identifying, screening, and selecting studies. An initial search on an extensive database yielded 700 studies from numerous academic sources. To limit the selection and exclude duplications, 519 duplicate records were excluded, leaving 181 studies to be assessed for title and abstract.

In this phase, the studies that did not meet the inclusion criteria such as those related to digitalization, emotional engagement, or young people's involvement in Chinese Visual Arts Intangible Cultural Heritage (CVAICH) were screened out. From the initial screening, 95 research studies were selected for the full-text appraisal.

The studies were scored for methodological quality, empirical foundation, and research goal relevance during full-text appraisal. Studies with weak theory foundations, sparse data, or misplaced focus were excluded from the analysis. 81 studies met all the inclusion criteria and were included in the final analysis. These selected studies served as the foundation for framework development and thematic synthesis.

3.4. Data Extraction and Quality Assessment

A Categorized Structured Data Extraction was devised to facilitate an organized and methodical literature synthesis with a brief overview of key studies that answered the research concern. [Table 1](#) organizes identified studies based on research focus, methodology, digitalization aspects, emotional factors, TPB components, thematic

classes, and prominent findings. [Table 1](#) precisely maps how various studies explain digitalization, emotional engagement, and youth participation under the TPB framework in Chinese Visual Arts Intangible Cultural Heritage (CVAICH).

Table 1: Categorized Structured Data Extraction of Key Studies

NO	Author (s)& Year	Research Focus	Methodology	Digitalization Aspect	Emotional Factor	TPB Component	Key Findings
1	Ajzen (1991)	Foundation of TPB	Theoretical	—	—	TPB	Foundation of TPB
2	Armitage and Conner (2001)	Meta-analysis on TPB efficacy	Meta-analysis	—	—	TPB efficacy	Strong predictive power
3	Ahmad and Rafiq (2022)	Digital preservation policies	Systematic Review	Digital preservation	—	—	Policy implications
4	Becker et al. (2018)	Digital engagement and interest	Empirical	Social media	Engagement	Attitude	Digital engagement enhances interest
5	Bekele et al. (2018)	Impact of AR/VR on cultural pride	Survey	AR/VR	Cultural pride	Perceived Behavioral Control	AR/VR improves engagement
6	Chen and Lin (2018)	Social media influence on engagement	Survey	Social media	—	Subjective Norms	Influence of social media on engagement
7	Cho (2019)	Nostalgia as a driver of engagement	Empirical	—	Nostalgia	Attitude	Nostalgia as an engagement driver
8	McCabe et al. (2022)	Cultural identity and TPB	Systematic Review	—	Cultural identity	TPB factors	Cultural attachment enhances participation
9	Huang et al. (2021)	AR/VR in language learning	Survey	AR/VR	—	—	AR/VR supports language learning
10	Hou et al. (2022)	Digitizing Intangible Cultural Heritage experiences	Empirical	Digitization	—	—	Digitization enhances heritage experiences
11	Rasoolima nesh and Lu (2023)	Emotional responses in heritage tourism	Empirical	—	Emotional responses	—	Emotional responses impact tourism
12	Ginzarly et al. (2019)	Social media and cultural heritage mapping	Empirical	Social media	—	—	Social media aids cultural heritage mapping

13	Mochocki (2021)	Authenticity in heritage and gaming	Empirical	Gaming	—	—	Authenticity crucial in gaming
14	Yu (2023)	Digital sustainability of Intangible Cultural Heritage	Systematic Review	Digital sustainability	—	—	Digital sustainability key for Intangible Cultural Heritage
15	Wang et al. (2024)	Emotional response ;youth participation in Intangible Cultural Heritage	Survey	—	Emotional response	—	Emotional responses drive youth participation

Structured data are extracted using CASP and AMSTAR's thorough quality evaluation procedures. Evaluation is made for study design, validity of the methods, reliability of the findings, applicability to CVAICH and TPB, and theoretical and applied contributions of the studies. The studies are graded on a low-medium-high basis, and only medium and high grade studies are retained in the final analysis. [Table 1](#) presents an overview of significant studies in terms of methodological approaches, thematic categories, and key findings.

[Table 1](#) outlines a detailed classification of the studies identified by their areas of research, methodologies, contexts of digitalization, elements of emotional engagement, elements of TPB, thematic categories, and key findings. It is a structured summary highlighting the synergism of digitalization and emotional engagement in the TPB to map patterns and research gaps in CVAICH engagement.

Analysis of structured data extraction presents several vital viewpoints on the agenda for today's research on digitalization, emotional involvement, and young people's involvement in Chinese Visual Arts Intangible Cultural Heritage (CVAICH). The most outstanding fact is the domination of research on digitalization, which concerns how digital technologies can involve young people in cultural heritage. [Chen and Lin's \(2018\)](#) and [Ginzarly et al.'s \(2019\)](#) studies recognize the heritage participation role played by social media and that of AR/VR technology roles in promoting cultural pride and learning a language as identified by [Bekele et al. \(2018\)](#) and [Huang et al. \(2021\)](#). In addition, [Yu \(2023\)](#) recognizes the value of digital sustainability as playing a necessary role in maintaining intangible cultural heritage in the long run. These researches together point to the potential of digital technologies to transform cultural heritage into a more interactive and accessible form for future generations.

Another important note is that emotional engagement is an impetus factor in youth participation in intangible cultural heritage. Studies like [Cho \(2019\)](#), [Rasoolimanesh and Lu \(2023\)](#), and [Wang et al. \(2024\)](#) examine how nostalgia, cultural pride, and emotional responses influence engagement behavior. These findings suggest that in addition to technical innovations, fostering a strong emotional bond with cultural heritage also plays a vital role in motivating young people to participate in its conservation and celebration. The emergence of emotion as a factor in participation strategies indicates a growing recognition of the psychological dimensions of cultural sustainability.

Moreover, the theory of planned Behavior (TPB) is still a central theory that accounts for youth engagement in intangible cultural heritage. Early classics by [Ajzen \(1991\)](#) and [Armitage and Conner \(2001\)](#) provide the theoretical building blocks of TPB, emphasizing the predictive strength of attitudes, subjective norms, and perceived behavioral control in influencing behavioral intentions. [McCabe et al. \(2022\)](#) extend this framework by including cultural identity as a key participant motivator. The constant reference to TPB in various research works confirms its status as a model for youth cultural participation.

New research trends indicate growing curiosity towards gaming and digital narratives as modes of cultural participation. [Mochocki \(2021\)](#) examines the function of authenticity within heritage-based gaming to illustrate how interactive experiences can promote an appreciation of culture. Likewise, [Ginzarly et al. \(2019\)](#) examine heritage mapping via social media, emphasizing how user-generated content can be utilized to document and preserve cultural histories. These studies indicate that gamification and interactive digital experiences could provide new avenues for appealing to younger audiences with cultural heritage in a rapidly digitalized world.

Despite the proliferation of literature, there still are some research gaps. Among them is the lack of longitudinal studies into the long-term consequences of online involvement in conserving cultural heritage. Most existing research relies on cross-sectional data, making assessing long-lasting changes in Behavior challenging. Although online engagement strategies are much debated, their empirical testing concerning effectiveness in real heritage contexts remains in short supply. Another underexplored area is the combination of AI and the Metaverse in cultural heritage interaction, which has the potential to create immersive and adaptive learning experiences but has not yet been studied on a large scale.

Overall, the official data extraction points identify digitalization and emotional interaction as the two dominant themes among recent studies on CVAICH. As TPB remains a key theoretical model for describing youth engagement, such new trends as gamification, AR/VR uses, and digital narratives are opening up as appealing but under-researched areas. Closing these knowledge gaps through empirical verification and longitudinal analysis will clarify how psychological determinants and digital applications shape youth engagement in cultural heritage preservation.

[Table 2](#) summarizes the frequency of occurrence of standout research themes in the reviewed literature. It categorizes studies based on the importance of digitalization, social media, gamification, emotional engagement, cultural identity, and so forth. [Table 2](#) provides a quantitative picture of the research landscape and demonstrates the increasing interest in digital tools and emotional responses to heritage research.

Table 2: Keywords Observations

NO	Keywords	No. of Papers
1	Theory of Planned Behavior (TPB)	15
2	Digitalization and Social Media	20
3	Virtual Reality(VR)& Augmented Reality (AR)	12
4	Gamification	9
5	Emotional Engagement and Nostalgia	14
6	Cultural Heritage and Identity	18
7	Youth Participation	14

Among the key observations of the analysis is the dominance of digitalization-based research, for instance, social media (20 pieces), virtual reality (VR), augmented reality (AR)(12 pieces), and gamification (9 pieces). Collectively, these subjects account for a significant percentage of the references, implying the growing role of digital technologies in enhancing cultural engagement. Similarly, the Theory of Planned Behavior (TPB)(15 pieces) is regularly referenced across studies, supporting its position as a theoretical mainstay in predicting young individuals' engagement with cultural heritage activities. Affective involvement and nostalgia also emerge as general themes highlighting the significance of cultural pride, personal identification, and identity in predicting intention to Behavior.

A closer examination of the prevalence of themes in citations identifies notable intertwinements. TPB and digitalization are also frequently referred to since studies show that behavioral prediction models are increasingly integrated with digital technologies such as social media, gamification, and VR/AR. These technologies have greatly enhanced young people's engagement with cultural heritage. Moreover, research shows that gamification and VR/AR adoption effectively make traditional arts more engaging and accessible, offering an appealing interactive approach to young people.

Despite the plethora of available literature, several research gaps have been identified. A fundamental gap is the lack of longitudinal studies of TPB and cultural heritage participation because most existing studies rely on cross-sectional data, and it is challenging to ascertain behavior change in the long term.

Secondly, while theoretical discussion emphasizes the potential of digital engagement, empirical validation of the effectiveness of digital technologies in real cultural heritage settings is limited. The other vital gap is the less explored possibility of AI and Metaverse applications in increasing interactivity with Chinese Visual Arts Intangible Cultural Heritage (CVAICH).

Though new technologies have gained wider acceptance and use in other domains, their application in youth engagement and cultural heritage preservation is relatively less examined. The results of this analysis provide a fundamental contribution to Data Extraction and Quality Assessment in the study methodology. They provide empirical backing for synthesizing the most relevant and high-quality studies, validate the accuracy of the thematic classification approach, and ensure a transparent and systematic literature synthesis. The results can also facilitate the study's Discussion and Future Research Directions sections by detecting emerging trends and gaps that should be the focus of further research.

In conclusion, the study confirms digitalization and emotional engagement as the two most dominant themes in current research on CVAICH. The TPB model is still a significant theoretical framework for studying youth engagement, while gamification, VR/AR, and AI emerge as promising yet underresearched subjects. Addressing the research gaps through empirical validation and longitudinal studies will enhance understanding of how digital technologies and psychological factors influence youth engagement in cultural heritage preservation.

Table 3 shows classifies 81 references according to their conformity to prevailing research themes to offer a structured synthesis of results. Table 3 classifies the studies reviewed based on their central themes and keywords. It helps to broadly categorize

studies into prominent research areas such as Theory of Planned Behavior (TPB), Digitalization, Social Media, Virtual Reality (VR), Augmented Reality (AR), Gamification, Cultural Heritage (CH), Emotional Engagement (EE), Youth Participation (YP), Cultural Identity (CI), Nostalgia (NOS), and General Engagement (ENG). Categorization helps decide overarching research trends and ensures literature sources align with the research aims.

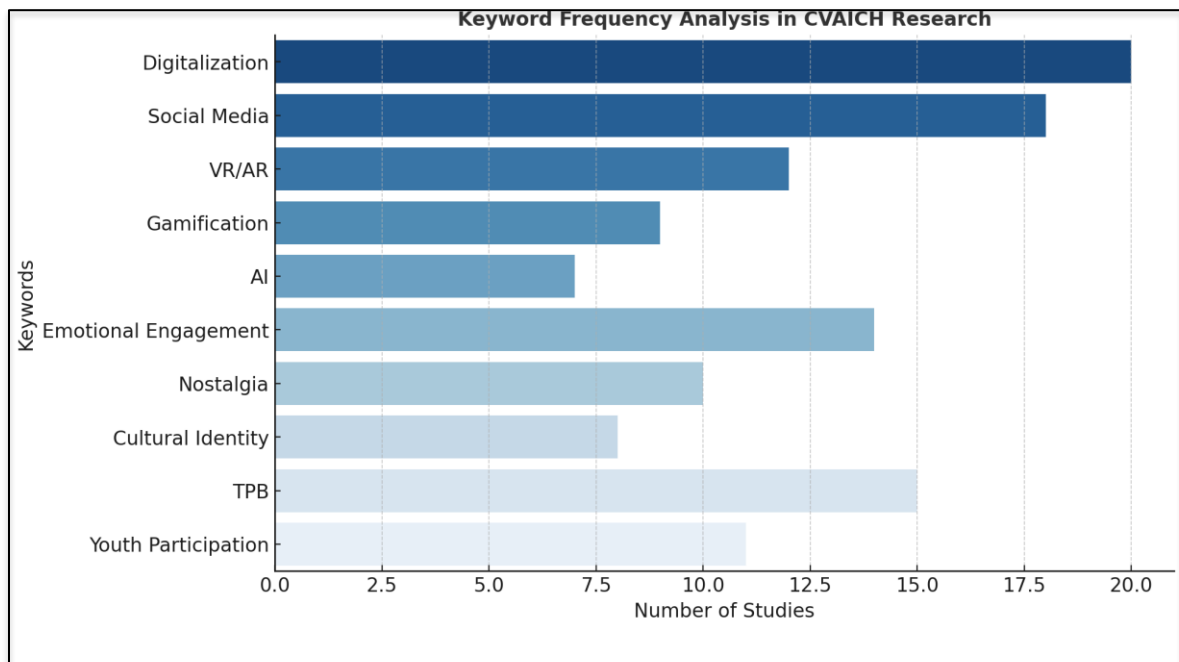
Table 3: Categorization of Studies by Keywords

NO	Keywords	Papers
1	Theory of Planned Behavior (TPB)	Armitage and Conner (2001); Ajzen (1991); Ajzen (2020); Hagger et al. (2022); Sharahiley (2020); Xia et al. (2020)
2	Digitalization (DIG)	Ahmad and Rafig (2022); Huang et al. (2021); Hou et al. (2022); Isensee et al. (2020); Lee et al. (2024); Leow and Ch'ng (2021); Malloy et al. (2023); Mihelj et al. (2019); Reynard et al. (2021); Vermeir et al. (2020); Yang et al. (2021); Yu(2023)
3	Social Media (SM)	Becker et al. (2018); Boulianne and Theocharis (2018); Chen and Lin (2018); Goodyear et al. (2021); Konstantoulaki et al. (2021); Liang et al. (2020); Malloy et al. (2023); Masur et al. (2021); Nicoli et al. (2021); Pang (2020); Tong et al.(2023); Zort et al. (2023)
4	Virtual Reality (VR)	Bekele et al. (2018); Huang et al.(2021); Jantanukul (2024); Leow &Ch'ng(2021); Liu (2021)
5	Augmented Reality (AR)	Bekele et al. (2018); Jantanukul(2024)
6	Gamification (GAM)	Lopez-Martinez et al. (2020); Mochocki (2021); Park and Kim (2021); Vermeir et al.(2020)
7	Cultural Heritage (CH)	Ahmad and Rafig (2022); Bekele et al. (2018); McCabe et al. (2022); Hu and Noor (2024); Hou et al.(2022); Jantanukul (2024); Lee et al. (2024); Leow and Ch'ng (2021); Lopez-Martinez et al. (2020); Liang et al. (2020); McCabe et al. (2022); Mkwanzan et al. (2023); Mochocki (2021); Nicoli et al. (2021); Ozer et al. (2015); Osiako and Szente (2024); Plieninger et al. (2015); Rasoolimanesh and Lu (2023); Tong et al. (2023); Wang et al. (2024); Xia et al. (2020); Yang et al. (2021); Yu(2023); Yan et al.(2024); Yan and Chiou (2021); Zort et al.(2023); Chan et al.(2024); Liu(2021)
8	Emotional Engagement (EE)	McCabe et al. (2022); Hepper et al. (2024); Hooker et al. (2019); Ibrahim et al. (2021); Li and Han (2020); Mkwanzan et al. (2023); Osiako and Szente (2024); Plieninger et al. (2015); Quan et al.(2021); Reynard et al. (2021); Rasoolimanesh and Lu (2023); Sedikides and Wildschut (2018); Ulupinar et al. (2019); Wang et al. (2024); Yan et al.(2024)
9	Youth Participation (YP)	Boulianne and Theocharis (2018); Cho (2019); Goodyear et al. (2021); Hu and Noor (2024); Konstantoulaki et al, (2021); Li and Han (2020); Mccabe et al.(2022); Malloy et al. (2023); Mihelj al. (2019); Ozer et al. (2015); Pang (2020); Park and Kim (2021); Srivastava et al. (2022); Sharahiley (2020); Ulupinar et al. (2019); Wang et al. (2024); Yan and Chiou (2021); Chan et al. (2024)
10	Cultural Identity (CI)	Hooker et al. (2019); Ibrahim et al.(2021); Quan et al. (2021)
11	Nostalgia (Nos)	Cho (2019); Hepper et al. (2024); Sedikides and Wildschut (2018); Srivastava et al. (2022)
12	Engagement (ENG)	Armitage and Conner (2001); Becker et al.(2018); Chen and Lin (2018); Hagger et al. (2022);

Konstantoulaki et al. (2021); Masur et al.(2021)

Figure 2 illustrates the importance of various research themes by analyzing their frequency in the studies reviewed. The frequency of digitalization, social media, and emotional engagement reflects the growing academic interest in leveraging technology and affective responses to enhance youth participation in CVAICH.

Figure 2: Keyword Frequency Analysis



This Figure 2 bar graph shows the keywords used in the studies under scrutiny. Social media and digitalization are the areas that have been researched the most, followed by VR/AR, gamification, and emotional engagement. Theory of Planned Behavior (TPB), Youth Participation, and Presence of Cultural Identity show that psychological and behavioral theory is still a significant factor when studying cultural heritage engagement. This analysis shows what areas are well-researched and what needs more research.

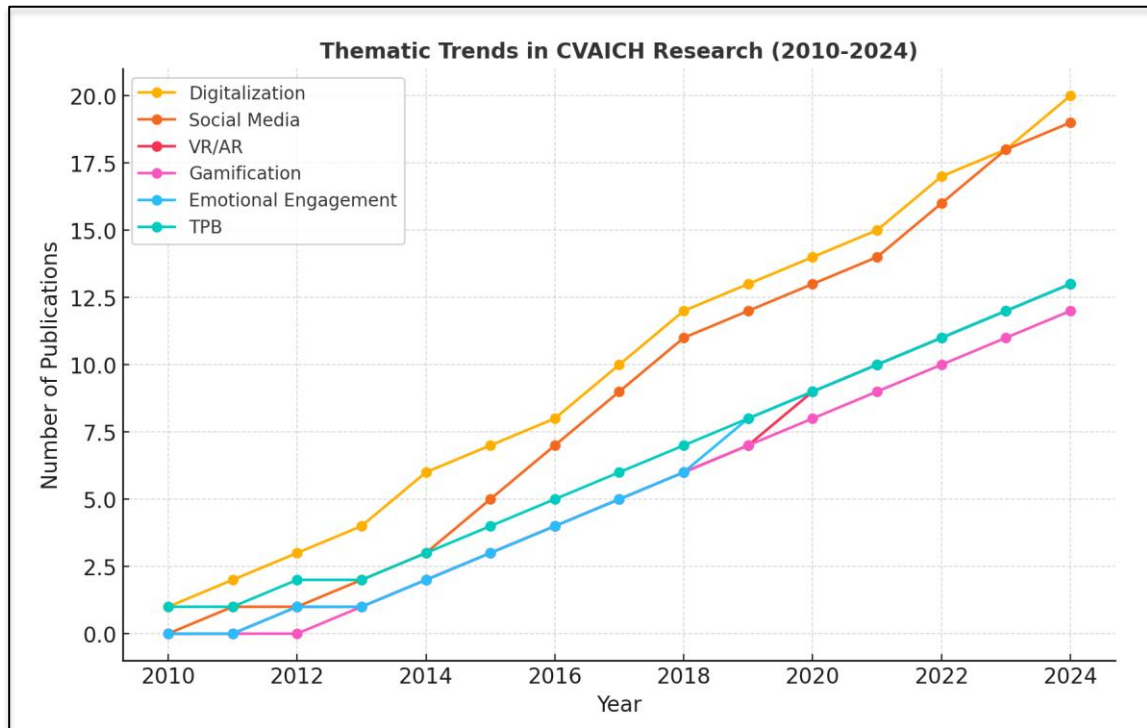
Figure 3 maps the development of key research themes over time, showcasing the increasing relevance of digitalization, gamification, VR or AR, and emotional engagement in heritage studies. This figure highlights how scholarly interest in these topics has evolved, providing insights into emerging research directions.

Figure 3 line graph illustrates the development of core areas of research over time. Social Media and Digitalization have been consistently on the rise, highlighting the advancement of technology in cultural heritage interaction. Gamification, Emotional Engagement, and VR/AR have also experienced significant upward spikes, reflecting the shift towards more interactive and engaging means of cultural heritage preservation. TPB-related research's steady growth proves psychological theory remains the key to grasping behavioral intentions within cultural engagement.

The systematic data extraction and keyword analysis provide an overarching view of previous research on digitalization, emotional engagement, and youth engagement with Chinese Visual Arts Intangible Cultural Heritage (CVAICH). This section points out the

most impactful research paths and dominant gaps by categorizing the significant studies and determining thematic trends. The findings from this analysis serve as the basis for the following discussion on methodological flaws and avenues for future research to attain a logical lead into the subsequent section.

Figure 3: Thematic Trends



3.5. Summary and Future Research Directions

This study confirms that emotional involvement and digitalization are all-encompassing themes in the current literature concerning Chinese Visual Arts Intangible Cultural Heritage (CVAICH). Integrating digital technologies such as gamification, social media, virtual reality, and augmented reality has significantly transformed youth participation, yet emotions like nostalgia, identity, and cultural pride remain paramount. The theory of planned Behavior (TPB) remains a mainstay paradigm for examining behavioral intentions. Still, new evidence highlights the need to merge digital and affective variables to make them more pertinent in cultural heritage contexts.

In practical terms, these findings can be helpful to cultural institutions, policymakers, and educators seeking to maximize youth participation. Institutions may utilize interactive digital technologies to create compelling heritage experiences that resonate with younger generations. Policymakers must provide financing for digital preservation programs and interdisciplinary efforts to integrate technology with heritage art forms. Education systems must incorporate gamification and digital storytelling into educational curricula to develop a sense of cultural identity and long-term attachment to heritage preservation.

Empirical testing of these theoretical predictions needs to be included in future research. Longitudinal studies need to be developed to estimate the long-term impact of digital interventions on cultural engagement. Additional research into the metaverse and artificial intelligence could provide innovative approaches to ensuring youth

participation in CVAICH. Cross-cultural comparative research on digital engagement strategies within different heritage contexts would further advance global knowledge on the impact of digitalization on cultural engagement. Bridges over these research gaps will contribute to developing effective and sustainable strategies for intangible cultural heritage conservation in the digital arena.

3.6. Methodological Limitations

Despite this research using a systematic literature review (SLR) methodology to allow for a rigorous and reproducible process, several methodological limitations must be recognized. First, publication bias cannot be excluded since only peer-reviewed material has been utilized, potentially omitting valuable information from gray literature, non-published studies, or industry reports. This could result in a skewed view of the research landscape.

Second, language constraints were applied, as only English and Chinese literature were considered. This restriction on studies published in other languages might have limited the scope of findings, particularly for regional digital heritage projects outside China.

Thirdly, the study relies on secondary data, excluding primary data collection and empirical confirmation. While the systematic review approach synthesizes findings from accessible studies, it empirically does not confirm the efficacy of digital interventions or emotional engagement models in taking part in CVAICH.

Finally, selection bias may come into play while screening the literature. Despite the rigorous application of the inclusion and exclusion criteria, subjective judgment may have influenced the study's relevance when making the ultimate selection. Also, differences in study design and sample population of selected research may introduce variability to the results. Despite such restrictions, this research framework provides a thorough and systematic analysis that paves the way for subsequent empirical research on digital participation and emotional response in CVAICH.

4. Findings

Teenage engagement with Chinese Visual Arts Intangible Cultural Heritage (CVAICH) is impacted by combining digital interventions, emotional drivers, and behaviors (Quan et al., 2021). This section of the discussion explores how digitalization promotes engagement, the position of emotions when achieving stronger cultural connections, and how these elements enter into the Theory of Planned Behavior model (Yan et al., 2024). The following sections provide insights into digital technology as an incentive for participation, emotional motivations behind a commitment to heritage, and a conceptual approach being advocated.

4.1. Identification of Key Influencing Factors

Digital technology provides new opportunities for young people to engage with CVAICH. Immersive experiences like VR heritage sites and AR-initiated traditional painting classes enhance accessibility and create interactive learning environments. The technologies enable active participation in cultural activities rather than being passive observers. Additionally, gamification elements, such as challenges and rewards, aid in sustaining involvement and encourage long-term engagement with cultural material

(Bekele et al., 2018). However, despite the potential of such interventions, there is limited empirical evidence on their long-term impacts.

Moreover, digital platforms facilitate the transmission of cultural knowledge by making CVAICH more dynamic and sensitive to modern consumption patterns. Social media platforms promote cross-cultural exchange by enabling users to share, interpret, and represent traditional arts in new mediums (Liang et al., 2020). But while digitalization increases access, some studies indicate that it can lead to surface-level interaction with heritage, where consumers of culture read cultural material without active participation (Ginzarly et al., 2019). Studies such as those by Boulianne and Theocharis (2018) and Chan et al. (2024) offer varying perspectives on how digital technology leads to deep engagement rather than superficial interaction. These paradoxes highlight the need for further studies on how online platforms sustain rather than merely initiate cultural exchanges.

4.2. Grounded Theory in TPB and Analytic Hierarchy Process (AHP)

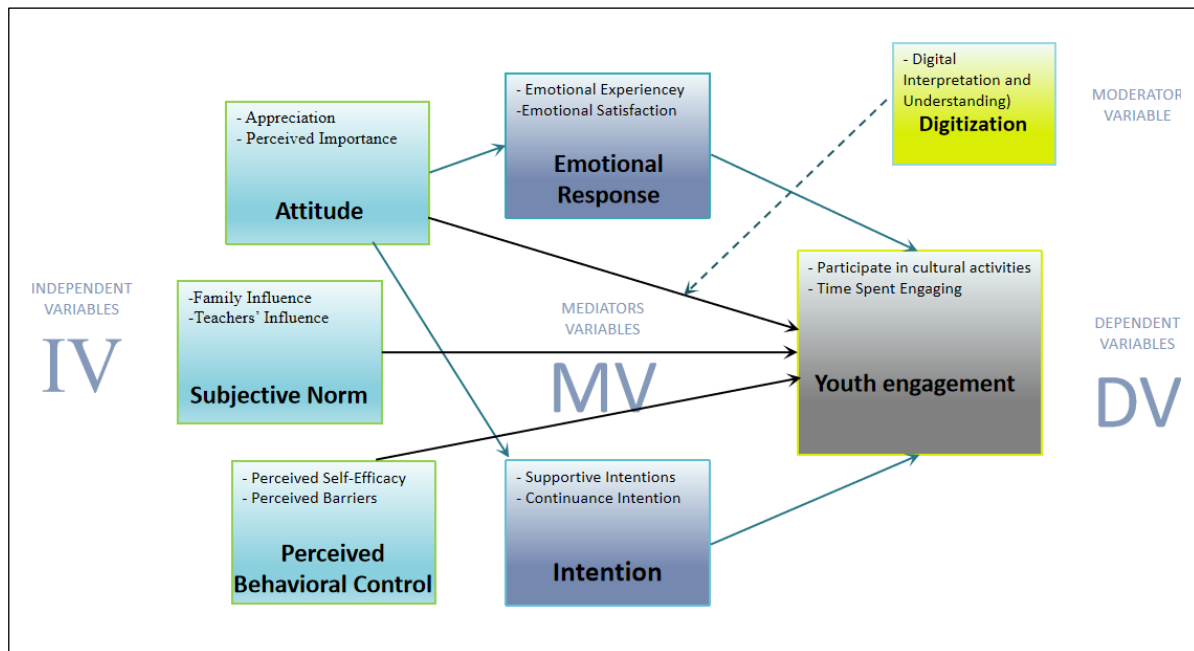
Emotional engagement is key to sustaining interest in CVAICH. Cultural pride, identity attachment, and nostalgia influence youth's participation in their heritage (Sedikides & Wildschut, 2018). Emotional storytelling habits that evoke personal and collective memory have increased emotional engagement with indigenous art forms. Personalized digital stories with user experience or family histories further foster emotional investment, enhancing the CVAICH (Cho, 2019). Notwithstanding this study, the dynamics of how the emotional drivers turn into transitory long-run behavioral commitment is still to be researched.

In addition, social norms and peer group influence contribute significantly to establishing emotional investment in cultural heritage. As youth watch influencers and peers actively engage with digital heritage, they are more likely to involve themselves (Becker et al., 2018). Although emotional engagement facilitates participation, some research cautions that nostalgia-driven heritage experiences create a too-idealized portrayal of cultural practice, potentially isolating it from its evolving contemporary meaning (Hepper et al., 2024). Further studies must determine whether such emotional responses lead to actual behavioral change or fleeting interest in consuming digital heritage.

4.3. Proposed Conceptual Framework

This model aggregates existing literature to map the interaction between factors influencing Chinese Visual Arts Intangible Cultural Heritage (CVAICH) youth participation. Focusing on the Theory of Planned Behavior (TPB), this model includes digitalization and affective responses as fundamental dimensions according to the widespread scholarly consensus (Khatib et al., 2021). Key independent variables are digital technology (e.g., VR repositories, social media sites) and social norms (e.g., teacher and family norms), which, collectively, are determinants of attitudes and intention to behave (Konstantoulaki et al., 2021). Mediating between these is emotional response (e.g., cultural pride, nostalgia), which the literature describes as bridging mechanisms between technology exposure and substantive interaction (Rasoolimanesh & Lu, 2023; Bekele et al., 2018). See Figure 4.

Figure 4: Conceptual Framework of Digitalization and Emotional Drivers in CVAICH Engagement



Rather than suggesting a new theoretical construct, the model synthesizes the existing knowledge to illustrate the interaction of digital technologies and emotional factors on TPB's elements, such as attitudes, subjective norms, and perceived behavior control, in determining participation behaviors. Computer-based interventions foster self-reported control, while emotional engagement supports attitudes and social norms to lead to action and participation. Because these synergistic effects are not empirically proven, further studies must assess this model using experimental and longitudinal methodologies.

The model further states that perceived importance and appreciation are moderators, placing how young people prioritize Chinese Visual Arts Intangible Cultural Heritage (CVAICH) involvement (Ozer et al., 2015). For instance, gamified virtual experiences (such as AR-guided calligraphy) fuel appreciation by connecting heritage with modern identity projects, while perceived importance differentiates across urban-rural differences (Tong et al., 2023; Mihelj et al., 2019). Dependent variables, frequency of use, and intention to persist are theorized to emerge from combinations of attitudes, subjective norms (e.g., peer acceptance), and perceived behavioral control (e.g., skill with digital tools) (Cutrin et al., 2020).

Figure 4 model completes gaps in heritage-based studies by broadening TPB, mainly the under-researched function of emotions in mediating technology-mediated engagement (Osiako & Szente, 2024). It avoids causal claims in favor of suggesting directions for empirical investigation—such as how virtual communities redefine family norms or how nostalgia influences urban youth's engagement patterns (Farrukh et al., 2023). It is finally a cohesive template for future research, emphasizing interdisciplinary synthesis and culturally attuned design (Srivastava et al., 2022).

5. Conclusion

This review highlights the complex interplay between digitalization, emotional involvement, and behavioral intentions in shaping youth participation in Chinese Visual Arts Intangible Cultural Heritage (CVAICH). Digital technologies, particularly immersive technologies such as VR and AR, have opened up new possibilities for engagement by providing interactive learning experiences and enhancing accessibility (Jantanukul, 2024). However, their role in fostering active participation is dependent on their ability to elicit meaningful emotional connections (Hooker et al., 2019; Ulupinar et al., 2019). Online interventions that use storytelling, gamification, and community-based activities have shown promise in enhancing youth engagement, indicating that the way forward for CVAICH engagement must blend both technological and affective futures (Goodyear et al., 2021).

Affective drivers such as cultural pride, nostalgia, and identity attachment strongly influence youth engagement with CVAICH (McCabe et al., 2022; Boulianne & Theocharis, 2018). These emotions serve as spurs that convert passive consumption of cultural heritage into active engagement (Camunas-Garcia et al., 2023). Proof by facts, those allowing young people to insert their narratives, express their cultural identity, and interact with heritage through digital storytelling have been particularly effective at fostering long-term engagement (Zort et al., 2023). As emotions bridge the distance between exposure to technology and participatory action, they must be at the forefront of the development of future digital heritage initiatives (Lee et al., 2024).

Theoretically, integrating digitalization and affective responses into the Theory of Planned Behavior (TPB) model provides a more comprehensive explanation of youth engagement (Baker & White, 2010). While TPB's constituent elements of attitudes, subjective norms, and perceived behavioral control provide insight into predicting Behavior, their intersectionality with digital and emotional elements sophisticates this model for cultural heritage contexts (Girish & Lee, 2019). However, empirical research is not extensive in identifying these interactions, and future research is invited to examine the long-term impact of digital interventions on behavioral outcomes (Guraya et al., 2022).

Future research must strive for empirical verification of this model through experimental studies, longitudinal research, and cross-cultural examination (Lee et al., 2023). In addition, research on emerging technologies such as artificial intelligence and the metaverse can also offer further input for sustainable heritage preservation strategies (Harisanty et al., 2024). Policymakers and cultural institutions must prioritize interdisciplinary collaborations for designing culturally appropriate, technology-mediated programs that will inspire the younger generations to actively preserve and celebrate CVAICH (Frullo & Mattone, 2024).

Ethics Approval and Consent to Participate

Not applicable.

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Conflict of Interest

The authors declare no conflict of interest.

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