

An overview of consumer preferences for souvenirs in China post-COVID

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Abstract: The COVID-19 epidemic had a major effect on the travel sector worldwide, with China's souvenir market being especially hard hit. Examining post-COVID-19 tourist preferences for memento designs, this study also attempts to explore the ramifications for the souvenir design business as the tourism sector starts to recover. In order to find pertinent publications from 2019 to June 2024, a systematic literature review procedure based on the PRISMA criteria was used to scan the Web of Science and Scopus databases. After screening the collected literature for research themes and post-pandemic development trends, the VOSviewer tool was used to perform keyword co-occurrence analysis. Four primary research issues were established by the study: (1) the rationale for cultural tourism; (2) community involvement; (3) technological integration design; and (4) cultural economic analysis. It was discovered that travellers prefer personalised travel experiences and engaging with local culture, and that creating keepsakes using technology is becoming more and more popular. Travellers' tastes for Chinese souvenir designs have changed since COVID-19, and they are now more interested in individualised experiences, cultural components, and technological integration. The study's conclusions offer legislators, souvenir designers, and other tourism industry practitioners insightful information on how to promote innovation and long-term economic success.

Keywords: Post-COVID-19 era, Souvenir design, Systematic literature, Tourist preferences, VOSviewer.

1. Introduction

1.1. Research Background

The expansion of the tourism industry, which includes the souvenir market, which is a vital component of the industry and critical for attracting tourists and promoting culture, has a substantial impact on the economy and cross-cultural interactions (Wu et al., 2022; Gordon, 1986). On the other hand, the global tourism industry has never experienced anything like the COVID-19 pandemic outbreak of 2019. China is among the nations most impacted by the significant decline in both foreign visitor numbers and tourism-related revenue. Several countries' travel bans and lockdowns during the pandemic led to a sharp fall in tourism, and the market for trinkets completely collapsed.

China's tourism sector has welcomed the possibility of revival after the pandemic fully recedes in 2023. The government actively supports the tourist industry's renaissance through the adoption of tourism promotion activities and the improvement of tourism infrastructure. The travel strategies and behaviours of Chinese visitors have significantly changed at the same time; self-driving tours and short-distance travel have become the new norms. These changes have also had an impact on the market for travel souvenirs. Traditional creative items are not keeping up with modern culture (Ma & Wang, 2022).

In addition, overseas visitors have found China's National Immigration Administration's 144-hour transit visa exemption programme to be practical. This programme is expected to increase the number of international visitors to China, which will increase the market for mementos with Chinese influences. The desire for mementos relating to Chinese tourism has been significantly fueled by the "China travel" subject on TikTok and other social media platforms. Through the exchange of travelogues and the endorsement of unique keepsakes, they have stimulated foreign tourists' interest in Chinese tourism souvenirs (Sun, 2022).

In the lengthy process of China's and the world's development, the heritage and expansion of countless great cultures combined with modern art have demonstrated boundless potential. Therefore, studying travellers' preferences for Chinese souvenir designs in the post-COVID-19 era is essential to filling in the knowledge gap in academia and advancing theoretical as well as practical objectives, like boosting tourism souvenirs' competitiveness on the global market and promoting the industry's sustainable growth in China.

1.2. Literature Review and Research Aim

1.2.1. Digitalization and Innovation in Souvenir Design

In the context of the digital age, technological advancements—particularly the pervasive use of artificial intelligence—are changing the cultural and creative industries (Han et al., 2022). Although the COVID-19 pandemic had a significant impact on the global tourism industry, new development opportunities have also emerged in the post-pandemic era. Zhu et al. (2023) report that there was a slight decline in research on souvenir creation related to cultural heritage after the pandemic, but this was also a sign of the field's attention shifting to digital solutions.

The expansion of digital cultural production and the digital metamorphosis of tourist destinations are examples of this kind of transfer. It disseminates and interacts via digital media platforms by repurposing cultural content to create virtual cultural works (Liang, 2022; Mantas, 2021). Digital products are distinct and have opened up new ways to reduce the amount of material and energy used since they may provide a new visual experience without a physical form (Huang et al., 2023).

Furthermore, scholars like Yu et al. (2020) and Boonpracha (2021) are emphasising the value of innovation as well as the role that biculturalism and cultural variety play in the development of novel products. Wang & Huang (2024) investigate philosophical approaches to inventive expression, while Liang (2022) highlights the crucial role artificial intelligence plays in determining the aesthetic value of digital cultural creative products. Digital media provides a larger platform for creativity and expression, and digital technology offers more chances for innovative and cultural product design. These advancements take place against the backdrop of quickly changing technology and digital media.

Technology like virtual reality (VR) and 5G mixed with traditional crafts gives new life to the production of culturally unique products (Ma & Wang, 2022). Mantas et al. (2021) assert that the creation of personalised digital souvenirs can significantly enhance visitors' experiences, especially for younger visitors whose impressions of sustainability are strongly influenced by the novelty of cultural artefacts (Qin et al., 2019).

While prior studies provide a comprehensive grasp of digitalization and innovation in souvenir design, they often overlook the influence on souvenir design and the rapid shifts in tourist preferences that followed the outbreak.

1.2.2. Homogenization of Souvenirs and Consumer Perception

The souvenir sector has been facing the pressing need to address the uniformity issue for some time now. Souvenirs often exhibit a high degree of performance similarity and lack originality due to the concentration of market competitiveness and the standardisation of manufacturing lines (Swanson & Timothy, 2012; Wu et al., 2022). The studies by Song (2005) and Cheng (2019) further focus on the visible indicators of uniformity, which are that souvenirs sold in the tourism sector are fairly similar in terms of form, function, display, and marketing tactics but lack unique regional characteristics.

The impact of homogeneity on customers' buying intentions is examined by Wu et al. (2022) and Shen (2022). Their findings indicate that product similarity reduces consumers' willingness to make a purchase as well as their range of accessible options.

Tu et al. (2019) investigated, using a hypothetical model, how perceived homogeneity affects visitors' judgements of value and plans to make further purchases, and Gumulya & Meilani (2023) employed a combination of quantitative and qualitative research methods to fully comprehend travellers' souvenir-buying behaviours. These findings suggest that a strong emotional bond between products and consumers is necessary to prevent homogeneity and boost product success (Schifferstein et al., 2008). Enhancing the emotional design of creative and cultural products can help create a unique user experience for customers and achieve cultural heritage. This can aid in market segmentation and provide more targeted services (Gao & Huang, 2022).

By employing EEG, Interactive Genetic Algorithm (IGA), and Backpropagation Neural Network (BPNN) to analyse users' preferences for cultural components, Deng & Wang (2019) provided a novel perspective on how customers evaluate memento design. Although previous research provides a comprehensive grasp of uniformity and its implications, it occasionally overlooks the possibility of resolving issues through creative design strategies.

1.2.3. Motives and Influencing Factors of Souvenir Purchase Behavior

Because of its distinct cultural and sentimental value, the souvenir sector has developed into a very attractive market, according to Anastasiadou and Vettese (2021) (Amaro et al., 2020). Purchasing mementos is a customary aspect of travel, intimately linked to preconceived conceptions and impressions of the location. This choice is influenced by culture and recollections in addition to money.

Gordon (1986) observed that mementos allow people to "remember" special times and places by transforming abstract travel experiences into concrete objects (Anastasiadou & Vettese, 2019). Studies have shown that tourists usually buy souvenirs that are unique to the area (Fairhurst et al., 2007; Wilkins, 2011). Through a literature review and empirical research, Qin et al. (2019) and Wang and Ajovalasit (2020) investigated many factors that impact souvenir buying behaviour. These elements included aspects linked to tourism, sociocultural influences, and innovative concepts in product design.

Sociodemographic factors such as age, gender, wealth, and education have an impact on memento purchases, even if no appreciable differences have been found in these attributes (Amaro et al., 2020). It is noteworthy, however, that women are more likely than men to buy and gather souvenirs, especially when they are gifts. Additionally, travellers are choosing souvenirs with greater consideration for the product's cleanliness, portability, and aesthetic appeal (Amaro et al., 2020). The expansion of the logistics industry and the incorporation of multimedia features such as images, sounds, graphics, and videos into product design contribute to the allure of souvenirs (Bhatti et al., 2020).

Product design is closely linked to the customer feedback loop at the behavioural level, and culturally creative consumers value a product's unique experience design (Sun, 2022). The way the product functions and how thoughtfully the visual value and effect are thought out are both examples of this design. Yu et al. (2022) emphasised that social media platforms further enhance the emotional empowerment of cultural creative product design in the digital media era. These platforms have a profound and significant impact on user emotions and subconsciousness and have emerged as a major driving force for the development of culturally creative products.

However, current research often ignores this complex relationship when investigating consumer emotional expectations and product design in relation to souvenir buying behaviour. This study aims to bridge this gap by extensively examining tourists' buying intentions and behaviours and focusing on their emotional needs while exploring methods for creating more aesthetically pleasing and culturally appropriate mementos.

1.2.4. *The Tourism Industry and Souvenir Market in the Post-COVID-19 Era*

Since the COVID-19 breakout in 2019, there has been a dramatic shift in global human behaviour, particularly in the domain of business transactions. People were compelled to implement work-from-home policies, lockdowns, and quarantines in 2020, for instance, which affected consumer behaviour (Yen et al., 2022). Customers are using remote shopping more frequently as a result of the "new normal," which has an impact on the way they purchase and use cultural and creative goods (Bhatti et al., 2020). In addition to changing e-commerce patterns, the worldwide pandemic has also given rise to new ways to buy, bringing with it innovative ideas and tactics for promoting cultural and creative goods (Gutowski & Kłos-Adamkiewicz, 2022).

This is why there are now many more avenues for the display and dissemination of artistic and cultural commodities. thanks to the development of digital media, virtual reality, interactive design theory, and Internet technology. Particularly during the epidemic, travellers have had new experiences thanks to electronic services, which has altered their needs and preferences for mementos (Yen et al., 2022; Huang et al., 2023).

Consumers are becoming more conscious of a product's artistic expression and cultural relevance. Therefore, during the creative design process, designers must highlight the artistic and cultural relevance of their creations. In order to produce cutting-edge goods that both capture the essence of their nation's culture and follow modern aesthetics, they must also employ modern design approaches flexibly (Meng, 2021).

However, the epidemic has also caused challenges for the creative and cultural sectors. Many creative and cultural professionals have realised that the paid work model they are used to is no longer viable and that they need to quickly shift their livelihood strategies, which has altered the notion of labour and value (Pertierra et al., 2024). But to attract both domestic and foreign tourists, which boosts economic activity, maintaining the charm of tourism and protecting cultural assets are crucial (Gao et al., 2021).

This research claims that in the post-COVID-19 era, there have been notable shifts in the tourism industry and souvenir sector. Travellers love Chinese souvenir design for a number of reasons, such as its cultural relevance, uniqueness, personalisation, and identity. The needs and preferences of tourists must be thoroughly understood by designers in order to create mementos that combine traditional Chinese culture with contemporary aesthetics and cultural depth. Souvenir practitioners and designers should be aware of new visitor behaviour patterns, strengthen the connection between product design and cultural narratives, and elevate visitors' perceptions of innovation and cultural identity in relation to the items in order to adapt to market shifts.

Technology advancements, particularly in the fields of deep learning and artificial intelligence, are driving innovation in the design of cultural and creative products. In order to get insight into cultural heritage and market development, researchers are also investigating ways to better understand consumer desires and preferences. as well as how to merge traditional culture with current technologies. The advent of cutting-edge technology such as 5G creates new opportunities for the distribution and experience of creative and cultural commodities. These studies indicate a movement in favour of interdisciplinary collaboration with the aim of enhancing the value and accessibility of cultural and creative creation through technology.

1.2.5. *Research Aim*

Through a systematic assessment of the literature from 2019 to June 2024, this study will analyse development trends and developments in the field of souvenir design in China during the post-COVID-19 era in detail. The primary goal of the study is to determine how the pandemic has affected tourists' choices for Chinese souvenir designs and how these changes have affected marketing strategies and souvenir design. There was a notable decline in this field's research after the COVID-19 pandemic in 2019. More specifically, not enough was said about travellers' preferences following the outbreak. This study aims to close this information gap and provide direction for current and future research directions.

In addition to providing strategic insights for the field's sustainable development, this study opens up new avenues for future research on Chinese souvenir design. Given the rapid growth of design concepts and the ongoing policy changes, it has become extremely important to study the dynamics of Chinese souvenir design from 2019 to 2024. The main research question of this study is: What preferences have tourists developed for Chinese souvenir design in the era of the pandemic, and how have these choices impacted souvenir design and marketing strategies?

2. Materials and Methods

This study employed a literature review technique, looking at previous research to identify key aspects of the problem in order to identify research gaps. More accurately, this study provides insights into the patterns of evolution in Chinese memento design by means of a thematic assessment of relevant literature. The term "thematic analysis" refers to the act of identifying patterns and creating themes via a thorough examination of the content (Clarke & Braun, 2013; Zhu et al., 2023).

By grouping topics using a thematic literature review, researchers can identify the precise themes most relevant to their work. The benefit of theme analysis is that it's a useful, flexible, and easy research instrument that can produce "secrets" and language for thematic analysis in addition to thorough, insightful, and in-depth descriptions of the data (Clarke & Braun, 2013).

This approach has been used in many previous studies (Zhu et al., 2023; Li et al., 2023; Qiu et al., 2024). Consequently, a thematic review of the literature—which also involves a search and analysis of relevant data from databases—was the primary analytical technique employed in this study. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) is used to coordinate the retrieval of literature (Page et al., 2021).

2.1. Search Strategy

In addition to a number of different strategies, the academic reference databases Web of Science (WOS) and Scopus are employed in this study to reach research conclusions. WOS is the most commonly used data source for bibliometric analysis, even though Scopus is one of the biggest and most potent databases in the scientific community, with many unique documents (Bernardo et al., 2023) and is frequently used for a thorough understanding of tourism research subfields (Trupp & Dolezal, 2020; Yung & Khoo-Lattimore, 2019). To ensure the completeness and scientific integrity of this study, we combined these two datasets.

This study employs a number of ways to access the abundance of pertinent research within the years 2019 to 2024, having reviewed all applicable literature. It then specifies the primary literature search scope to include this time frame. This guarantees a deeper and more comprehensive comprehension of how research issues have evolved since the COVID-19 epidemic.

2.2. Databases and Search Terms

For the study's main topic (souvenirs and design), we used a variety of Boolean logic-based words to enhance our search for as many relevant articles as we could.

The official term "Post COVID-19 condition" from WHO (2020) was initially used because this study focuses on the period following the pandemic; however, this term produced very few documents obtained in the search; later screening replaced this term with the time range after 2019, and all academic journals are included in the literature for analysis; in relation to souvenirs, the keywords "Souvenir," "Cultural Product," or "Cultural and Creative" are used; in order to further restrict the literature on design, we use the terms "Design" OR "Design Trends" OR "Design Directions" for design. The database's string is the outcome of utilising AND to join words between categories and OR to connect keywords inside each category (see Table 1).

Table 1.
Search string.

Search builder	Search String
Souvenir	“Souvenir”OR“Chinese souvenir”OR“Cultural and creative”
Design	Design OR“Design trends”OR“Design directions”

Because the WOS and Scopus databases have different search features and syntax, there are slight differences in the search terms used in each database (see Table 2). Following that, mining was carried out on the two priority databases, yielding 993 entries (all searches were conducted on June 19, 2023). (Articles from Scopus 612; WOS 381 articles).

Table 2.
Database search string.

Database	Search Strings	Results
Web of Science	((ALL=(("souvenir" OR "cultural product" OR "Cultural and creative")) AND ALL=(("Design" OR "Design trends" OR "Design directions")) AND LA=(Chinese OR English)) AND DT=(Article)	381
SCOPUS	TITLE-ABS-KEY (Souvenir OR "Cultural product" OR "Cultural and creative") AND TITLE-ABS-KEY (Design OR "Design trends" OR "Design directions") AND LANGUAGE (English OR Chinese) AND DOCTYPE (ar)	612

2.3. Inclusion/Exclusion Criteria

When screening studies for inclusion and exclusion, the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines were adhered to (see Table 3). The 700 papers were then subjected to a second round of evaluation by two impartial reviewers, who removed 386 papers after removing 293 publications that were not released between 2019 and 2024. that in the abstract just mentioned the subject of the investigation; Sixty-six papers were excluded because the research was not conducted in China or was unrelated to Chinese souvenirs. 22 papers that were not subjected to peer review or had been withdrawn were removed. Eight items that had broken links, were unfinished, or were inaccessible were removed. 141 papers that had nothing to do with the topic were excluded, eight literature review articles were removed, and 28 duplicate articles from three databases were removed. Studies that were too specific—that is, that focused only on the design of souvenirs in a particular area of China or on a single type of souvenir—as well as studies that were conducted within the time range but whose conclusions have been significantly updated or refuted by later research—were specifically excluded. After a full-text review, the total number of papers under consideration was finally reduced to 41. Figure 1 illustrates the three processes (identification, screening, and eligibility) involved in selecting analysis and references from past studies.

Table 3.
Inclusion and exclusion criteria.

Inclusion Criteria	Exclusion Criteria
The publication date range is 2019-2024	Not published in 2019-2024
Written in Chinese or English	Written in other language
The research was conducted in China or related to Chinese souvenir	Research souvenirs from other countries
Full research reports are available	Not find full-context
Peer reviewed	Not peer reviewed
Studies	Literature reviews
Beside the point	The study was very narrow, Outdated research content

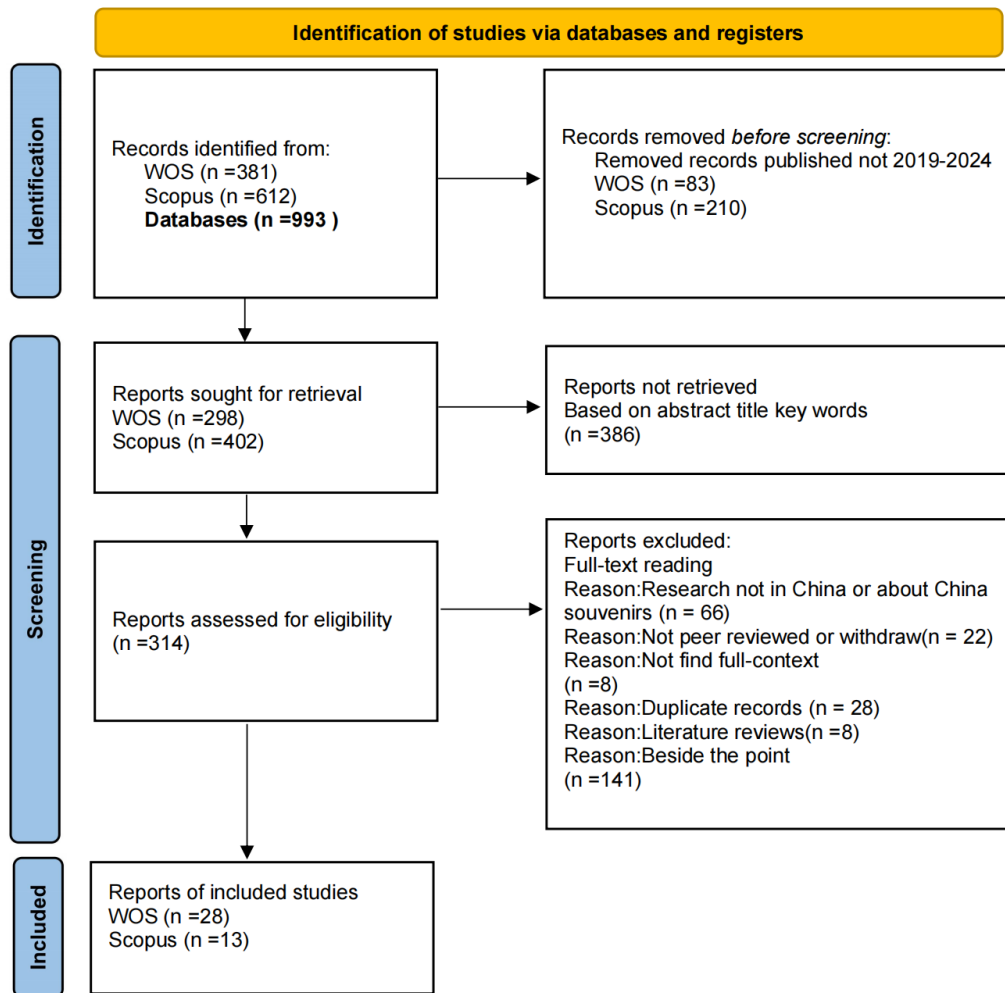


Figure 1.
PRISMA flow diagram of the research process.

Figure1 Alt Text: A PRISMA-compliant flowchart depicting the literature review process, with detailed records of the number of excluded studies and their reasons at each stage.

2.4. Approach to Analysis and Synthesis

This study used a strict methodological framework for everything from the creation of research questions to the selection, retrieval, and preparation of data sources. After extracting, analysing, and synthesising themes, the results were presented, debated, and visually represented.

The bibliometric programme VOSviewer was utilised for data analysis in the study due to its unique advantages in cluster analysis (Yang et al., 2019; Huang et al., 2022). VOSviewer functions in a Java environment and has a strict association procedure that finds the most important articles for the subjects being studied (Bernardo et al., 2023; Waltman et al., 2010; Xie et al., 2020). This makes it possible to statistically analyse the quantity and year of publications made in the subject, highly cited papers, and keyword popularity. Consequently, this software's VOS technology may be used to present a two-dimensional matrix diagram in a comprehensible way that highlights and arranges sections based on their influence and likeness (Yu et al., 2020).

3. Results

3.1. Cluster Formation

In order to evaluate the overall state of the field, this study examined the 993 references prior to the 41 article samples for the cluster building procedure. Two or more co-citations were present in about 339 entries, which VOSViewer identified and grouped into four topic groups. Cluster 1 has the most, with nearly 120 studies; the next three clusters, in order, are Clusters 2, 3, and 4 (114, 77, and 28 items, respectively). The four primary study clusters within the topic of preference studies for tourist souvenir purchases each represent specific areas of research focus. Subsequently, additional material analysis was conducted to identify reoccurring motifs. This technique might also help suggest relevant topics for further research.

Table 4.

Terms with most co-occurrence in reviewed articles.

Cluster 1 (120 items) technological design integration		Cluster 2 (114 items) community engagement		Cluster 3 (77 items) cultural tourism motivation		Cluster 4 (28 items) cultural economic analysis	
Term	Occur ences	Term	Occur rences	Term	Occur rences	Term	Occur rences
Technology	309	Interview	266	Orginality value	286	limtiation	213
Characteristic	301	Community	242	Souvenir	279	Variable	194
Cultural	297	Contribution	232	Tourist	265	Measure	179
Application	293	Evidence	222	Practical implication	237	Item	159
System	289	Survey	207	Insight	242	Culture industry	158
Image	287	Sector	199	Marketing	201	Good	155
Order	282	Organization	197	Destination	193	Range	143
Function	255	Observation	197	Behavior	185	Side	126
Integration	241	Project	193	Intention	183	Matter	118
Feature	225	Craft	189	Reponse	170	Third	117
Evaluation	217	Hand	183	Attitude	169	Formation	113
Experiment	206	Customer	181	Recommendatio n	168	Examination	111
Significance	192	Outcome	179	Relation	161	Positive Effect	111
Product design	191	Education	177	Hypothesis	157	Trade	108
Color	191	Engagement	175	Manager	156	Establishment	89
Algorithm	182	Connection	173	Authenticity	150	Economic Benefit	83
Effectiveness	168	Theme	173	Motivation	150	Significant Impact	80
Principle	163	Event	171	Intangible cultural heritage	149	Mass	73
Advantage	159	Firm	170	Practitioner	146	Control Group	54
Traditional Culture	152	Entrepreneur	163	Picture	143	Patient	31
Aesthetic	153	Food	160	Data anlysis	139		

unique features and recognisable aspects of technology or design. This approach facilitates the development of research models that incorporate information about virtual travel and souvenir shopping (Shen & Lai, 2022).

The frequency with which the word "cultural" appears in Cluster 1 suggests the significance of cultural elements in technology design and application. This not only demonstrates the need for preserving cultural heritage and disseminating cultural values, but it also demonstrates how characteristics of culture, such as those associated with outside visual features like colour, texture, and pattern, can be identified in genuine cultural items (Zhu et al., 2023). Products that are based on cultural expressions are combined with practical qualities like use, safety, and functionality. The word "culture" also refers to deeper levels of story, cultural background, and emotional content in design. Culture bestows deep emotional and symbolic values on design, which further strengthens its emotional relationship with consumers.

The terms "application" and "system" imply that the study may examine the development of systems and the real-world applications of technology in various settings. Leong and Clark (2003) established a paradigm that divides cultural space into three levels: the external "tangible" level, the intermediate "behavioural" level, and the internal "intangible" level. This theory provides additional arguments in favour of including cultural elements in design. A culture's exterior "tangible" level consists of observable components like colour and pattern; its internal "intangible" level consists of abstract concepts like awareness and spirit; and its intermediate "behavioural" level consists of behaviours that follow ingrained traditions.

This three-tier cultural hierarchy paradigm is not only a novel approach to the study of culture-integrated products, but it has also been widely accepted and applied in subsequent research.

The word "integration" emphasises the blending of technology and design elements, implying that the design process should consider how to apply technology as well as how to combine technology and cultural elements to produce highly technologically advanced and culturally significant products.

"Image" and "colour" indicate the aesthetic and visual elements of design, while "order" and "function" speak to the practicality and structural organisation of the work. According to Yeh et al. (2019), these claims imply that the goal of design must be to convert ancient culture into contemporary forms that are aesthetically pleasing. Additionally, the terms "experiment" and "assessment" imply that research may entail examining and verifying the results of advancements in design or technology.

Terms like "importance," "product design," "effectiveness," and "efficiency" are commonly used, suggesting that the primary areas of interest for research are technology, product development, and societal impact. The phrases "accuracy" and "algorithm" may refer to the precision and computational techniques used in technology application or design stages.

The terms "principle" and "advantage" may refer to the benefits and theoretical foundations of design and technology. Words like "aesthetic" and "traditional culture" imply that research should focus on finding creative methods to integrate traditional elements into modern designs. Words like "dissemination" and "design method" suggest that the study may discuss how cultural elements and the design process have become more popular.

The study material in Cluster 1 can be summed up as "technological design integration," as technology is closely associated with many of the key terms and contributes significantly to innovation, improved functionality, and elevated aesthetic value of cultural product design.

3.1.2. Cluster 2: Community Engagement

The second cluster is indicated in green. The commonly used terms "interview" and "survey" imply that direct data gathering techniques have been used by researchers in this field to obtain firsthand knowledge and in-depth insights. Face-to-face interaction with community members, corporations, and associations is extensively emphasised in this strategy to ensure the authenticity and reliability of the obtained information.

The frequent usage of the terms "community" and "sector" suggests that the connections between different industries and social groups are prioritised. These kinds of partnerships are essential for recognising community needs, comprehending market trends, and promoting multi-party collaboration.

The terms "contribution" and "benefit" imply that a variety of studies may examine the many ways in which individuals or groups derive value and advantages from the activities under investigation. There could be a social, economic, or cultural component to this. The words "observation" and "evidence" highlight the study's empirical basis and the need for observation- and data-based analysis to ensure the objectivity and correctness of research conclusions.

The terms "organisation" and "company" suggest that a broad spectrum of research subjects might encompass how companies allocate their resources, organise their activities, and adjust to shifting market conditions. The words "hand" and "craft" designate traditional handcrafted goods. This implies that a great deal of study is directed towards the promotion and preservation of traditional crafts as well as their adaptation to modern culture.

The terms "participation" and "customer" emphasise the significance of consumer engagement and interactions with goods and services. "Outcomes" and "participation" may be related to assessing the impact and effectiveness of initiatives or activities. The words "education" and "connection" highlight the ways in which education links various aspects of the field. To do this, it might be essential to encourage closer relationships between individuals and artefacts and to educate the public about cultural heritage.

The terms "theme" and "event" can describe the planning and execution of specific cultural events or neighbourhood get-togethers. Given the reduction in local gift stores and the global travel and tourism industry, the phrases "entrepreneur" and "covid" may allude to the ways in which the pandemic has impacted local economies and entrepreneurial endeavours (Sigala, 2020).

In summary, the research content of Cluster 2, which we summarise as "community engagement," focuses particularly on the advantageous role that individuals, groups, and businesses play in fostering social connections, cultural heritage, and economic recovery against the backdrop of education, cultural activities, and economic development. The research indicates that community involvement is essential for preserving cultural heritage, fostering community relationships, and promoting sustainable economic growth.

3.1.3. Cluster 3: Cultural Tourism Motivation

The third cluster is displayed in a shade of blue. The terms "novelty value" and "authenticity" draw attention to how unique presents are to travellers. Several studies have looked into the attraction that genuine and distinctive presents have for tourists. The words "tourist" and "souvenir" imply that a great deal of research is done on the tastes and habits of these people when they shop. This requires a thorough understanding of the reasoning behind and the process travellers use to make decisions when selecting specific souvenirs.

The terms "practical significance" and "recommendations" suggest that a number of studies offer particular suggestions and directions for tourism operations that are supported by theoretical research. The words "insight" and "marketing" emphasise how the primary objectives of memento marketing are to create powerful marketing strategies and fully comprehend visitor wants. Product designers should consider customers' emotional responses, functional behaviours, and visual aspects, as highlighted by the concept of emotional design (Chen & Wang, 2021), as fostering positive emotional responses in consumers can have a significant impact on a product's overall success.

The terms "destination" and "intention" imply that a great deal of research examines the traveller's travel objectives. Additionally, the categories "behaviour" and "reaction" offer particular insights into how visitors feel about the vacation spot and souvenirs, as well as how souvenirs are used to put together the history of the region (CNR, 2019; Wang, 2019).

The terms "attitude" and "relationship" may be used to describe how travellers feel about their travel experiences and how these sentiments influence their purchase selections. The word "hypothesis"

implies that the study, which examines the factors affecting the travel industry, can be based on theoretical speculation. Studying "intangible cultural heritage" and "motivation" makes it possible to look into the driving forces behind tourists' quest for cultural encounters.

The terms "images" and "practitioners" describe how the tourism industry uses visual components to entice travellers. The terms "purchase intention" and "data analysis" imply that many studies may employ quantitative techniques to assess travellers' inclination to make purchases.

The terms "memory" and "tourism industry" suggest that a great deal of research examines the ways in which travel affects travellers' feelings and recollections. The phrases "purchase" and "stakeholders" draw attention to the significance of both the passengers and the roles and impacts of various stakeholders in the travel sector.

Cluster 3, sometimes referred to as the "blue cluster," contains research on "Cultural Tourism Motivation," with a focus on the importance of uniqueness, traveller behaviour, purchase intents, and marketing strategies in the tourism industry. It represents the emphasis of study on enhancing the calibre of travel encounters, promoting the creation of novel tourism offerings, and understanding the psychology of travellers.

3.1.4. Cluster 4: Cultural Economic Analysis

Cluster 4 is tinted yellow. The terms "variables" and "terminology" imply that a lot of research is done on classification, definition, or focusing on various elements. The results of this current study will also offer a precise theoretical basis for future investigations. The phrases "items" and "measurement" emphasise how important it is to provide data to support study findings by quantifying certain elements or indicators.

The terms "limitations" and "aspects" imply that many studies look for errors in their methods, findings, or presentation of several points of view; this type of self-examination improves the credibility and openness of the research. The terms "good" and "cultural industry" emphasise the value of visitor evaluations and cultural goods.

The terms "scope" and "issues" draw attention to the wide variety of issues and study subjects that exist. The terms "third" and "formation" may refer to several stages of research or development processes, denoting a thorough examination of a certain phase in the cultural industry's evolution. The terms "review" and "positive effects" describe the evaluation of the merits of specific parts or regulations.

In the cultural context, "trade" and "institutions" refer to commercial transactions and hierarchical establishments, respectively. The phrases "significant impact" and "economic benefits" emphasise even more how the study examines the ways in which the cultural industry influences and contributes to the economy.

The terms "mass" and "control group" may imply that the study used data analysis methods from a control experiment to ascertain and assess the impacts of different factors on the cultural industry. Although the word "patient" may sound strange in this context, it can refer to a specific audience or customer in the cultural industry, implying that the research may take into consideration the desires and viewpoints of specific groups.

The study topic for Cluster 4 is "Cultural Economic Analysis," with a focus on the value of trade, cultural products, and contributions to economic growth. It stands for in-depth discussions on analysing the economic mechanisms of the cultural industry, assessing the results of cultural policy, and promoting the trade of cultural commodities.

These clusters illustrate the diverse research methodologies used in the field. These clusters offer an integrated research framework that enables a greater comprehension of the complex nature of design practices and visitor preferences, in addition to reflecting different aspects of the study of souvenir design.

3.2. Research Periods

As previously mentioned, 41 papers were chosen using the PRISMA process to represent post-pandemic development trends. Figure 3 shows the total number of publications related to the theme in 2019. Since the search was restricted to June 2024, 2024 can be excluded from the calculation. It is clear that there is a significant amount of variety in the data. Due to the COVID-19 epidemic in December 2019, the volume of papers for 2019 might be a reliable measure of researchers' interest in mementos before the pandemic.

2020 witnessed a sharp decline in the number of publications, a development that can be directly linked to the global COVID-19 outbreak that year, which led to lockdowns in several nations and caused major harm to the travel and tourism industry. The difficulties associated with doing field research and gathering data have hindered academic output, a development that is congruent with the stagnation of the worldwide tourism business. The rise in the number of documents indicates that academia began to adapt to the new research environment in 2021, even while the pandemic continued to spread.

The disadvantages of field research may have been avoided while still generating excellent academic work by employing readily available data and internet surveys. In 2022, the number of documents increased significantly as the world travel economy rebounded and the regulations pertaining to pandemic lockdown were gradually relaxed. This expansion implies that interest in this area of study among academics has been rekindled. It is also in line with the rising demand for travel and the growing interest in mementos related to tourism.

The quantity of documents is still very high and even surpasses the pre-pandemic level, even if it has fallen by 2023. This would mean that the study's focus has shifted since the travel industry and related studies have begun to adapt to the "new normal" in the wake of the pandemic.

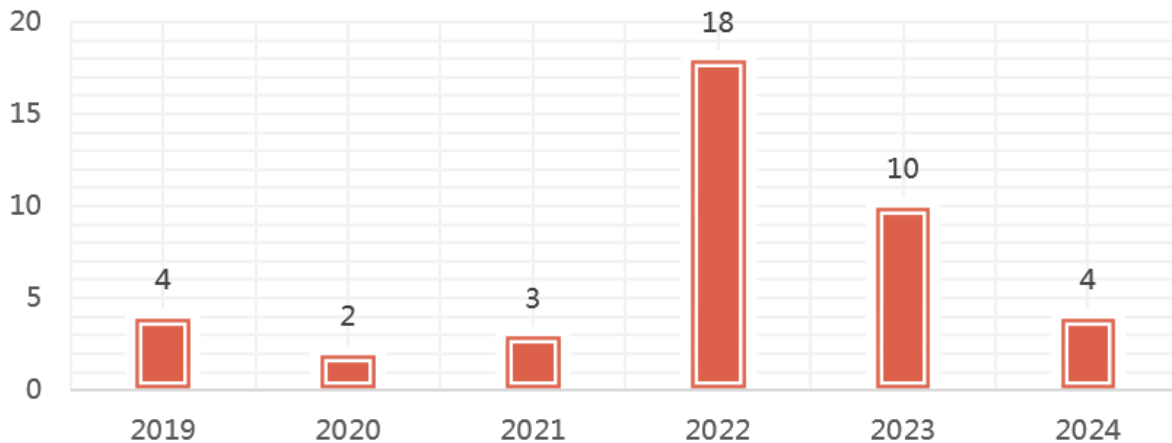


Figure 3.
Year of publication.

Figure 3 Alt Text: The year-on-year publication count chart delineates the trend in the number of research papers on Chinese tourism souvenir design from 2019 to 2024, peaking at 18 publications in 2022.

3.3. Journals of Published Articles

The articles were published in 30 different publications and covered a wide range of multidisciplinary topics, including tourism, intelligent technology, social science, economic management, culture, art and design, psychology, and more (see Table 5). During a study of journals that published articles of higher quality, quantile rankings and the impact factor were examined. The

top six most productive journals span a wide range of disciplines, but they are all focused on using research to solve practical problems, be they in psychology, biology, education, or technology. This indicates that the field's focus shifted after 2019, when technology took the stage in souvenir research.

The prevalence of research in journals such as "Sustainability" and "Computational Intelligence and Neuroscience" highlights the application of intelligent technology to design innovation and sustainability principles. Journals with a high impact factor, like "Frontiers in Psychology," provide psychological insights into understanding how the epidemic has impacted the mental and behavioural health of travellers. A number of design magazines, like "International Journal of Art & Design Education" and "The Design Journal," emphasise how important it is for souvenir designers to apply creativity and cultural sensitivity.

Scholarly journals that offer in-depth examinations of keepsakes as cultural identifiers include "Cultura: International Journal of Philosophy of Culture and Axiology" (refer to Table 4). According to the trend in multidisciplinary research, a complete understanding of visitor preferences necessitates integrating data from design, technology, psychology, and tourist studies. Emerging themes like sustainability and design innovation that are covered in relevant publications also influence future paths for remembrance design. Thus, in the years after the pandemic, the writings that appear in these journals help to shed light on the varied preferences of tourists for Chinese trinkets.

Table 5.
Periodical ranking.

Journals	Documents	I.F.	Q
Sustainability	4	3.3	2
Computational Intelligence and Neuroscience	4	3.1198	3
Frontiers in Psychology	3	2.6	2
Wireless Communications & Mobile Computing	2	2.146	3
Mathematical Problems in Engineering	2	1.43	4
International Journal of Art & Design Education	2	1.051	-
Advanced Engineering Informatics	1	8.0	1
Information Processing and Management	1	7.4	1
Current Issues in Tourism	1	5.7	3
Asia Pacific Journal of Tourism Research	1	5.0	1
Heliyon	1	3.4	1
Soft Computing	1	3.1	2
Applied Mathematics and Nonlinear Sciences	1	3.1	-
Heritage Science	1	2.6	1
Behavioral Sciences	1	2.5	2
Journal of Chinese Human Resource Management	1	2.3	-
International Journal of Interactive Design and Manufacturing - IJIDeM	1	2.1	3
Nankai Business Review International	1	1.8	3
Journal of Intelligent & Fuzzy Systems	1	1.7	3
Complexity	1	1.7	-
International Journal of Cultural Studies	1	1.5	2
Review of Socionetwork Strategies	1	1	4
The Design Journal	1	1.0	-
Tourism and Hospitality Research	1	0.846	1
Advances in Multimedia	1	0.7	4
Creativity Studies	1	-	-
New Design Ideas	1	-	2

Journals	Documents	I.F.	Q
Journal of Silk	1	-	-
Cultura. International Journal of Philosophy of Culture and Axiology	1	-	3
Environmental Science and Pollution Research	1	N/A	3

Note: Legend: I.F. - Impact Factor; Q. - Quartil.

3.4. Co-Occurrences of Terms

This study used VOSviewer's text mining capability to produce a word map (Figure 4). Van Eck and Waltman (2011) state that the closer two terms are to one another, the more strongly they are connected.

Each cluster of terms represents a study theme. According to the VOSviewer study, the 10 terms that appear in the articles the most frequently are technology (30), value (26), effect (24), tourist (22), memento (22), designer (20), cultural product (15), design process (14), impact (14), and system (13), all of which have some connection.

Our research revealed that the word "souvenir" designates a cultural object that is most strongly linked to travel and is connected to value, design, technology, and effect. The word "technology" appears the most, indicating that, as a result of the pandemic's effects in 2019, interest in and use of this field of study have grown.

Design and creative design form the basis of the souvenir study, which highlights the importance of innovation in attracting tourists. Since a cultural feature and a cultural product are closely related, it stands to reason that tourists will find great value in products that have a strong sense of place. This is especially true now that the pandemic is over, as products function as both mementos and cultural experiences.

The phrase map further demonstrates the connection between tourism and value by highlighting the cultural significance and individual value that tourists seek out in souvenirs.

Throughout the whole design process, the interaction between questions and attention is an important problem that requires careful consideration. Deep learning and technology integration show how technology can be used to create unique design goods by customising travel experiences. The close relationship between trials and systems implies that a rigorous approach and careful experimental design are necessary for assessing visitors' reactions to various souvenir designs.

Furthermore, visitors' intentions to make repeat purchases are strongly associated with their loyalty and recurring purchasing patterns, so understanding their preferences and market trends is essential. The combination of deep learning and technology means that personalised keepsakes made using cutting-edge technologies like artificial intelligence can better meet the needs of each unique tourist.

The relationship between tourism and change reflects the dynamic changes in the market that have happened since the outbreak, and these modifications may have an immediate impact on tourists' preferences and purchasing behaviour. The "Impact and Effect Cluster" illustrates the potential long-term effects that souvenir design may have on traveller behaviour and the tourism industry.

The term map comprehensively illustrates how design innovation, cultural value, technological application, and adaptation to changes in the tourism industry are the main factors shaping tourists' preferences, offering valuable perspectives and insights for souvenir design and marketing strategies in the post-pandemic period.

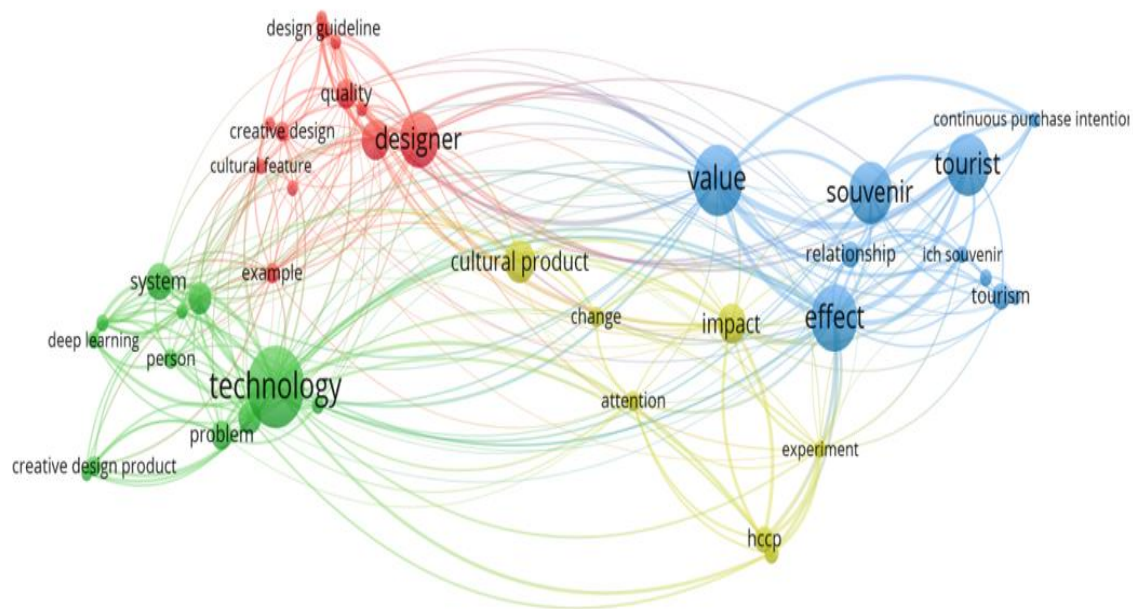


Figure 4.
Keywords map.

Figure 4 Alt Text: Clusters of four colours (red, green, blue, and yellow) are interconnected at varying distances, illustrating the most frequently occurring terms in the literature, such as "technology" and "design."

The term map (Figure 5) provides an intuitive perspective that helps us understand trends and examine hotspots over multiple years. The word "technology" has a big circle size on the map, which shows how important it is as a standalone research issue as well as how widely used it is as a key tool or platform in studies on souvenir design.

On the term map, clusters of purple, dark green, green, and yellow represent the study hotspots for each year. This path demonstrates how research has changed over time, moving from in-depth assessments of the creative business and its value to discussions of design methodology and approaches to problem-solving, from platform and system design to creative product design applications.

A higher probability of two terms occurring together or having a relationship in research is implied by shorter distances. The distances between terms on the map indicate their association. This arrangement helps to draw attention to significant connections and interactions within the research. In addition to "technology," other terms that are displayed with larger circles are "creative product design," "traditional culture," "colour," and "purchase intention." This suggests that these terms have also been prominent themes in recent years. Discovering these popular subjects helps us comprehend significant issues in the field of remembrance design.

The analysis of design trends shows a shift away from technology use and towards the inclusion of cultural elements and consumer preference research. This shift may be a result of changing consumer and market expectations in the post-COVID-19 era. This modification emphasises how important it is to consider cultural values and user experiences while creating.

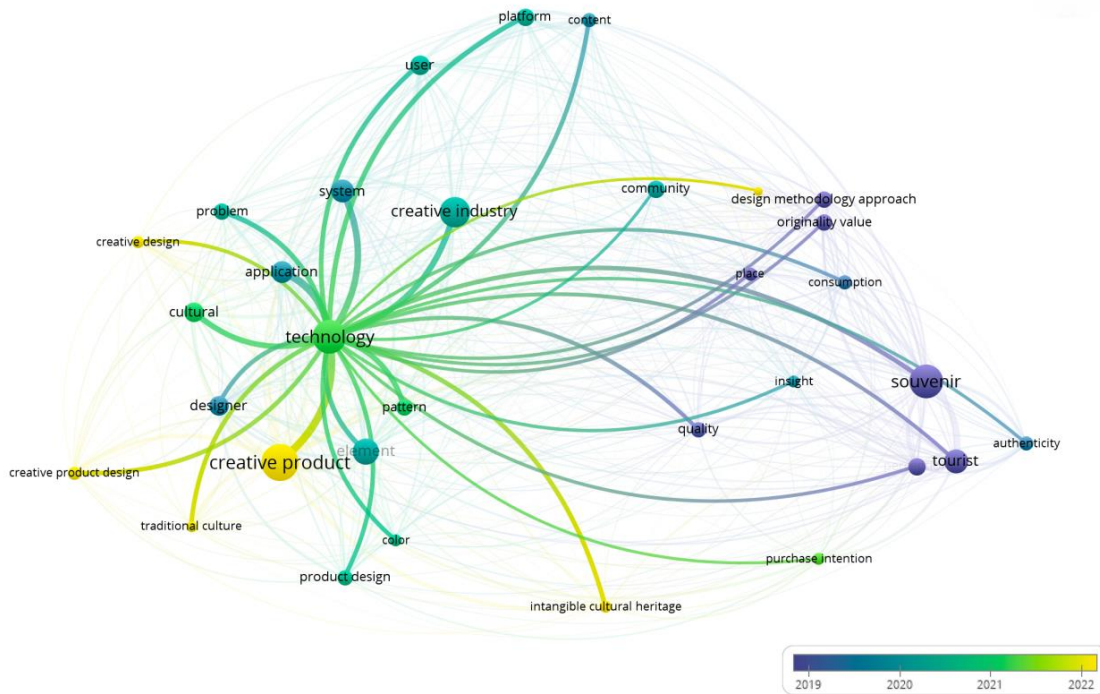


Figure 5.
The term map.

Figure.5 Alt Text: The coloured clusters are interconnected, with the term "technology" at the centre and a timeline of cluster colour changes in the bottom right corner. The word "technology" first appeared around 2021.

Future research may concentrate more on the integration of traditional elements with modern design as well as the use of technology to enhance the memories' aesthetic appeal and cultural relevance. This necessitates careful analysis of market developments and consumer preferences in addition to creative design. Thanks to this comprehensive research, we can anticipate that the field of souvenir design will continue to evolve in response to the diverse needs of tourists in the context of globalisation.

4. Discussion

4.1. Limitations

Future research might take advantage of more scholarly databases. The findings of the bibliometric analysis are limited in their representativeness for the entire research on tourists' preferences for souvenir consumption because they are based on journal articles that were published in Scopus and WOS up until June 2024. Additionally, a study programme based on a thematic map may overlook some intriguing topics for additional research. Future studies will look at other sub-themes, depending on the map.

The results cannot be generalised to all publications that have been published before because VOSViewer only allows mapping of the WoS and Scopus databases. Furthermore, the fact that the reviewed databases only allow the assignment of keywords to article search parameters may affect the results. Future research should incorporate other studies and papers indexed in other databases in order to expand the scope of the study sample analysis.

4.2. Implications

This study facilitates international cultural contacts and makes it easier to produce cultural works by pinpointing the specific gift design preferences of travellers. It provides an empirical basis for the formulation of national cultural industry plans, promoting product diversity and innovation while strengthening the soft power of national culture. Aside from creating work opportunities, investing in the souvenir industry can promote appreciation for cultural diversity and social consciousness.

The research findings support the preservation and transfer of cultural heritage and can encourage neighbourhood involvement and local economic growth by showcasing traditional elements and creative expressions in souvenir design. The study also reveals the preferences of tourists for the material and psychological aspects of mementos, which can help stakeholders enhance tourists' shopping experiences, satiate their need for uniqueness and cultural identification, and eventually increase visitor satisfaction and loyalty.

5. Conclusion

This study systematically presents the current state of research on the designs that tourists buy as souvenirs, with an emphasis on the years 2019 to 2024. First, a cluster analysis was performed on all the literature that was located using keyword searches in order to identify four study themes. Next, each theme's body of knowledge was evaluated.

(1) Technological Design Integration: As technology becomes increasingly prevalent in souvenir design, traveller alternatives and the creative process itself are being altered. This field of study should focus on how technological improvements enable increased customisation and engagement and how these meet the evolving demands of tourists for souvenirs.

(2) Community Engagement: emphasising the role that cultural activities play in supporting regional economic growth and the preservation of cultural assets. Among the subjects discussed are the effects of community involvement on the cultural value of souvenirs and how it influences visitors' opinions and actions.

(3) Cultural Tourism Motivation: Examining the various rationalisations offered by tourists to acquire mementos. The analysis and conversation should centre on how cultural value and individuality affect tourists' inclination to buy.

(4) Cultural economic analysis: souvenir design has a big impact on economic growth. The main topic of discussion is how souvenir design may advance economic development by fusing commercial goals with cultural ideals.

A comprehensive analysis of the literature from 2019 to 2024, based on the PRISMA approach, was then conducted to evaluate the choices made by travellers for Chinese souvenir design in the post-COVID-19 era. 41 documents were thoroughly examined, and some noteworthy themes and trends were discovered. Research opportunities and gaps were also discussed.

(1) The pandemic's impact on preferences for keepsake design: Due to the pandemic's significant repercussions on travel and the souvenir industry, travellers' preferences have changed. Scholars have focused on investigating how the pandemic has altered consumers' need for keepsakes in this period, taking into consideration factors such as the acceptance of virtual and e-commerce, new standards for creativity and culture, and safety and health issues.

(2) Creative and cultural elements in souvenir design: The results of the study show that these and other design elements are essential for attracting tourists. The conversation should centre on how modern designers use traditional cultural components in their creations and how to use technology to enhance the visual attractiveness and use of keepsakes.

(3) Modification of souvenir market strategies: Given the evolving tastes of tourists, the discussion should focus on how to adapt techniques such as creating personalised products, boosting cultural experiences, and advertising and selling souvenirs online.

Even though this study outlines the main research themes and trends and meticulously illustrates the current state of visitor preferences for Chinese souvenir design in the post-COVID-19 era, there are

still some research gaps that present opportunities for future research. Although this study has demonstrated how the pandemic has influenced travellers' choices for memento designs, more investigation is still required to completely understand the exact psychological mechanisms at work as well as the long-term effects of these modifications on travellers' preferences and buying behaviours. To monitor and evaluate the pandemic's long-term effects on traveller decisions, future studies may use longitudinal research approaches.

Technology is becoming more and more important in souvenir design, but the majority of research done to date has been theoretical in nature and has not looked closely at how the technology is really used in the real world. Further research should look into how technology is used specifically during the design phase and evaluate its actual impact on visitors' experiences.

While this study focuses on Chinese souvenir design, tourists' selections can differ greatly based on their cultural background. Further studies could do cross-cultural assessments to determine how different cultural norms affect travellers' preferences for souvenirs. Additionally, because visitor tastes are constantly changing, strategies for the souvenir market must be adjusted on a regular basis. Subsequent research endeavours may explore innovative methods of marketing, such as tailoring content on social media platforms or leveraging augmented reality (AR) to create interactive experiences.

5.1. The Theoretical Contributions

This effort has improved academic understanding. First of all, it is the first comprehensive quantitative assessment of the post-epidemic era and a simultaneous examination of the state of souvenir design research prior to and following the pandemic. This review might serve as a roadmap for researchers as they prepare and organise their study on tourism souvenirs. By looking at how tourists already consume souvenirs, stakeholders in destination marketing, cross-stakeholder cultural engagement in tourism, and sustainable development might find new topics.

5.2. The Practical Implications

First off, the results of the survey unequivocally show how travellers choose to use souvenirs in the post-pandemic era. This knowledge aids in the positioning of souvenir manufacturers and designers in the marketplace, enabling them to make items that more effectively appeal to their intended consumer base. Understanding visitor preferences also makes it easier for travel agencies and souvenir sellers to maximise their marketing strategies. These tactics, which include targeted advertising, marketing campaigns, and social media initiatives, will all function as empirical guidelines for the growth of the travel and tourism sectors. This study also considers the impact of COVID-19 on the souvenir sector, highlighting several issues and offering suggestions for professionals.

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