

Cultural Transformation through Digitalization: A Bibliometric Approach in Responding to Changes in Social Values, Norms, and Cultural Practices in Society

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ABSTRACT

This study employs VOSviewer to conduct a bibliometric analysis and visualize the intricate research landscape surrounding the themes of digitalization, cultural transformation, organizational practices, and the impact of global crises like the COVID-19 pandemic. Through a series of network density maps, the research identifies key thematic concentrations and academic collaborations over recent years. It reveals how digitalization intersects with various societal dimensions, influencing education, cultural heritage, sustainability, and business practices. The analysis emphasizes the role of digital technologies in facilitating significant social and organizational changes, advocating for policies that enhance digital literacy and inclusivity. Additionally, the examination of authorship networks sheds light on influential scholars and collaborative dynamics, providing insights that can guide future research directions. The study underscores the necessity for adaptive business models that integrate sustainability and resilience, crucial for navigating contemporary and future challenges.

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1. INTRODUCTION

In the age of rapid technological advancements, the intersection between culture and digitalization has become increasingly pivotal. As societies worldwide navigate through this digital era, cultural practices, social values, and norms are experiencing significant transformations. These changes are largely driven by the widespread adoption of digital technologies which alter the way communities engage,

communicate, and sustain their cultural heritage. The phenomenon of digitalization not only supports the preservation of intangible cultural aspects but also revolutionizes them, thereby creating a new cultural paradigm that integrates traditional elements with modern digital forms [1].

Furthermore, the global spread of digital platforms has facilitated a more interconnected world where cultural exchange is ubiquitous. This has led to the

dilution of geographical and cultural boundaries, allowing for a multicultural digital space where diverse cultural expressions coexist and influence each other. As a result, there is a dynamic shift in cultural identities and practices, reflecting a complex landscape of traditional values merging with global digital influences [2]

However, the impact of digitalization on culture is not uniformly positive. While it promotes the democratization of cultural access, it also poses challenges such as cultural homogenization, where dominant cultures may overshadow local traditions. Additionally, the digital divide remains a critical issue, with unequal access to digital technologies potentially leading to disparities in cultural participation and representation [3]. These concerns highlight the dual role of digitalization as both a preserver and a transformer of culture.

The academic discourse around this transformation is extensive yet fragmented. Scholars have explored various facets of how digital technologies influence cultural practices, but a consolidated understanding of the overarching trends, challenges, and future directions is lacking. A bibliometric analysis of the existing literature can provide a structured overview of the research landscape, revealing dominant themes, key scholars, and pivotal studies that have shaped our understanding of cultural transformation through digitalization [4].

Despite the growing body of research on the digitalization of culture, there is a noticeable gap in synthesizing these diverse studies to form a coherent picture of how digital technologies are reshaping cultural practices globally. Current literature often focuses on isolated aspects of cultural change, such as specific technological impacts on particular cultural practices or localized studies of digital adoption. There is a need for an integrated analysis that spans different geographical regions and cultural contexts to identify common patterns, divergent trends, and the overall trajectory of cultural transformation in the digital age. This gap hinders the ability to fully understand the

implications of digital technologies on societal norms and values and to anticipate future developments in cultural practices.

The objective of this research is to conduct a bibliometric analysis on the topic of cultural transformation through digitalization, focusing on how social values, norms, and cultural practices are evolving in response to digital technologies. This study aims to map the existing academic terrain, identify key themes and gaps, and highlight influential research that has contributed to our understanding of this field. By doing so, the research seeks to provide a comprehensive overview that aids scholars, policymakers, and cultural practitioners in navigating the complexities of cultural changes induced by digitalization, fostering more informed strategies for managing cultural heritage in the digital era.

2. LITERATURE REVIEW

2.1 *Digitalization and Cultural Practices*

The digital transformation has redefined the parameters of cultural engagement and preservation. According to [1], digital platforms have emerged as pivotal spaces for cultural expression and engagement, offering new avenues for the dissemination and preservation of cultural heritage. These platforms not only facilitate a broader dissemination of cultural content but also enable participatory engagement that was not possible with traditional media. Interactive features such as virtual tours, digital archives, and online exhibitions have allowed individuals to explore cultural artifacts and traditions from around the world without geographical constraints [1].

Moreover, [3] discusses the dual impact of digitalization on cultural diversity. On one hand,

digital technologies have democratized access to cultural content, empowering minority groups to showcase their traditions and narratives on a global stage. On the other hand, there is a significant risk of cultural homogenization, as global platforms tend to promote content that has wide appeal, often overshadowing less dominant cultural expressions. This creates a paradox where digitalization simultaneously supports and undermines cultural diversity [3].

2.2 *Globalization and Cultural Exchange*

[2] examine the role of digitalization in fostering global cultural exchange. They argue that the internet has facilitated a cultural hybridization process where individuals and communities blend elements from multiple cultures, creating new, hybrid identities. This phenomenon is particularly evident among digital natives, who are more likely to integrate diverse cultural influences into their daily lives through continuous exposure to global media and communication networks [2].

The concept of "cultural globalization" is further explored by [4], who posit that digital technologies have accelerated the pace at which cultural goods are exchanged and adapted across borders. However, they also caution that this rapid exchange can lead to superficial understandings of different cultures, where the complexities and nuances of cultural practices are often lost in translation. The authors call for more mindful approaches to digital cultural

exchanges that respect the integrity and depth of cultural traditions.

2.3 *Technological Disparities and Cultural Participation*

The digital divide is a critical factor affecting cultural participation. [3] highlights that despite the potential of digital technologies to enhance access to cultural content, significant disparities remain in terms of digital access and literacy. These disparities are particularly pronounced in developing countries, where limited infrastructure and educational resources restrict the benefits of digital cultural participation. The digital divide not only perpetuates existing inequalities but also prevents certain communities from contributing to and shaping the digital cultural landscape [3].

Furthermore, the impact of digital literacy on cultural preservation is discussed by [1], who suggests that digital literacy is essential for communities to effectively utilize digital tools for cultural preservation. Without adequate skills and knowledge, there is a risk that digitalization could lead to the erosion of traditional cultural practices rather than their preservation. Smith argues for targeted educational programs that enhance digital literacy, specifically tailored to the needs of cultural practitioners and communities [1].

3. METHODS

This research employs a bibliometric analysis to investigate the extensive literature on cultural transformation through digitalization, utilizing Google Scholar as the

primary data source. Articles and scholarly works published from 1947 to 2024 were collected using keywords such as "digitalization," "cultural transformation," "social values," and "cultural practices." The data extraction focused on retrieving articles that extensively discuss the intersection of digital technology with cultural shifts. VOSviewer software was chosen for

constructing and visualizing bibliometric networks, which aided in identifying central themes, influential authors, and pivotal research contributions within the field. The methodology involved systematic data cleaning to remove duplicates and irrelevant entries, ensuring that the analysis was confined to pertinent studies.

4. RESULTS AND DISCUSSION

4.1 Research Data Metrics

Table 1. Data Citation Metrics

Publication years	1947-2024
Citation years	77 (1947-2024)
Paper	980
Citations	218434
Cites/year	2836.81
Cites/paper	222.89
Cites/author	151629.34
Papers/author	572.99
Author/paper	2.32
h-index	208
g-index	462
hI,norm	169
hI,annual	2.19
hA-index	87
Papers with ACC	: 1,2,5,10,20:814,743,609,479,323

Source: Publish or Perish Output, 2024

Table 1 presents bibliometric data spanning from 1947 to 2024, detailing the impact and dissemination of 980 papers over these years, resulting in a substantial 218,434 citations. This equates to an average of 2836.81 citations per year and 222.89 citations per paper, demonstrating significant scholarly influence. The table further breaks down efficiency, with an average of 151,629.34 citations per author and about 573 papers per author, indicating a high level of productivity in this research field. On average, each paper involves approximately 2.32 authors. The h-index, a metric that assesses both the productivity and citation impact of the publications, is notably high at 208, complemented by a g-index of 462, suggesting that a large number of papers have received substantial citations. The normalized h-index (hI,norm) is 169, with an annualized version (hI,annual) at 2.19, reflecting sustained impact over time. The hA-index stands at 87, providing insight into the adjusted author impact. The distribution of papers with accumulated citations (ACC) at varying levels (1, 2, 5, 10, 20) shows a decreasing trend, with 814 papers having at least one citation, down to 323 papers with 20 citations, illustrating a broad but diminishing influence as the citation threshold increases.

Table 2. Top Cited Research

Citations	Authors and year	Title	Findings
11253	[5]	Confronting the challenges of participatory culture: Media education for the 21st century	Jenkins discusses the need for media education that develops digital literacy and critical thinking skills to navigate the complex landscape of modern participatory media culture.
9679	[6]	Frontiers in group dynamics: Concept, method and reality in social science; social equilibria and social change	Lewin explores the dynamics of group behavior and the processes of social change, emphasizing the role of feedback mechanisms and the 'group decision' in creating social shifts.
7842	[7]	Networks of outrage and hope: Social movements in the Internet age	Castells examines the role of social networks in facilitating new forms of protest and political activism, highlighting how these platforms empower marginalized groups by providing new means of communication and organization.
5797	[8]	The cultural relativity of organizational practices and theories	Hofstede introduces a framework for understanding cultural differences in work-related values and practices, emphasizing how these differences influence organizational behaviors and management theories.
4340	[9]	Consumption and theories of practice	Warde argues that consumption should be understood through the lens of social practices, suggesting that our consumer behavior is shaped by routine, socially informed practices rather than individual choice alone.
4330	[10]	Media education: Literacy, learning and contemporary culture	Buckingham advocates for comprehensive media education that incorporates critical analysis of media forms, production processes, and their societal impacts, aiming to enhance media literacy among learners.
3943	[11]	New public management is dead—long live digital-era governance	This work critiques traditional public management approaches and argues for a digital-era governance model that integrates information technology to enhance transparency, efficiency, and citizen engagement in public services.
3269	[12]v	Building the virtual state: Information technology and institutional change	Fountain analyzes the transformative impact of information technology on government institutions, suggesting that digital tools can lead to significant changes in how government operations are conducted and services are delivered.
3252	[13]	Popular culture and high culture: An analysis and evaluation of taste	Gans delves into the distinctions between high and popular culture, examining the societal values and tastes that segregate cultural forms and influence personal preferences and social identity.
3248	[14]	Materials for an exploratory theory of the network society ¹	Castells provides a foundational theory for understanding the network society, where the proliferation of digital networks fundamentally reshapes social structures, interactions, and power dynamics.

Source: *Publish or Perish Output*, 2024

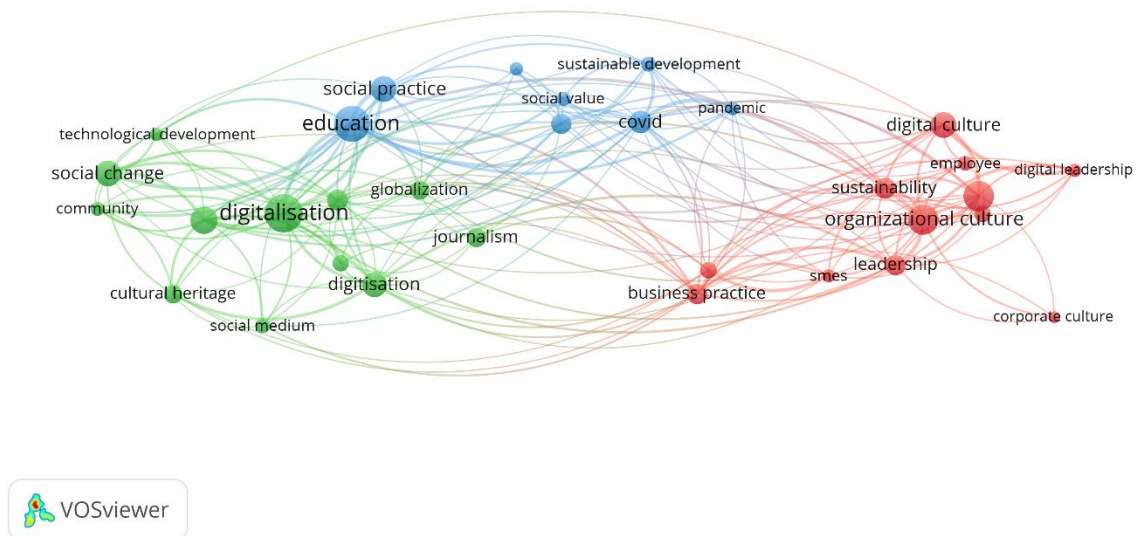


Figure 1. Network Visualization

Source: Data Analysis Result, 2024

The green cluster at the center, dominated by "digitalisation" linked with "education," "globalization," "social change," and "cultural heritage," suggests a strong focus on the socio-cultural and educational impacts of digital technology. This cluster's links to "community" and "social media" indicate an exploration of how digital platforms facilitate community building and cultural preservation, reshaping how individuals and societies engage with and transmit cultural knowledge.

Adjacent to this, the red cluster emphasizes the intersection of "digital culture," "organizational culture," and "sustainability" with "business practices" and "leadership." This implies a significant research focus on how digital transformation influences corporate environments, affecting everything from day-to-day business operations to overarching strategic leadership. The presence of "sustainability" within this cluster points to an increasing concern with how organizations can leverage digital tools to achieve sustainable outcomes,

which is further corroborated by the link to "SMEs," suggesting a specific focus on small and medium-sized enterprises.

The blue cluster, smaller and focused on "sustainable development," "social value," and "pandemic," connects these topics with "COVID," indicating a specific strand of research that has emerged in response to global challenges. This cluster's presence reflects the pivotal role digitalization has played during the COVID-19 pandemic in areas such as remote work, education, and healthcare. The link to "social value" suggests that the research also considers how these technological shifts align with or impact societal values and norms during such crises.

Overall, the network visualization from VOSviewer provides a comprehensive map of the multifaceted research landscape surrounding digitalization. It underscores the pervasive impact of digital technologies across various sectors and disciplines, illustrating the interconnectedness of technological, cultural, business, and sustainability challenges in the digital age.

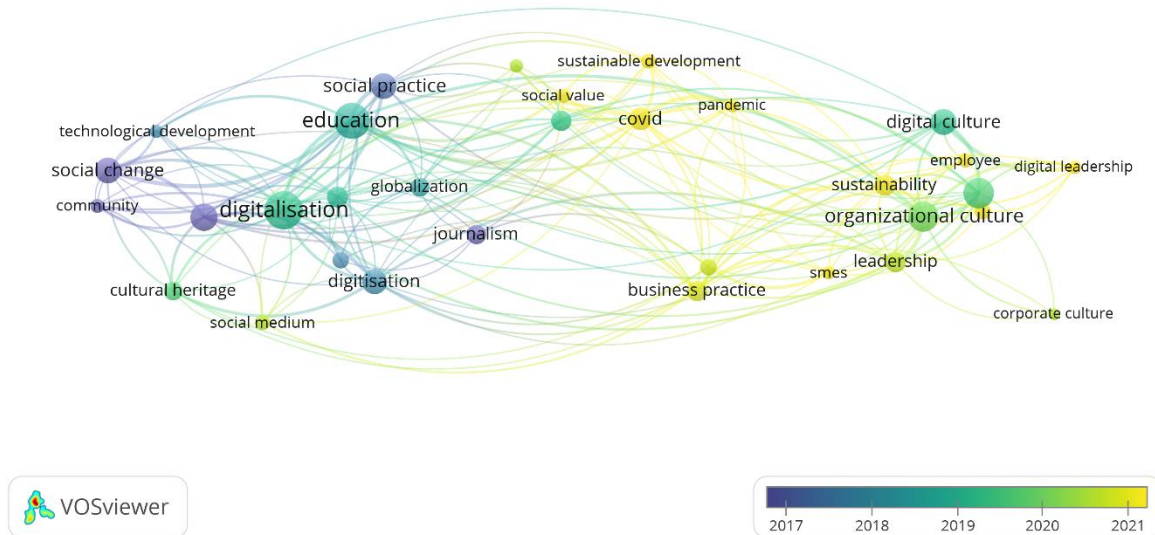


Figure 2. Overlay Visualization
 Source: Data Analysis Result, 2024

This VOSviewer visualization provides a bibliometric mapping, incorporating a temporal component to illustrate how certain themes have evolved from 2017 through 2021 in the context of digitalization and its broader impact on various sectors. Nodes represent specific topics, with their size indicating the volume of research and their color gradient reflecting the progression of time, from earlier (purple) to more recent research (yellow). The visualization reveals how various research themes have gained prominence or evolved over the specified years, offering a dynamic view of the academic landscape surrounding digitalization.

The central and largest node, labeled "digitalisation," connects to a wide array of themes such as "education," "globalization," and "cultural heritage," suggesting that these areas have consistently interacted with digital transformation throughout the five years. The shift in node colors towards yellow in areas like "sustainability" and "organizational culture" around the periphery suggests an increasing focus on these topics more

recently, particularly in relation to business practices and leadership within digital contexts. This may indicate a growing academic interest in how digital technologies can be leveraged to promote sustainability within corporate strategies and leadership practices as businesses adapt to global challenges, including those amplified by the COVID-19 pandemic.

Moreover, the presence of "COVID" and "pandemic" nodes connected to "sustainable development" and "social value" in lighter shades suggests that these topics have become particularly relevant in the latest years of the timeline. The pandemic's impact on digital transformation strategies and their intersection with social and sustainability issues appears to have attracted significant scholarly attention, reflecting the urgent need to understand and address the implications of rapid digitalization in a global crisis context. This bibliometric analysis not only highlights the key focal areas within digitalization research but also underscores the adaptability and responsiveness of academic inquiries to real-world events and trends.

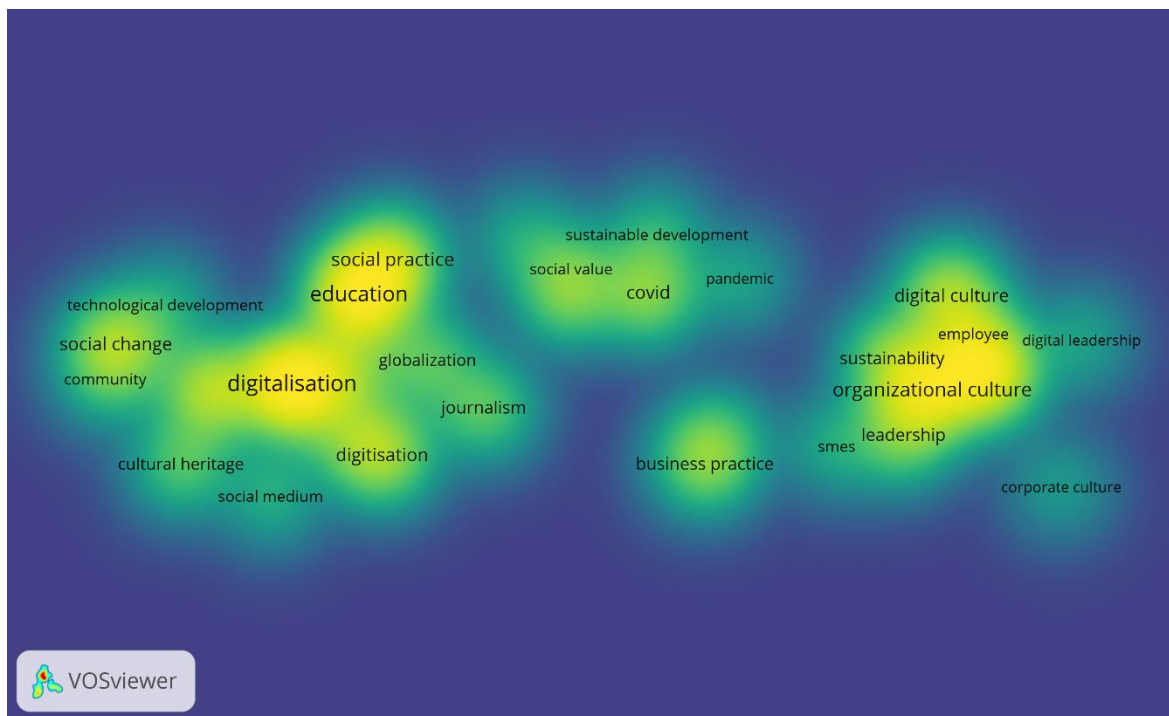


Figure 3. Density Visualization

Source: Data Analysis, 2024

This VOSviewer visualization provides a density map that illustrates the concentration and interconnection of various research themes associated with digitalization. The map uses color gradients to indicate the density of topics, with warmer colors (yellow) representing higher concentrations of research and cooler colors (blue) indicating lesser focus. Central to the visualization is the theme "digitalisation," which appears as a prominent yellow area, underscoring its significance and centrality in related discussions. Surrounding it are interconnected themes such as "education," "globalization," and "cultural heritage," which are also highlighted as areas of substantial academic interest. This suggests that these topics not only have a significant volume of research but also hold a central position in the discourse around the impacts of digital technology on society.

Adjacent areas like "sustainable development," "organizational culture," and "leadership" show a transition from green to yellow, indicating a growing body of research in these areas, particularly in the contexts of digital leadership and sustainability within organizational settings. The presence of "COVID" and "pandemic" in greener shades toward the right side of the map points to emerging research areas that have likely gained traction due to recent global events. This density distribution helps to visualize not only the volume of research across different themes but also how these themes overlap and interact, highlighting the multidisciplinary nature of studies on digitalization and its widespread impact across different sectors and disciplines.

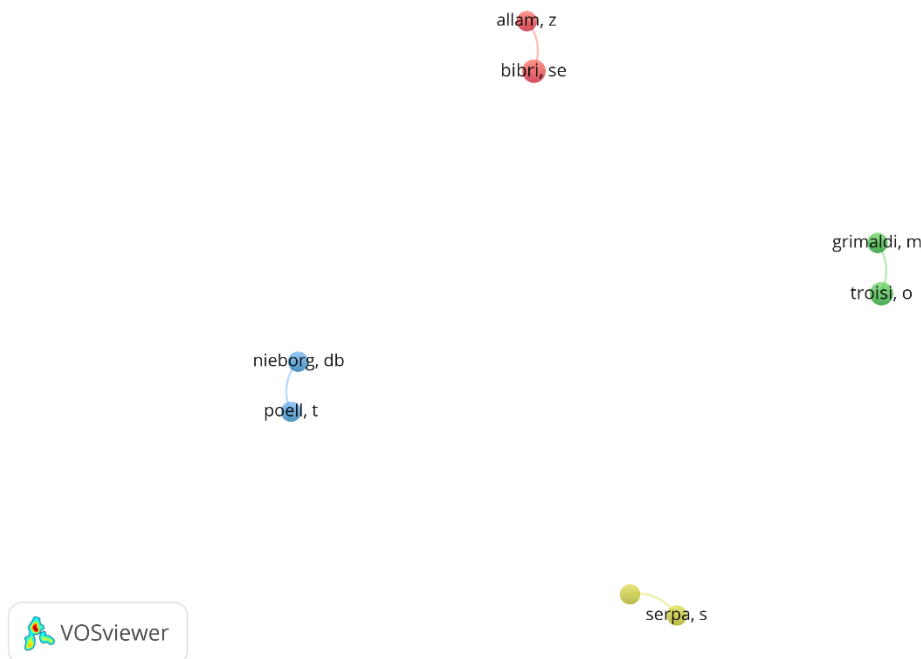


Figure 4. Author Collaboration Visualization

Source: Data Analysis, 2024

The VOSviewer visualization depicts a network of authors, showcasing their relative positions based on co-authorship or citation relationships within a specific field of study. Each node represents an author, and the placement of these nodes indicates potential collaborations or thematic similarities in their research outputs. The isolated positioning of most authors, such as "allam, z," "nieborg, db," and "troisi, o," suggests that while these researchers are noted within the field, their connections with others in this visual are minimal or non-existent within this dataset. This could indicate that these authors either work independently, in different subfields, or that their collaborations are not heavily cross-referenced within this particular body of literature. In contrast, "serpa, s," shown in a distinct location with a larger node, might denote a higher volume of publications or a central role in the research network due to more extensive citations or collaborations, suggesting a significant influence within this academic landscape.

Practical Implication

The series of VOSviewer visualizations analyzed above offer substantial practical implications for various stakeholders involved in research, policy-making, and educational sectors, particularly within the contexts of digitalization, cultural transformation, and academic collaboration.

Firstly, the density and bibliometric network maps focusing on digitalization highlight the interconnectedness of digital technologies with various societal and organizational aspects, such as education, cultural heritage, and sustainability. For policymakers and educational leaders, this emphasizes the necessity of integrating digital literacy into curricula and policy frameworks to harness the benefits of digitalization fully. It also underscores the importance of creating policies that foster digital inclusivity and sustainability, ensuring that the advantages of digital transformation are accessible to all sectors of society, including the most marginalized.

Secondly, the analysis of emerging research themes related to COVID-19 and sustainability within the network maps suggests an urgent need for businesses to

adapt their models to address both immediate and long-term challenges posed by global crises and sustainability concerns. Business leaders and managers can use these insights to drive innovation in organizational practices, embedding principles of sustainability and resilience into their core operations. This could involve leveraging digital tools to create more flexible, responsive business models that are capable of withstanding various types of disruptions, from pandemics to economic shifts.

Lastly, the author co-citation network reveals the landscape of academic collaborations and influences, which can be particularly useful for researchers and academics. Understanding the key figures and their interconnections within a specific field can guide upcoming researchers in identifying potential mentors, collaborators, and influential studies that could shape their own research agendas. For academic institutions, these insights can aid in the strategic planning of research investments and partnerships, fostering environments that encourage cross-disciplinary research and innovation that are evidently crucial in the rapidly evolving domains of digital transformation and cultural studies.

5. CONCLUSION

The comprehensive analysis using VOSviewer visualizations provides a multi-faceted view of the dynamic research landscape surrounding digitalization and its impact across various domains such as education, culture, sustainability, and organizational practices. The study highlights the critical interplay between digital technologies and societal changes, underscoring the need for policies that promote digital literacy and inclusivity to ensure that all segments of society can benefit from technological advancements. Furthermore, the emerging research themes relating to global crises like the COVID-19 pandemic call for adaptive and resilient business models that incorporate digital tools for sustainability and continuity. Lastly, the visualization of academic collaborations offers valuable insights into the networking and influence patterns within the scholarly community, suggesting pathways for future research and development initiatives. This study not only maps the current academic discourse on digitalization but also sets the stage for future investigations to build on this foundational knowledge, fostering informed strategies and innovations in both policy and practice.

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