

Investigate the Role of Digital Media in Shaping Cultural Identity using ARAS Method

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Abstract

Cultural expression and communication, as a dynamic platform for interaction, are significantly shaped by digital media. Media, including social networking sites, streaming platforms, and online forums, plays a crucial role in shaping identities in the digital age. Through these channels, individuals and societies can reaffirm their cultural identities, share traditions, and connect with others who share similar cultural backgrounds. Content creation and the democratization of dissemination empower marginalized voices and promote cultural diversity by transcending geographical boundaries. However, there is a risk of cultural homogeneity in the digital sphere, where similar perspectives dominate and challenges such as digital inequality arise. The advent of digital media has revolutionized how individuals express and explore their identities, offering unparalleled opportunities. Through social media platforms, people can manage their online personas, reflecting their cultural backgrounds, interests, and beliefs, thereby sharing aspects of their lives with a global audience. These platforms enable user-generated content, fostering connectivity and diversity as individuals connect with like-minded people worldwide and participate in virtual communities that celebrate their cultural identities. Yet, the digital landscape also poses challenges in identity formation, notably through the aggregated nature of profiles termed "Digital Self-Presentation." This phenomenon often leads individuals to conform to social norms in pursuit of validation, potentially resulting in identity fragmentation or cultural appropriation. Digital media also plays a crucial role in shaping collective cultural identities, facilitating the creation and dissemination of cultural content and fostering solidarity within online communities.

These digital spaces provide marginalized groups with a platform to amplify their voices, challenge dominant narratives, and advocate for social change. Global Connectivity, Representation and Visibility, Cultural Exchange and Fusion, Identity Construction and Performance, Cultural Preservation and Revitalization and Challenges and Controversies. Language Use and Preservation, Identity Construction and Expression, Cultural Hybridity and Globalization and Digital Literacy and Agency. the Rank Digital Media in Shaping Cultural Identity for Additive Ratio Assessment method. Challenges and Controversies is showing the highest rank and Global Connectivity is showing the lowest rank.

Keywords: MCDM, Language Use and Preservation, Identity Construction and Expression, Cultural Hybridity and Globalization and Digital Literacy and Agency.

Introduction

To proliferate Internet usage among the general population, digital disparities have long been evident, with personal computers serving as a prime example since their early days. Research has focused on understanding the factors influencing the adoption of computers within households, shedding light on socio-economic discrepancies. As digital technologies became more ingrained in society, efforts to bridge these gaps intensified, particularly with advancements like internet browsers and the widespread availability of internet access in homes [1]. This transition marked a shift from mere computer ownership to a focus on internet

connectivity and its implications for society, including its role in reinforcing existing inequalities. A continuous model of internet access has been influential in shaping scholarly discourse on this subject, with many scholars advocating for inclusive strategies to broaden access and participation. Recent initiatives have aimed to explore patterns of internet usage and non-usage in relation to socio-demographic factors, further informing efforts to address digital inequities.

The digital divide encompasses demographic and attitudinal disparities, primarily revolving around access, skills, and utilization of web applications [2]. These imbalances are often associated with factors such as age, income, and education. Over the years, researchers have delved into the attitudes and values of both internet users and non-users to discern these divisions, albeit with limited focus on broader 'cybercultures' and their impact on shaping the digital gap. This paper, centered on evolving research in Britain, underscores the significance of attitude in internet cultures, whether they share similarities with or possess distinct characteristics from those in America, and how these factors influence digital interpretation [3]. The digital divide and digital disparities in this domain are resurfacing as a focal point for research. Various factors, including accessibility, skills, and internet usage, contribute to these disparities. Moreover, inconsistencies in usage

Received date: September 11, 2025 **Accepted date:** September 19, 2025; **Published date:** September 24, 2025

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Citation: Divya Soundarapandian (2025). Investigate the Role of Digital Media in Shaping Cultural Identity using ARAS Method. Journal of Data Science and Information Technology, 2(2), 1–10 doi: <https://dx.doi.org/10.55124/jdit.v2i2.273>

patterns are closely intertwined with demographic characteristics such as age, income, and education. Recent additions to the core variables shaping internet engagement include approaches and values held by both users and non-users, which delineate distinct “internet cultures [4].” This underscores the existence of diverse approaches to internet usage and their correlation with population demographics. Identifying the cultures prevalent on the Internet was primarily attempted through the Oxford Internet Surveys (OxIS) conducted by Dutton and Blank in 2013. This survey aimed to gauge respondents’ perspectives on various statements about the Internet, ranging from strong agreement to strong disagreement, utilizing a five-point Likert scale. The survey items, initially developed and refined in a census conducted in 2003, underwent analysis using Principal Component Analysis (PCA) with varimax rotation and Kaiser normalization to determine the number of dimensions [5].

The analysis yielded four components with eigen values greater than 1.0, representing distinct perspectives on how the Internet is perceived: as an engaging escape, a utilitarian tool for acquiring skills, a disruptive troublemaker, or a facilitator of social interaction. In the realm of digital art, the distinction between good and evil becomes increasingly apparent as the moral landscape expands. Individuals are not only granted the freedom of expression but also bear the responsibility of discerning between right and wrong [6]. This duty of moral judgment is akin to issuing “kill orders” on the internet, seen in instances such as “The Abuse of Cats,” “Kingua Incident of Women Ming Poisoning,” and “Bronze Gate,” among others. Internet users find themselves automating moral judgments, which places significant stress on all involved parties. Ultimately, it is people who are tasked with making these moral assessments. Traditionally, art has been associated with notions of nobility and beauty, yet in the realm of digital art, the concept of beauty is becoming less straightforward. Works such as King Kong and computer-generated creatures display a different form of beauty, leading to a subtle but notable shift in the standards of beauty. This alteration challenges people’s perceptions and confounds their spiritual realms [7]. Digital media art thrives on interactivity, embodying character and diversity while embracing associated uncertainties. Unlike classical works of art, digital media art places a greater emphasis on sharing and communal experience. Audiences are no longer mere spectators but active participants, creating an unprecedented dynamic.

The process of creating digital art involves ongoing dialogue with the audience, allowing for continual reinterpretation and evolution of the artwork [8]. Digital technology has revolutionized consumer culture, ushering in a new era where people from all walks of life appreciate the allure of visually captivating content, particularly in the realm of digital film and television. These forms of entertainment have become ingrained in our daily lives, satisfying not only our physiological needs but also fulfilling deeper psychological cravings [9]. Animated movies and TV shows serve as a conduit for expressing intricate thoughts and spiritual complexities within popular culture, acting as sophisticated metaphors that resonate with audiences globally. Each country’s cinematic and television productions offer a unique reflection of its cultural identity and values, weaving conceptual meanings deeply rooted in its societal fabric. Through animation, countries communicate their perspectives, propagate cultural trends, and convey universal truths, all while expressing the beauty and insights of life [10]. According to the research on youth media practices in the United States (2010: 117), there’s a widespread adoption of new

media for “intimate interactions,” particularly notable in the realm of dating practices among young people.

They are actively engaged in creating, utilizing, and adapting new media technologies, often in ways that are unfamiliar or even unsettling to adults. The proximity of these interactions, especially among young individuals, presents socio-cultural challenges, particularly regarding gender dynamics, necessitating the development of innovative mediated communities and ethical frameworks [11]. Research on Swedish youth by Johansson (2007: 118) further confirms the integration of the internet into everyday life, with digital media becoming an integral aspect of sexuality. While widespread digital media practices are evident in Western youth cultures, the focus of inquiry often revolves around intimate storytelling on Social Networking Sites (SNSs). These platforms serve as spaces for sharing intimate narratives, which, although mediated and influenced by software platforms, reflect the shaping forces of societal norms and corporate interests [12]. Through a specific case study approach, this research aims to explore how social media companies cater to youth audiences’ desire for intimate storytelling and how their design choices reflect societal values. Acknowledging the significance of SNSs in teenagers’ lives, this essay adopts an ethical-political perspective, particularly focusing on gender, sexuality, and relationship dynamics within the context of popular media spaces. Young people’s portrayal of themselves in intimate contexts is heavily influenced by established norms surrounding gender and sexuality [13].

These norms are not necessarily newly created online but rather reiterated and perpetuated through various social interactions on digital platforms. For instance, practices like crafting written self-introductions and sharing images on social media tend to embody masculine traits more frequently than feminine ones, often reinforcing binary representations of gender. Moreover, the networking dynamics within online communities, especially among youth, tend to promote hetero normative identity constructions, which are more prominently displayed online compared to offline settings [14]. This is largely due to the nature of digital interactions and the mediation processes involved in online communication platforms. As described by Couldry (2008), there exists a continuous flow of production, circulation, interpretation, and reception of content online, wherein narratives and representations are constantly recycled and reproduced within both digital and broader social and cultural contexts. Cultural influences are deeply intertwined, eventually converging and shaping intimate narratives of daily life, once considered mere choices. Designs deemed ‘apolitical’ are now part of this discourse, as seen in this review from a popular standpoint. Self-representation on social networking sites carries significant consequences, urging us to envision our own identities. However, these mechanisms of mediated self-expression are influenced by the flow of capital, primarily controlled by social media corporations [15]. Mediated intimacy, a core aspect of storytelling, is intricately connected to communication, market dynamics, and cultural influences.

These platforms serve as valuable tools, catering to specific audiences and stakeholders, prioritizing profit over genuine everyday connections. Whether male, female, straight, or gay, individuals navigate these platforms within the framework of dominant symbols and structured audiences, ultimately serving the interests of various stakeholders such as advertisers [16]. Social media platforms engage in storytelling, utilizing linking and sharing mechanisms to steer narratives toward a more nuanced

understanding. Market and cultural influences, as highlighted by De Ridder (2013), introduce additional layers of complexity. Despite the perception of social media companies' software designs as politically neutral, their impact is contested, as users and institutions play significant roles alongside them. Fenton (2007) argues against viewing social media platforms as monolithic entities, emphasizing their diverse organizational dynamics [17]. In popular culture, examining social media products reveals tensions between media industries and audience dynamics, as noted by Fiske (2010). Understanding the intricate relationships between technology, society, and user practices aligns with social constructionist perspectives, which emphasize deviations from and over determinations of meanings. Frameworks such as Social Construction of Technology (SCOT) and Actor-Network Theory (ANT) offer valuable insights into these dynamics. SCOT, as articulated by Bijker et al. (1993), emphasizes the centrality of human agency in technological development [18].

Materials and Method

Global Connectivity: Digital media facilitates global connectivity, allowing individuals from different cultural backgrounds to interact and share their experiences. Social media platforms, online forums, and digital communities enable people to engage in cross-cultural dialogue, exchange ideas, and form connections that transcend geographical boundaries. This interconnectedness fosters the development of hybrid cultural identities that incorporate diverse influences.

Representation and Visibility: Digital media platforms provide a space for underrepresented cultural groups to share their stories and perspectives. Through blogs, vlogs, podcasts, and social media profiles, marginalized communities can assert their identities, challenge stereotypes, and counter mainstream narratives that may perpetuate cultural biases or misconceptions. This increased visibility helps validate diverse cultural experiences and promotes inclusivity.

Cultural Exchange and Fusion: Digital media facilitates cultural exchange and fusion by enabling the sharing of music, art, literature, cuisine, and other cultural artifacts across different communities. Platforms like YouTube, Spotify, and Netflix allow users to discover and engage with content from around the world, exposing them to new cultural practices and traditions. As a result, individuals may adopt elements from various cultures, leading to the emergence of multicultural identities and hybrid cultural expressions.

Identity Construction and Performance: Digital media offers individuals the opportunity to construct and perform their cultural identities online through curated profiles, multimedia content, and digital personas. Social media platforms, in particular, serve as virtual stages where users can express their cultural affiliations, values, and beliefs through photos, videos, status updates, and hashtags. This performative aspect of digital culture allows individuals to negotiate their identities, experiment with different cultural expressions, and seek validation and recognition from their peers.

Cultural Preservation and Revitalization: Digital media plays a crucial role in preserving and revitalizing cultural heritage by digitizing historical artefacts, documents, and traditions. Online archives, digital libraries, and cultural heritage websites make cultural resources more accessible to a global audience, ensuring their preservation for future generations. Additionally, digital

platforms provide opportunities for cultural practitioners to innovate and adapt traditional practices to contemporary contexts, thereby ensuring their relevance and continuity.

Challenges and Controversies: While digital media offers numerous opportunities for cultural empowerment and expression, it also presents challenges and controversies. Issues such as cultural appropriation, misrepresentation, and digital divide underscore the complexities of cultural identity in the digital age. Furthermore, the algorithmic curation and monetization of digital content can reinforce cultural stereotypes, limit exposure to diverse perspectives, and exacerbate inequalities in representation.

Language Use and Preservation: Language serves not merely as a means of communication but stands as a cornerstone of identity and culture. The richness of linguistic diversity is crucial for the preservation of cultural heritage. Consequently, efforts aimed at conservation are imperative, as languages often face threats from globalization and hegemony. It is essential to undertake language revival initiatives, documentation programs, and educational endeavours to safeguard endangered languages and promote multilingualism, thus enhancing cultural protection.

Identity Construction and Expression: Identity encompasses a multitude of facets, including language, culture, nationality, race, gender, and sexuality, which are influenced by various factors. Individuals construct and express their identities through connections forged via language, attire, conduct, beliefs, and affiliations. Globalization and increased interconnectedness contribute to the emergence of hybrid identities, reflecting the diverse cultural influences and contexts individuals encounter.

Cultural Hybridity and Globalization: Cultural diversity entails the fusion of different cultural elements to generate novel expressions, belief systems, and practices. Migration, media, trade, and technological advancements facilitate cultural exchange, accelerating globalization processes. While globalization fosters cross-cultural understanding, it also raises concerns regarding cultural integrity, appropriation, and power imbalances, prompting a call for digital literacy and agency.

Digital Literacy and Agency: Digital literacy is essential for navigating the digital landscape, enabling individuals to critically evaluate content and develop necessary skills. Digital technologies offer avenues for self-expression, participation, and advocacy, yet they also pose challenges such as information overload, privacy issues, and digital divides. Proficiency in digital literacy empowers individuals to engage effectively with media, express themselves online, and advocate for social change.

Method: The ARAS method stands out as the optimal approach for alternative selection. It simplifies the process effectively by employing suitable indicators, often using volume as a measure. This method facilitates replacement between alternatives, highlighting the variance in their effectiveness while neutralizing the influence of differing units of measurement [19]. The ARAS technique finds application in addressing a variety of Multi-Criteria Decision Making (MCDM) challenges, particularly those with a limited range of potential outcomes, such as project-related issues. It involves sorting through various options, each representing a distinct choice, and evaluating them against clearly defined criteria, in alignment with the ARAS methodology, to ascertain their suitability. This determination of attribute utility fees aids in gauging the potential opportunities and comparative efficiencies of the problem under consideration [20]. In the realm

of transport companies, the ARAS approach serves as a comprehensive means of assessing performance. It encompasses the evaluation of 20 key performance indicators, enabling a holistic assessment of overall performance within the organization. This assessment unfolds in three phases, employing a sensitivity analysis method established during the evaluation process [21].

The ARAS approach simplifies complex international events by providing a structured framework for understanding and evaluating criteria. It emphasizes the importance of considering weighted quantities and causal descriptions of opportunities in the assessment of alternatives, particularly in the context of renewable energy systems such as Polysilicon Solar PV Energy, solid oxide fuel cells, Phosphoric acid fuel cells, and offshore wind energy systems. Sustainability indicators play a crucial role in this evaluation, with input from energy experts shaping the ARAS hybrid method [22]. A novel approach, combining Advanced with the ARAS method, has been proposed to enhance the evaluation process. The technique, known for its cost-effectiveness and applicability across various domains including management, organization, production, planning, architecture, policy, and environmental sustainability, is integrated to introduce a subjective standards-weighting technique [23]. In geographical regions like the Arras Valley, characterized by moderate winter temperatures and conducive natural conditions, a diverse range of fruits belonging to the rosacea family, including apples, apricots, pears, peaches, plums, cherries, and various berries like strawberry and mulberry, thrive. While wild apricots, abundant in the valley under natural conditions, offer hundreds of fruits, human selection over the years has led to the cultivation of smaller-fruited varieties [24]. The ARAS (Additive Ratio Assessment with Gray Numbers) approach introduces a novel method for classical decision-making, particularly in troubleshooting Multi-Criteria Decision Making (MCDM) problems. Unlike traditional technical approaches, ARAS offers an optional technique that emphasizes values-based activities, involving the test producer from the outset. This method aims to identify superior alternatives compared to feature costs, relying on sound judgment despite inherent ambiguities. The incorporation of "gray" in ARAS signifies the acknowledgment of uncertainty in decision-making processes [25]. ARAS-G (Gray Additive Assessment) integrates gray principles into the ARAS system, emphasizing technical precision. While the literature on ARAS is relatively recent, it has found utility across various fields and industries, as evidenced by its application in numerous studies.

In the context of flash-lamp photolysis experiments, ARAS measures a significant value of 1.9, followed by a rapid increase to one hundred and one after the onset of photosynthesis within the initial 150 PS test time [26]. The experiment encountered challenges due to circuit fluctuations caused by flash usage, rendering precise measurements unattainable. Prior experiments had addressed issues such as PMT intensity fluctuations resulting from excimer flashes, mitigated through monochromating, and electronic interference, addressed using optical isolators for signals. Furthermore, safety concerns associated with the excimer laser were resolved [27]. The ARAS method lacks the capability to handle ambiguity, subjective judgments, and coping with incomplete information. It relies on unbiased good judgment to address uncertainty, particularly in unknown and complex conditions, making it a valuable approach. The method provides options for sequencing and analysis based on facts and special cases, allowing selectors to express both optimistic and rational attitudes. While it appears numerical on paper, it offers the flexibility to create e-learning pathways tailored to individual needs, emphasizing the importance of mastery. The proposed integrated software for this method is both cost-effective and validated for suitability, ensuring its practical application [28].

Analysis and Discussion

Table 1. Digital Media in Shaping Cultural Identity

	Language Use and Preservation	Identity Construction and Expression	Cultural Hybridity and Globalization	Digital Literacy and Agency
Global Connectivity	250	56	189	78
Representation and Visibility	200	48	296	45
Cultural Exchange and Fusion	140	75	202	129
Identity Construction and Performance	150	85	105	170
Cultural Preservation and Revitalization	240	145	120	150
Challenges and Controversies	350	150	285	300

Table 1 shows the Digital Media in Shaping Cultural Identity for Analysis using ARAS Method. Language Use and Preservation, Identity Construction and Expression, Cultural Hybridity and Globalization and Digital Literacy and Agency. Figure 1. shows Digital Media in Shaping Cultural Identity in Global Connectivity, Representation and Visibility, Cultural Exchange and Fusion, Identity Construction and Performance, Cultural Preservation and Revitalization and Challenges and Controversies. From the figure 1 and table 1 it is seen that Challenges and Controversies is showing the Highest Value for Language Use and Preservation and Cultural Exchange and Fusion is showing the lowest value. Challenges and Controversies is showing the Highest Value for Identity Construction and Expression and Representation and Visibility is showing the Lower value. Challenges and Controversies is showing the Highest Value for Cultural Hybridity and Globalization and Identity Construction and Performance is showing the lowest value. Challenges and Controversies is showing the Highest Value for Digital Literacy and Agency and Representation and Visibility is showing the lowest value.

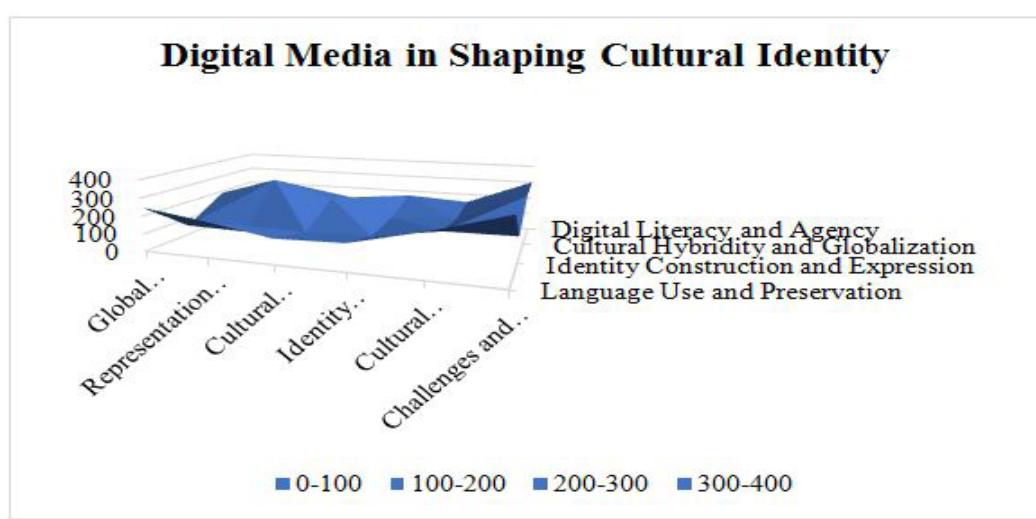


Figure 1: Digital Media in Shaping Cultural Identity.

Figure 1 shows the Digital Media in Shaping Cultural Identity for Analysis using ARAS Method, Language Use and Preservation, Identity Construction and Expression, Cultural Hybridity and Globalization and Digital Literacy and Agency. Figure 1. shows Digital Media in Shaping Cultural Identity in Global Connectivity, Representation and Visibility, Cultural Exchange and Fusion, Identity Construction and Performance, Cultural Preservation and Revitalization and Challenges and Controversies. From the figure 1 and table 1 it is seen that Challenges and Controversies is showing the Highest Value for Language Use and Preservation and Cultural Exchange and Fusion is showing the lowest value. Challenges and Controversies is showing the Highest Value for Identity Construction and Expression and Representation and Visibility is showing the Lower value. Challenges and Controversies is showing the Highest Value for Cultural Hybridity and Globalization and Identity Construction and Performance is showing the lowest value. Challenges and Controversies is showing the Highest Value for Digital Literacy and Agency and Visibility is showing the lowest value.

$$X_{max} = \text{Max} (X_1, \dots, X_n) \quad (1)$$

Table 2. Calculation of maximum value

	Language Use and Preservation	Identity Construction and Expression	Cultural Hybridity and Globalization	Digital Literacy and Agency
Max	350	150	296	300
Global Connectivity	250	56	189	78
Representation and Visibility	200	48	296	45
Cultural Exchange and Fusion	140	75	202	129
Identity Construction and Performance	150	85	105	170
Cultural Preservation and Revitalization	240	145	120	150
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Table 2 shows the Calculation of maximum value Digital Media in Shaping Cultural Identity for Analysis using ARAS Method, Language Use and Preservation, Identity Construction and Expression, Cultural Hybridity and Globalization and Digital Literacy and Agency. Digital Media in Shaping Cultural Identity in Global Connectivity, Representation and Visibility, Cultural Exchange and Fusion, Identity Construction and Performance, Cultural Preservation and Revitalization and Challenges and Controversies.

$$X_{1nor} = \frac{X_1}{\sum(X_1 + X_2 + \dots + X_n)} \quad (2)$$

Table 3. Shows the normalised matrix for Digital Media in Shaping Cultural Identity for Analysis using ARAS Method

	Language Use and Preservation	Identity Construction and Expression	Cultural Hybridity and Globalization	Digital Literacy and Agency
Max	0.208333	0.211566	0.198259	0.255973
Global Connectivity	0.14881	0.078984	0.126591	0.066553
Representation and Visibility	0.119048	0.067701	0.198259	0.038396
Cultural Exchange and Fusion	0.083333	0.105783	0.135298	0.110068
Identity Construction and Performance	0.089286	0.119887	0.070328	0.145051
Cultural Preservation and Revitalization	0.142857	0.204513	0.080375	0.127986
Challenges and Controversies	0.208333	0.211566	0.190891	0.255973

Table 3 shows the normalised matrix for Digital Media in Shaping Cultural Identity for Analysis using ARAS Method. Language Use and Preservation, Identity Construction and Expression, Cultural Hybridity and Globalization and Digital Literacy and Agency. Digital Media in Shaping Cultural Identity in Global Connectivity, Representation and Visibility, Cultural Exchange and Fusion, Identity Construction and Performance, Cultural Preservation and Revitalization and Challenges and Controversies.

Figure 2 shows the normalised matrix for Digital Media in Shaping Cultural Identity for Analysis using ARAS Method. Language Use and Preservation, Identity Construction and Expression, Cultural Hybridity and Globalization and Digital Literacy and Agency. Digital Media in Shaping Cultural Identity in Global Connectivity, Representation and Visibility, Cultural Exchange and Fusion, Identity Construction and Performance, Cultural Preservation and Revitalization and Challenges and Controversies. Normalised matrix values.

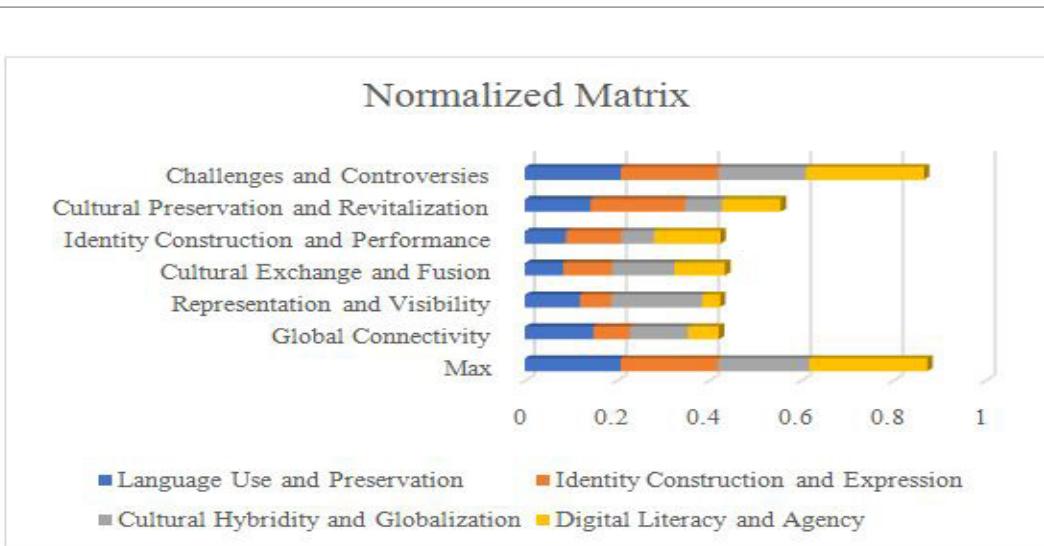


Figure 2: Normalised matrix

$$X_{wnormal1} = X_{n1} \times w_1 \quad (3)$$

Table 4. Weighted Normalized Matrix

	0.25	0.25	0.25	0.25
Weighted Normalized Matrix				
	Language Use and Preservation	Identity Construction and Expression	Cultural Hybridity and Globalization	Digital Literacy and Agency
Max	0.052083	0.052891	0.049565	0.063993

Global Connectivity	0.037202	0.019746	0.031648	0.016638
Representation and Visibility	0.029762	0.016925	0.049565	0.009599
Cultural Exchange and Fusion	0.020833	0.026446	0.033825	0.027517
Identity Construction and Performance	0.022321	0.029972	0.017582	0.036263
Cultural Preservation and Revitalization	0.035714	0.051128	0.020094	0.031997
Challenges and Controversies	0.052083	0.052891	0.047723	0.063993

Table 4 shows the weighed normalized matrix for the shows the normalised matrix for Digital Media in Shaping Cultural Identity for Analysis using ARAS Method. Language Use and Preservation, Identity Construction and Expression, Cultural Hybridity and Globalization and Digital Literacy and Agency. Digital Media in Shaping Cultural Identity in Global Connectivity, Representation and Visibility, Cultural Exchange and Fusion, Identity Construction and Performance, Cultural Preservation and Revitalization and Challenges and Controversies it is also the weighed normalized matrixvalue.

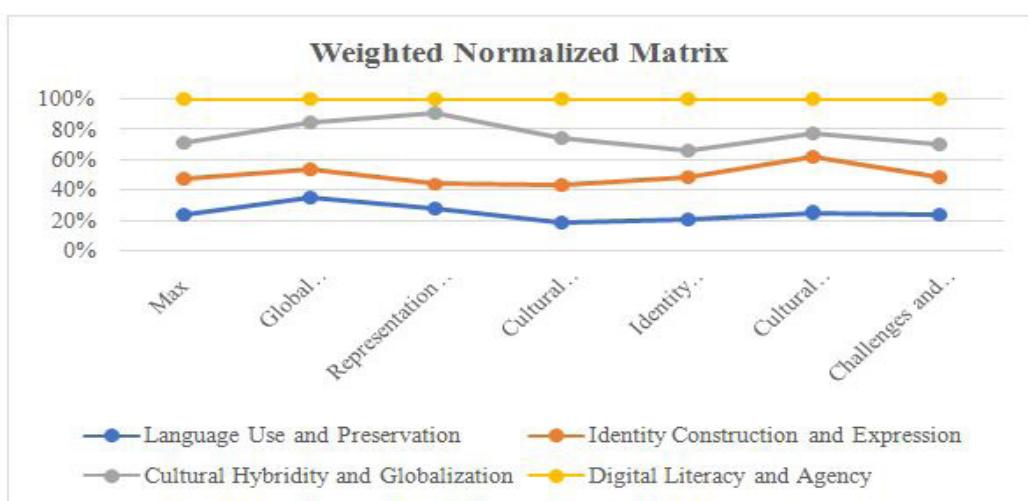


Figure 3: Weighted Normalised Matrix

$$Si = \sum(X_1 + Y_1 \dots Z_n) \quad (4)$$

$$Ki = \frac{X_{wnor1}}{\sum(X_{wnor1} + X_{wnor2} \dots X_{wnorn})} \quad (5)$$

Table 5. Final Result			
	Si	Ki	Rank
Global Connectivity	0.218533	1	
Representation and Visibility	0.105234	0.48155	6
	0.105851	0.484371	5

Cultural Exchange and Fusion	0.108621	0.497045	3
Identity Construction and Performance	0.106138	0.485685	4
Cultural Preservation and Revitalization	0.138933	0.635754	2
Challenges and Controversies	0.216691	0.991571	1

Table 5 shows the final result and rank of the Digital Media in Shaping Cultural Identity in Additive Ratio Assessment method. Language Use and Preservation, Identity Construction and Expression, Cultural Hybridity and Globalization and Digital Literacy and Agency. Digital Media in Shaping Cultural Identity in Global Connectivity, Representation and Visibility, Cultural Exchange and Fusion, Identity Construction and Performance, Cultural Preservation and Revitalization and Challenges and Controversies and it shows the SI, KI, Rank. SI values are derived by using the formula(4), And KI values.

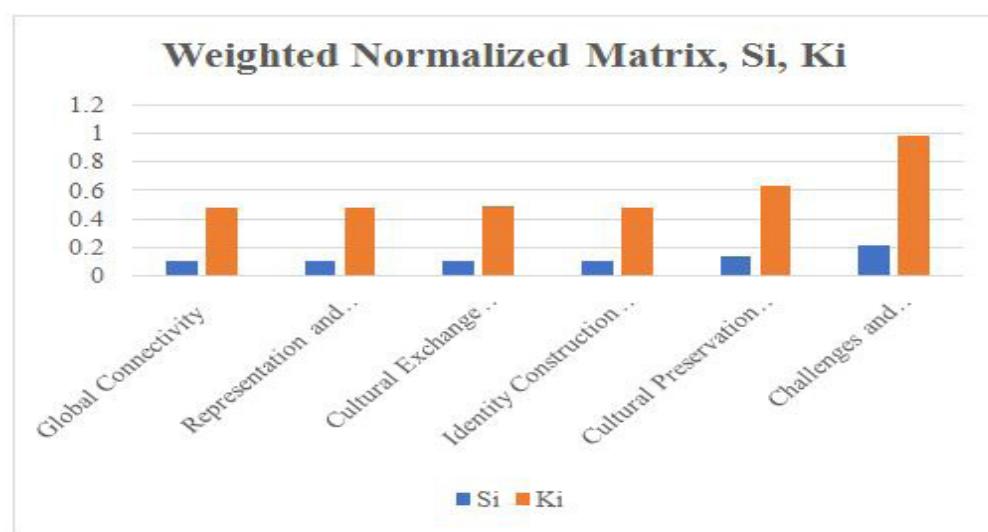


Figure 4: Weighted Normalized Matrix, Si, Ki

Figure 4 shows the weighted normalised matrix in Digital Media in Shaping Cultural Identity. Language Use and Preservation, Identity Construction and Expression, Cultural Hybridity and Globalization and Digital Literacy and Agency. Digital Media in Shaping Cultural Identity in Global Connectivity, Representation and Visibility, Cultural Exchange and Fusion, Identity Construction and Performance, Cultural Preservation and Revitalization and Challenges and Controversies In SI method Challenges and Controversies is showing the highest value and Global Connectivity is showing the lowest value for KI method Challenges and Controversies is showing the highest value and Global Connectivity is showing the lowest value of weighted normalised data.

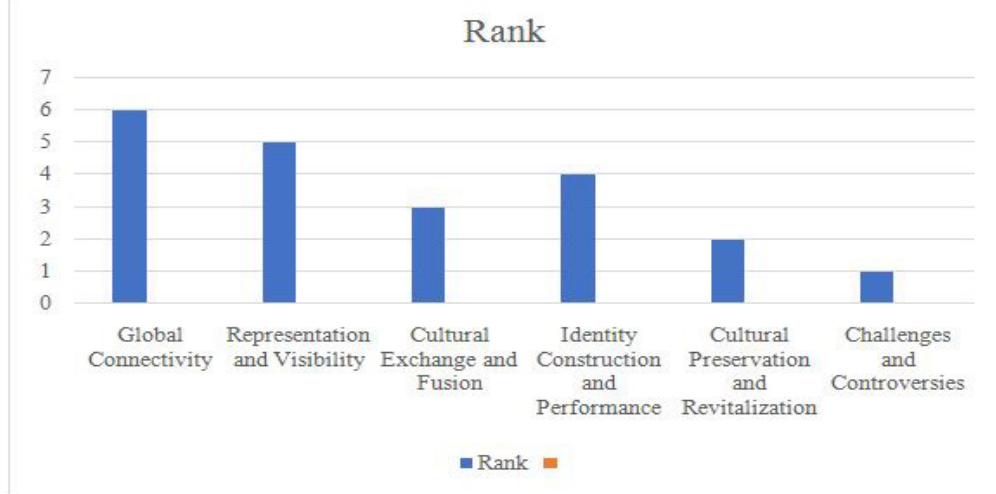


Figure 5: Shows the Rank

Figure 5 shows the Rank Digital Media in Shaping Cultural Identity for Additive Ratio Assessment method. Challenges and Controversies is showing the highest rank and Global Connectivity is showing the lowest rank.

Conclusion

Cultural expression and communication, as a dynamic platform for interaction, are significantly shaped by digital media. Media, including social networking sites, streaming platforms, and online forums, plays a crucial role in shaping identities in the digital age. Through these channels, individuals and societies can reaffirm their cultural identities, share traditions, and connect with others who share similar cultural backgrounds. Content creation and the democratization of dissemination empower marginalized voices and promote cultural diversity by transcending geographical boundaries. However, there is a risk of cultural homogeneity in the digital sphere, where similar perspectives dominate and challenges such as digital inequality arise.

The advent of digital media has revolutionized how individuals express and explore their identities, offering unparalleled opportunities. Through social media platforms, people can manage their online personas, reflecting their cultural backgrounds, interests, and beliefs, thereby sharing aspects of their lives with a global audience. To proliferate Internet usage among the general population, digital disparities have long been evident, with personal computers serving as a prime example since their early days. Research has focused on understanding the factors influencing the adoption of computers within households, shedding light on socio-economic discrepancies. As digital technologies became more ingrained in society, efforts to bridge these gaps intensified, particularly with advancements like internet browsers and the widespread availability of internet access in homes. Digital media facilitates global connectivity, allowing individuals from different cultural backgrounds to interact and share their experiences. Social media platforms, online forums, and digital communities enable people to engage in cross-cultural dialogue, exchange ideas, and form connections that transcend geographical boundaries. Digital media platforms provide a space for underrepresented cultural groups to share their stories and perspectives. Through blogs, vlogs, podcasts, and social media profiles, marginalized communities can assert their identities, challenge stereotypes, and counter mainstream narratives that may perpetuate cultural biases or misconceptions. Digital media facilitates cultural exchange and fusion by enabling the sharing of music, art, literature, cuisine, and other cultural artifacts across different communities. Platforms like YouTube, Spotify, and Netflix allow users to discover and engage with content from around the world, exposing them to new cultural practices and traditions.

These digital spaces provide marginalized groups with a platform to amplify their voices, challenge dominant narratives, and advocate for social change. Global Connectivity, Representation and Visibility, Cultural Exchange and Fusion, Identity Construction and Performance, Cultural Preservation and Revitalization and Challenges and Controversies, Language Use and Preservation, Identity Construction and Expression, Cultural Hybridity and Globalization and Digital Literacy and Agency. the Rank Digital Media in Shaping Cultural Identity for Additive Ratio Assessment method. Challenges and Controversies is showing the highest rank and Global Connectivity is showing the lowest rank.

Conclusion

1. Chen, Guo-Ming, and Kai Zhang. "New media and cultural identity in the global society." In *Handbook of research on discourse behavior and digital communication: Language structures and social interaction*, pp. 795-809. IGI Global, 2010.

2. Kiran Kumar Mandula Samuel, Venkata Pavan Kumar Aka. (2023). AI for Special Education Closing Gaps in Inclusive Learning Using MOORA Method. *International Journal of Computer Engineering and Technology (IJCET)*, 14(1), 249-267.
3. Piotrowski, J. "Cultural Identity in the Era of Digital Media." In *Conference Proceedings of the 86th Association of Collegiate Schools of Architecture (ACSA)*, Cleveland, pp. 258-62. 1998.
4. Aka, V. P. K. (2024). Enterprise SAP Tax Machine Migration: Using Machine Learning and Architecture Best Practices for Vertex 9 Transformation. *Journal of Artificial Intelligence and Machine Learning*, 2(3), 1-7. doi: <https://doi.org/10.55124/jaim.v2i3.279>
5. Goldman, Shelley, Angela Booker, and Meghan McDermott. "Mixing the digital, social, and cultural: Learning, identity, and agency in youth participation." *Youth, identity, and digital media* 216 (2008): 216.
6. McKenzie, Jessica. "Digital media as sites for cultural identity development: The case of Hmong American emerging adults." *Journal of Adolescent Research* (2022): 07435584221116312.
7. Perikala, K (2024). Large-Scale Architecture for Retail Platforms Using Cloud-Native Big Data Systems. *International Journal of Computer Science and Data Engineering*, 1(3), 1-7 doi: <https://dx.doi.org/10.55124/csdb.v1i3.268>
8. Iacovino, Livia. "Shaping and reshaping cultural identity and memory: maximising human rights through a participatory archive." *Archives and Manuscripts* 43, no. 1 (2015): 29-41.
9. Bakhshandeh, Baran. "the Influence of the Media on the National and Cultural Identity." *Society Culture Media* 6, no. 25 (2018): 87-114.
10. Yonefendi, Yesi, and MahendraWijaya. "DIGITAL MEDIA: AN EFFORT TO STRENGTHEN OF CULTURAL IDENTITY." 2ND ICSSED 2018 (2018): 189.
11. Stokes, Jennifer, and Bianca Price. "Social media, visual culture and contemporary identity." In 11th International Multi-conference on society, cybernetics and informatics. IMSCI: <https://www.iiis.org/CDs2017/CD2017Summer/papers/EA876TF.pdf>. 2017.
12. Varun Venkatesh Dandasi, Suresh Deepak Gurubasannavar, Raghavendra Sunku. (2024). Data Mart Design and Predictive Modeling at Palandir Foundry: from Ontology to Operational Intelligence Using Machine Learning. *International Journal of Computer Engineering and Technology (IJCET)*, 15(2), 274-294.
13. Wu, Wei. "The Role of Social Media in Shaping Cultural and Political Trends." *International Journal of Business Management and Visuals*, ISSN: 3006-2705 6, no. 1 (2023): 29-35.
14. Kellner, Douglas. *Media culture: Cultural studies, identity and politics between the modern and the post-modern*. Routledge, 2003.
15. FERRATI, Abdesselam. "Global Media and Cultural Identity: Opportunities and challenges for Morocco in the Digital Era." *International Journal of Language and Literary Studies* 3, no. 3 (2021): 109-120.
16. Giroux, Henry A., and Grace Pollock. "Is Disney good for your kids? How corporate media shape youth identity in the digital age?"

In *Kinderculture*, pp. 73-92. Routledge, 2018.

17. Gurubasannavar, S D, Sunku, R, Dandasi, V V. (2025). Selecting an Extract, Transform, and Load (ETL) Software Solution: A Comprehensive Evaluation and Comparison. *International Journal of Cloud Computing and Supply Chain Management*, 1(3), 1-7. doi: <https://doi.org/10.55124/ijccscm.v1i3.249>
18. Ohiagu, Obiageli Pauline, and Victor OgbonnayaOkorie. "Social media: Shaping and transmitting popular culture." *Covenant Journal of Communication* (2014).
19. Singh, CharuLata. "New media and cultural identity." *China Media Research* 6, no. 1 (2010).
20. Carroll, David, and Joanne Carney. "Personal perspectives: Using multimedia to express cultural identity." *Contemporary Issues in Technology and Teacher Education* 4, no. 4 (2005): 465-488.
21. Neiger, Motti. "Theorizing media memory: six elements defining the role of the media in shaping collective memory in the digital age." *Sociology Compass* 14, no. 5 (2020): e12782.
22. Preston, Paschal, and Aphra Kerr. "Digital media, nation-states and local cultures: the case of multimediacontent'production." *Media, Culture & Society* 23, no. 1 (2001): 109-131.
23. Velasquez, Alcides, Gretchen Montgomery, and Jeffrey A. Hall. "Ethnic minorities' social media political use: How ingroup identification, selective exposure, and collective efficacy shape social media political expression." *Journal of Computer-Mediated Communication* 24, no. 4 (2019): 147-164.
24. Liu, Nana, and Zeshui Xu. "An overview of ARAS method: Theory development, application extension, and future challenge." *International Journal of Intelligent Systems* 36, no. 7 (2021): 3524-3565.
25. Zavadskas, EdmundasKazimieras, ZenonasTurkis, and TatjanaVilutiene. "Multiple criteria analysis of foundation instalment alternatives by applying Additive Ratio Assessment (ARAS) method." *Archives of civil and mechanical engineering* 10, no. 3 (2010): 123-141.
26. Suresh Deepak Gurubasannavar, Varun Venkatesh Dandasi, Raghavendra Sunku. (2025). Enhancing Smart Home Automation with AI And Topsis-Based Decision Making. *International Journal of Information Technology and Management Information Systems (IJITMIS)*, 16(6), 1-22.
27. Radović, Dunja, ŽeljkoStević, Dragan Pamučar, Edmundas Kazimieras Zavadskas, Ibrahim Badi, JurgitaAntuchevičiene, and ZenonasTurkis. "Measuring performance in transportation companies in developing countries: a novel rough ARAS model." *Symmetry* 10, no. 10 (2018): 434.
28. Turkis, Zenonas, and EdmundasKazimierasZavadskas. "A new fuzzy additive ratio assessment method (ARAS-F). Case study: The analysis of fuzzy multiple criteria in order to select the logistic centers location." *Transport* 25, no. 4 (2010): 423-432.
29. Perikala, K (2024). Architecting Retail-Scale Product Knowledge Graph Systems. *International Journal of Artificial intelligence and Machine Learning*, 2(3), 1-6. doi: <https://doi.org/10.55124/jaim.v2i3.292>
30. Ghenai, Chaouki, Mona Albawab, and MaamarBettayeb. "Sustainability indicators for renewable energy systems using multi-criteria decision-making model and extended SWARA/ARAS hybrid method." *Renewable Energy* 146 (2020): 580-597.
31. Gundala, Tirumala Rao. (2025). Predictive Analytics for SSO Performance: Improving Authentication Response Times in Oracle Enterprise Environments Using Linear Regression, Random Forest Regression. *International Journal of Computer Science and Data Engineering*, 2(4), 1-6. doi: <https://dx.doi.org/10.55124/csdb.v2i4.265>
32. Gecer, Mustafa Kenan, TuncayKan, MuttalipGundogdu, SezaiErcisli, Gulcellhan, and Halil Ibrahim Sagbas. "Physicochemical characteristics of wild and cultivated apricots (*Prunusarmeniaca* L.) from Aras valley in Turkey." *Genetic Resources and Crop Evolution* 67, no. 4 (2020): 935-945.
33. Yildirim, BahadirFatih, and BurcuAdiguzelMercangoz. "Evaluating the logistics performance of OECD countries by using fuzzy AHP and ARAS-G." *Eurasian Economic Review* 10, no. 1 (2020): 27-45.
34. Davidson, D. F., and R. K. Hanson. "High temperature reaction rate coefficients derived from N-atom ARAS measurements and excimer photolysis of NO." *International Journal of Chemical Kinetics* 22, no. 8 (1990): 843-861.
35. Zamani, Mahmoud, Arefeh Rabbani, AbdolrezaYazdani-Chamzini, and ZenonasTurkis. "An integrated model for extending brand based on fuzzy ARAS and ANP methods." *Journal of Business Economics and Management* 15, no. 3 (2014): 403-423.
36. Gundala, Tirumala Rao. (2024). Performance Optimization for Micro-Frontend-Based Applications: A Predictive Analysis Using XG Boost Regression. *Journal of Business Intelligence and Data Analytics*, 2(3), 1-6. <https://doi.org/10.55124/jbid.v2i3.256>
37. Venkata Pavan Kumar Aka and Kiran Kumar Mandula Samuel. (2023). Predictive Modeling for Brownfield Migration from SAP ECC 6.0 To S4HANA A Machine Learning Approach for Effort Evaluation Under the SAP Rise Program. *International Journal of Computer Engineering and Technology (IJCET)*, 14(1), 232-248. DOI: https://doi.org/10.34218/IJCET_14_01_018
38. JaukovicJocic, Kristina, Goran Jocic, DarjanKarabasevic, GabrijelaPopovic, DragisaStanujkic, EdmundasKazimierasZavadskas, and PhongThanh Nguyen. "A novel integrated piprecia-interval-valued triangular fuzzy aras model: E-learning course selection." *Symmetry* 12, no. 6 (2020): 928.