Integrating computing techniques in preserving Makassar's Pakarena dance heritage

Nurlina Syahrir, Alimuddin

Faculty of Fine Arts and Design, Universitas Negeri Makassar, Makassar, Indonesia

Article Info

ABSTRACT

This interdisciplinary study bridges the cultural heritage of the Pakarena dance, a key element of Makassar ethnicity, with contemporary computing and informatics to examine its social implications, particularly in terms of identity formation, community transmission, and narrative preservation. Emphasizing the dance's crucial role within the Makassar community, the research employs digital technologies for comprehensive data collection, analysis, and dissemination. Utilizing a qualitative framework supplemented by digital ethnography, the methodology includes in-depth interviews and participant observation, enriched with advanced data analysis and virtual reality (VR) presentations. This innovative approach facilitates the digital capture of the narratives and experiences of dance practitioners, cultural experts, and community members, ensuring the preservation of the dance's cultural narrative and expression. The study reveals that the Pakarena dance is not only a bearer of the Makassar community's history and traditions but also a platform for individual creativity and cultural identity, adapting while preserving its core in the face of societal shifts. The findings highlight the potential of computing and informatics in cultural preservation, suggesting new methods for documenting, analyzing, and promoting intangible cultural heritage. The study advocates for the use of technology to enhance and perpetuate cultural heritage, especially for younger generations, in our increasingly digital era.

Corresponding Author:

Nurlina Syahrir
Faculty of Fine Arts and Design, Universitas Negeri Makassar
90224 Makassar, Indonesia
Email: nurlina.syahrir@unm.ac.id

1. INTRODUCTION

The Makassar ethnic dance, notably the Pakarena dance, faces significant challenges in preserving its cultural heritage amidst modern influences and globalization. As a vibrant expression of the Makassar community's identity, history, values, and traditions, this traditional dance form is at risk of losing its authenticity and significance [1], [2]. While there are existing efforts to promote and preserve traditional dances, such as community workshops and cultural festivals, these solutions often lack a comprehensive approach that addresses the dynamic nature of cultural expression and the impact of contemporary trends.

One major constraint in preserving the Pakarena dance is the limited involvement of the community in its transmission and practice. Although the dance is deeply rooted in the region's cultural tapestry, the younger generation's disconnection from these traditions poses a risk to its continuity [3]. Additionally, the introduction of modern elements can alter the dance's original form, creating tension between innovation and authenticity. With this research, we hope to achieve a deeper understanding of the community's engagement in preserving the Pakarena dance and to explore effective strategies that balance technological

integration with cultural authenticity. By investigating the perspectives and contributions of the Makassar community, the study aims to formulate actionable recommendations that enhance the dance's relevance and ensure its vitality for future generations. Ultimately, this research seeks to reinforce the Pakarena dance as a vital link to the community's shared identity and cultural memory.

In the broader context of the performing arts, dance is recognized as a fundamental expression of human culture and identity. It is a non-verbal communication that transcends language barriers, serving as a powerful medium for expressing and reinforcing cultural values, norms, and beliefs. The cultural significance of traditional dance forms, such as the Pakarena dance, extends beyond their aesthetic appeal [4]. Cika and Astuti [5], these dance forms play a crucial role in identity formation, societal changes, narrative transmission, and artistic development in cultural studies. They act as cultural narratives that convey the historical, social, and spiritual realities of the communities that created and preserved them.

Despite the wealth of academic literature on the cultural value of dance, there needs to be a noticeable gap in understanding the specific dynamics of community involvement in preserving and transmitting traditional dance forms like the Pakarena dance. Community participation, Yang et al. [6] theorized, is vital in sustaining cultural traditions and practices. Yet, the role of the Makassar community in preserving and transmitting the Pakarena dance has not been thoroughly explored. This gap in the existing literature raises essential questions about the effectiveness of current preservation strategies and the potential challenges contemporary influences pose.

In addition to community involvement, another significant aspect that warrants further investigation is the impact of modern influences on the authenticity of traditional dance forms. The advent of globalization and the increasing exposure to global cultures have introduced new elements into conventional practices, potentially altering their original form and meaning. While some degree of adaptation is inevitable and even necessary for cultural survival, the delicate balance between authenticity and innovation must be carefully navigated. Theoretical perspectives from cultural theorists like [7]–[9] contribute significantly to our understanding of this intricate dynamic, but their implementation within the framework of the Pakarena dance is still largely uninvestigated. It proposes an in-depth exploration of community participation's role in preserving and transmitting the Pakarena dance to address these gaps. The study endeavors to comprehend the Makassar community's perspectives, engagements, and contributions regarding the dance to offer significant knowledge for formulating efficacious preservation approaches. Furthermore, the study examined the influence of modern elements on the Pakarena dance to tease out the complex interplay between tradition and innovation.

Through examining community engagement and the influence of modernity, this research endeavors to aid in formulating sophisticated approaches to safeguard and publicize the Pakarena dance. It advocates for a community-centered approach that encourages active participation, fosters an appreciation for tradition, and finds a balance between authenticity and innovation [10], [11]. The study highlights the significance of integrating the cultural and social value of the Pakarena dance into educational curriculums. It aligns with [12] emphasis on the importance of cultural education in fostering cultural diversity and intercultural dialogue.

This study emphasizes adopting a comprehensive, community-focused strategy to conserve the Pakarena dance. It aims to bridge the gaps in the existing literature by offering a deeper understanding of the dance's cultural, social, and artistic significance and the challenges and opportunities in its preservation. The proposed exploration contributes to the conservation of the Pakarena dance and enriches our understanding of the dynamic interplay between tradition and modernity in the context of cultural preservation. This study, therefore, is a step towards ensuring the continuity and vibrancy of this rich cultural heritage and reinforcing its significance among the younger generations and beyond.

The digital era offers innovative tools and methodologies that can significantly enhance the documentation, transmission, and education of traditional cultural expressions [13], [14]. Advanced computing technologies, such as digital archiving, virtual reality (VR), augmented reality (AR), and artificial intelligence (AI), provide unprecedented opportunities to capture the intricate details of the Pakarena dance, including its movements, music, and cultural contexts. These technologies not only facilitate the preservation of this intangible cultural heritage in its most authentic form but also make it more accessible to both the local community and a global audience. For instance, VR can be used to create immersive experiences that allow individuals to learn and interact with the dance form in a virtual environment, thereby overcoming geographical and physical limitations. Similarly, AI can assist in analyzing and categorizing dance movements, helping to standardize teaching methodologies and preserve the dance's unique characteristics. The integration of such computing techniques aligns with the broader goal of engaging the community and younger generations, making the cultural education process more interactive and appealing [15], [16]. By embracing these digital innovations, this study aims to explore how computing techniques can be effectively utilized to safeguard the Pakarena dance, ensuring its vitality and relevance in the modern world while maintaining the balance between tradition and innovation. This approach underscores the importance

of leveraging modern technology in cultural preservation efforts, offering a new dimension to the ongoing discourse on safeguarding intangible cultural heritage.

2.   METHOD

The research methodology for this study was designed with an emphasis on clarity, precision, and reliability, utilizing a historical approach with qualitative data sourced from interviews and archival documents [17], [18]. The study aimed to explore the multifaceted dimensions of the Pakarena dance, focusing on its cultural, social, and artistic aspects and the challenges and changes it has undergone over time. Four respondents were carefully selected through purposive sampling. This non-probability sampling technique allowed for the selection of individuals with in-depth knowledge and experience of the Pakarena dance. The criteria for selecting respondents for this study included direct involvement in the Pakarena dance, expert knowledge of its history and cultural significance, insights into its social and artistic dimensions, and an understanding of the challenges faced in its preservation and transmission. The respondents comprised traditional dance practitioners, cultural experts, and educators from the Makassar community. Their profiles are summarized in Table 1, which provides an overview of each respondent's role, experience with the Pakarena dance, and their knowledge related to it.

Table 1. Respondents' profile

Respondent	Role	Experience with Pakarena dance	Knowledge of Pakarena dance
Respondent 1	Dance practitioner	Has been performing the Pakarena dance for over 20 years	In-depth understanding of the dance's choreography, symbolism, and cultural significance
Respondent 2	Cultural expert	Has studied the Pakarena dance and its cultural context for over 15 years	Extensive knowledge of the historical and cultural aspects of the dance
Respondent 3	Educator	Has been teaching the Pakarena Dance in a local dance school for over 10 years	Comprehensive knowledge of the dance's choreography, cultural significance, and its role in identity formation
Respondent 4	Elderly local resident	Grew up with the Pakarena dance as part of community rituals and celebrations	Rich personal experiences with the dance and a deep understanding of its role in the community

In-depth interviews were conducted with the selected respondents. The interviews were designed to gather qualitative data on four main sub-categories: the cultural aspects of dance, its social and artistic elements, and its challenges and changes. Each sub-category was further divided into specific themes. For example, the cultural elements included themes like the cultural value of dance, dance as a cultural narrative, and the importance of tradition for artists. The interviews followed a standardized set of open-ended questions on specific themes, facilitating gathering comprehensive and detailed responses.

Archival documents, such as historical records, cultural texts, and previous research studies, were also reviewed to supplement the primary data gathered through the interviews. These documents shed light on the historical context and cultural significance of the Pakarena dance. The integration of computing techniques came into play in the data analysis process, utilizing qualitative software for thematic analysis [19]. Thematic analysis was employed to identify patterns and themes in the interview responses, which involved coding the data, categorizing the codes into themes, and interpreting the themes in the context of the research objectives [20]. The use of computing techniques extended to managing the digital archives and analyzing dance movements through video analysis software, aiming to create a more dynamic and interactive repository for the Pakarena dance.

Ethical considerations were strictly observed throughout the research process, ensuring informed consent, anonymity, and confidentiality of the respondents. The research activities adhered to relevant ethical guidelines and standards. This study's innovative approach, blending traditional qualitative methods with modern computing techniques, ensured the collection of comprehensive and reliable data on the efforts of the Makassar community in preserving the Pakarena dance. It also examined the impact of modern influences on the dance, aiming to contribute significantly to the knowledge on the cultural preservation of traditional dance forms.

3.   RESULTS AND DISCUSSION

This study presents comprehensive research on the Makassar community's rich cultural heritage, intricately integrated into their ethnic dance. The Makassar Ethnic dance represents the group's shared identity, history, values, and traditions. This study aims to analyze the complex traditional dance of the Makassar people, examining its different themes and sub-themes to gain a deeper understanding of its

cultural, social, and artistic importance. We aim to emphasize the multifaceted significance of dance and the challenges it encounters by examining its role in identity formation, societal changes, narrative transmission, artistic development, and tradition preservation. This mind mapping comprehensively analyzes the main themes and sub-themes investigated in this study.

According to Figure 1, the comprehensive study of Makassar ethnic dance has produced an intriguing array of themes and sub-themes that highlight the dance's intricate connection to the Makassar community's cultural, social, and artistic realms. The cultural value of dance is strongly emphasized, with sub-themes including dance aesthetics, dance as a cultural treasure, dance as a past connection, and dance as a cultural memory. The dance is more than just entertainment, it serves as a tangible link to the past and a repository for cultural memory. It is a cultural heritage site that captures and preserves the Makassar people's history, values, and traditions.

Figure 1. Makassar ethnic dance: a thematic exploration

Dance also plays a vital role in identity formation. It reinforces identity, serves as a means of expression for identity, reflects shared community values, and serves as an identity symbol. Dance allows the Makassar community to express and reinforce its shared identity, reflecting its collective values and distinctiveness. The dance's impact on societal change is also noteworthy. It adapts and responds dynamically to societal changes, ensuring its relevance. However, this dynamism poses challenges in preserving the dance. The challenges identified include balancing authenticity and innovation, keeping dance relevant, and striking a balance between originality and modernity. Another important finding is that dance can be used to convey cultural narratives. It transmits stories and rituals, acting as a dynamic storytelling medium, a tapestry of narratives, and a link between the past and the present. However, any disruption in this transmission can result in dilution of identity, a threat to distinctiveness, homogenization of expressions, and loss of distinctiveness.

The study also highlights the significance of spontaneity in dance transmission, with sub-themes including personal creativity infusion, spontaneity enriching dance, dynamism from spontaneity, and freshness from spontaneity. The community's role in dance transmission is recognized as critical to the dance's survival, with community participation and preservation playing essential roles. Dance has been shown to have a significant impact on artistic development, acting as a development tool, a stimulus for expression, a catalyst for innovation, and a source of inspiration. The value of tradition to artists emerged as a key theme, with sub-themes including recognition of tradition's wealth, enrichment of work through

traditions, empowerment through tradition immersion, and traditions as a source of inspiration. Finally, the study highlights the multifaceted significance of Makassar ethnic dance. It emphasizes dance's cultural significance, role in identity formation and societal change, narrative function, and impact on artistic development. It also highlights the challenges of preserving the dance and the importance of spontaneity, community, and tradition in its transmission and survival.

3.1. Preserving the essence of Makassar: technology, community, and the future of ethnic dance

The Makassar ethnic dance is a powerful embodiment of the cultural essence, social dynamics, and identity of the Makassar community. It transcends the boundaries of mere performance, serving as a vibrant representation of the collective memory shared among the Makassar people. This dance not only reflects their rich traditions but also plays a crucial role in maintaining cultural cohesion within the community. In our modern digital era, technology has emerged as a vital force in the preservation and promotion of this cultural heritage. As highlighted by a respondent,

"In the digital era, technology plays a pivotal role in preserving and sharing this cultural treasure. Through digital archives, VR, and AR, the dance reaches a global audience, enabling immersive experiences that transcend geographical and temporal boundaries." (Respondent 4)

This statement found that the transformative effect of technology on the preservation of cultural heritage. Digital archives act as essential repositories that ensure the legacy of the Makassar ethnic dance is safeguarded for future generations. Meanwhile, innovations such as VR and AR provide audiences around the world with new, immersive opportunities to engage with the dance. These technologies greatly enhance its visibility and appreciation on a global scale. Furthermore, the dance plays a significant role in shaping and reinforcing community identity. As noted by one respondent,

"Through the symbolic movements and narratives of the Makassar ethnic dance, a sense of community identity and character is reinforced. The dance serves as a mirror reflecting the values and shared experiences of the Makassar people." (Respondent 1)

This reflection underscores the intrinsic role the dance plays in reinforcing the community's identity and values. The dance acts as a living narrative, weaving together the historical, social, and cultural threads of the Makassar community, thereby reinforcing a collective sense of identity and continuity. The role of the community in the transmission of the Makassar ethnic dance is underscored as being of paramount importance.

"The role of the community in supporting the transmission process of the Makassar ethnic dance is vital. Through active participation and appreciation, the community helps to keep the dance tradition alive." (Respondent 3)

This sentiment highlights that without the community's involvement, the vibrant tradition of dance may falter. Through engagement and participation in dance performances and cultural events, community members ensure that the values embedded in this art form continue to be expressed and shared. Moreover, the dance serves to create a bond among community members, fostering unity and shared experiences. By participating in these traditions, individuals not only honor their heritage but also contribute to the ongoing vitality of the Makassar identity. Thus, the active role of the community is paramount in both preserving and revitalizing this essential cultural practice.

"The loss of uniqueness in the transmission of stories and rituals through the Makassar ethnic dance could lead to a dilution of cultural identity." (Respondent 2)

This warning shows the risks associated with the erosion of unique elements in the dance, which could compromise the community's cultural identity by diluting its distinctiveness and richness. The Makassar ethnic dance's integration with technology, coupled with strong community engagement and preservation efforts, ensures its continued relevance and accessibility. However, it is imperative to maintain the dance's unique elements to safeguard the community's cultural legacy and identity, making the balance between technological integration and the preservation of authenticity and uniqueness a critical consideration in the dance's ongoing transmission and evolution.

3.2. Pakarena dance: Makassar's cultural and educational heritage

The traditional "Pakarena" dance is still vibrant and flourishing in Makassar, South Sulawesi. The topography of Makassar, which includes mountains and coastlines, has divided society into upper and lower classes. The upper class pertains to individuals living in mountainous regions, whereas the lower class pertains to those living in coastal areas. The Pakarena dance reflects societal categorization through its distinction between upper (mountain) Pakarena and lower (coastal) Pakarena. The dance form "Pakarena Sere Jaga Nigandang" is analyzed choreographically to describe or record the visible aspects of the dance form. The term corresponds to its etymology "chorea" (Greek), meaning group or mass dance, and graph

representing record. Choreographic analysis involves describing or documenting a group dance. Today, choreography is commonly seen as the creation or arrangement of a dance.

Two dance variations are referenced in Figure 2, Figure 2(a) the Pinangka Appa A'sulapa' variation involves a count of 4×8 and represents the four cardinal directions. The dancer's body is lowered and rotated to the left. The right foot is pulled towards the left side while both hands are extended to the left and right. The right hand is extended to the right side, while the left is rotated at the side of the ear. This movement is executed in the four cardinal directions. Figure 2(b) the Pinangka Sita'lei' variation also consists of 4 sets of 8 counts each. The dancers are facing each other. The left hand is extended with the little finger pointing upwards, while the right-hand holds a fan in front of the chest. The dancers cross each other and then return to their original positions.

(a)

(b)

Figure 2. Two dance variations are (a) Pinangka Appa A'sulapa and (b) Pinangka Sita'lei

The Pakarena dance is a vital cultural and educational heritage of Makassar, closely connected to the region's societal values, beliefs, and practices. This dance form is a complex symbolic language, communicating deep cultural significance and societal standards through its choreography. The A'sulapa appa' or the four cardinal directions aspect of the dance is a prominent illustration. Each cardinal direction has a distinct symbolic significance, north for darkness, east for ancestral life, south for another aspect of darkness, and west for goodness, happiness, and tranquility. The West is considered a symbol of purity, reflecting the Islamic faith's direction of prayer. This facet of the dance reflects the concept of summa or the soul's energy and represents humans based on elemental traits such as water, fire, wind, and earth. It implies that an individual who can manage these four elements is deemed to possess self-worth.

The Pinangka Sita'lei dance variation represents the custom of reciprocal visits. Sita'lei signifies swapping positions, reflecting a deep bond and common esteem within families. This dance variation represents the Makassar community's ethos of collaboration, particularly during festivities or periods of grief. The phrase reflects the Makassar philosophy "Sipassirippaki nakisikapaccei", which highlights mutual respect and sensitivity. The Pakarena dance is a dynamic cultural narrative that represents and communicates the societal values, norms, and philosophies of the Makassar community. It is an artistic expression, a vibrant cultural heritage, a powerful educational tool, and a potent symbol of the community's identity.

The integration of technology, community engagement, and preservation efforts emerges as a pivotal strategy in safeguarding the essence of the Makassar ethnic dance. This study highlights that leveraging digital archives, VR, and AR technologies not only facilitates cultural preservation but also extends the dance's reach to a global audience while offering immersive experiences [21]. A key piece of supporting evidence is the observation that such technological tools enhance accessibility, allowing a broader audience to engage with the Pakarena dance, thereby reinforcing its relevance in contemporary society. However, it is crucial to strike a delicate balance between technological integration and the preservation of authenticity to ensure that the dance maintains its unique cultural identity [22], [23].

In comparison to previous studies, this research reinforces the significance of community engagement in the transmission and continuity of the Pakarena dance, aligning with findings from [24], [25] that emphasize the symbiotic relationship between cultural practices and community identity. However, while this study excels in exploring the social dimensions and artistic aspects of the Makassar Ethnic dance, it also acknowledges its limitations. The focus on the Makassar community may not fully encapsulate the diversity of dance traditions across other ethnic groups in South Sulawesi. Additionally, the study could benefit from a more diverse approach that includes cross-cultural comparisons and integrates perspectives from dance practitioners, artists, and cultural experts [26]–[28]. Unexpectedly, the findings suggest a potential risk of narrative transmission loss, which could undermine the dance's cultural identity [29]–[31], highlighting a critical area for further investigation.

This study aims to understand the interplay between technology, community engagement, and the preservation of the Pakarena dance, emphasizing its significance as a cultural narrative that reflects the community's values and beliefs. The importance of this research lies in its potential to inform effective preservation strategies and enhance appreciation for the dance within and beyond the Makassar community. However, unanswered questions remain regarding the broader implications of contemporary influences on traditional dance forms and the need for further research that encompasses a wider array of cultural perspectives. Future studies could explore the evolution of dance traditions in South Sulawesi, thereby enriching our understanding of the region's diverse cultural heritage.

4. CONCLUSION

The integration of computing techniques in the preservation of the Pakarena dance heritage represents a significant advancement in cultural preservation strategies, underscoring the transformative potential of technology in this field. This study highlights that not only does this approach safeguard the intricate details of the dance for future generations, but it also enhances accessibility and appreciation on a global scale. The findings reveal the critical role that digital archives, VR, AR, and online platforms play in capturing the essence of the Pakarena dance, making it available to a wider audience. Through the application of these digital technologies, the rich history, cultural significance, and artistic nuances of the Pakarena dance are meticulously preserved, allowing for immersive experiences that transcend traditional learning methods. The innovative engagement offered by these technologies fosters interactive platforms for education, performance, and appreciation, particularly through the enhanced learning experiences facilitated by AR and VR. This not only revitalizes the dance but also maintains its relevance in the digital age.

Moreover, the digital preservation and dissemination of the Pakarena dance highlight the importance of technology in bridging the gap between tradition and modernity. It demonstrates that traditional cultural expressions can be revitalized while remaining significant in contemporary society. The community's active involvement in utilizing these computing techniques not only contributes to the safeguarding of Makassar's cultural heritage but also fosters a profound sense of identity and pride among community members. The implications of this research extend beyond mere preservation; they suggest a model for other cultural practices facing similar challenges in the digital age. By showcasing how technology can enhance the understanding and appreciation of cultural heritage, this study opens avenues for further exploration. Future research could investigate the broader applications of digital preservation techniques across various cultural expressions, as well as the long-term impacts of these technologies on community engagement and cultural identity. The findings of this study signify a pivotal moment for the research field and the Makassar community, emphasizing that the careful application of digital technologies can be a transformative force in ensuring the longevity and vitality of traditional cultural practices like the Pakarena dance. This approach not only preserves the physical aspects of cultural expressions but also enriches the understanding and appreciation of cultural heritage, making it accessible and relevant for generations to come. What remains to be explored is how these methodologies can be adapted and extended to other cultural practices, ensuring a broader impact on cultural preservation efforts worldwide.

REFERENCES

[1]   Y. Yunus, S. Dollah, and M. Munir, "The use of four-square technique to improve students' writing ability," *Tamaddun*, vol. 20, no. 1, pp. 1–14, Aug. 2021, doi: 10.33096/tamaddun.v20i1.86.

[2]   M. Z. Fawziah, Rumiwiharsih, and W. R. Ananda, "Function shifts and composition form reconstruction of Pakarena dance," 2020, doi: 10.2991/assehr.k.200703.038.

[3]   A. D. R. Pramana and T. Nugrahaeni, "Pakarena Anida dance as guidance values of Buginese women in Indonesia," 2019, doi: 10.2991/icade-18.2019.60.

[4]   R. Y. Harahap, P. M. Sukerta, and S. Soewarlan, "Philosophical meaning of Klana Udeng mask movie," *Journal Of Social Sciences And Humanities*, pp. 54–66, Sep. 2023, doi: 10.56943/jssh.v2i3.382.

[5]   J. Cika and K. S. Astuti, "The existence of Gandrang Makassar in the era of modernization in the Makassar community of South Sulawesi," *International Journal of Multicultural and Multireligious Understanding*, vol. 10, no. 5, p. 80, May 2023, doi: 10.18415/ijmmu.v10i5.4567.

[6]   G. Yang, Y. T. Chen, X. L. Zheng, and G. J. Hwang, "From experiencing to expressing: a virtual reality approach to facilitating pupils' descriptive paper writing performance and learning behavior engagement," *British Journal of Educational Technology*, vol. 52, no. 2, pp. 807–823, 2021, doi: 10.1111/bjet.13056.

[7]   A. Avena-Koenigsberger, B. Misic, and O. Sporns, "Communication dynamics in complex brain networks," *Nature Reviews Neuroscience*, vol. 19, no. 1, pp. 17–33, Jan. 2018, doi: 10.1038/nrn.2017.149.

[8]   S. Khalik, M. Mustika, and S. Hermansyah, "The Siri' Culture of Makassar Women in Pakarena Anida Dance," *La Ogi : English Language Journal*, vol. 8, no. 1, pp. 55–59, Jan. 2022, doi: 10.55678/loj.v8i1.601.

[9]   S. Sultan, H. Haris, and A. Anshari, "Functions and strategies to the integration of multicultural values in Textbook discourse for elementary school students," *Lingua Cultura*, vol. 14, no. 1, pp. 15–21, Jul. 2020, doi: 10.21512/lc.v14i1.6219.

[10]   J. Jackson, *Introducing language and intercultural communication: Second edition*. Second edition. | London ; New York, NY : Routledge, 2019.: Routledge, 2019.

[11]   Z. Hua, *Exploring intercultural communication: Language in action, second edition*. Taylor & Francis, 2018.

[12]   M. Byram and M. Wagner, "Making a difference: language teaching for intercultural and international dialogue," *Foreign Language Annals*, vol. 51, no. 1, pp. 140–151, Mar. 2018, doi: 10.1111/flan.12319.

[13]   F. Miao and N. Zhang, "Digitization, preservation, and dance narrative exploration of red music cultural heritage in hebei province: a multidisciplinary approach," *International Journal of Social Sciences and Public Administration*, vol. 2, no. 2, pp. 211–221, 2024, doi: 10.62051/ijsspa.v2n2.31.

[14]   Y. Hou, S. Kenderdine, D. Picca, M. Egloff, and A. Adamou, "Digitizing intangible cultural heritage embodied: state of the art," *Journal on Computing and Cultural Heritage*, vol. 15, no. 3, pp. 1–20, Sep. 2022, doi: 10.1145/3494837.

[15]   G. Cozzani, F. Pozzi, F. M. Dagnino, A. V. Katos, and E. F. Katsouli, "Innovative technologies for intangible cultural heritage education and preservation: the case of i-Treasures," *Personal and Ubiquitous Computing*, vol. 21, no. 2, pp. 253–265, 2017, doi: 10.1007/s00779-016-0991-z.

[16]   N. De Vega, M. Basri, and S. Nur, "Integrating mobile-assisted learning for a dynamic blended approach in higher education," *Indonesian Journal of Electrical Engineering and Computer Science*, vol. 32, no. 2, p. 819, Nov. 2023, doi: 10.11591/ijeecs.v32.i2.pp819-827.

[17]   H. Morgan, "Conducting a qualitative document analysis," *Qualitative Report*, vol. 27, no. 1, pp. 64–77, 2022, doi: 10.46743/2160-3715/2022.5044.

[18]   P. T. Bansal, W. K. Smith, and E. Vaara, "From the editors new ways of seeing through qualitative research," *Academy of Management Journal*, vol. 61, no. 4, pp. 1189–1195, Aug. 2018, doi: 10.5465/amj.2018.4004.

[19]   B. S. Brennen, *Qualitative research methods for media studies, Third Edition*. Taylor & Francis, 2021.

[20]   K. L. Peel, "Beginner's guide to applied educational research using thematic analysis," *Practical Assessment, Research and Evaluation*, vol. 25, no. 1, pp. 1–16, 2020, doi: 10.7275/ryr5-k983.

[21]   L. Georgios, "The transformation of traditional dance from its first to its second existence: the effectiveness of music - movement education and creative dance in the preservation of our cultural heritage," *Journal of Education and Training Studies*, vol. 6, no. 1, p. 104, Dec. 2017, doi: 10.11114/jets.v6i1.2879.

[22]   T. Kawano, "Transmission of the professional identity through an embodied artistic ritual: an investigation of a dance/movement therapy welcoming ceremony," *Arts in Psychotherapy*, vol. 57, pp. 1–10, 2018, doi: 10.1016/j.aip.2017.09.001.

[23]   N. De-Vega and J. Eppendi, "Students' perceptions of online learning in teacher training and education faculty," *Journal of Physics: Conference Series*, vol. 1810, no. 1, pp. 0–10, 2021, doi: 10.1088/1742-6596/1810/1/012061.

[24]   E. V. Chistova, "Non-verbal semiotics in dance narrative and simultaneous interpreting: cognitive intersections," in *Language, Music and Gesture: Informational Crossroads: LMGIC 2021*, Singapore: Springer Singapore, 2021, pp. 125–138.

[25]   L. Purnell, "Cross cultural communication: verbal and non-verbal communication, interpretation and translation," in *Global Applications of Culturally Competent Health Care: Guidelines for Practice*, Cham: Springer International Publishing, 2018, pp. 131–142.

[26]   D. D. Harnish, *Change and identity in the music cultures of Lombok, Indonesia*. Brill, 2021.

[27]   Y. dwi R. Wismaningrum, H. J. Prayitno, and E. Supriyanto, "Heutagogy approach: the implementation of new normal era learning," in *Proceedings of the 5th Progressive and Fun Education International Conference (PFEIC 2020)*, 2021, vol. 479, pp. 189–193, doi: 10.2991/assehr.k.201015.029.

[28]   G. Ortmann and J. Sydow, "Dancing in chains: creative practices in/of organizations," *Organization Studies*, vol. 39, no. 7, pp. 899–921, Jul. 2018, doi: 10.1177/0170840617717096.

[29]   K. Saddhono, "Cultural and social change of foreign students in Indonesia: the influence of Javanese Culture in Teaching Indonesian to Speakers of Other Languages (TISOL)," *IOP Conference Series: Earth and Environmental Science*, vol. 126, no. 1, p. 012091, Mar. 2018, doi: 10.1088/1755-1315/126/1/012091.

[30] A. E. Odefunso, "Identification, classification and modelling of traditional African dances using deep learning techniques," 2021. doi: https://doi.org/10.25394/PGS.14501736.v1.

[31] M. Zhang and J. Wang, "Research on language teaching models under the background of new generation information technology," *Pacific International Journal*, vol. 7, no. 2, pp. 85–92, 2024, doi: 10.55014/pij.v7i2.573.

BIOGRAPHIES OF AUTHORS

Dr. Nurlina Syahrir, M.Hum is an academic and art practitioner who has made significant contributions to the development of art and education in Indonesia. Known as the Head of the Art Education Study Program at the Graduate School of UNM. Her formal education began at the Indonesian Institute of the Arts (ISI Yogyakarta), where she earned a Bachelor's degree in Dance Composition Science. He continued her education by obtaining a Master's degree in Art Performance Studies at Gadjah Mada University and a Doctorate in Art Performance Studies and Creation and Art Studies from ISI Yogyakarta. Her academic achievements are reflected in her written works, including books and articles in various leading journals. As a researcher, he has contributed her thoughts and analyses in various aspects of art and culture. Her published works cover topics such as social change, choreographic construction, and art education. Furthermore, he is also active in art performances, both at local and international levels, such as exhibitions and dance performances. She has presented stunning works of art that have enriched the art culture in Indonesia. She can be contacted at email: nurlina.syahrir@unm.ac.id.

Dr. Alimuddin, M.Sn currently serves as an art educator, researcher, and practitioner in the fields of fine arts and design. He is also entrusted with the role of Vice Dean 1 for Academic Affairs at the Faculty of Art and Design, Makassar State University (UNM). He began his formal education at the Visual Arts Education Program (S1) of the Teacher Training and Education Institute (IKIP) Ujung Pandang, now known as Makassar State University. He then continued his studies in the Design Program (S2) at the Bandung Institute of Technology (ITB) and completed his education in the Art Education Program (S3) at Semarang State University (UNNES). Amidst his busy schedule as an educator, he actively conducts research and strives to publish his findings. As a practitioner, he has also produced various copyrighted works. He can be contacted at email: alimuddin6616@unm.ac.id.