

Preserving Calung Through Arts Education: Situating Learning and Digital Engagement Among Sundanese Youth

¹Uus Kusnadi, ²Toni Setiawan, ³Arif Hidayat,
⁴Ranu Sudarmansyah, ⁵Nurul Hidayah, ⁶Diki Somantri

Universitas Pendidikan Indonesia, Indonesia

¹kusnadinajmi@upi.edu, ²tonisetiawans@upi.edu, ³arif.hidayat@upi.edu,
⁴ranu.sudarmansyah@upi.edu, ⁵nurulhidayah@upi.edu, ⁶dikis@upi.edu

ABSTRACT

This study examines the role of arts education in preserving the traditional art of Calung among Sundanese youth in Garut, Indonesia, focusing on the integration of situated learning and digital engagement. Utilizing a post-activity quantitative descriptive approach with a one-shot case study design, research was conducted with 25 youth participants from the Cahaya Gumelar Art Group in Jongor Village. Data were collected through a Likert-scale questionnaire to measure cognitive, affective, and conative responses, supplemented by structured interviews with community leaders and cultural elders. The findings demonstrate that the program was associated with high levels of participants' cultural engagement. Post-intervention, youth displayed high levels of cultural pride (96%) and a strong commitment (92%) to continuous participation in weekly practice. The combination of hands-on situated learning with digital media production was reported to be highly effective in rekindling cultural ownership and addressing local regeneration barriers. This study provides a practical framework for combining traditional apprenticeship with modern digital platforms to sustain intangible cultural heritage, directly contributing to the achievement of Sustainable Development Goal (SDG) 11.4 regarding the protection of cultural heritage.

Keywords: Calung, Arts Education, Situated Learning, Digital Engagement, SDGS, Cultural Preservation

Corresponding Author: ¹Uus Kusnadi - kusnadinajmi@upi.edu

How to cite : Kusnadi, U., Setiawan, T., Hidayat, A., Sudarmansyah, R., Hidayah, N., & Somantri, D. (2026). Preserving Calung Through Arts Education: Situating Learning and Digital Engagement Among Sundanese Youth. *Journal of Social and Scientific Education*, 3(2), 189-201. <https://doi.org/10.58230/josse.v3i2.662>

INTRODUCTION

Indonesia possesses a rich ancestral tradition born from the customs of local communities interacting harmoniously with their natural environment (Halim et al., 2025; Wicaksono et al., 2022). In the Sundanese lands of West Java, this harmonious relationship is closely reflected in how the Sundanese people utilize bamboo, locally known as awi, in their daily lives (Faizal & Ekawati, 2023; Ihsan et al., 2024; Irawan et al., 2019). For the Sundanese, bamboo is not merely a common plant, but a symbol of resilience and life flexibility, which eventually gave birth to various traditional musical instruments, including Calung. Originally, this pentatonic bamboo melodic art was born as part of agrarian rituals, such as harvest thanksgiving ceremonies or the ngaruat pare ritual to honor the rice goddess, Dewi Sri (Komarudin et al., 2022; Supriatna et al., 2025). Through its rhythmic beats, Calung was historically played to foster a cosmic harmony between human life and the universe.

With the passage of time, the sacred dimension of this agrarian tradition has gradually transformed into a more practical social function (Pascal, 2025). Calung is no longer confined

to agricultural fields; instead, it has evolved into a communal performing art that integrates musical harmony, social criticism through Sundanese poetry (*sisindiran*), and humor. Through these entertaining collective performances, Calung has grown into a medium for social communication as well as a psychological bond that strengthens relationship networks among community members ([Octavia et al., 2024](#); [Susilawati & Milyartini, 2022](#)). The social capital embedded within Calung performances is highly valuable to cultivate, as it has proven effective in maintaining community cohesiveness and neighborhood harmony amid the rapid onset of modernization, which tends to promote individualism ([Octavia et al., 2024](#)).

Unfortunately, the cultural values and social functions of Calung currently face severe sustainability challenges in the digital era. This concerning reality is highly visible in Jongor Village, Margaluyu, Leles, Garut. The Cahaya Gumelar Art Group, which serves as the last bastion of Calung in this area, is experiencing a serious organizational aging problem. With the majority of active players being over 45 years old, the regeneration process for local youth has stalled in recent years. Young generations' reluctance to learn Calung is generally triggered by the perception that traditional arts are outdated, compounded by conventional and monotonous learning methods. This situation is further exacerbated by the popularity of modern entertainment, such as solo organ (*organ tunggal*), which has gradually dominated local family celebrations and marginalized Calung ensembles from rural public spaces ([Supriatna et al., 2025](#); [Susilawati & Milyartini, 2022](#)).

This local regeneration crisis has triggered significant attention from researchers seeking to formulate preservation efforts through scientific inquiry. Several previous studies have analyzed the historical development of Calung from a sociological perspective ([Nugroho & Dukut, 2021](#); [Octavia et al., 2024](#)). Meanwhile, other studies have examined the vital role of traditional institutions and local wisdom in shielding intangible cultural heritage from extinction in the Garut region ([Hilman & Hendriawan, 2018](#); [Tosin et al., 2025](#)). On the other hand, educational institutions have also attempted to reintroduce traditional instruments to the youth through culture-based teaching methods ([Kristiyasari & Sukoco, 2022](#); [Zhang et al., 2024](#)). These diverse literatures have undoubtedly provided a valuable theoretical foundation for regional cultural preservation efforts.

While previous studies have offered broad insights, most of them leave a distinct gap in terms of practical implementation at the grassroots level. In particular, existing studies on culturally based art education ([Kristiyasari & Sukoco, 2022](#)) have predominantly explored teaching frameworks without providing empirical evaluations of program outcomes. Furthermore, there is a lack of focus on how structured arts education can be integrated with digital media to achieve Sustainable Development Goal (SDG) 11.4, which mandates the strengthening of efforts to protect and safeguard cultural heritage.

Theoretically, the effectiveness of cultural transmission in this program is based on the situated learning theory developed by [Billett \(1996\)](#). Learning traditional arts like Calung is not merely a passive individual cognitive process, but rather an active social practice within a community. Through direct interaction and collaboration with skilled masters, young learners can navigate their transition from cultural observers to active practitioners. This process involves not only mastering the physical techniques of the instrument but also absorbing the intellectual values and historical narratives embedded in Calung. Thus, situated learning facilitates the growth of affective responses and conative commitment, where youth no longer

view traditional music as an archaic practice but as a prestigious cultural identity worth maintaining.

Furthermore, the integration of digital engagement has become a fundamental element in the process of cultural preservation and transmission in the modern era. Referring to Sarah Pink's (2014) concept of visual anthropology, digital engagement allows local art groups to adapt traditional performances into visually engaging digital formats that resonate with global audiences. By recording and uploading performances to social media platforms, young practitioners actively redefine the material boundaries of their art, transforming traditional instruments into trendy and aesthetically pleasing digital content. This strategy is crucial for impression management, allowing the younger generation to challenge negative stereotypes that traditional music is boring while simultaneously building their confidence as cultural guardians in cyberspace.

The urgency of this research lies in the real risk of extinction threatening Calung due to the loss of interest among the youth and the lack of adaptive transmission strategies at the grassroots level. Without interventions that marry traditional apprenticeship with modern digital platforms, this intangible cultural heritage will continue to be marginalized until it eventually disappears along with the older generation. Therefore, this study is essential to provide a practical framework on how social capital can be reactivated through structured arts education. Specifically, this study aims to evaluate the effectiveness of a structured arts education program on Sundanese youth by measuring its cognitive, affective, and conative impacts, thereby offering a replicable framework that supports the global agenda of SDG 4 and SDG 11 in ensuring cultural sustainability through digital engagement.

METHODS OF RESEARCH

Research Design and Approach

This research employs a quantitative descriptive approach aimed at describing or depicting a phenomenon systematically, factually, and accurately based on numerical data (Creswell, 2017). To evaluate the level of youth participation and engagement following the Calung Arts Education Program, the research design applied is a One-Shot Case Study, which is part of the pre-experimental method (Creswell, 2017). In this design, the research subjects are first given a treatment in the form of arts training, then followed by a single post-test measurement without involving a control group (Creswell, 2017). While this design focuses on describing the post-program status rather than establishing causal impact, it provides an essential baseline for cultural engagement levels. Visually, the systematic workflow of this research implementation is illustrated in Figure 1.

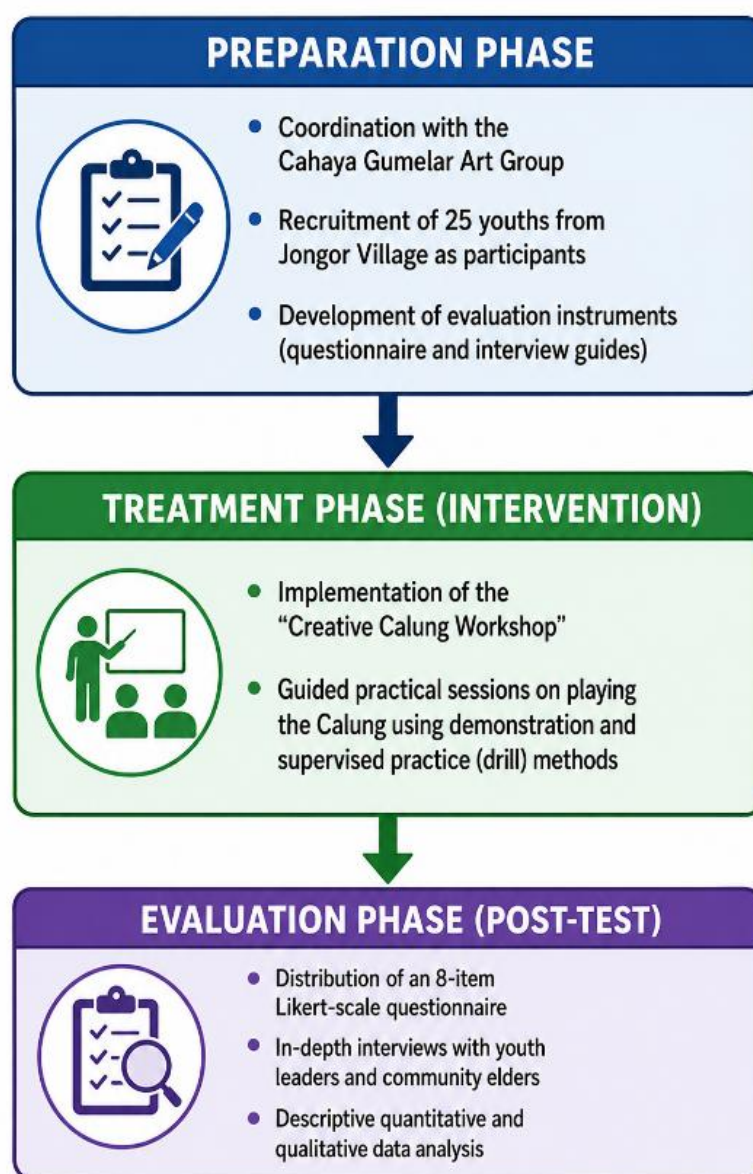


Figure 1 Research Implementation Process Flowchart

Research Site and Participants

Referring to the implementation workflow shown in Figure 1, the initial step begins with determining the location and research subjects to ensure relevance to the focus of the problem studied. The research setting is located in Jongor Village, Margaluyu, Leles District, Garut Regency, which serves as the base of activities for the partner, the Cahaya Gumelar Art Group. Meanwhile, the research subjects involved consisted of 25 local youth. The selection of these subjects utilized a purposive sampling technique, with the main criteria being youth from Margaluyu Village who had never received formal training in playing Calung before and were committed to participating in all workshop sessions until completion. The study acknowledges that the participants' prior commitment may introduce a self-selection bias, which is noted as an internal validity threat. Furthermore, ethical protocols were strictly followed, including

obtaining informed consent from all participants or their guardians prior to the study.

Data Collection and Analysis

To capture the condition of the subjects accurately after being given the treatment, the data collection technique combined quantitative questionnaires and qualitative interviews. The primary instrument is a closed-ended Likert scale questionnaire (1-5) consisting of 8 statements grouped into three main dimensions: cognitive, affective, and conative. To ensure psychometric adequacy, the instrument underwent content validity testing through expert judgment and was subjected to a reliability test, yielding a Cronbach's Alpha coefficient of >0.70, indicating high internal consistency. The grid of the questionnaire instrument is presented in detail in Table 1.

Table 1 Research Instrument Grid of Cultural Affection

Dimension	No	Questionnaire Statements
Cognitive (Knowledge & Awareness)	1	I understand that the traditional art of Calung is a unique Sundanese cultural heritage that must be preserved.
	2	I know the social functions and philosophical values contained in Calung music.
Affective (Interest & Pride)	3	I feel proud if the youth in Margaluyu Village actively play the traditional art of Calung.
	4	Compared to modern/foreign music, I feel that traditional Calung music possesses high aesthetic uniqueness.
	5	I am interested in listening to or watching Calung performances voluntarily (not because of coercion).
Conative (Concrete Action & Commitment)	6	I am willing to consistently allocate time to attend Calung practice at Paguyuban Cahaya Gumelar.
	7	I am interested in sharing creative content or Calung performances on my personal social media accounts (Instagram/TikTok).
	8	I am willing to invite my peers or relatives to join in learning to play Calung.

Based on all the instrument statements detailed in Table 1, data collection was carried out by distributing questionnaires to all respondents at the end of the workshop sessions. Once the questionnaire data was collected, the next step was to perform data processing using descriptive statistical analysis techniques. Numerical data from the Likert scale was processed to find the positive response percentage (cumulative percentage of 'Agree' and 'Strongly Agree' choices), the mean score, and the standard deviation (SD) for each statement item to measure response dispersion. These mean scores were then interpreted into five levels of cultural affection, namely: Very Low (1.00–1.80), Low (1.81–2.60), Moderate (2.61–3.40), High (3.41–4.20), and Very High (4.21–5.00) to capture the self-reported condition of youth interest post-training ([Morgan et al., 2019](#)).

Beside the quantitative percentage analysis, qualitative interview data was analyzed to provide an in-depth meaning to those quantitative findings. This qualitative data analysis refers to the interactive analysis model from [Miles et al. \(2014\)](#), which consists of three simultaneous stages: data condensation (filtering and focusing interview results from selected informants); data display (arranging interview quotes in a neat narrative); and drawing and verifying conclusions (to test the validity of findings through data triangulation). This rigorous qualitative process ensures that the subjective perspectives of participants and elders

complement the quantitative data, resulting in credible and objective final conclusions regarding the participants' engagement within the arts education program.

RESULTS AND DISCUSSION

Learning Process Through Direct Practice (Situated Learning)

The first step began with conducting intensive practical training sessions for 25 local youth. Given that most of them were absolute beginners who had never touched a Calung instrument before, the program was specifically designed to allow them to learn directly from the experts. This inclusive approach aligns with SDG 4 (Quality Education) by providing equitable access to cultural skill-building for all participants. Through this demonstration method, participants did not merely sit and listen to theory; instead, they were invited to dive straight into experiencing the actual atmosphere of a traditional practice session.

As the workshop commenced, the atmosphere became highly engaging when the maestros from the Cahaya Gumelar Art Group began showing the anatomy of the bamboo slats one by one. Participants were taught everything from the correct sitting posture to the proper hand swing to ensure each strike felt right. Through these real-life examples, they were able to quickly grasp how to produce the clean and resonant "ngentrung" sound, which they might have only heard from a distance before. (No changes needed here, maintaining original content).

Following this, the learning process continued with repetitive practice, often referred to as the drill method. To ensure a more organized flow, the youth were divided into several small groups based on their instrument types, such as the melody, accompaniment, and rhythm keeper groups. This division aimed to allow each individual to focus on mastering their specific responsibilities before eventually being combined into one large ensemble.

These practices were carried out gradually, starting from a slow beat and then slowly accelerating to the intended song tempo. Interestingly, this way of learning made the participants feel more comfortable as they did not feel forced, but rather flowed with the musical harmony they created themselves. Consequently, within a short time, the initial stiffness gradually disappeared and was replaced by a sense of cohesiveness among the players.

Transforming Traditional Art Through Digital Integration

Beyond honing their physical skills, the program also encouraged the youth to be tech-savvy in packaging their artistic work. We understand that in today's era, a work of art will struggle to gain recognition if it does not enter the digital world. This digital integration serves as a modern strategy for SDG 11.4, ensuring that intangible heritage remains resilient in a globalized society. Therefore, participants were provided with guidance on how to make their Calung performances look attractive on smartphone screens.

This activity reached its climax when the research team assisted the youth in recording their debut ensemble performance. Although they only used smartphone cameras, the participants' enthusiasm was extraordinary as they felt they were creating modern content. In this process, they learned that preserving tradition can actually be done in a way that is very familiar to their daily lives.

Once the recording was complete, the youth were invited to edit the video themselves

using user-friendly applications. This is where their creative side began to emerge; they were able to add various visual effects without damaging the original aesthetics of the Calung music. This independent editing process provided a particular sense of pride because they felt capable of mastering both ancestral heritage and modern technology at the same time.

Finally, the resulting video works were uploaded to popular platforms such as Instagram and TikTok to be viewed by a wider audience. In this way, Calung, which was once considered "archaic" music by some young people, now appears fresher and trendier. This digital strategy proved to be a highly effective bridge for reintroducing local cultural wealth to a broader public space.

Cultural Affection Achievement Based on Quantitative Data

To see the extent of the participants' engagement following this intervention, the research team conducted a comprehensive evaluation through a post-activity survey given to all participants. This measurement was designed to capture the mental and behavioral perceptions of the youth through three main dimensions: cognitive (knowledge), affective (feeling), and conative (action). Using a Likert scale, the collected data provides a clear picture of participants' self-reported responses regarding the collaboration between traditional methods and digital strategies.

Furthermore, the data analysis shows a very significant level of positive response in all measured indicators. This success is not only visible from the enthusiasm during practice but is also proven through the mean scores, which fall into the "Very High" category for almost all statement items. The low standard deviation (SD) values across the indicators further suggest a high level of consensus among the 25 participants regarding their positive experience. The details regarding these figures, ranging from aspects of understanding to the youth's willingness to act, are systematically presented in Table 2.

Table 2 Measurement Results of Cultural Affection Questionnaire (N = 25)

Dimensi	No	Questionnaire Statements	SA	A	N	D	SD	Positive Resp.	Mean	SD (Standard Deviasi)	Category
Kognitif	1	Memahami Calung sebagai warisan budaya Sunda yang wajib dijaga. Understanding Calung as a Sundanese heritage.	18	6	1	0	0	96%	4.68	0.55	Very High
	2	Knowledge of social and philosophical values.	15	8	2	0	0	92%	4.52	0.65	Very High
Afektif	3	Pride in youth actively playing Calung art.	19	5	1	0	0	96%	4.72	0.54	Very High
	4	Perception of Calung's aesthetic uniqueness.	14	9	2	0	0	92%	4.48	0.65	Very High
Konatif	5	Interest in watching Calung voluntarily.	16	7	2	0	0	92%	4.56	0.65	Very High
	6	Willingness to consistently attend practice.	13	10	2	0	0	92%	4.44	0.65	Very High
	7	Interest in sharing Calung content on social media.	17	6	2	0	0	92%	4.60	0.64	Very High
	8	Willingness to invite peers to learn Calung.	12	11	2	0	0	92%	4.40	0.64	Very High

Note: SA = Strongly Agree; A = Agree; N = Neutral; D = Disagree; SD = Strongly Disagree. Positive Response is the cumulative percentage of SA and A.

Based on the data presented in Table 2, it is clear that the cognitive and affective dimensions serve as the main foundation for the success of this program. The participants' level of understanding of the philosophical values of Calung reached a very satisfying figure, where 96% of respondents realized the importance of protecting this cultural heritage. Interestingly, the pride of the participants (score 4.72) became the highest indicator, proving that the situated learning approach successfully touched the emotional side of the youth, making them feel they possess a prestigious cultural identity.

On the other hand, in the conative dimension or the tendency to act, the youth's commitment to remaining involved in the preservation of Calung stayed at a very strong level. The figure of 92% on the point of willingness to share content on social media shows that digital technology has become a very effective motivator for today's generation. Overall, the consistent high scores across all dimensions confirm that an adaptive arts education program is capable of breaking the chain of youth disinterest in tradition, while simultaneously opening the way for cultural sustainability in the future.

Subjective Perspectives of Participants and Cultural Legacy

The various quantitative data findings presented previously become much more meaningful when paired with the subjective perspectives of the actors in the field. To ensure a rigorous qualitative analysis, structured interviews were conducted with a total of seven informants, consisting of five youth participants and two cultural elders, selected through purposive sampling. While the researchers acknowledge a potential social desirability bias as the training facilitators also served as evaluators, the triangulation process based on Miles and Huberman's model revealed that the empirical experience provided new understanding for the participants regarding their own identity. This change in perception suggests that the success of the program lies not only in technical achievements but also in a profound transformation of cultural consciousness.

One of the crucial points revealed was the shift in the younger generation's view of the aesthetic value of traditional art, which had been considered lagging behind. Sdr. AR (19 years old), representing the participants, stated that the assumption regarding the rigidity of Calung art gradually eroded along with the intensity of interaction in the program. He shared his reflection as follows:

"I used to think that Calung practice was rigid and only suitable for the village elders. But after participating in the practice with my friends yesterday, it turns out that striking the bamboo requires an exciting focus and is not boring at all. We are now actually proud because we can play one full song and the video is displayed on Instagram."

On the other hand, the positive impact of this initiative was also felt emotionally by the elders at the Cahaya Gumelar Art Group. The presence of the younger generation among them seemed to be the answer to long-standing concerns regarding the threat of local art extinction in Jongor Village. One of the cultural elders expressed his gratitude and optimism regarding the sustainability of this cultural legacy:

"The presence of these young people brings an extraordinary new life to our studio. For years, we were worried that this art would be buried with us, the elders. Now, seeing their agile hands dancing on the bamboo, we are confident that the sound of Calung in Jongor Village will never die."

Overall, the synergy between the enthusiasm of the youth and the full support from these cultural figures creates a very solid transmission model. This integration proves that the sustainability of intangible cultural heritage heavily depends on the availability of inclusive interaction spaces for various age groups. Thus, this program has not only succeeded in transferring musical skills but also reinforced the social capital and emotional bonds of the community in maintaining their local identity amidst the currents of modernization.

Discussion

The findings of this study demonstrate a significant alignment in both the cognitive and affective dimensions of youth engagement with traditional arts. The high level of cognitive understanding regarding Calung's historical and philosophical values (96%, mean = 4.68) confirms that structural transmission is highly effective when embedded in direct social contexts. As emphasized by Nappi et al. (2024), intellectual knowledge is a vital prerequisite for cultural care; individuals cannot genuinely protect a tradition without understanding the

historical values behind it. In this study, this high cognitive understanding was accompanied by a notable shift in the affective dimension, particularly in terms of cultural pride (96%, mean = 4.72).

This cognitive success directly stimulated a shift in the affective dimension, particularly in terms of cultural pride (96%, mean = 4.72). Repositioning Calung from an 'archaic' rural practice to a prestigious cultural identity aligns with the concept of cultural identity, which posits that collective pride in local wisdom serves as a psychological shield protecting youth from non-aligned external cultural influences (Maitner et al., 2017). This psychological transition was facilitated by situated learning, where the transfer of cultural knowledge is optimized through active, direct involvement in an authentic community of practice (Billett, 1996).

Furthermore, the integration of digital engagement played a supportive role in bridging the gap between traditional heritage and modern youth sociology. The high willingness of youth to share creative Calung content on their personal social media (92%, mean = 4.60) suggests that combining hands-on practice with digital media creation is an effective preservation mechanism. This adaptive capacity directly supports the global agenda of SDG 11.4 by allowing indigenous communities to actively participate and project their cultural identities into cyber spaces (Pink, 2014; Pink et al., 2020).

This strategy acts as a powerful tool for impression management (Faisal et al., 2025), allowing the youth to challenge the negative stereotype that traditional music is "uncool." In the digital age, social media serves as a democratic channel for cultural transmission, shifting the youth's perception of Calung from a marginalized, outdated practice to a fashionable, shareable online aesthetic. Ultimately, the success of this arts education program redefines the narrative surrounding the cultural crisis and youth regeneration in rural Indonesia. The integrated findings show that the decline in traditional arts is not caused by a loss of cultural love among the youth, but rather by the absence of adaptive teaching strategies that respect their contemporary sociological characteristics (Murcahyanto, 2022).

By offering a youth-friendly, low-barrier, and digitally inclusive program, the initiative successfully unlocked the latent social capital of the local community. Traditional indigenous wisdom (kearifan lokal) and community-based solidarity (gotong royong) can be reactivated when combined with modern social tools (Octavia et al., 2024). This study suggests that future preservation policies must move away from purely passive, theoretical archiving and instead invest in active, situated, and digitally-enabled training programs to secure the regeneration of intangible cultural heritage at the grassroots level.

CONCLUSIONS

This study evaluated the outcomes of an arts education program integrating situated learning and digital engagement in preserving the traditional art of Calung among Sundanese youth in Garut, Indonesia. The findings revealed high levels of cultural engagement, evidenced by a 96% positive response in cultural pride and a 92% commitment to continuous practice. These results suggest the program's contribution in rekindling cultural ownership and bridging the generational gap through the synergy of traditional apprenticeship and modern digital media. Furthermore, this initiative demonstrates a practical model for achieving SDG 4

(Quality Education) and SDG 11.4 by safeguarding intangible cultural heritage through youth-centered digital participation. Despite these positive outcomes, the study is limited by its relatively small sample size of 25 participants and the use of a one-shot case study design, which restricts the statistical generalizability of the results and the empirical monitoring of long-term behavioral commitment. Consequently, future research should employ longitudinal mixed-method designs with larger and more diverse sample sizes across multiple villages to track the long-term sustainability of cultural engagement and to explore the psychological resilience of young practitioners in maintaining traditional heritage amidst global disruption.

ACKNOWLEDGMENTS

This community service program is funded by the Universitas Pendidikan Indonesia through the community service program (Contract No. 288/UN40.F7/AM.02.01/2026).

REFERENCES

- Billett, S. (1996). Situated learning: Bridging sociocultural and cognitive theorising. *Learning and Instruction*, 6, 263–280. [https://doi.org/10.1016/0959-4752\(96\)00006-0](https://doi.org/10.1016/0959-4752(96)00006-0)
- Creswell, J. (2017). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. Sage Publications. <https://consensus.app/papers/qualitative-inquiry-and-research-design-choosing-among-creswell/ae1549bd0cd150f78676fcb941db2a0f/>
- Faisal, M. A. F., Hasanin, H., Marlina, M., Athayasani, A. N., & Ranjani, R. (2025). The Role of Youth in The Digitalization of Arts and Culture: A Case Study of Gondolio Arts in Banyumas Regency. *Public Policy and Management Inquiry*. <https://doi.org/10.20884/1.ppmi.2025.9.1.15642>
- Faizal, M. I., & Ekawati, J. (2023). Application of traditional Sundanese architectural concepts in an edu-cultural tourism site at Bandung, Indonesia. *ISVS e-journal*, 10(9), 83–98. https://isvshome.com/pdf/ISVS_10-9/ISVSej_10.9.2.pdf
- Halim, I., Hambali, R., Marjani, G. I., & Sidik, M. D. H. (2025). Wisdom toward Nature: A Perennial Approach to the Cultural Perspective of Indigenous People in Indonesia. *Religió Jurnal Studi Agama-Agama*. <https://doi.org/10.15642/religio.v15i1.3107>
- Hilman, I., & Hendriawan, N. (2018). Local Wisdom of Indigenous Community of Kampung Dukuh as Culture Preservation in Ciroyom Village, Cikelet district, Garut Regency, West Java Province. *IOP Conference Series: Earth and Environmental Science*, 145. <https://doi.org/10.1088/1755-1315/145/1/012028>
- Ihsan, M., Irawan, B., & Iskandar, J. (2024). The traditional ecological knowledge of the local people of Cijambu Village, Sumedang, Indonesia, on the diversity, utilization, management, and conservation of bamboo. *Biodiversitas Journal of Biological Diversity*. <https://doi.org/10.13057/biodiv/d250446>
- Irawan, B., Partasasmita, R., Rahayu, N., Setiawati, T., & Iskandar, J. (2019). Indigenous knowledge of bamboos by Naga community, Tasikmalaya District, West Java, Indonesia. *Biodiversitas Journal of Biological Diversity*. <https://doi.org/10.13057/biodiv/d200535>
- Komarudin, K., Ramlan, L., Laras, M. F., Wiresta, A. G., & Saepudin, A. (2022). Musik Bambu Wiragawi: Representasi Komodifikasi Bambu dari Hasil Strukturasi di Tiga Locus. *Resital: Jurnal Seni Pertunjukan*. <https://doi.org/10.24821/resital.v22i3.6188>

- Kristiyasari, Y. S., & Sukoco, H. (2022). Ethnomathematics in ten Indonesian traditional musical instruments. *Ethnomathematics Journal*. <https://doi.org/10.21831/ej.v3i2.53151>
- Maitner, A., Mackie, D., Pauketat, J., & Smith, E. (2017). The Impact of Culture and Identity on Emotional Reactions to Insults. *Journal of Cross-Cultural Psychology*, 48, 892–913. <https://doi.org/10.1177/0022022117701194>
- Miles, M., Huberman, A., & Saldaña, J. (2014). *Qualitative Data Analysis: A Methods Sourcebook*. Third Edition. Sage.
- Morgan, G., Gliner, J., & Harmon, R. (2019). Measurement and descriptive statistics. *Journal of the American Academy of Child and Adolescent Psychiatry*, 38(10), 1313–1315. <https://doi.org/10.4324/9780429287657-3>
- Murcahyanto, H. (2022). Pelatihan seni musik Tradisi Gamelan Tokol pada generasi muda. *ABSYARA: Jurnal Pengabdian Pada Masyarakat*. <https://doi.org/10.29408/ab.v3i2.6775>
- Nappi, M. L., Buono, M., Chivăran, C., & Giusto, R. (2024). Models and tools for the digital organisation of knowledge: accessible and adaptive narratives for cultural heritage. *Heritage Science*, 12. <https://doi.org/10.1186/s40494-024-01219-z>
- Nugroho, Y. Y. T., & Dukut, E. M. (2021). History And Transformation of Calung to Punklung. *Makna: Jurnal Kajian Komunikasi, Bahasa, Dan Budaya*. <https://doi.org/10.33558/makna.v8i1.2468>
- Octavia, A. N., Putri, F. A., Ramdani, G., Robi, R., & Setiadi, B. (2024). Sosialisasi Budaya Kesenian Calung Salakadomas di Dusun Kelewih Desa Saguling Kecamatan Baregbeg Kabupaten Ciamis. *El-Mujtama: Jurnal Pengabdian Masyarakat*, 4(5). <https://doi.org/10.47467/elmujtama.v4i5.4297>
- Pascal, G. (2025). The Agrarian Ritual of Caloianul in Covurlui Land: Identity Dimensions and Local Cultural Meanings. *The Journal of Ethnology and Culturology*. <https://doi.org/10.52603/rec.2025.37.16>
- Pink, S. (2014). Digital–visual–sensory–design anthropology: Ethnography, imagination and intervention. *Arts and Humanities in Higher Education*, 13, 412–427. <https://doi.org/10.1177/1474022214542353>
- Pink, S., Ardévol, E., & Lanzeni, D. (2020). Digital materiality. *Digital Materialities*. <https://doi.org/10.4324/9781003085218-1>
- Supriatna, N., Sukmayadi, Y., & Purwanto, A. (2025). Tarawangsa Traditional Music: An Ethnomusicological Study in Sukaluyu Village, Girimukti Village, Sumedang. *Harmonia: Journal of Arts Research and Education*. <https://doi.org/10.15294/harmonia.v25i1.21453>
- Susilawati, R. N., & Milyartini, R. (2022). The Values of Local Wisdom in Calung Tarawangsa as a Character Shaper of Society. *Advances in Social Science, Education and Humanities Research*. <https://doi.org/10.2991/assehr.k.220601.055>
- Tosin, I. K., Rudiana, H., Pratama, E. E., Andriansah, M., Budiman, Y., & Halimah, L. (2025). Quality of Life Framed by Local Wisdom: A Case Study of the Indigenous Communities of Pulo Garut, Naga Tasikmalaya, and Kuta Ciamis. *JURNAL PENDIDIKAN IPS*. <https://doi.org/10.37630/jpi.v15i3.3134>
- Wicaksono, A., Yunita, I., & Ginaya, G. (2022). Living side by side with nature: evidence of self-governance in three local communities in Indonesia. *Heliyon*, 8.

<https://doi.org/10.1016/j.heliyon.2022.e12248>

Zhang, J., Muthukrishnan, P., Hoon, T. S., Gao, X., & Liu, C. (2024). A Delphi Study on Teacher Trainees' Competencies to Promote Cultural Sustainability of Chinese Traditional Musical Instrument Education. *Asian Journal of University Education*.
<https://doi.org/10.24191/ajue.v20i3.27961>