



Development of Sundanese Dance Learning Module Assisted by Digital Application to Improve Cultural Literacy and Citizenship in Elementary School Students

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Abstract

Dance education in Indonesian elementary schools faces significant challenges, including limited learning resources, teachers lacking specialized dance competencies, and declining student awareness of local cultural heritage, while the National Literacy Movement emphasizes cultural literacy and citizenship as essential 21st-century competencies. This study aims to develop and validate a Sundanese dance learning module assisted by digital applications to enhance cultural literacy and citizenship among fifth-grade elementary school students. This research employed a Design and Development approach using the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation), with module validation conducted by material experts, media experts, and learning practitioners, and the implementation involved 30 fifth-grade students at one of the elementary schools in West Bandung Regency. The module incorporated digital applications including Canva for design, QR codes for video access, and YouTube for instructional videos demonstrating Tari Merak (Peacock Dance) and Tari Kijang (Deer Dance). Validation results showed 100% feasibility across all expert evaluations, categorizing the module as "Very Feasible" in content quality, presentation design, interaction usability, accessibility, reusability, standard compliance, learning goal alignment, feedback and adaptation, and motivation aspects. Implementation results demonstrated significant improvement in student cultural literacy, with mean scores increasing from 70.97 (pre-test) to 85.8 (post-test), representing a 20.9% enhancement, with all 30 students showing score improvements ranging from 10 to 27 points. The Sundanese dance learning module assisted by digital applications is highly feasible and effective for improving cultural literacy and citizenship among elementary school students. Future research should expand the development of the module to include other Indonesian dances and conduct longitudinal studies to assess long-term retention.

Keywords: Dance education, Learning media, Performing arts, SDG's.

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INTRODUCTION

Cultural literacy and citizenship represent critical competencies for Indonesian students navigating the complexities of the 21st century; yet, these essential capabilities remain underdeveloped in elementary education, despite their fundamental importance to national identity formation. The National Literacy Movement (GLN), which has been in existence since 2016, outlines six basic literacies, including cultural and civic literacy, as core competencies for Indonesian citizens to thrive in contemporary society (Jackson, D., at all 2024; Moore, P. J. (2020)). Cultural literacy encompasses the ability to understand, appreciate, and engage meaningfully with Indonesian culture as national identity, while citizenship literacy involves comprehending rights and responsibilities as citizens, together embodying the national motto "Bhinneka Tunggal Ika" (Unity in Diversity) (Widiastuti, 2023).

However, the Programme for International Student Assessment (PISA) 2022 survey positioned Indonesia at rank 70 among 80 countries in literacy, indicating critically low literacy levels requiring urgent educational intervention (OECD, 2019). This literacy crisis extends beyond reading comprehension to encompass cultural literacy, where students increasingly lack knowledge of their cultural heritage, cannot recognize their national identity, and fail to develop an appreciation for local wisdom amid accelerating globalization pressures (Moore, P. J., 2020). Traditional dance education, particularly Sundanese dance from West Java Province, provides an essential vehicle for developing cultural literacy among elementary students, yet multiple systemic

challenges impede effective implementation (Varahdilah, 2018).

The urgency of addressing cultural literacy deficiencies through dance education intensifies when considering Indonesia's cultural diversity vulnerability to cultural appropriation by foreign entities. Increasing claims on Indonesian cultural assets by foreign parties in recent years, demonstrating how inadequate cultural literacy enables cultural heritage erosion and appropriation (Hamdani, A. D., at all 2023).

Without strong cultural literacy foundations established during elementary education, future generations risk losing connection to their cultural identity, becoming susceptible to cultural colonization, and failing to preserve invaluable cultural heritage for subsequent generations (Hiswara, A., at all, 2023). Furthermore, Indonesia's education policy framework through Minister of Education and Culture Regulation No. 45 Year 2025 mandates arts education, including dance as compulsory curriculum component, recognizing arts education's role in developing students' aesthetic sensitivity, artistic appreciation, creativity, and character formation aligned with Pancasila values. The curriculum further emphasizes dance education's objectives including developing kinesthetic intelligence, fostering appreciation for traditional arts, understanding cultural history and traditions, and contributing to cultural preservation efforts while preparing students for 21st-century challenges. Despite these policy imperatives, implementation gaps persist in elementary schools.

Observations of dance education practices in West Java elementary schools reveal significant implementation challenges undermining cultural literacy development.



Elementary teachers predominantly lack specialized dance competencies, being generalist classroom teachers rather than trained dance educators, resulting in predominantly theoretical instruction without practical demonstration or embodied learning experiences (Nurhasah & Giyartini, 2022).

Teachers frequently select dances from other Indonesian regions rather than local Sundanese traditions, citing perceived difficulty in teaching local dances, thereby depriving students of opportunities to engage with their immediate cultural context deeply. Learning resources remain critically limited, with teachers relying almost exclusively on government-provided textbooks lacking comprehensive dance instruction, visual demonstrations, or cultural context explanations. When teachers do incorporate dance activities, instruction often consists merely of showing videos without guiding students through movement practice, analysis of cultural meanings, or exploration of supporting dance elements including makeup, costumes, music, and philosophical backgrounds. These practices fail to develop cognitive understanding, affective appreciation, or psychomotor skills, leaving students with superficial dance exposure unable to foster meaningful cultural literacy.

Existing research on dance education module development demonstrates effectiveness in enhancing student learning outcomes, yet gaps remain in integrating digital technologies and explicitly targeting cultural literacy development. Nurhaliza (2019) developed a Tari Sigeh Pengunten learning module for elementary students, achieving 91.96% material expert validation categorization as "Very Feasible," demonstrating traditional dance modules' viability for elementary education. Hidayah (2019) created a Tari Guci

learning module, improving student learning outcomes with 86% material expert and 94% learning practitioner validation ratings, confirming dance modules' pedagogical effectiveness. However, these studies primarily focused on dance skill acquisition and general learning outcomes rather than explicitly measuring cultural literacy enhancement across comprehensive cultural indicators. Furthermore, previous dance learning modules minimally integrated digital technologies, missing opportunities to leverage students' technology attachment and 21st-century learning affordances, including multimedia presentations, video demonstrations accessible via QR codes, and interactive digital learning activities. The rapid acceleration of educational technology adoption during the COVID-19 pandemic demonstrated digital learning's potential while highlighting digital divide challenges requiring careful pedagogical design (Laufer, M., 2021). Contemporary elementary students, characterized as digital natives comfortable with smartphones and internet technologies, require learning materials aligning with their technological fluency while maintaining pedagogical rigor and cultural authenticity.

The theoretical framework for cultural literacy education draws from Koentjaraningrat's identification of seven universal cultural elements serving as comprehensive cultural literacy indicators: language systems, knowledge systems, social systems, technology systems, economic systems, religion, and arts (Sumarto, 2018). This framework enables systematic assessment of cultural literacy across multiple dimensions rather than isolated knowledge recall, supporting holistic cultural understanding development. Integrating local cultural

knowledge into curriculum enables students to connect learning with concrete situations encountered in daily life, enhancing relevance, meaningfulness, and knowledge retention while maintaining local wisdom existence amid globalization (Druker-Ibáñez, S., & Cáceres-Jensen, L. (2022). Module-based learning theory emphasizes self-contained, self-instructional, stand-alone, adaptive, and user-friendly materials enabling independent student learning while supporting teacher-facilitated instruction (Alvarez, C., (2024). The ADDIE instructional design model provides systematic development procedures ensuring effective, efficient, and empirically validated educational products through iterative analysis, design, development, implementation, and evaluation phases (Richey & Klein, 2007). Integrating these theoretical foundations enables comprehensive module development addressing identified gaps.

This research addresses critical gaps by developing and validating a Sundanese dance learning module assisted by digital applications explicitly designed to enhance cultural literacy and citizenship among fifth-grade elementary students. The study poses three research questions: First, how should Sundanese dance learning modules assisted by digital applications be designed to effectively address fifth-grade elementary students' learning characteristics, curriculum achievement standards, and cultural literacy development objectives? Second, what validation results demonstrate module feasibility according to material experts, media experts, and learning practitioners across content quality, presentation design, interaction usability, accessibility, reusability, standard compliance, learning goal alignment, feedback and adaptation, and motivation dimensions? Third,

how effectively does module implementation improve student cultural literacy measured through pre-test and post-test assessments aligned with seven cultural element indicators? By answering these questions, this research contributes to dance education scholarship while providing practical solutions for elementary teachers seeking to enhance cultural literacy through culturally responsive, technologically integrated, and pedagogically sound learning materials

METHODS

This research employed a Design and Development (D&D) methodology utilizing the ADDIE instructional design model comprising five sequential phases: Analysis, Design, Development, Implementation, and Evaluation (Richey & Klein, 20014; Suryani et al., 2018). The research participants included three expert validators and 30 fifth-grade students at an elementary school in West Bandung Regency, who were selected through purposive sampling. Table 1 presents the characteristics and roles of the participants in detail.

Table 1. Research Participants

Participant Type	N	Characteristics	Role
Material Expert	1	Dance education pedagogy lecturer, Dance Education Dept. Universitas Pendidikan Indonesia	Validate content quality, cultural accuracy
Media Expert	1	Visual arts education lecturer, Elementary	Validate design, usability,



Participant Type	N	Characteristics	Role	Instrument	Format	Items	Purpose	Measure ment Scale
		Teacher Education. Universitas Pendidikan Indonesia	technology integration	Practitioner Question naire	Question naire	10 items	Assess learning goal alignment , motivation	Guttman (Yes/No)
Learning Practitioner	1	Fifth-grade classroom teacher at Bandung.	Validate pedagogical feasibility, classroom applicability	Cultural Literacy Test	True-False Test	30 items	Measure cultural literacy across cultural elements	Dichotomous scoring
Student Participants	30	Grade 5 students (ages 10-11), West Java Province	Module implementation and testing					

Data collection employed multiple instruments as detailed in Table 2.

Table 2. Research Instruments

Instrument	Format	Items	Purpose	Measure ment Scale
Observation Sheet	Checklist	5 indicators	Document pre/post implementation condition s	Qualitative descriptive
Material Expert Question naire	Question naire	10 items	Assess content quality, cultural literacy alignment	Guttman (Yes/No)
Media Expert Question naire	Question naire	10 items	Assess design, usability, accessibility	Guttman (Yes/No)

The research procedure followed five ADDIE phases as illustrated in Figure 1. The Analysis phase examined problems (limited resources, teacher competency gaps), Phase C achievement standards, 17 learning objectives, student characteristics (technology attachment, concrete learning preferences), and required technologies. The Design phase created module storyboards with 13 components including front cover, identity page, instructions, contents, achievement standards, learning objectives, materials (text-image-video), interactive worksheets, evaluation, answer keys, glossary, bibliography, and back cover.

The Development phase involved: (1) creating the module using Canva (A5 format), (2) producing instructional videos using CapCut and uploading to YouTube with QR code access, (3) developing validation instruments, (4) conducting two validation rounds with iterative revisions implementing expert feedback (adding eyebrow images, costume references, module characters, movement videos, identity fields). The Implementation phase conducted field testing, with sequences of pre-test (30 minutes), module-based learning sessions (reading

materials, watching videos, completing worksheets, practicing movements), and post-test (30 minutes), accompanied by continuous classroom observations. The Evaluation phase analyzed data quantitatively using percentage calculations: $\text{Percentage} = (\text{Validation Score} / \text{Maximum Score}) \times 100\%$, with interpreted criteria (81-100%: Very Feasible; 61-80%: Feasible; 41-60%: Moderately Feasible; 21-40%: Less Feasible; 0-20%: Not Feasible), and qualitatively following Miles and Huberman's model involving data reduction, data display, and conclusion drawing.

Ethical considerations included obtaining school permission, parental consent, student assent, ensuring voluntary participation, maintaining anonymity through coded identifiers, and providing equal learning opportunities regardless of research participation.

Table 3. Sundanese Dance Learning Module Components

Component	Content Description	Pedagogical Function
Front Cover	Module title, characters (Saras & Dito), Sundanese imagery (goong), dancers	Attract attention, establish cultural context
Identity Page	Student name, number, class, school fields	Document ownership, prevent module confusion
Usage Instructions	Step-by-step learning sequence guide	Enable independent learning, clarify expectations

Component	Content Description	Pedagogical Function
Table of Contents	31 sections with page numbers	Facilitate navigation, support selective reading
Achievement Standards	Phase C dance education standards	Establish learning benchmarks, curriculum alignment
Learning Objectives	17 hierarchical objectives (C1-C4, psychomotor)	Specify learning targets, guide assessment
Material Description	Text, images, QR code-linked videos covering Tari Merak & Tari Kijang	Deliver content through multimodal presentation
Interactive Worksheets	Opinion columns, image matching, games, puzzles	Promote active engagement, reinforce learning
Evaluation	30 true-false items assessing cultural literacy	Measure learning achievement, provide feedback
Answer Keys	Correct responses for all evaluation items	Support self-assessment, enable independent verification
Glossary	Definitions of Sundanese	Clarify unfamiliar



Component	Content Description	Pedagogical Function
	dance terminology	terms, support comprehension
Bibliography	6 sources (books, journals, online resources)	Document references, enable further exploration
Back Cover	Sundanese cultural imagery (goong)	Provide visual closure, reinforce cultural themes

RESULTS AND DISCUSSION

Design Module

The module presented two contrasting Sundanese traditional dances enabling comparative cultural learning. Tari Merak (Peacock Dance), created by Raden Tjetje Somantri (1955) and recreated by Irawati Durban Ardjo (1965), depicts male peacock courtship behaviors through graceful movements emphasizing beauty and elegance (Kartiyani, 2018). Material coverage included philosophical background (appreciating natural beauty), makeup techniques (lanyap style, pasekon eyebrows, godeg eulis), vibrant costumes featuring peacock feather motifs, and 11 movement patterns (cingeus, godeg, ungleuk panjang, ukel kembar, etc.). Tari Kijang (Deer Dance), popularized by Ardjo in early 2000s, depicts deer behaviors with lively, agile movements representing community hunting scenarios and historical figure honors (Lidusyiami, S., 2025). Material included philosophical background (unity and perseverance), makeup techniques (cagak eyebrows representing antlers), comfortable movement-facilitating costumes, and

characteristic movements (running patterns, jumping motions).

Digital technology integration addressed student characteristics and 21st-century learning requirements through multiple applications. Figure 2 illustrates the technology integration framework employed in module development.

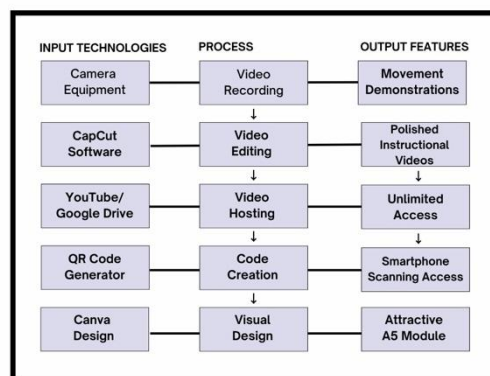


Figure 2. Technology Integration Framework

The visual design employed vibrant colors (red, orange, yellow, green) psychologically associated with enthusiasm, happiness, and learning motivation, aligning with elementary student preferences (Jonauskaitė, D., & Möhr, C., 2025). Module characters “Saras, Dito, Bu Linda” provided interactive guidance throughout learning sequences, creating a conversational tone, reducing formality, and increasing engagement. The A5 format (148×210mm) conforms to ISO standards, ensuring portability, student-friendly handling, and cost-effective printing.

Cultural literacy development integrated Koentjaraningrat's seven universal cultural elements throughout the module content. Table 4 demonstrates how module materials addressed each cultural literacy indicator.

Table 4. Cultural Literacy Integration in Module Content

Cultural Element	Module Content Integration	Example Materials
Language System	Sundanese terminology for movements, costumes, makeup	Godeg, pasekon, siger, dodot, ukel kembar
Knowledge System	Dance history, philosophy, techniques, cultural meanings	Tari Merak origins, peacock courtship symbolism
Social System	Sundanese community characteristics, social structures	Community hunting traditions, gender roles
Technology System	Traditional instruments, costume production methods	Gamelan orchestra, fabric dyeing techniques
Economic System	Sundanese livelihoods, economic activities	Agricultural practices, artistic professions
Religion	Cultural ceremonies, spiritual dimensions of dance	Dance functions in celebrations, rituals
Arts	Comprehensive dance exploration (makeup, costumes, music, movements)	Complete Tari Merak and Tari Kijang presentations

This comprehensive cultural element coverage enabled systematic cultural literacy development rather than isolated dance skill acquisition, addressing research gaps identified in previous studies (Nurhaliza, 2019; Hidayah, 2019).

Validation Result

Expert validation conducted across two iterative rounds achieved 100% overall feasibility

categorization as "Very Feasible" according to Arikunto's criteria. Table 5 presents detailed validation results from all three expert validators.

Table 5. Expert Validation Results

Validator	Validation Round 1	Validation Round 2	Revision Requirements
Material Expert	80% (8/10 items) Feasible	100% (10/10 items) Very Feasible	Add pasekon eyebrow images; include costume reference images; provide additional learning resources
Media Expert	100% (10/10 items) Very Feasible	100% (10/10 items) Very Feasible	Add module characters to front cover; include Tari Merak movement videos
Learning Practitioner	100% (10/10 items) Very Feasible	N/A (single validation)	Add school identity field to student information page
Overall Average	93.3%	100%	All revisions implemented

Material expert validation assessed content quality across 10 criteria including achievement standard alignment, learning objective correspondence, material depth and breadth, presentation clarity, language appropriateness, cultural literacy integration, accuracy, validity, student characteristic suitability, and comprehensive coverage. The first validation identified two deficiencies requiring revision: eyebrow makeup images inadequately demonstrating pasekon style



characteristic of Tari Merak, and insufficient costume reference diversity limiting student understanding of traditional variations. Following revisions adding proper demonstration images and multiple costume references from various sources, the second validation achieved 100% feasibility with all criteria meeting standards.

Media expert validation evaluated presentation design (visual quality, clarity, coordination), interaction usability (ease of use, learning sequence clarity), accessibility (knowledge acquisition support), reusability (Phase C applicability, development potential), and standard compliance (ISO A5 size conformity). Despite achieving 100% first validation, the media expert suggested improvements enhancing module effectiveness: adding module characters “Saras and Dito” to the front cover explicitly indicating elementary student target audience, and including QR code-linked videos demonstrating Tari Merak movement fundamentals enabling student practice beyond classroom instruction. Implementation of these suggestions in the second validation maintained 100% feasibility while enhancing module quality.

Learning practitioner validation assessed learning goal alignment (achievement standard and learning objective correspondence, activity alignment, assessment suitability, cognitive-affective-psychomotor facilitation), feedback and adaptation (student response encouragement, independent learning support), and motivation (knowledge acquisition encouragement, cultural literacy enhancement, learning interest attraction). Single validation achieved 100% feasibility with minor suggestion to add school identity fields for complete student identification, implemented in final module revision.

The validation process revealed module strengths and iterative improvement effectiveness. Module characteristics were confirmed through expert validation: self-instruction (clear independent learning guidance), self-contained nature (complete material coverage without external dependencies), stand-alone capability (no additional resource requirements), adaptability (digital technology integration), and user-friendly design (intuitive navigation, attractive visuals, clear language). The 100% final validation across all experts substantially exceeded previous Sundanese dance module research. This superior validation performance likely resulted from: (1) comprehensive needs analysis informing design decisions, (2) multimodal content presentation addressing diverse learning preferences, (3) explicit cultural literacy framework guiding content development, (4) iterative validation enabling systematic improvement, and (5) digital technology integration enhancing accessibility and engagement.

Implementation Results

Module implementation with 30 fifth-grade students demonstrated significant cultural literacy improvement measured through pre-test and post-test assessments. Table 6 presents descriptive statistics and individual student score changes.

Table 6. Pre-test and Post-test Cultural Literacy Scores

Statistical Measure	Pre-test	Post-test	Change
Mean Score	70.97	85.80	+14.83
Standard Deviation	6.82	6.15	-0.67
Minimum Score	53	73	+20
Maximum Score	80	97	+17

Statistical Measure	Pre-test	Post-test	Change
Score Range	27	24	-3
Students Improving	N/A	30 (100%)	N/A
Improvement Range	N/A	10-27 points	N/A

All 30 students demonstrated score increases ranging from 10 to 27 points, with mean improvement of 14.83 points representing 20.9% enhancement. The reduced standard deviation (6.82 to 6.15) indicated decreased score variability, suggesting the module effectively supported both high-achieving and struggling students. Minimum score increase from 53 to 73 demonstrated substantial improvement for lowest-performing students, while maximum score increase from 80 to 97, showed continued growth opportunities for highest-performing students.

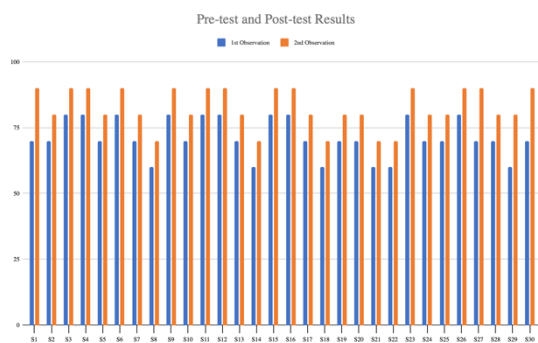


Figure 3. visualizes individual student score trajectories illustrating consistent improvement patterns across the entire sample.

Behavioral changes indicating enhanced cultural literacy and engagement. Pre-implementation observations revealed limited learning resources (government textbooks only), predominantly female student interest in dance,

student unfamiliarity with local Sundanese dances, and teacher-centered theoretical instruction without practical demonstration. Post-implementation observations documented high student enthusiasm and active participation, students asking clarifying questions about unfamiliar Sundanese terminology (resolved through glossary consultation), students eagerly volunteering to demonstrate dances before classmates, technology integration requiring teacher guidance for QR code scanning (some students lacked smartphone operation experience), and students successfully understanding and performing Tari Merak and Tari Kijang movements through video-guided practice.

Cultural literacy improvement analysis by cultural element indicator revealed differential learning outcomes. Table 7 presents pre-test and post-test performance across seven cultural literacy dimensions.

Table 7. Cultural Literacy Improvement by Cultural Element

Cultural Element	Pre-test Mean %	Post-test Mean %	Improvement %	Items
Arts (Dance)	78.3%	92.7%	+14.4%	12 items
Knowledge System	71.7%	86.0%	+14.3%	6 items
Social System	68.3%	84.3%	+16.0%	4 items
Language System	65.0%	81.7%	+16.7%	3 items
Technology System	63.3%	80.0%	+16.7%	3 items
Economic System	60.0%	76.7%	+16.7%	1 item
Religion	56.7%	73.3%	+16.6%	1 item



Students demonstrated highest initial performance and absolute post-test scores on Arts (Dance) items directly related to dance characteristics, makeup, costumes, and movements, confirming the module's primary content strength. Language System, Technology System, Economic System, and Religion elements showed greatest relative improvements (16.6-16.7%), indicating the module effectively introduced previously unfamiliar cultural dimensions. These differential improvements suggest comprehensive cultural literacy development beyond isolated dance knowledge, validating the Koentjaraningrat framework integration (Sumarto, 2019).

Implementation effectiveness resulted from multiple pedagogical factors aligning with elementary student developmental characteristics. Jean Piaget's cognitive development theory positions fifth-grade students (ages 10-11) at concrete operational stage transitioning toward formal operations, characterized by concrete thinking requiring tangible examples and hands-on experiences rather than abstract concepts (Zhan, Z., at all. 2022).

The practice method employed during implementation, where students repeatedly practiced movement sequences using video demonstrations, aligned with motor learning principles for kinesthetic skill development. Movement rehearsal with visual models facilitates movement memorization, muscle memory development, and performance confidence. Students progressing from individual practice to small group performances to whole-class demonstrations experienced scaffolded learning supporting skill mastery and cultural appreciation (Pfister, A., at all, 2025).

Technology integration enhanced learning accessibility and engagement while addressing student technology attachment. QR code-linked YouTube videos provided unlimited practice opportunities beyond classroom time constraints, enabling students to review movements at individual paces, practice at home, and share cultural learning with families (Amos, D., 2021; Colás-Bravo & Quintero-Rodríguez, 2023). However, implementation revealed technology access challenges requiring pedagogical responses: some students lacked smartphone ownership or operation skills necessitating teacher-facilitated scanning and peer assistance, and internet connectivity limitations occasionally prevented immediate video access, requiring offline video caching. These challenges highlight digital divide considerations for technology-integrated educational materials (Mexhuani, B., 2024), suggesting future modules should include both digital and non-digital content presentation options, ensuring equitable access.

Beyond addressing accessibility and engagement challenges, the module's outcomes also demonstrate measurable learning impacts that reinforce the significance of integrating technology with cultural content. This study's 20.9% cultural literacy improvement (70.97 to 85.80 mean scores) provides comparable evidence while extending previous research through: (1) explicit cultural literacy measurement using Koentjaraningrat's seven-element framework rather than general learning outcomes, (2) digital application integration (QR codes, video platforms) enhancing accessibility and engagement, (3) comprehensive Sundanese cultural context beyond isolated dance performance, and (4) two contrasting dance examples (Tari Merak and Tari Kijang) enabling comparative cultural learning. These findings

not only validate the effectiveness of the technology-enhanced approach but also create a bridge toward understanding its alignment with broader educational principles.

The module successfully addressed local wisdom-based education principles (Setyawan & Dopo, 2020), that connecting students with concrete cultural situations encountered in West Java communities. By focusing on Sundanese traditions specific to students' residential region, the module enhanced local cultural appreciation, maintained local wisdom existence amid globalization pressures, developed cultural identity and regional pride, and encouraged cultural preservation through active learning and performance. Students' post-implementation enthusiasm for demonstrating dances and discussing Sundanese cultural elements evidenced meaningful engagement with local wisdom rather than superficial exposure.

Implementation limitations warrant acknowledgment for appropriate findings interpretation and future research direction. The single-school implementation (30 students, one-week duration) limits generalizability across diverse Indonesian elementary contexts varying in resources, teacher expertise, student demographics, and cultural contexts. Pre-test and post-test assessments measured immediate learning outcomes without examining long-term cultural literacy retention, behavioral applications, or attitudinal changes toward Sundanese culture. The module's regional specificity (Sundanese culture, Tari Merak and Tari Kijang focus) limits direct applicability to other Indonesian regions with distinct cultural traditions, though the development framework and digital integration strategies transfer across contexts. Technology access requirements (smartphones, internet connectivity) may create

barriers for disadvantaged students lacking device ownership or connectivity, necessitating supplementary non-digital presentation options. Finally, the limited dance repertoire (two dances) inadequately represents Sundanese dance diversity including other significant forms (Tari Jaipong, Tari Ketuk Tilu, Tari Topeng), suggesting future module expansions should incorporate broader dance examples.

CONCLUSION

This research developed a Sundanese dance learning module assisted by digital applications that proved highly feasible and effective in enhancing fifth-grade students' cultural literacy and citizenship. Using the ADDIE model, a 13-component module was produced featuring Tari Merak and Tari Kijang through text, images, QR code-linked videos, and interactive worksheets. Expert validation confirmed 100% feasibility across material, media, and pedagogy, with revisions improving quality. Implementation with 30 students showed significant gains in cultural literacy (10–27 point increases), alongside greater enthusiasm, active participation, and improved dance performance. The module addressed issues of limited resources, teacher competency gaps, and low cultural literacy, while aligning with local wisdom principles that connect students to Sundanese heritage.

Recommendations include adopting the module in Phase C dance education, providing teacher training and digital infrastructure, and organizing cultural performances. Teachers should adapt content to student needs, integrate local resources, and balance cognitive, affective, and psychomotor skills with ongoing assessments. Future research should expand to other Sundanese dances (e.g., Jaipong, Ketuk



Tilu), develop modules for other Indonesian cultures, conduct longitudinal studies, validate across diverse schools, explore technology strategies, and examine links between cultural literacy and citizenship

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