

## Needs analysis and design of an interactive learning video on Indonesian traditional dance for senior high school students

Stefi Winda Pratiwi\*, Elindra Yetti, Rizki Taufik Rakhman

Universitas Negeri Jakarta, Indonesia

\*Corresponding Author: [stefi.winda@mhs.unj.ac.id](mailto:stefi.winda@mhs.unj.ac.id)

---

### ABSTRACT

Dance learning in high schools is dominated by conventional methods of memorizing movements, while critical thinking and art appreciation aspects are less considered. This study aims to analyze the needs and design a prototype of an interactive learning video based on Indonesian traditional dance to improve students' critical thinking skills and dance appreciation. Using Research and Development (R&D) approach with the ADDIE model in the initial stage (Analyze and Design). Data were collected through observation, teacher interviews, student questionnaires, and a pretest administered to 36 grade 10 students in public high schools in Jakarta. The needs analysis revealed that teachers primarily used PowerPoint, resulting in students being passive and struggling to understand the meaning of dance symbols. The student questionnaire confirmed that most preferred visual and interactive learning media to help understand cultural symbols in dance. The pretest results also showed that students had low initial abilities in interpreting the meanings of movements, symbols, and aesthetic elements of dance. Based on these findings, an interactive learning video was designed to serve as the primary contextual and interactive learning medium, integrating critical thinking and appreciation skills in dance education for high schools.

**Kata kunci:** *Learning interactive video, traditional dance, critical thinking, art appreciation, learning media*

---

#### Article history

Submitted:

28 September 2025

Accepted:

12 October 2025

Published:

31 October 2025

---

#### Citation:

Pratiwi, S. W., Yetti, E., & Rakhman, R. T. (2025). Needs analysis and design of an interactive learning video on Indonesian traditional dance for senior high school students. *Imaji: Jurnal Seni dan Pendidikan Seni*, 23(2), 65-70. <https://doi.org/10.21831/imaji.v23i2.90029>

---

### INTRODUCTION

In the modern era, critical thinking skills have become essential competencies for competitiveness. This aligns with the demands of 21st-century education, which emphasizes higher-order thinking skills, including critical and creative thinking (Idris & Suhendi, 2023). With these skills, students are not only able to comprehend knowledge conceptually but can also analyze, evaluate, and solve complex real-life problems. However, schools still tend to apply learning methods that do not support the development of students' critical thinking skills, particularly in traditional dance learning.

Learning traditional dance at the senior high school level (SMA) is often perceived as a less important subject. The learning process generally focuses only on movement practice or is treated as a leisure activity without deeper meaning for students. As a result, the symbolic meaning of each traditional dance movement is difficult for students to understand. In fact, art education should focus on developing creativity, critical thinking skills, and cultural appreciation (Pratama & Aryani, 2024). Constructivist theory emphasizes that students should play an active role in building knowledge through exploration, analysis, and reflection rather than merely imitating movements.

This condition reinforces the importance of shifting the paradigm of traditional dance learning toward the development of students' critical thinking abilities. Through such an approach, students can not only gain a deeper understanding of traditional dance but also enhance their appreciation of the values, meanings, and beauty contained within it. Dance appreciation is a fundamental aspect of art learning because, through appreciation, students do not only learn technical movements but also understand the values, meanings, and aesthetics embodied in traditional dance. Saragih et al. (2024) describe dance as a medium of expression that provides aesthetic experiences through harmony of

movement, rhythm, and cultural symbols. Dewey's aesthetic theory (1910) also emphasizes that an aesthetic experience is not merely a motor skill, but an ability to feel, judge, and interpret beauty in a work of art. In practice, however, students' level of dance appreciation remains low because the learning model used tends to be conventional—focusing more on knowledge acquisition and memorization rather than developing students' appreciation of dance in a meaningful way..

Observation of 36 tenth-grade students at a public high school in Jakarta showed that students struggled to provide logical reasoning for each movement, had difficulty interpreting dance symbols, and displayed low participation. Students tended to memorize rather than understand meaning or evaluate dance works deeply. Even when watching dance videos, they appeared unenthusiastic and reluctant to comment. This is consistent with findings by Harto & Hawa (2025) who noted that Indonesian students' critical thinking skills remain low, as reflected in relatively weak performances in PISA, HDI, and TIMSS. This situation also affects students' low appreciation of dance and learning motivation (Djafar & Djafri, 2024).

Such conditions stem from the continued use of conventional teaching approaches. Teachers tend to deliver lessons monotonously, relying on memorization and simple media such as PowerPoint. This hinders students' ability to develop analytical, interpretive, and reflective skills in understanding symbolic values in traditional dance. Cahyadi & Sunarsih (2025) also confirmed that conventional learning models are ineffective in fostering critical thinking skills. Consequently, students' critical thinking ability in dance remains weak, leading to low levels of appreciation.

The above explanation highlights the importance of transforming classroom approaches to traditional dance learning to support the development of students' critical thinking skills. One promising strategy is the use of technology-based learning media to create a more interactive and engaging learning experience that encourages artistic appreciation. Several studies have demonstrated the potential of technology-based media in supporting this goal. Abdul Azis (2021) found that the use of audiovisual media can enhance dance appreciation through more creative and reflective learning experiences. Hartika et al. (2025) emphasized that dance appreciation plays a crucial role in preserving local cultural identity. Thus, critical thinking serves as a fundamental basis for developing art appreciation, as it enables students to understand the meaning, message, and cultural values embedded in dance works, rather than merely enjoying them as visual entertainment.

But, Noetel et al. (2021) found that video-based learning significantly increases student engagement and learning outcomes ( $g \approx 0.80$ ). Simanjuntak & Panjaitan (2023) demonstrated the effectiveness of interactive media in improving art learning outcomes, while Casfian et al. (2024) highlighted the role of interactive videos as scaffolding tools for exploring the symbolic meaning of dance. Studies by Febliza et al. (2023) and Trisnawati et al. (2024) also support the effectiveness of interactive videos in enhancing critical thinking skills.

Although numerous studies have explored the effectiveness of audiovisual and interactive video media in promoting art appreciation, few have developed interactive videos specifically designed for traditional dance learning to enhance students' appreciation of traditional dance. Therefore, developing an interactive learning video based on traditional dance is essential. The video product developed in this study functions not merely as a supplementary tool but as a primary, contextual, and reflective medium aligned with 21st-century learning principles through a deep learning approach.

This research focuses on the initial stages of Research and Development (R&D) using the ADDIE model, particularly the Analyze and Design stages. The objectives are: (1) to describe the learning needs of traditional dance based on observation, interviews, questionnaires, and pretest results; and (2) to design an interactive learning video prototype aligned with the needs of teachers and students, aiming to enhance both art appreciation and critical thinking skills. The study is expected to contribute theoretically by integrating cognitivism (Piaget), constructivism (Vygotsky), and aesthetic theory (Dewey), and practically by producing adaptive, contextual, and interactive learning media suitable for high school dance education.

## **METHOD**

This research employed a Research and Development (R&D) approach using the ADDIE model (Analyze, Design, Develop, Implement, Evaluate). However, this article focuses only on the initial stages: Analyze (needs analysis) and Design (product design). The ADDIE model was selected due to

its systematic nature and suitability for developing technology-based learning media while allowing flexibility at each stage (Branch & Varank, 2009).

The study was conducted at a public senior high school in Jakarta. Participants included one tenth-grade dance teacher and 36 tenth-grade students. The teacher served as the main informant to explore teaching challenges, while students were respondents for identifying learning media needs and assessing their initial understanding of traditional dance meanings and symbols.

Data were collected through four main instruments: classroom observation, teacher interviews, student questionnaires, and a pretest. Observation identified real classroom conditions, including teaching methods, media use, student participation, and facilities. Interviews with the dance teacher explored challenges in teaching dance meanings and symbols and perceptions of the need for interactive media. Questionnaires used a 4-point Likert scale to measure students' perceptions of dance learning, learning motivation, and the need for interactive media. Pretest (essay and multiple-choice) measured students' initial ability to interpret the meaning, symbols, and aesthetics of traditional dance.

Qualitative data from observations and interviews were analyzed thematically through reduction, categorization, and conclusion drawing. Questionnaire data were analyzed descriptively using percentage distributions. Pretest data were analyzed quantitatively and descriptively to determine students' initial ability levels.

The initial research stage followed the first two ADDIE steps: Analyze and Design. Analyze involved classroom observations, teacher interviews, student questionnaires, and a pretest to identify students' initial levels of appreciation and critical thinking. Design used the needs analysis results as a basis for creating the interactive video prototype, covering content structure, traditional dance material selection, integration of interactive elements (text, audio, visuals, and reflective quizzes), and the learning flow based on critical thinking and art appreciation. Through this approach, the resulting product design is expected to align with real classroom needs and address the low levels of art appreciation and critical thinking in dance learning.

## **FINDINGS AND DISCUSSION**

### **Findings**

Observation of traditional dance learning among tenth-grade students at a senior high school in Jakarta revealed that the learning process still takes place conventionally. The teacher delivered the material using PowerPoint without utilizing video or other technology-based learning media. Students appeared less enthusiastic, showed low participation, and tended to imitate the teacher's movements rather than explore meaning. Field notes also indicated that students had difficulty understanding the symbols and meanings of the traditional dance being taught.

Based on interviews with the dance teacher, it was found that the learning process was limited to explaining material through PowerPoint, without the support of other or interactive media. The main challenge was that students found it difficult to understand the meanings and symbols of dance because they tended to memorize information. Student responses were also varied: some paid attention, but many were bored, sleepy, or distracted by their gadgets. The teacher emphasized the need for visual and interactive media to make students more interested, motivated, and able to understand symbolic meanings more deeply. The teacher also expressed great interest in the availability of interactive learning videos based on traditional dance, believing that such media would increase student engagement and comprehension.

In addition, the questionnaire distributed to students showed a positive tendency toward the use of interactive video learning media. Most students stated that it was easier to understand dance through visual displays than through teacher explanations alone. The majority also believed that interactive learning videos could make learning more engaging, motivating, and capable of fostering critical thinking skills, as well as helping them better understand Indonesian culture. Therefore, the need for interactive video learning media in dance education is considered very urgent.

The pretest results administered to 36 tenth-grade students reinforced this analysis, showing an average score of 8.36 out of 20 (41.8%), with a minimum score of 3 and a maximum of 16. These results indicate that students' initial ability to understand the meanings and symbols of dance remains low. Item analysis showed that the distribution of question difficulty levels was relatively balanced: there were easy questions (e.g., Q1, 80.6%), quite a number of moderate questions (40–69%), and several difficult questions (<40%). However, the most notable trend was that questions requiring interpretation,

analysis, and reflection on dance symbols (Q16–Q19) had the lowest percentages (13.9%–27.8%). This suggests that while students were able to answer factual or recall questions well, they struggled when required to connect dance movements with their symbolic meanings and the cultural values contained within them.

Based on the results of the needs analysis, the design of the interactive learning video product was developed using the ADDIE model at the Design stage. This design aims to create learning media that can foster students' critical thinking skills and artistic appreciation through more contextual and reflective learning experiences. The design consists of four components: video structure, media components within the video, learning indicators, and design characteristics.

The video structure consists of: (1) Introduction – material overview, learning objectives, and critical thinking prompts; (2) Material Presentation – explanation of traditional dance symbols and meanings, accompanied by dance video clips; (3) Reflective Interaction – students are given reflective questions through interactive menus; (4) HOTS Quiz – questions that promote analysis, evaluation, and reflection to train critical thinking; and (5) Conclusion – summary of key learning points and motivational messages.

The media components in the video include: (1) Visuals – dance clips, symbol illustrations, and simple animations; (2) Audio – explanatory narration, background music that matches the dance character, and interactive instructions; (3) Text – keywords and explanations of dance symbols; and (4) Interactivity – pause buttons, navigation menus, reflective questions, and evaluative quizzes.

The learning indicators in the design consist of: (1) Critical Thinking – interpretation, analysis, evaluation, and reflection; and (2) Art Appreciation – observation, symbolic understanding, aesthetic analysis, and empathetic response. The final component, the design characteristics, includes being contextual, reflective, interactive, and motivational. With this design, the interactive learning video product is expected not only to serve as a supplementary medium but also to function as a primary medium in dance education.

## **Discussion**

The findings of this study reveal a gap between the learning needs of dance education in schools and the instructional media used by teachers. Classroom conditions that remain dominated by conventional methods—such as lecturing and rote memorization—result in low student engagement, thereby hindering the optimal development of critical thinking and artistic appreciation skills. This aligns with the study of Cahyadi & Sunarsi (2025) who found that traditional teaching methods are ineffective in promoting students' critical thinking.

Based on teacher's interview emphasized a strong need for interactive media capable of visually and contextually explaining symbolic meanings in dance. Student responses also supported this, showing a clear preference for digital and interactive video media. These findings are consistent with Noetel et al. (2021), who found that video-based learning significantly enhances engagement and achievement ( $g \approx 0.80$ ).

The pretest results also underscore the urgency of developing such media, as students' average score was only 41.8%, with the weakest performance in interpretive and analytical items. This supports the report by Rahman et al. (2023) who found that Indonesian students' critical thinking skills remain low according to PISA and TIMSS assessments. Previous studies by Febliza et al. (2023) and Trisnawati et al. (2024) have shown that interactive video learning effectively improves critical thinking, while Simanjuntak & Panjaitan (2023) confirmed the effectiveness of interactive media in cultural arts learning.

Therefore, the need for interactive video learning media based on traditional dance is evident. The product developed in this study has the potential to serve as a strategic solution bridging the gap between learning needs and actual classroom practice. The integration of text, audio, visuals, dance clips, reflective questions, and HOTS-based quizzes helps students not only understand dance symbols but also develop deeper art appreciation. The novelty of this study lies in combining critical thinking indicators—interpretation, analysis, evaluation, and reflection—with art appreciation indicators—observation, symbolic understanding, aesthetic analysis, and empathetic response—in an interactive video learning model based on Indonesian traditional dance.

## CONCLUSION

This study reveals that dance learning in senior high schools still relies on conventional methods such as lectures and memorization, which make students less interested and hinder their ability to understand the symbolic meanings of traditional dance. Observations, interviews, questionnaires, and pretest results indicate that students' initial skills in interpreting dance symbols and cultural values remain low. This condition is caused by learning methods that do not support the development of students' critical thinking and appreciation of dance art. The study also confirms students' desire to use interactive videos as learning media to replace the PowerPoint presentations currently used. Therefore, there is a need for research and development of interactive learning media as an alternative method for teaching traditional dance.

Based on this needs analysis, subsequent research seeks to develop an interactive learning video based on Indonesian traditional dance that integrates text, audio, visuals, dance clips, reflective questions, and HOTS-based quizzes. This product is expected not only to serve as a supplementary tool but to function as a primary learning medium capable of enhancing students' critical thinking skills and artistic appreciation in dance education.

## REFERENCES

- Azis, A. (2021). Peningkatan apresiasi konsep karya tari berbantuan media rekaman audio visual pada siswa kelas IX semester 2 SMPN 1 Pecalungan tahun pelajaran 2019/2020. *PAEDAGOGY: Jurnal Ilmu Pendidikan Dan Psikologi*, 1(1), 1–15
- Branch, R. M., & Varank, İ. (2009). *Instructional design: The ADDIE approach* (Vol. 722). Springer
- Cahyadi, Y., & Sunarsih, E. (2025). Pengaruh model pembelajaran contextual teaching and learning terhadap kemampuan pemahaman konsep IPA siswa kelas V SDN 88 Singkawang. *Pendas: Jurnal Ilmiah Pendidikan Dasar*, 10(02), 306–317
- Casfian, F., Fadhillah, F., Septiaranny, J. W., Nugraha, M. A., & Fuadin, A. (2024). Efektivitas pembelajaran berbasis teori konstruktivisme melalui media e-learning. *Jurnal Pendidikan Sosial Dan Humaniora*, 3(2), 636–648
- Dewey, J. (1910). Science as subject-matter and as method. *Science*, 31(787), 121–127
- Djafar, N., & Djafri, N. (2024). Penanaman literasi budaya dan kreativitas melalui pembelajaran tari tradisional di SMP 1 Kabila Bone sebagai bentuk objek pemajuan kebudayaan daerah kawasan Teluk Tomini. *Prosiding Seminar Nasional Ilmu Pendidikan*, 1(2), 8–22
- Febaliza, A., Afdal, Z., & Copriady, J. (2023). Improving students' critical thinking skills: Is interactive video and interactive web module beneficial? *International Journal of Interactive Mobile Technologies*, 17(3)
- Hartika, N. P. L., Pramesti, N. W. R., Devi, I. A. D. U. P., & Maharani, A. A. P. (2025). Kolaborasi kreativitas digital dan budaya lokal Bali: Strategi generasi muda dalam era digital. *Prosiding Pekan Ilmiah Pelajar (PILAR)*, 5
- Harto, K., & Hawa, K. (2025). Refleksi hasil PISA dan TIMSS di Indonesia: Upaya peningkatan kompetensi literasi siswa madrasah melalui AKMI. *Pendas: Jurnal Ilmiah Pendidikan Dasar*, 10(02), 391–405
- Idris, S. F., & Suhendi, H. Y. (2023). Pengembangan media pembelajaran interaktif GEMBI untuk meningkatkan keterampilan berpikir kritis siswa. *DIFFRACTION: Journal for Physics Education and Applied Physics*, 5(1), 24–36
- Noetel, M., Griffiths, S., Delaney, O., Sanders, T., Parker, P., del Pozo Cruz, B., & Lonsdale, C. (2021). Video improves learning in higher education: A systematic review. *Review of Educational Research*, 91(2), 204–236
- Pratama, A. Y., & Aryani, Z. (2024). Model pembelajaran seni budaya dalam Kurikulum Merdeka di sekolah dasar. *Jurnal Insan Cita Pendidikan*, 3(1), 1–8
- Rahman, A., Suharyat, Y., Zulyusri, Z., Yastati, U., Santosa, T. A., Gunwan, R. G., Suhaimi, S., & Ilwandri, I. (2023). Pengaruh flipchart terintegrasi STEM terhadap kemampuan berpikir kritis dan hasil belajar siswa di Indonesia: Sebuah meta-analisis. *Jurnal Sustainable*, 6(1), 95–107
- Saragih, N. H., Manalu, R. I., Andira, A., Sinaga, S., Hasibuan, M. D. I., & Dalimunthe, S. F. (2024). Analisis pengaruh ekspresi dalam meningkatkan estetika dan dinamika seni tari kontemporer. *Jurnal Intelek Insan Cendikia*, 1(4), 436–442

- Simanjuntak, E. B., & Panjaitan, N. Y. (2023). Pengaruh media pembelajaran interaktif berbasis nearpod untuk meningkatkan hasil belajar siswa sekolah dasar. *Innovative: Journal Of Social Science Research*, 3(5), 4517–4532
- Trisnawati, S. A., Ridwan, M., Setiawan, E., & Ahmedov, F. (2024). Integrating interactive video media in physical education: A study on critical thinking and learning motivation. *Edu Sportivo: Indonesian Journal of Physical Education*, 5(3), 289–305