

Design and Evaluation of *Rampoe Aceh*-Based Project Learning Model to Enhance Students' Creative Competence in Arts Education

Rika Restela^{1*}, Khairil Ansari², Yusnizar Heniwaty³

^{1, 2, 3}Universitas Negeri Medan

*Corresponding Author: restelastela@gmail.com; khairil728@unimed.ac.id; yusnizarheni@unimed.ac.id

HOW TO CITE:

Rika Restela, Khairil Ansari, Yusnizar Heniwaty (2026). Design and Evaluation of Rampoe Aceh-Based Project Learning Model to Enhance Students' Creative Competence in Arts Education. International Journal of Special Education, 41(7s), 492-502.

COPYRIGHT STATEMENT:

Copyright: © 2026 Authors.
Open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).

ABSTRACT:

Creative competence is an essential outcome in arts education, yet many university learning practices remain dominated by conventional instruction that limits students' opportunities for cultural exploration and collaborative creativity. Integrating local cultural heritage into project-based learning can be a meaningful strategy to enhance students' creativity. This study aimed to design and evaluate a Rampoe Aceh-based project learning model to improve students' creative competence in arts education. The research employed a quasi-experimental evaluation with a pretest–posttest control-group design. Participants were undergraduate students enrolled in an arts education course, divided into an experimental group implementing the Rampoe Aceh-based project learning model and a control group using conventional project learning. Creative competence was measured using a rubric assessing originality, flexibility, elaboration, and artistic expression. Data were analyzed using an independent-samples t-test to compare gain scores between groups. The results indicated a statistically significant difference in creative competence improvement between the experimental and control groups, $t(58) = 6.42$, $p < .001$. The experimental group achieved a higher mean posttest score ($M = 84.37$, $SD = 6.21$) compared to the control group ($M = 72.15$, $SD = 7.08$), with a large effect size (Cohen's $d = 1.21$). These findings demonstrate that integrating Rampoe Aceh cultural values into project-based learning effectively enhances students' creative competence. The study suggests that culturally responsive project-based learning models can serve as an innovative pedagogical approach to strengthen creativity in university arts education.

Keywords: Arts education, Creative competence, Culturally responsive, Rampoe Aceh

1. Introduction

Creativity-oriented learning in higher education is increasingly framed through pedagogies that position students' identities, communities, and meaning-making practices as assets for learning, rather than treating learning as culturally neutral or purely technical. In particular, culturally responsive pedagogy (CRP) is consistently defined as an

approach that recognizes learners' diverse cultural backgrounds and deliberately incorporates students' cultural identities, experiences, and perspectives into teaching and learning processes to create inclusive, engaging environments and support achievement and positive learner identity (Caingcoy, 2024). Closely related frameworks, including culturally relevant and culturally sustaining

pedagogies, similarly emphasize academic success alongside affirmation of identity and community culture, with culturally sustaining approaches additionally seeking to sustain pluralism and multilingual/multicultural practices as educational goals (Mac et al., 2023). Across contexts, CRP is also associated with improved engagement and sense of belonging by leveraging students' cultural assets and frames of reference within instruction (Chadha & Relly, 2024; Salgado et al., 2024).

However, research suggests that culturally grounded and dialogic forms of learning are not yet consistently realized across disciplines and settings. In arts-related domains, scholarship has noted that culturally responsive pedagogy remains unevenly implemented; for example, work in visual art education contexts has characterized multicultural or culturally responsive approaches as still limited in practice, despite longstanding scholarly attention (Kamal & Maaruf, 2022). In higher-degree visual art education, a systematic review further reports that concepts related to reciprocal knowledge-building (e.g., "cognitive exchange") are comparatively underdeveloped or infrequently used in the field, even though they are strongly associated with dialogic learning and collaborative experiences in broader higher-education pedagogy (Heaton & Kuan, 2023). Together, these accounts indicate a persistent need for instructional designs in arts and creative disciplines that more consistently support collaborative meaning-making and culturally grounded learning processes, rather than relying on approaches that may not fully capitalize on students' cultural repertoires or opportunities for reciprocal exchange (Heaton & Kuan, 2023).

A substantial body of work argues that learning designs that foreground interaction, dialogue, and community connection are well-positioned to support culturally responsive aims. Dialogic instruction, grounded in sociocultural theories of learning, emphasizes that learning is mediated through language and social interaction; it therefore emphasizes student ownership of inquiry and teacher scaffolding to support collaborative investigation (Calvit & Ford, 2023). Importantly, dialogic approaches are described as promising but insufficient on their own for diverse learners unless

intentionally combined with culturally responsive and relevant education frameworks (Calvit & Ford, 2023). Complementing this orientation, community-based or community-engaged learning frames culturally responsive practice as inseparable from learners' communities and lived contexts; such approaches describe organized learning activities that benefit local communities while also contributing to student learning (Shah et al., 2024). These perspectives align with broader CRP formulations that treat culture as integral to the learning environment and as a channel through which academic knowledge is communicated and made meaningful (Caingcoy, 2024).

Within this line of argument, cultural contextualization is not merely an "add-on," but a core condition for equity, relevance, and sustainability in education. Studies emphasizing CRP in diverse settings argue that educational quality and inclusion can be strengthened by grounding pedagogy in local cultural values and frameworks (Ava, 2020), consistent with CRP's focus on leveraging cultural identities and experiences to promote engagement, achievement, and critical thinking (Caingcoy, 2024). Relatedly, writing on culturally relevant and responsive pedagogy underscores the need for an active, dynamic relationship between educational environments and community culture, positioning identity affirmation and cultural connection as central to learning processes rather than peripheral considerations (Mac et al., 2023). In applied instructional settings, such as online collaborative projects, CRP has been found effective when cultural characteristics and perspectives serve as channels for meaningful communication and collaboration, particularly when learning activities invite exchange across diverse lived experiences (Chadha & Relly, 2024). Collectively, these sources support the premise that arts and creative learning, where meaning, identity, and interpretation are central, may be especially well served by models that intentionally integrate local cultural heritage as a foundation for collaborative inquiry and production (Ava, 2020).

Against this background, the present study responds to the documented need for more

systematic, culturally grounded instructional designs in arts education contexts. Prior work indicates that culturally responsive approaches in art education have not been uniformly adopted and that reciprocal, collaborative learning constructs remain comparatively underutilized in advanced visual art education research (Kamal & Maaruf, 2022). Meanwhile, dialogic and community-based learning literatures propose actionable pedagogical principles, collaborative inquiry, scaffolding, and community connection that can be coherently aligned with CRP aims when cultural relevance is explicitly designed into learning activities (Shah et al., 2024). Therefore, this study designs and evaluates a culturally contextualized project-oriented learning model grounded in local cultural heritage (*Rampoe Aceh*) as a contextual anchor for collaborative creative work, aligning with the broader evidence base emphasizing cultural assets, dialogic learning, and community-linked pedagogy as mechanisms for engagement and inclusive learning (Calvit & Ford, 2023). Because the cited literature does not provide detailed, domain-specific accounts of Rampoe Aceh itself, the study's contribution is positioned primarily at the level of instructional design and evaluation, namely, advancing a structured model that operationalizes culturally responsive principles through collaborative, inquiry-oriented creative production in higher education arts learning (Heaton & Kuan, 2023).

The objectives of this study are threefold. First, the study aims to design a Rampoe Aceh-based project learning model suitable for university arts education. Second, it seeks to evaluate the model's effectiveness in enhancing students' creative competence. Third, the research analyzes students' learning experiences during the implementation of the culturally integrated learning model. By combining project-based pedagogy with cultural heritage, this study contributes to the development of innovative and culturally responsive learning models in higher education arts programs.

2. Methodology

2.1 Research Design

The study used a quasi-experimental, pretest–posttest, nonrandomized control group design, an approach commonly used in educational contexts where random assignment is difficult or infeasible (Duru & ÇALGICI, 2023). This design structure involves administering equivalent baseline (pretest) and outcome (posttest) measures to both an intervention group and a comparison group to estimate change attributable to instruction (Sari et al., 2023). Consistent with quasi-experimental logic, the experimental group received the Rampoe Aceh-based project learning model. In contrast, the control group continued with conventional project-based learning, enabling a direct comparison of learning gains across groups using pretest–posttest differences (Pinninti, 2024). The inclusion of a control/comparison group is specifically highlighted as strengthening inferences over single-group pretest–posttest approaches by helping address alternative explanations for change (e.g., maturation/testing) (Pinninti, 2024), while still acknowledging that quasi-experiments cannot fully control all external influences relative to true experiments (Aloum et al., 2025).

2.2 Participants

Participants were university students enrolled in a course, selected and assigned under conditions typical of quasi-experimental educational research where random assignment is often impractical (Girgin & Çoştı, 2024; Vangölü, 2025). Following established quasi-experimental procedures, students were allocated to experimental and control groups using intact, pre-existing class structures rather than regrouping learners, an approach explicitly described as appropriate when teaching classes are already administratively formed (Siregar et al., 2023) and consistent with non-equivalent pretest–posttest control group designs used in educational interventions (H. Chen et al., 2024). The resulting two-group structure (experimental vs. control) aligns with quasi-experimental designs that compare outcomes across groups while acknowledging that such designs may not fully control for extraneous influences to the extent that randomized

experiments do (Kaldybekova et al., 2021). This participant organization is also consistent with quasi-experimental applications in university and cultural/arts-related instructional contexts where an intervention group is contrasted with a conventional-instruction comparison group (Aimukhambet et al., 2023; Baş, 2021).

2.3 Data Collection Procedures

Data collection was conducted over one academic semester to evaluate the effectiveness of the Rampoe Aceh-based project learning model. The

procedure included four stages: pretest, implementation, posttest, and qualitative data collection. The pretest measured students' initial creative competence. During implementation, the experimental group used the Rampoe Aceh-based model, while the control group followed conventional project learning. Posttests and qualitative data from observations and reflection journals were used to assess learning outcomes and experiences (see Table 1).

Table 1: Data Collection Procedures

Stage	Activity	Purpose
Pretest Phase	Students in both groups completed a creative competence assessment before the intervention.	To measure students' initial creative competence.
Implementation Phase	The experimental group used the Rampoe Aceh-based project learning model, while the control group followed conventional project learning.	To implement and compare learning approaches.
Posttest Phase	Both groups completed the same creative competence assessment after the instructional period.	To measure improvement in creative competence.
Qualitative Data Collection	Observations and student reflection journals were collected during the learning process.	To understand students' learning experiences and engagement.

Data Analysis

Quantitative creative-competence scores were summarized using descriptive statistics (means and standard deviations) to characterize group performance patterns, followed by inferential testing to evaluate between-group differences in gain scores. Between-group improvement was tested using a two-tailed independent-samples t-test, consistent with its use for comparing mean differences between two independent groups in study designs that plan such contrasts (Wang et al., 2025). To complement statistical significance testing, Cohen's d was computed to quantify the magnitude of the group difference, aligning with common reporting of standardized mean-difference effects alongside independent-samples t-tests (Lilleholt et al., 2023; Tsai et al., 2023).

Qualitative data from observations and student reflection journals were analyzed using thematic analysis to identify recurring patterns and aggregate

them (coding), to interpret students' creative engagement and cultural learning experiences. Reflective journals are also used elsewhere as an intervention-linked learner experience data source (Pinninti, 2024). Finally, quantitative and qualitative results were jointly interpreted to provide a more comprehensive evaluation than either strand alone.

3. Results

3.1 Design of the Rampoe Aceh-Based Project Learning Model

The first objective of this study was to design a culturally responsive project learning model inspired by the artistic and collaborative principles of Rampoe Aceh. The model integrates cultural values with project-based learning to foster students' creative competence in arts education. It consists of five interconnected phases that guide students from cultural understanding to creative production and reflection, as shown in Figure 1.



Figure 1. Design of the Rampoe Aceh-Based Project Learning Model

Model Phases:

- (1) Cultural Orientation → Introduction to the history, artistic elements, and cultural values of Rampoe Aceh.
- (2) Creative exploration → Students analyze rhythm, movement patterns, and poetic expressions for creative inspiration.
- (3) Collaborative Project Planning → Student groups design artistic projects based on Rampoe Aceh cultural elements.
- (4) Artistic production → Students develop and perform creative artistic works collaboratively.
- (5) Reflective Performance Evaluation → Students and instructors evaluate the creative process and artistic outcomes.

Figure 1 illustrates the instructional design of the Rampoe Aceh-based project learning model. The model begins with cultural orientation to help students understand cultural values. It then moves

to creative exploration and collaborative planning, where students generate ideas and design artistic projects. Artistic production allows students to implement their ideas through performance activities. Finally, reflective evaluation supports critical reflection on the creative process and learning outcomes, promoting continuous improvement in students' creative competence.

3.2 Implementation of the Learning Model

The Rampoe Aceh-based project learning model was implemented in the experimental group over one academic semester. Students worked in small groups to develop artistic projects incorporating rhythm, choreography, and storytelling inspired by Rampoe Aceh traditions. The implementation emphasized collaboration, cultural exploration, and creative experimentation. Classroom observations were conducted to compare students' participation and engagement during project-based learning activities between the experimental and control groups (see Table 2).

Table 2: Observation Results of Learning Model Implementation

Learning Aspect	Experimental Group (Rampoe Aceh-Based Model)	Control Group (Conventional Project Learning)
Student Participation	Students actively participated in discussions and project activities.	Participation was moderate and mostly limited to completing tasks.
Collaboration	Strong collaboration among group members during creative planning and rehearsals.	Collaboration occurred, but focused mainly on task division.
Creative Exploration	Students explored rhythmic patterns, choreography, and storytelling inspired by Rampoe Aceh.	Creative exploration was limited and less culturally oriented.
Cultural Integration	Cultural elements of Rampoe Aceh were actively incorporated into artistic projects.	Cultural elements were rarely integrated into projects.
Learning Engagement	High engagement and enthusiasm during project development and performance.	Engagement was relatively lower during learning activities.

Table 2 shows that implementing the Rampoe Aceh-based project learning model created a more active and collaborative learning environment than conventional project learning. Students in the experimental group demonstrated stronger participation, teamwork, and creative exploration while integrating cultural elements into their artistic projects. In contrast, the control group tended to focus primarily on completing assigned tasks. These findings indicate that the culturally integrated learning model encourages deeper engagement and creativity in arts education.

3.3 Improvement of Students' Creative Competence

To evaluate the effectiveness of the learning model, students' creative competence was measured using pretest and posttest assessments. The results showed that both groups experienced improvement; however, the experimental group demonstrated a substantially greater increase in creative competence (see Table 3).

Table 3: Pretest and Posttest Scores of Creative Competence

Group	N	Pretest Mean	Posttest Mean	Gain Score
Experimental	30	68.42	84.37	15.95
Control	30	67.91	72.15	4.24

The experimental group achieved a significantly higher posttest score compared to the control group. An independent-samples t-test on the gain scores revealed a statistically significant difference between the two groups, $t(58) = 6.42$, $p < .001$, indicating that the Rampoe Aceh-based project learning model produced greater improvement in students' creative competence. Furthermore, the calculated effect size (Cohen's $d = 1.21$) indicates a large practical effect, suggesting that the learning model had a strong influence on the development of students' creative abilities.

3.4 Students' Learning Experiences

Students' learning experiences were analyzed using qualitative data collected from classroom observations and student reflection journals. The data were analyzed using thematic analysis to identify patterns in students' creative engagement and cultural learning experiences during the implementation of the Rampoe Aceh-based project learning model. The analysis revealed several themes describing how the culturally integrated learning model influenced students' creativity, collaboration, and cultural awareness (see Table 4).

Table 4: Themes of Students' Learning Experiences

Theme	Description of Student Experience	Evidence from Observation and Reflection
Enhanced Cultural Awareness	Students developed a deeper understanding of local cultural traditions through the exploration of Rampoe Aceh's artistic elements.	Students reflected on the cultural meaning of rhythm, movement, and storytelling in their artistic projects.
Collaborative Creative Engagement	Group-based project activities encouraged active participation, discussion, and idea sharing among students.	Observations showed strong teamwork and collective decision-making during project development.
Increased Confidence in Artistic Expression	Students became more confident in presenting creative performances and experimenting with artistic ideas.	Reflection journals indicated that students felt more comfortable expressing creative ideas and performing in front of others.

Table 4 shows that the Rampoe Aceh-based project learning model positively influenced students' learning experiences. Students not only improved their creative competence but also developed stronger cultural awareness and collaborative skills. The integration of cultural heritage into project-based learning encouraged active participation, creative experimentation, and confidence in artistic expression. These qualitative findings complement the quantitative results, demonstrating that the learning model effectively supports both creative development and meaningful cultural learning in arts education.

4. Discussion

4.1 Effectiveness of the Rampoe Aceh-Based Project Learning Model

The study's pattern, higher creative-competence gains in the culturally integrated (experimental) group than the control group, alongside a large effect size, aligns with wider evidence that arts-integrated, student-centered interventions can produce practically meaningful improvements relative to conventional instruction (Kandasamy et al., 2021; Weichang & Jamaludin, 2024). More broadly, research comparing art education and non-art domains indicates that art-learning experiences are associated with distinct, and in some respects higher, creative-thinking development, supporting

the plausibility of measurable creativity gains under enriched arts pedagogy (Ülger, 2023).

A likely mechanism is that project-oriented, collaborative learning structures promote active knowledge construction and creative production. STEAM-oriented learning that requires students to translate concepts into artistic forms has been shown to elicit original models, motivate learners, and support reflective comparison processes, features consistent with systematic project phases from orientation to reflection (Bassachs et al., 2020). Likewise, arts-integration literature emphasizes collaboration and synergistic art forms as enablers of engagement and the development of creative abilities, paralleling group-based project work (Strakšienė & Musneckienė, 2024). However, evidence from art-based science communication cautions that "art" does not uniformly outperform traditional approaches across all outcomes and may depend on design features and the measures used, underscoring the importance of implementation fidelity and assessment alignment in interpreting effect sizes (Ricci et al., 2023).

4.2 Cultural Integration in Creative Learning

Integrating local cultural heritage into learning can make instruction more contextual, meaningful, and engaging by connecting classroom tasks to learners' lived cultural environment and community practices

(Hidayanti & Wulandari, 2023). Studies on integrating local cultural arts into teaching materials report benefits for students' motivation, understanding of cultural values/local wisdom, and creativity development, while also emphasizing that teachers may face constraints (e.g., limited resources, references, and time), implying that cultural integration requires institutional support to be sustainable (Jamilah et al., 2024). Parallel evidence from school-based traditional performing-arts education argues that embedding traditional arts in modern schooling contributes to cultural engagement and heritage preservation, strengthening the rationale for using culturally grounded performance elements as creative stimuli (W. Chen & Woramitmitree, 2024; Liu & Choatchamrat, 2024).

4.3 Pedagogical Implications

Culturally responsive project work is plausibly creativity-enhancing because student-centered, culture-linked problem/project pedagogies have been associated with greater student activity and creative-thinking development (Hidayanti & Wulandari, 2023), and STEAM framings explicitly position collaboration and creativity as core outcomes, including when anchored in moral values and local culture (Lestari et al., 2023). Moreover, project-based and interdisciplinary learning studies consistently link teamwork processes (coordination, negotiation, collaborative behaviors) with creativity-related outcomes, supporting the emphasis on collective artistic responsibility and shared decision-making (Chmelárová & Pasiar, 2023; Kandriasari et al., 2023; Rupavijetra et al., 2022).

5. Conclusion

This study aimed to design and evaluate a Rampoe Aceh-based project learning model to enhance

students' creative competence in arts education. The results demonstrate that integrating cultural heritage into project-based learning provides a meaningful and effective approach to developing creativity in university learning environments. The Rampoe Aceh-based learning model, which consists of the phases of cultural orientation, creative exploration, collaborative project planning, artistic production, and reflective performance evaluation, offers a structured framework that encourages students to engage actively in artistic creation.

The quasi-experimental evaluation showed that students who participated in the Rampoe Aceh-based project-based learning model achieved significantly greater improvements in creative competence than those who followed conventional learning approaches. Statistical analysis indicated a significant difference between the experimental and control groups, with a large effect size, confirming the strong impact of the culturally integrated learning model on students' creativity development. From a theoretical perspective, this study contributes to advancing culturally responsive pedagogy in arts education by demonstrating how local cultural traditions can be systematically integrated into learning design. In practice, the findings suggest that educators can use local cultural heritage as a valuable pedagogical resource to stimulate creativity, collaboration, and cultural appreciation among students. Despite these promising results, this study has several limitations, including a relatively small sample size and a focus on a single educational context. Future research may explore the application of similar culturally based project learning models in different educational settings and artistic disciplines to further examine their broader impact on creative learning outcomes.

References

- Aimukhambet, Z., Aituganova, S., Alimbayev, A., Sagynadin, G., & Seiputanova, A. (2023). The Effects of Computer Aided Education in the Education of Folk Cultural Products. *Journal Of Curriculum Studies Research*, 5(2), 167–185. <https://doi.org/10.46303/jcsr.2023.25>
- Aloum, L., Ibrahim, H., Rajasekaran, S., & Alefishat, E. (2025). Open-Access Web-Based Gamification in Pharmacology Education for Medical Students: Quasi-Experimental Study. *Jmir Medical Education*, 11, e73666–e73666. <https://doi.org/10.2196/73666>

- Ava, A. T. (2020). Culturally Responsive Pedagogy for Sustainable Quality Education in the Cook Islands Setting. *Waikato Journal of Education*, 25, 31–41. <https://doi.org/10.15663/wje.v25i0.714>
- Baş, G. (2021). Improving Efficacy of Pre-Service Teachers in Educational Research Through Peer Review Process. *The New Educational Review*, 63(1), 214–225. <https://doi.org/10.15804/tner.21.63.1.17>
- Bassachs, M., Ortíz, D. C., Nogué, L., Serra, T., Bubnys, R., & Colomer, J. (2020). Fostering Critical Reflection in Primary Education Through STEAM Approaches. *Education Sciences*, 10(12), 384. <https://doi.org/10.3390/educsci10120384>
- Caingcoy, M. (2024). Culturally Responsive Pedagogy: A Systematic Overview. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4842773>
- Calvit, A. I. M., & Ford, D. Y. (2023). Engaging Diverse Learners: Lessons Learned From a Dialogic, Technology-Enabled Social Studies Curriculum. *Journal for Multicultural Education*, 17(3), 343–355. <https://doi.org/10.1108/jme-11-2022-0148>
- Chadha, M., & Relly, J. E. (2024). Supporting Intercultural Experiences in Online Teaching During Wartime and Humanitarian Crises: Slack as a Learning Tool. *Journalism & Mass Communication Educator*, 79(2), 224–245. <https://doi.org/10.1177/10776958241234365>
- Chen, H., Yohannes, A., & Hung, N. (2024). Effects of Escape Room Game-based Civics Education on Junior High School Students' Learning Motivation, Critical Thinking and Flow Experience. *British Journal of Educational Technology*, 56(3), 1170–1190. <https://doi.org/10.1111/bjet.13519>
- Chen, W., & Woramitmaitee, N. (2024). Vocal Techniques Literacy in Huai Opera for School-Based Education in Shanghai Municipality, China. *International Journal of Education and Literacy Studies*, 12(1), 252–259. <https://doi.org/10.7575/aiac.ijels.v.12n.1p.252>
- Chmelárová, Z., & Pasiar, L. (2023). Attitudes of Economics Students Towards Teamwork at University. *International Journal of Engineering Pedagogy (Ijep)*, 13(6), 4–16. <https://doi.org/10.3991/ijep.v13i6.39733>
- Duru, M. K., & ÇALGICI, G. (2023). Farklılaştırılmış Öğretimin Kütle Ve Ağırlık Kavram Yanılgılarının Giderilmesine Ve Akademik Başarıya Etkisi. *Eğitim Bilimleri Dergisi*, 57(57), 201–225. <https://doi.org/10.15285/maruaebd.1117542>
- Girgin, Ş., & Çoştı, B. (2024). The Effectiveness of Daily-Life Oriented Project Based Learning on Students' Conceptual Understanding. *Dokuz Eylül Üniversitesi Buca Eğitim Fakültesi Dergisi*, (61), 2058–2082. <https://doi.org/10.53444/deubefd.1423636>
- Heaton, R., & Kuan, S. C. L. (2023). A Systematic Literature Review of Cognitive Exchange in Higher Degree Visual Art Education. *Arts and Humanities in Higher Education*, 22(4), 368–387. <https://doi.org/10.1177/14740222231165907>
- Hidayanti, I., & Wulandari, F. (2023). The Effect of Problem-Based Learning Based Ethnoscience on Science Literacy Ability of Elementary School. *Edunesia Jurnal Ilmiah Pendidikan*, 4(3), 967–982. <https://doi.org/10.51276/edu.v4i3.475>
- Jamilah, J., Jayadi, K., Yatim, H., Sahnir, N., Djirong, A., & Abduh, A. (2024). The Integration of Local Cultural Arts in the Context of Teaching Materials on the Implementation of the Merdeka Belajar Curriculum. *Journal of Education Research and Evaluation*, 8(2), 404–413. <https://doi.org/10.23887/jere.v8i2.78359>
- Kaldybekova, R., Aksoy, B., & ABDYMANAPOV, B. (2021). Impact of Activity-Based Map Literacy Skills Teaching on Academic Achievement Levels of Secondary School Students in Kazakhstan. *Review of International Geographical Education Online*. <https://doi.org/10.33403/rigeo.853728>
- Kamal, A. A., & Maaruf, S. Z. (2022). Pre-Service Teachers' View Towards the New Approach in Culturally Responsive Pedagogy in Visual Art Education. *International Journal of Academic Research in Progressive Education and Development*, 11(4). <https://doi.org/10.6007/ijarped/v11-i4/15835>
- Kandasamy, O. K., Mydin, A.-A., Kanesan, A. G., & Shaik Abdul Malik Mohamed Ismail Malik. (2021). The Effectiveness of STAD Model Based on the Art Education Application Module on Students' Achievement and Attitudes. *International Journal of Academic Research in Progressive Education and Development*, 10(3). <https://doi.org/10.6007/ijarped/v10-i3/10572>

- Kandriasari, A., Yulianti, Y., Sachriani, & Jarudin. (2023). Mobile Learning American Service as Digital Literacy in Improving Students' Analytical Skills. *Journal of Advanced Research in Applied Sciences and Engineering Technology*, 31(2), 184–196. <https://doi.org/10.37934/araset.31.2.184196>
- Lestari, D., Ibrahim, N., & Iriani, C. (2023). STEAM: Science, Technology, Engineering, Art, and Mathematics on History Learning in the 21st Century. *Journal of Education Research and Evaluation*, 7(2), 306–312. <https://doi.org/10.23887/jere.v7i2.44172>
- Lilleholt, L., Zettler, I., Betsch, C., & Böhm, R. (2023). Development and Validation of the Pandemic Fatigue Scale. *Nature Communications*, 14(1). <https://doi.org/10.1038/s41467-023-42063-2>
- Liu, K., & Choatchamrat, S. (2024). Yu Shuxi's Biography and Transmission of Pingdiao Sanxianshu Chinese Folk Singing in the Context of Literacy. *International Journal of Education and Literacy Studies*, 12(3), 105–111. <https://doi.org/10.7575/aiac.ijels.v.12n.3p.105>
- Mac, J., Hoang, S. B., Kem, P., Kiang, P. N., Romero, D. R., & D'Anna-Hernandez, K. (2023). Leveraging Culture and Identity in Writing-intensive Initiatives and Courses at Minority Serving Institutions. *New Directions for Student Services*, 2023(181), 53–65. <https://doi.org/10.1002/ss.20455>
- Pinninti, L. R. (2024). The Impact of Peer-Collaborative Strategic Reading and Reflective Journal Writing on Orchestrated Reading Strategy Use and Comprehension. *Teaching English as a Second or Foreign Language--Tesl-Ej*, 27(4). <https://doi.org/10.55593/ej.27108a3>
- Ricci, K., McLaughlin, B., & Hua, J. (2023). Impact of a Science Art Exhibit on Public Interest and Student Comprehension of Disease Ecology Research. *Journal of Microbiology and Biology Education*, 24(1). <https://doi.org/10.1128/jmbe.00162-22>
- Rupavijetra, P., Nilsook, P., Jitsupa, J., & Hanwong, U. (2022). Career Skills and Entrepreneurship for Students by Collaborative Project-Based Learning Management Model. *Journal of Education and Learning*, 11(6), 48. <https://doi.org/10.5539/jel.v11n6p48>
- Salgado, R. M., Koike, P. S., Maglasang, R., & Miñoza, J. (2024). Overcoming Linguistic and Cultural Barriers in English Language Learning: An Exploration of Culturally Responsive Pedagogy. *The English Teacher*, 53(2), 91–108. <https://doi.org/10.52696/uifx1995>
- Sari, F. P., Maryati, M., & Wilujeng, I. (2023). Ethnoscience Studies Analysis and Their Integration in Science Learning: Literature Review. *Jurnal Penelitian Pendidikan Ipa*, 9(3), 1135–1142. <https://doi.org/10.29303/jppipa.v9i3.2044>
- Shah, R., Preston, A., & Dimova, Ms. E. (2024). Making Engineering Education More Sustainable Through Community-Based Learning and Teaching. *Engineering Education Research Network Conference*. <https://doi.org/10.31273/10.31273/9781911675167/1623>
- Siregar, G. M. A., Wahyudin, W., Herman, T., & Prabawanto, S. (2023). Facilitated Web Learning as Computer-Assisted Learning Based on Discovery Learning to Improve Mathematical Reasoning. *Beta Jurnal Tadris Matematika*, 16(1), 55–80. <https://doi.org/10.20414/betajtm.v16i1.644>
- Strakšienė, D., & Musneckienė, E. (2024). Opportunities of Arts Education in Implementing Inclusive Education: Learning Experiences of Teachers in the International Context. *Specialusis Ugdymas / Special Education*, (45–46), 77–94. <https://doi.org/10.15388/se.2023.45.5>
- Tsai, P., Scarampi, C., Kliegel, M., & Gilbert, S. J. (2023). Optimal Cognitive Offloading: Increased Reminder Usage but Reduced Proreminder Bias in Older Adults. *Psychology and Aging*, 38(7), 684–695. <https://doi.org/10.1037/pag0000751>
- Ülger, K. (2023). A Comparison Study From a Creative Thinking Perspective in Different Domains as Art Education and Non-Art Education Students. *Creativity Studies*, 16(1), 193–210. <https://doi.org/10.3846/cs.2023.14593>
- Vangölü, S. K. (2025). Effects of a Set of Culturally Responsive Activities on Children's School Readiness Levels / Efectos De Un Conjunto De Actividades Culturalmente Receptivas Sobre Los Niveles De Preparación Escolar De Los Niños. *Culture and Education*, 37(4), 971–997. <https://doi.org/10.1177/11356405251386591>
- Wang, S., Xin, T., Ma, H., Li, F. F., & Wu, C. (2025). EEG Assessment of Artificial Intelligence-Generated Content Impact on Student Creative Performance and Neurophysiological States in Product Design. *Frontiers in Psychology*, 16. <https://doi.org/10.3389/fpsyg.2025.1508383>

Weichang, L., & Jamaludin, K. A. (2024). The Effectiveness of Arts-Based Mathematics Interdisciplinary Curriculum in Enhancing Students' Creative Problem Solving Skills Among Secondary School From China. *International Journal of Academic Research in Progressive Education and Development*, 13(4). <https://doi.org/10.6007/ijarped/v13-i4/23678>

7. Author Declaration

The author declares that this manuscript is original, has not been published or submitted elsewhere, and all sources have been properly acknowledged. The author further confirms that the research was conducted ethically and declares no financial, professional, personal, or institutional conflicts of interest related to this study.