

Contextual Learning Design Based on Islamic Values: Integrating Simplicity, Anti-Waste, and Social Concern in Responding to Global Challenges

Faizal Hakim¹ , Hani Fadilah² , Halimah³ , Rina Farah⁴ , Zain Nizam⁵ 

¹ UIN Mahmud Yunus Batusangkar, Indonesia

² UIN Mahmud Yunus Batusangkar, Indonesia

³ UIN Mahmud Yunus Batusangkar, Indonesia

⁴ University Teknologi Malaysia, Malaysia

⁵ University Malaysia Sarawak, Malaysia

ABSTRACT

Background. Contemporary global challenges such as excessive consumption, resource waste, environmental degradation, and social inequality require educational approaches that connect ethical values with responsible action. Islamic values of simplicity, anti-waste, and social concern offer a relevant moral foundation, yet their integration into systematic contextual learning remains limited.

Purpose. This study aimed to develop and examine a contextual learning design based on Islamic values that integrates simplicity, anti-waste behavior, and social concern in responding to contemporary global and local challenges.

Method. The study employed Educational Design Research involving 61 students of an Islamic Religious Education program at a private higher education institution in South Sumatra, Indonesia. Data were collected through expert validation, student response questionnaires, observation sheets, and value-based learning assessments, and analyzed using descriptive and inferential statistics.

Novelty. The study proposes a Context Value Reflection Action (CVRA) instructional pathway that transforms Islamic values from normative concepts into contextual reasoning, critical reflection, and responsible action.

Results. The developed design achieved high validity (Aiken's $V = 0.91$), high practicality (87.0%), and strong implementation (91.4%). Students' mean scores increased from 62.18 to 81.46, with a significant difference, $t(60) = 14.82$, $p < .001$, and a large effect size ($d = 1.90$). Anti-waste awareness showed the greatest improvement.

Conclusion. The CVRA-based contextual learning design provides a promising framework for integrating Islamic values with sustainability and social responsibility, although long-term value internalization requires continuous practice and institutional reinforcement.

Citation: Hakim, F., Fadilah, H., Halima, Halima., Farah, R., & Nizam, Z. (2026). Contextual Learning Design Based on Islamic Values: Integrating Simplicity, Anti-Waste, and Social Concern in Responding to Global Challenges. *Journal Of Paddisengeng Technology*, 2(2), 91–102.
<https://doi.org/10.65224/jopate.v2i2.260>

Correspondence:

Faizal Hakim,
Hakimfaizz23@gmail.com

Received: October 12, 2025

Accepted: January 11, 2026

Published: June 29, 2026

KEYWORDS

Anti Waste Behavior; Contextual Learning; Islamic Values; Simplicity; Social Concern

INTRODUCTION

Contemporary global society faces interconnected challenges related to overconsumption, resource waste, environmental degradation, and social inequality. Unsustainable lifestyles have increased pressure on natural resources while generating significant amounts of waste,



particularly food waste. Globally, approximately 1.05, billion tons of food were wasted in 2022, unequal access to resources remain persistent problems (Fakoyede et al., 2026). This situation demonstrates that global challenges are not only environmental and economic, but also reflect lifestyle issues, human values, and social responsibility (De Matos et al., 2026). Therefore, simplicity, anti-waste behavior, and social awareness are increasingly important values in responding to contemporary global challenges.

At the regional level, similar challenges are evident in West Sumatra, where waste management and social inequality remain significant concerns. The West Sumatra Regional Long-Term Development Plan report states that waste production continues to exceed the amount effectively managed and recycled, highlighting ongoing challenges in promoting responsible consumption and waste reduction practices (Suwarno et al., 2026). At the same time, approximately 312,300 people in West Sumatra were still living below the poverty line as of September 2025, highlighting the ongoing need for social awareness and solidarity within the community (Melliny et al., 2026). This situation demonstrates the relevance of strengthening simplicity, anti-waste behavior, and social awareness as values that must be instilled in the local social and educational context.

Despite the increasing relevance of sustainability and social responsibility, the integration of Islamic values into education has largely been discussed at the conceptual, ethical, and curricular levels, rather than translated into systematic and contextual learning designs. Existing studies have demonstrated the relationship between Islamic principles and sustainability and the potential of Islamic values to promote sustainable lifestyles, but their pedagogical operationalization in authentic learning contexts remains underexplored (Kurniadi et al., 2023). Recent research also emphasizes the need to integrate Education for Sustainable Development into Islamic education, but greater attention is needed to how these values are translated into concrete learning activities, experiences, and behavioral outcomes. This gap highlights the need for contextual learning designs that connect Islamic values of modesty, anti-wastefulness, and social care with real-life global and local issues, enabling students not only to conceptually understand these values but also to meaningfully apply them in their daily lives.

To address this gap, Contextual Teaching and Learning (CTL) was adopted as the primary pedagogical approach because it connects learning content to students' real-life experiences and encourages them to construct meaning through authentic social and environmental contexts. In this study, Islamic values of simplicity, anti-wastefulness, and social awareness were integrated into contextual learning activities related to consumption habits, waste reduction, resource use, and social responsibility. This approach is consistent with Education for Sustainable Development, which emphasizes transformative learning that integrates knowledge, values, attitudes, and actions in responding to real-world sustainability challenges (Rodríguez Aboytes & Barth, 2020). Contextual learning is also relevant to Islamic education because it allows religious values to transcend conceptual understanding to meaningful application in students' daily lives. Therefore, the proposed learning design positions students not merely as recipients of Islamic moral knowledge, but as active learners who critically examine real-life issues, reflect on relevant Islamic values, and translate these values into responsible actions.

This study aims to develop and test a contextual learning design based on Islamic values that integrates modesty, anti-wasteful behavior, and social awareness in response to contemporary global and local challenges. The study also seeks to determine how the proposed design can enhance students' understanding of values, responsible behavior, and meaningful application of Islamic principles in their daily lives.

RESEARCH METHODOLOGY

Research Design

This study used Educational Design Research (EDR) to develop and test a contextual learning design based on Islamic values of simplicity, anti-wastefulness, and social care. EDR was chosen because it systematically integrates educational problem analysis with the design, development, evaluation, and refinement of practical educational interventions in authentic learning environments (McKenney & Reeves, 2021). This study adopted an iterative design process in which the proposed learning design was progressively developed and refined based on theoretical foundations, contextual needs, expert input, and empirical evidence from its implementation. Such an approach is appropriate for producing usable educational interventions and theoretically grounded design principles that explain how Islamic values can be meaningfully integrated into contextual learning practices (McKenney & Reeves, 2021). Therefore, this study focused on producing a valid, practical, and pedagogically relevant contextual learning design that connects Islamic values to authentic global and local issues related to responsible consumption, waste reduction, and social responsibility.

Research Subjects

The participants in this study consisted of 61 students enrolled in the Islamic Religious Education study program at a private higher education institution in South Sumatra, Indonesia. The participants were drawn from two existing classes: Class A1, consisting of 30 students, and Class A2, consisting of 31 students. Both classes were involved in the implementation and evaluation of the contextual learning design based on Islamic values, particularly simplicity, anti-waste behavior, and social concern. The distribution of research participants is presented in Table 1.

Table 1. Distribution of Research Participants

Class	Study Program	Number of Students	Percentage
A1	Islamic Religious Education	30	49.18%
A2	Islamic Religious Education	31	50.82%
Total		61	100%

Instrument

The research instruments were designed to collect data on the validity, practicality, implementation, and learning outcomes of the proposed contextual learning design. In Educational Design Research, the quality of an educational intervention is commonly examined through criteria such as validity, practicality, and effectiveness (Susrawan et al., 2024). Accordingly, four instruments were employed: an expert validation sheet, a student response questionnaire, an observation sheet, and a value-based learning assessment. The indicators were developed by aligning the principles of Contextual Teaching and Learning, which emphasize connections between learning and real-life contexts (Saputri et al., 2025), with Education for Sustainable Development competencies involving knowledge, skills, values, attitudes, informed decision-making, and responsible action (Unesco, 2020).

Table 2. Research Instruments and Measurement Indicators

Instrument	Purpose	Main Indicators	Measurement	Reference Basis
Expert Validation Sheet	Assess the validity of the contextual learning design	Content relevance; instructional alignment; contextuality; integration of Islamic values; learning activities; assessment alignment; feasibility	5-point Likert scale	(Plomp, 2013)
Student Response Questionnaire	Measure the practicality and students' acceptance of the learning design	Clarity; ease of learning; relevance to real life; engagement; meaningfulness; applicability of Islamic values	5-point Likert scale	(Berns & Erickson, 2001)
Learning Implementation Observation Sheet	Examine how the designed learning process is implemented	Active participation; contextual problem analysis; collaboration; value reflection; decision-making; responsible action	Observation rating scale	(Berns & Erickson, 2001; Unesco, 2020)
Value-Based Learning Assessment	Assess students' understanding and application of targeted values	Understanding of simplicity; anti-waste awareness; responsible consumption; social concern; ethical decision-making; application to real-life situations	Pre-test and post-test/rubric-based assessment	(Unesco, 2020)

The expert validation sheet was used to evaluate whether the learning design was theoretically sound, pedagogically appropriate, contextually relevant, and consistent with its intended learning outcomes before implementation. Particular attention was given to the alignment among learning objectives, contextual activities, Islamic values, and assessment components. This validation process is consistent with Educational Design Research, in which the relevance and consistency of intervention components are essential indicators of design quality (Carlos, 2026; Martella et al., 2026).

The student response questionnaire and implementation observation sheet were used to examine the practicality and actual implementation of the design. The questionnaire captured students' perceptions of clarity, relevance, engagement, and meaningfulness, whereas the observation sheet documented how students connected Islamic values with authentic issues such as consumption patterns, waste reduction, resource use, and social responsibility. This reflects the central principle of contextual learning that knowledge becomes more meaningful when learners connect academic content with real world situations (Adam et al., 2026).

The value-based learning assessment was designed to measure changes in students' understanding and application of three core values: simplicity, anti-waste behavior, and social concern. The assessment focused not only on conceptual knowledge but also on students' ability to analyze real-life problems, make value-based decisions, and propose responsible actions. This multidimensional assessment is aligned with UNESCO's Education for Sustainable Development framework, which emphasizes that meaningful education should develop knowledge, skills, values, attitudes, informed decision-making, and responsible action rather than cognitive understanding alone (Liu et al., 2026; Purkat et al., 2026).

Research Procedure

The research procedure followed an iterative Educational Design Research process consisting of five main stages: preliminary analysis, design and development, expert validation, classroom implementation, and evaluation and refinement (Techakosit et al., 2026). The preliminary analysis identified learning needs, contextual problems, relevant Islamic values, and global and local issues related to simplicity, waste reduction, and social concern. The findings were then used to develop the initial contextual learning design, including learning objectives, materials, activities, and assessment instruments.

The prototype was reviewed by experts to assess its content validity, instructional consistency, contextual relevance, and feasibility, after which necessary revisions were made. The revised design was subsequently implemented with 61 students from Classes A1 and A2. Data from

observations, student responses, and value-based learning assessments were analyzed to evaluate the practicality and effectiveness of the design. The results were used to refine the final learning design and formulate design principles for integrating Islamic values into contextual learning. This iterative procedure is consistent with Educational Design Research, which emphasizes continuous interaction among analysis, design, implementation, evaluation, and revision (Penuel et al., 2020).

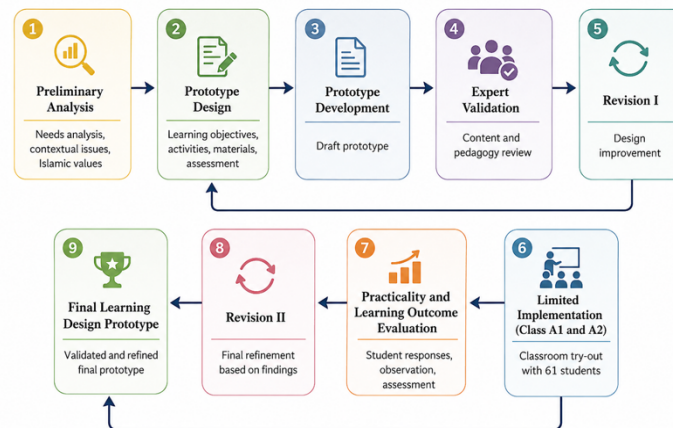


Figure 1. Research stages

RESULT AND DISCUSSION

The results of this study are presented according to the stages of Educational Design Research, including preliminary analysis, prototype development, expert validation, implementation and practicality, and evaluation of students' learning outcomes. The findings provide evidence regarding the quality and potential effectiveness of the contextual learning design based on Islamic values of simplicity, anti-waste, and social concern.

The preliminary analysis was conducted to identify students' initial understanding, learning needs, and contextual issues relevant to the development of the learning design. Initial observations and diagnostic responses indicated that students were generally familiar with Islamic teachings related to simplicity, prohibition of wastefulness, and social responsibility. However, their understanding remained largely conceptual and was not consistently connected to contemporary issues such as excessive consumption, food waste, environmental responsibility, and social inequality.

The preliminary assessment showed that only 39.3% of students were able to clearly connect the Islamic concepts of *isrāf* and *tabdhīr* with contemporary waste-related problems. Approximately 44.3% demonstrated adequate understanding of simplicity as an Islamic value, while 47.5% were able to explain the relationship between Islamic social responsibility and contemporary social problems. These findings indicated a gap between students' normative religious knowledge and their ability to apply Islamic values to authentic global and local issues.

Table 3. Preliminary Analysis of Students' Value-Based Understanding

Indicator	Students Demonstrating Adequate Understanding	Percentage
Connecting <i>isrāf</i> and <i>tabdhīr</i> with waste issues	24	39.3%
Understanding simplicity in contemporary life	27	44.3%
Connecting social concern with contemporary social issues	29	47.5%
Applying Islamic values to real-life decision-making	22	36.1%

The lowest result was found in students' ability to apply Islamic values to real-life decision-making, with only 36.1% demonstrating adequate performance. This finding became an important basis for developing a learning design that moved beyond conceptual explanation toward contextual problem analysis, value reflection, decision-making, and responsible action.

Based on the preliminary analysis, an initial prototype of the contextual learning design was developed. The prototype integrated three core Islamic values simplicity, anti-waste, and social concern with contemporary issues related to consumption, waste management, responsible resource use, and social inequality.

The prototype consisted of five main instructional components: contextual problem orientation, exploration of Islamic values, collaborative problem analysis, reflective decision-making, and action-oriented learning. Students were first introduced to authentic cases drawn from daily life and contemporary social issues. They then examined relevant Islamic principles, discussed possible ethical responses, reflected on personal and social implications, and developed appropriate actions.

The instructional sequence developed through this process can be summarized as Context–Value–Reflection–Action (CVRA). This sequence served as the operational structure of the prototype and guided the development of learning materials, student activities, and assessment tasks. The initial prototype was evaluated by three experts representing Islamic education, instructional design, and educational assessment. Five major aspects were assessed: content relevance, instructional alignment, contextual learning integration, integration of Islamic values, and assessment alignment.

Table 4. Expert Validation Results

Validation Aspect	Aiken's V	Category
Content relevance	0.91	Very valid
Instructional alignment	0.93	Very valid
Contextual learning integration	0.90	Very valid
Integration of Islamic values	0.95	Very valid
Assessment alignment	0.87	Valid
Overall	0.91	Very valid

The overall Aiken's V coefficient was 0.91, indicating a very high level of content validity. The highest coefficient was obtained for the integration of Islamic values ($V = 0.95$), demonstrating strong agreement among experts that simplicity, anti-waste, and social concern were appropriately integrated into the learning design.

Assessment alignment obtained the lowest coefficient ($V = 0.87$), although it remained within the valid category. Experts recommended strengthening behavioral indicators, clarifying the relationship between learning objectives and assessment tasks, and including more authentic assessment activities.

Based on these recommendations, several revisions were made to the first prototype. Reflection questions were made more analytical, contextual cases were strengthened using real-life situations, behavioral indicators were clarified, and action-based assessment tasks were added. The revised prototype was subsequently implemented in the classroom.

The revised prototype was implemented with 61 students, consisting of 30 students from Class A1 and 31 students from Class A2. Students completed a practicality questionnaire after participating in the learning activities.

Table 5. Student Responses to the Practicality of the Learning Design

Aspect	Mean	Percentage	Category
Clarity of learning activities	4.29	85.8%	Very practical
Relevance to real-life problems	4.48	89.6%	Very practical
Student engagement	4.31	86.2%	Very practical
Meaningfulness of learning	4.34	86.8%	Very practical
Applicability of Islamic values	4.38	87.6%	Very practical

Aspect	Mean	Percentage	Category
Ease of reflection and action planning	4.27	85.4%	Very practical
Overall	4.35	87.0%	Very practical

The overall practicality score was 4.35 out of 5, equivalent to 87.0%, indicating that the learning design was very practical. The highest score was obtained for relevance to real-life problems ($M = 4.48$; 89.6%). Students particularly responded positively to cases involving food waste, excessive consumption, lifestyle choices, resource use, and social inequality. The applicability of Islamic values also received a high score ($M = 4.38$; 87.6%), suggesting that students perceived a clear relationship between religious principles and contemporary situations.

Classroom observations were conducted to determine whether the learning design was implemented according to the planned instructional sequence.

Table 6. Implementation of the Contextual Learning Design

Learning Component	Implementation
Contextual problem orientation	94.0%
Exploration of Islamic values	93.2%
Collaborative problem analysis	92.1%
Value-based reflection	88.7%
Decision-making and action planning	89.0%
Overall implementation	91.4%

The overall implementation rate reached 91.4%, indicating that the learning activities were implemented very well. Contextual problem orientation achieved the highest implementation score (94.0%), followed by exploration of Islamic values (93.2%). Students actively participated in discussing problems that were directly connected to daily life. Value-based reflection showed a slightly lower implementation score (88.7%). Observation notes indicated that some students were able to identify appropriate Islamic values but required additional guidance to critically examine their own lifestyle and behavioral choices. Students' value-based learning outcomes were assessed before and after implementation. The assessment measured three dimensions: simplicity, anti-waste awareness, and social concern.

Table 7. Pre-test and Post-test Results

Dimension	Pre-test Mean	Post-test Mean	Mean Gain
Simplicity	63.4	78.6	15.2
Anti-waste awareness	59.7	84.8	25.1
Social concern	63.5	81.0	17.5
Overall	62.18	81.46	19.28

The overall mean score increased from 62.18 ($SD = 8.74$) in the pre-test to 81.46 ($SD = 7.22$) in the post-test, representing a mean increase of 19.28 points. The largest improvement occurred in anti-waste awareness, which increased from 59.7 to 84.8, representing a gain of 25.1 points. Social concern increased by 17.5 points, while simplicity increased by 15.2 points.

Although all three dimensions improved, the difference in gain scores indicates that the three values did not develop at the same rate. Anti-waste awareness demonstrated the strongest improvement, whereas simplicity showed the smallest gain. Statistical Analysis of Learning Outcomes, before hypothesis testing, the distribution of the pre-test and post-test scores was examined using the Shapiro–Wilk test.

Table 8. Normality and Paired-Samples Test Results

Analysis	Statistical Result	Interpretation
Pre-test normality	$p = .118$	Normally distributed
Post-test normality	$p = .086$	Normally distributed
Pre-test mean	62.18 ± 8.74	—
Post-test mean	81.46 ± 7.22	—
Mean difference	19.28	—
Paired t -test	$t(60) = 14.82$	Significant
Significance	$p < .001$	Significant difference
Cohen's d	1.90	Large effect
N-gain	0.51	Moderate

The Shapiro–Wilk results indicated that both pre-test and post-test scores met the normality assumption ($p > .05$). Therefore, a paired-samples t -test was used. The analysis revealed a statistically significant difference between pre-test and post-test scores, $t(60) = 14.82$, $p < .001$. The effect size was large (Cohen's $d = 1.90$), indicating a substantial difference between students' scores before and after the intervention. The normalized gain score was 0.51, which was categorized as moderate. This result indicates that although the improvement was statistically substantial, the level of normalized learning gain did not reach the high category. To examine the consistency of the learning outcomes across the two classes, post-test scores were compared between Class A1 and Class A2.

Table 9. Comparison of Learning Outcomes between Classes

Class	N	Pre-test Mean	Post-test Mean	Mean Gain
A1	30	62.43	81.93	19.50
A2	31	61.94	81.00	19.06
Total	61	62.18	81.46	19.28

Class A1 obtained a post-test mean of 81.93, while Class A2 obtained a mean of 81.00. The difference between the two classes was not statistically significant ($p > .05$).

The similarity of the results indicates that both classes experienced relatively consistent improvement despite being separate classroom groups. The mean gain was 19.50 points in Class A1 and 19.06 points in Class A2. A closer examination of the results showed different patterns of development across the targeted values.

Anti-waste awareness showed the greatest improvement, increasing by 25.1 points. Students demonstrated stronger ability after the intervention to identify wasteful practices, relate *isrāf* and *tabdhīr* to contemporary consumption, evaluate unnecessary resource use, and propose appropriate actions. Social concern increased by 17.5 points. Students showed stronger awareness of social inequality, collective responsibility, and the relevance of Islamic principles such as *ta'āwun*, charity, and social solidarity in addressing contemporary social problems.

Simplicity showed the smallest increase, at 15.2 points. Although students demonstrated improved conceptual understanding, reflective responses indicated greater difficulty in translating simplicity into personal lifestyle decisions. Students were generally able to explain the importance of modest consumption but showed more varied responses when evaluating personal preferences, social trends, and consumption habits.

The final refinement was conducted based on expert validation, student responses, observation results, and learning outcome data. Three major refinements were introduced. First, the reflection component was strengthened to encourage students to examine not only social problems but also their personal habits and decisions. Second, action-planning activities were made more specific by requiring students to formulate observable actions related to consumption, waste reduction, and social responsibility. Third, assessment was expanded beyond conceptual

understanding to include contextual reasoning, value-based decision-making, reflection, and proposed responsible action.

The final prototype therefore consisted of four interconnected instructional stages:

Context → Value → Reflection → Action (CVRA).

In the Context stage, students encounter authentic global or local problems. In the Value stage, they analyze these problems through relevant Islamic principles. In the Reflection stage, they critically evaluate personal and social implications. In the Action stage, they formulate or implement responsible responses.

Overall, the results demonstrate that the developed contextual learning design met the criteria of high validity, high practicality, strong implementation, and significant improvement in students' value-based learning outcomes. However, the variation in gains across simplicity, anti-waste awareness, and social concern also indicates that cognitive and value-based development may occur at different levels, particularly when values are closely connected to personal lifestyle and behavioral choices.

The findings demonstrate that the contextual learning design successfully integrated Islamic values of simplicity, anti-waste, and social concern into meaningful learning experiences. The high levels of validity, practicality, and implementation indicate that the design was pedagogically appropriate and relevant to students' everyday contexts (Lee et al., 2025). This supports the principle of Contextual Teaching and Learning, which emphasizes connecting academic content with real-life situations so that learners can construct meaning and apply knowledge beyond the classroom (Erwin et al., 2026).

The significant improvement in students' learning outcomes indicates that contextualizing Islamic values can strengthen students' ability to understand and interpret contemporary sustainability and social issues. The greatest improvement in anti-waste awareness suggests that Islamic concepts such as avoiding *isrāf* and *tabdhīr* can be effectively connected with responsible consumption and resource use. This finding is consistent with the broader Education for Sustainable Development framework, which emphasizes the development of knowledge, skills, values, attitudes, and responsible action in addressing sustainability challenges (Aldawsari et al., 2025; Avelar et al., 2025). Recent research in Islamic higher education similarly shows that integrating sustainability principles with Islamic educational values can strengthen students' sustainability competencies (Erwin & Kuswandi, 2024; Mudinillah et al., 2024).

However, the smaller improvement in simplicity compared with anti-waste awareness reveals an important knowledge value action gap. Simplicity involves personal lifestyle, consumption preferences, and social influences, making it more difficult to transform through short-term learning than concrete practices such as reducing waste. Therefore, higher post-test scores should not automatically be interpreted as permanent behavioral change. UNESCO emphasizes that sustainability education must extend beyond cognitive understanding toward socio-emotional engagement and responsible individual and collective action. This suggests that sustained value internalization requires not only instructional intervention but also habituation, role modeling, institutional support, and a learning environment that continuously reinforces sustainable behavior. Research on eco-Islamic education likewise highlights the importance of connecting Islamic ethical foundations with critical thinking, value-based decision making, and participatory practices.

The main contribution of this study lies in the Context Value Reflection Action (CVRA) instructional pathway generated through the design process. Students first encounter authentic global or local problems (Context), interpret them through relevant Islamic principles (Value), critically examine their personal and social implications (Reflection), and formulate responsible responses (Action). This pathway extends Islamic value education beyond normative knowledge by

translating religious principles into contextual reasoning and action-oriented learning. Therefore, the novelty of the proposed design lies not merely in combining Islamic values with sustainability issues, but in providing a structured instructional mechanism for transforming “Islamic values into contextual and responsible action”.

CONCLUSION

This study demonstrates that the contextual learning design based on Islamic values provides a valid, practical, and pedagogically relevant framework for integrating simplicity, anti-waste, and social concern into contemporary learning contexts. The developed design successfully connected Islamic ethical principles with authentic issues related to consumption, waste, resource use, and social responsibility, resulting in meaningful improvements in students’ value-based learning outcomes. The strongest improvement was observed in anti-waste awareness, while simplicity showed a more moderate increase, indicating that different values may require different levels of instructional reinforcement and behavioral habituation.

The study contributes a Context–Value–Reflection–Action (CVRA) instructional pathway that operationalizes Islamic values through authentic problems, ethical interpretation, critical reflection, and responsible action. This pathway extends Islamic value education beyond normative understanding toward contextual and action-oriented learning. However, short-term improvement in learning outcomes should not be interpreted as permanent behavioral transformation. Sustained internalization of simplicity, anti-waste behavior, and social concern requires continuous practice, supportive institutional culture, and long-term educational reinforcement. Therefore, the proposed design offers a promising instructional framework for strengthening the relevance of Islamic education in responding to contemporary global and local challenges.

ACKNOWLEDGEMENT

The authors would like to express their gratitude for the guidance that led to the implementation and publication of this research, and we would like to express our gratitude to academic colleagues at the university and friends who have supported and assisted in the field research phase.

AUTHORING TOOL USE STATEMENT

The use of AI is applied to help compile vocabulary in this research and the author uses it in appropriate aspects and ethics.

AUTHORS’ CONTRIBUTION

Author 1: Conceptualization; Conceptualization; Investigation; Methodology; Project administration; Writing – original draft; Writing review and editing.

Author 2: Data curation; Investigation; Formal analysis; Validation; Writing – original draft; Writing review and editing.

Author 3: Translation; Transliteration; Language editing; Writing review and editing.

Author 4: Translation; Transliteration; Language proofreading; Writing review and editing.

Author 5: Manuscript revision; Re-editing; Language refinement; Writing review and editing.

ETHICAL STANDARDS

This study was conducted in accordance with established ethical principles for educational research. Participation was voluntary, and all participants were informed about the study's purpose, procedures, confidentiality, and data use prior to their participation. Informed consent was obtained from all participants, and their identities were anonymized to protect privacy and confidentiality. The study protocol was reviewed and approved by the relevant institutional authorities/ethics committees of the institutions of authors.

REFERENCES

- Adam, U. A., Lameed, S. N., Owolabi, T., Onowugbeda, F. U., Oladejo, A. I., Okebukola, P. A., & Mustapha, G. A. (2026). The potency of culture, technology, and context in a biology classroom: Culturo-Techno-Contextual Approach in action. *International Journal of Science Education*, 48(2), 288–313. <https://doi.org/10.1080/09500693.2024.2405667>
- Aldawsari, N. D., Nemt-allah, M. A., & Abdellatif, M. S. (2025). Environmental Education Awareness in Light of Sustainable Development Goals and Its Relationship with Environmental Responsibility Among University Students. *Sustainability*, 17(21), 9393. <https://doi.org/10.3390/su17219393>
- Avelar, A. B. A., Mitchell, S. F., & Sandes-Guimarães, L. V. (2025). Integrating sustainable development goals in management education: Impact on student knowledge, attitudes, and behaviors. *The International Journal of Management Education*, 23(2), 101116. <https://doi.org/10.1016/j.ijme.2024.101116>
- Berns, R. G., & Erickson, P. M. (2001). *Contextual Teaching and Learning: Preparing Students for the New Economy. The Highlight Zone: Research@ Work No. 5.*
- Carlos, V.-P. (2026). Statistical validation of the social entrepreneurship profile instrument. *Social Enterprise*.
- De Matos, C. A., De Barcellos, M. D., & Dalmoro, M. (2026). Beyond individual choice: How price sensitivity, locavorism, and convenience shape socially responsible food consumption in developing markets. *Social Responsibility Journal*, 22(3), 573–595. <https://doi.org/10.1108/SRJ-06-2025-0633>
- Erwin, Degeng, M. D. K., Degeng, I. N. S., & Praherdhiono, H. (2026). The effectiveness of collaborative blended learning on mastery of instructional media concepts. *Multidisciplinary Reviews*, 9(12), 2026497. <https://doi.org/10.31893/multirev.2026497>
- Erwin, E., & Kuswandi, D. (2024). Tinjauan pustaka: Model pembelajaran blended learning di era Society 5.0. *INOPENDAS: Jurnal Ilmiah Kependidikan*, 7(1), 39–47.
- Fakoyede, S. J., Babalola, F. E., Ekundayo, S. K., & Alabi, D. O. (2026). Improving equitable access to library resources in tertiary institutions: Overcoming policy, infrastructure, and socio-cultural barriers. *The Journal of Academic Librarianship*, 52(2), 103219. <https://doi.org/10.1016/j.acalib.2026.103219>
- Kurniadi, P., Hasnah, S., Mudinillah, A., & Erwin, E. (2023). Korelasi Antara Penguasaan Bahasa Arab Dan Pemahaman Al-Qur'an Dengan Teknik Menghafal. *Mauizhah: Jurnal Kajian Keislaman*, 12(2), 103–117.
- Lee, H., Kim, H., & Yan, W. (2025). Promoting inclusive AI and technology in K-12 education: A review of context, instructional strategies, and learning outcomes. *Computers and Education: Artificial Intelligence*, 9, 100478. <https://doi.org/10.1016/j.caeai.2025.100478>
- Liu, F., Wang, H., Guo, Y., & Tang, T. (2026). Enhancing Sustainability Consciousness in Higher Education: Impacts of Artificial Intelligence-Integrated Sustainable Engineering Education. *Sustainability*, 18(4), 2124. <https://doi.org/10.3390/su18042124>
- Martella, A. M., Lawson, A. P., Martella, R. C., LaBonte, K., Zhao, F., Delgado, C. Y., Munns, M. E., LeRoy, A. W., Gluck, J. A., & Mayer, R. E. (2026). Systematically Reviewing the Rigour of Immersive Virtual Reality Research in STEM Education: A Deep Dive Into Threats to

- Internal Validity. *Journal of Computer Assisted Learning*, 42(1), e70165. <https://doi.org/10.1002/jcal.70165>
- McKenney, S., & Reeves, T. C. (2021). Educational design research: Portraying, conducting, and enhancing productive scholarship. *Medical Education*, 55(1), 82–92. <https://doi.org/10.1111/medu.14280>
- Melliny, V. D., Pertiwi, R., & Aini, H. B. (2026). *Gender-related indicators and income per capita across Indonesian provinces*. 14(2).
- Mudinillah, A., Kuswandi, D., Erwin, E., Sugiarni, S., Winarno, W., Annajmi, A., & Hermansah, S. (2024). Optimizing Project-Based Learning in Developing 21st Century Skills: A Future Education Perspective. *Qubahan Academic Journal*, 4(2), 86–101. <https://doi.org/10.48161/qaj.v4n2a352>
- Penuel, W. R., Riedy, R., Barber, M. S., Peurach, D. J., LeBouef, W. A., & Clark, T. (2020). Principles of Collaborative Education Research With Stakeholders: Toward Requirements for a New Research and Development Infrastructure. *Review of Educational Research*, 90(5), 627–674. <https://doi.org/10.3102/0034654320938126>
- Plomp, T. (2013). Educational design research: An introduction. *Educational Design Research*, 1, 11–50.
- Purkat, M., Devetak, I., Vošnjak, M., & Potočnik, R. (2026). From Scientific Inquiry to Visual Expression: Developing a Sustainable Worldview Through Science and Fine Art in Primary Education. *Education Sciences*, 16(1), 58. <https://doi.org/10.3390/educsci16010058>
- Rodríguez Aboytes, J. G., & Barth, M. (2020). Transformative learning in the field of sustainability: A systematic literature review (1999-2019). *International Journal of Sustainability in Higher Education*, 21(5), 993–1013. <https://doi.org/10.1108/IJSHE-05-2019-0168>
- Saputri, M. R., Arni, Y., & Lubis, P. H. M. (2025). Enhancing Critical Thinking Skills through Contextual Teaching and Learning. *Journal of Innovation and Research in Primary Education*, 4(4), 1936–1946. <https://doi.org/10.56916/jirpe.v4i4.1888>
- Susrawan, I. N. A., Suandi, N., Sudiana, I. N., & Dewantara, I. P. M. (2024). Indonesian Textbooks Oriented on Social Integration and 21st Century Skills in Higher Education: Validity, Practicality, and Effectiveness. *International Journal of Language Education*, 8(1). <https://doi.org/10.26858/ijole.v8i1.60910>
- Suwarno, A. S., Ulfatunnisa, A., Kojima, M., Kawamura, R., & Iwasaki, F. (2026). A review of macro marine debris abundance and waste management practices on small islands of Southeast Asia and the Pacific. *Journal of Material Cycles and Waste Management*. <https://doi.org/10.1007/s10163-026-02645-w>
- Techakosit, S., Rukngam, T., Nookhong, J., & Wannapiroon, P. (2026). An Experiential Design Learning Model Within a Digital Learning Ecosystem for Enhancing AI Competencies and Instructional Innovation in Pre-Service Science Teacher Education. *Education Sciences*, 16(2), 314. <https://doi.org/10.3390/educsci16020314>
- Unesco, I. (2020). *Basic texts of the 2003 convention for the safeguarding of the intangible cultural heritage*.

Copyright Holder :

© Faizal Hakim et al. (2026).

First Publication Right :

© Journal of Paddisengeng Technology

This article is under:

