



The contribution of “Kejogjakartaan” values in higher education curricula to promoting sustainable lifestyle

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ABSTRACT

Background: Environmental problems such as climate change remain a global challenge, requiring socio-cultural approaches to support environmental sustainability. Local wisdom provides important values for promoting sustainable behavior. The Special Region of Yogyakarta initiated the Kejogjakartaan Special Education program (PKJ) to integrate philosophical values into education. However, previous studies have rarely examined how Kejogjakartaan values, including *Hamemayu Hayuning Bawana*, *Sangkan Paraning Dumadi*, and *Manunggaling Kawula Gusti*, are integrated into higher education curricula. This study aims to analyze the integration of these values and evaluate their contribution to students' sustainable lifestyles.

Methods: This qualitative study employed documentation analysis and in-depth interviews. Data sources included the PKJ Main Book, PKJ Guidebook for Higher Education, Universitas Negeri Yogyakarta (UNY) 2025 Curriculum Guideline, course syllabus, lesson plans, and interviews with lecturers at Yogyakarta State University. Data were analyzed using Traditional Ecological Knowledge (TEK), Education for Sustainable Development (ESD), and Value-Belief-Norm (VBN) frameworks. **Findings:** The results indicate that Kejogjakartaan philosophical values have strong potential to encourage sustainable lifestyles, particularly *Hamemayu Hayuning Bawana*. However, their curriculum integration remains limited, as the values are mainly presented as discussion materials without being translated into learning outcomes or behavioral assessments. Three major barriers were identified: knowledge transmission barriers, curriculum design limitations, and inconsistent environmental messages within the campus environment. Internalization has reached the level of values and beliefs but has not yet developed into personal norms and concrete behavioral changes. **Conclusion:** The successful integration of local philosophical values requires alignment between lived knowledge transmission, applicative curriculum design, and supportive campus environments. Without these elements, philosophical values may remain conceptual and fail to influence student behavior. **Novelty/Originality of this article:** This study provides an integrative analysis of Kejogjakartaan philosophical values in higher education using TEK, ESD, and VBN perspectives, highlighting the gap between cultural knowledge, curriculum implementation, and sustainable behavioral transformation.

KEYWORDS: higher education; Kejogjakartaan special education; local wisdom; sustainability.

1. Introduction

Various challenges of environmental damage caused by human activities have now become common sight (Dijoo & Khurshid, 2022; Saxena, 2025; Singh & Singh, 2017). Ranging from climate change to the degradation of the surrounding environment. Various solutions have been offered, both technical and socio-ecological approaches. One proposed solution is the implementation of local wisdom values. Before humans knew technology and had a strong desire to explore the earth without limits, humans once lived in harmony with

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nature (Song & Cao, 2022; Wang et al., 2026). Humans had limits that favored nature and the surrounding environment for the sustainability of future generations and resilience. Local wisdom values are now starting to shift and be forgotten, even though they can still be used as a benchmark for living in the present and future. One potential benefit of local wisdom values is their implementation in education. Integrating local wisdom into the formal education curriculum can combine cultural preservation, environmental sustainability, and behavioral transformation. Education is a main pillar that will affect the progress and development of society (Jaya et al., 2023). Therefore, education is needed to solve various existing problems. An example of a problem that can be solved through education is one's character. Education does not only teach theory but also habits and character (Islamic et al., 2024). The values taught in education can shape the character and awareness of students.

The Government of the Special Region of Yogyakarta, through the Office of Education, Youth, and Sports, initiated the Kejojokartaan Special Education/Pendidikan Khas Kejojokartaan program (PKJ). This program is part of an effort to integrate philosophical values (core beliefs) into teaching at various levels of education. PKJ at the higher education level is expected to raise awareness of character education that aligns with Yogyakarta's philosophy. The PKJ guideline book for higher education states that PKJ implementation can be integrated with any related courses. Thus, researchers want to see whether PKJ can be included in the environmental science curriculum and whether the philosophical values of Kejojokartaan can be integrated into shaping students' character to be sustainable and pro-environment. Students in higher education are at a critical stage of development where their identity is being formed and their personal values are being consolidated (Santoso & Supadi, 2024). Students possess the cognitive capacity for abstract and systematic thinking needed to understand complex sustainability concepts. On the other hand, universities in Indonesia are increasingly aware of the importance of integrating local wisdom into learning outcomes, in line with national mandates such as Minister of Education and Culture Regulation No. 35/2015 and the SDGs National Action Plan in higher education (Asmayawati et al., 2024; Ramli et al., 2025). PKJ is expected to empower students with values that drive pro-environmental and responsible behavior, thus contributing to sustainable development goals.

The philosophical values of Kejojokartaan are better known as the Trilogy, namely *Hamemayu Hayuning Bawana*, *Sangkan Paraning Dumadi*, and *Manunggaling Kawula Gusti*. *Hamemayu Hayuning Bawana* comes from three words meaning beautifying the beauty of the world, enhancing the beauty of the world, preserving the beauty of the world. The word "world" refers to humans and all natural contents. This value signifies harmony between God, humans, and the universe (Sulistiyan et al., 2021). This harmony can be interpreted as protection for human life, mutual respect, and caring for the environment. It includes the obligation of "Tri Satya Brata" and is directly proportional to climate change management, natural resource protection, and collaboration to prevent global warming. Deepening the value of *Hamemayu Hayuning Bawana* aligns with the goal of protecting nature, being aware, and considering future generations. This value can influence student behavior to adopt a sustainable lifestyle. *Sangkan Paraning Dumadi* means the origin and purpose of creation or the origin and purpose of human life. It teaches that every human must know and be aware of their origin and purpose in this world. Humans are homosapiens who are given advantages in thinking and adapting to create various things. However, desires often dominate decision-making. Modern humans are increasingly distant from nature because they feel they do not directly interact with various organisms and plants. With awareness of the origin and purpose of human creation, the orientation towards temporary control should not dominate. Being aware of the decisions taken, thinking about their impact on the environment, and establishing harmony with nature are part of the purpose of human creation. Thus, by remembering the value of *Sangkan Paraning Dumadi*, humans are expected to live life with full awareness for the sustainability of the earth, nature, and future generations.

Manunggaling Kawula Gusti means the union of humans with their God, realizing that their entire life is in unity with the Divine. According to Middle Javanese literature (suluk), it describes that God resides within humans. This philosophy shows that humans are created by God and are connected to God. Therefore, humans can realize their purity if they behave well in harmony with their center, namely God. The interpretation of God here also applies to leaders or kings. The king is an incarnation of the Divine Being who has an obligation to provide welfare to his people. If this obligation is not fulfilled, the king will lose his legitimacy of power (Suseno, 1984). There are two messages from this philosophical value: first, individually, one must maintain purity by acting morally good; second, socially, collective welfare must be fought for by both the king and the people. This shows collaboration and harmony between the two actors of life. Cooperation between leaders and followers in protecting the environment—where protecting nature morally is goodness—will create the practice of *Manunggaling Kawula Gusti* value. Empirical studies on the interpretation of Kejawartaan values are still minimal. Not many universities in Yogyakarta have incorporated the PKJ curriculum into their learning. The Department of Fine Art Education at UNY has begun integrating PKJ into its courses. However, it needs to be reviewed whether Kejawartaan values are interpreted in terms of art or environmental science. Department of Education, Youth, and Sports DIY prepares PKJ as a culture-based character education for developing intelligence, morality, critical thinking, and systems thinking. Furthermore, Department of Education, Youth, and Sports DIY allows universities to implement it through various means, such as structured activities, courses, and the Merdeka Belajar Kampus Merdeka (MBKM) program.

This study wants to see whether PKJ, when included in the environmental science curriculum, can produce students who are aware of environmental sustainability. Therefore, supporting theories are needed to evaluate this research. Introducing Kejawartaan values aligns with the concept of Traditional Ecological Knowledge (TEK). This concept accumulates knowledge, practices, and beliefs in the relationship between life and the surrounding environment (Gruberg et al., 2022; Rai & Mishra, 2022). TEK is disseminated from generation to generation through cultural experience and direction. The relevance of Kejawartaan values in TEK discusses how local wisdom can be integrated into a higher education curriculum. The Kejawartaan values contain principles of balance, harmony, and moral limits in utilizing nature. The value of *Hamemayu Hayuning Bawana* represents the preservation and maintenance of ecological balance. The value of *Sangkan Paraning Dumadi* fosters existential awareness that drives a sense of moral responsibility for human actions towards nature. Meanwhile, the value of *Manunggaling Kawula Gusti* strengthens the spiritual-ecological dimension that sees nature as part of oneself, not just an object, so humans do not have a human-centered worldview. Through the TEK framework, local philosophical values are not only seen as local identity but also as a relevant system for answering existing environmental problems. Thus, TEK becomes a conceptual bridge between Kejawartaan values and the sustainability agenda.

The concept of Education for Sustainable Development (ESD) developed by United Nations Educational, Scientific and Cultural Organization (UNESCO) becomes the main analytical framework in this study, integrating Kejawartaan values into pedagogical goals (Hastangka et al., 2025). ESD refers to learning and activities that position education as the main instrument in transforming mindsets, values, and behaviors towards sustainability. The ESD learning approach combines various aspects such as environmental, social, and economic dimensions, including opportunities to increase environmental awareness, encourage behavioral change, and improve well-being for healthy living (Oe et al., 2022). Placing Kejawartaan values within ESD can align international efforts to promote sustainability through education. The philosophical value of *Hamemayu Hayuning Bawana* teaches to maintain and beautify the world, which when reflected upon leads to ecological awareness and responsibility for environmental preservation. *Sangkan Paraning Dumadi* becomes a philosophical value for reflecting on the origin and purpose of human life, which aligns with the ESD approach in building awareness and meaningfulness towards environmental sustainability. Furthermore, *Manunggaling Kawula Gusti* affirms the unity

between humans and God, strengthening awareness of human relations with nature. It is hoped that the ESD concept will explain how local wisdom is integrated into environmental science learning, enriching educational experiences and supporting ESD by making learning more contextual and meaningful, especially in higher education, where curriculum innovation integrates cultural, ecological, and philosophical values into a unified whole.

After using TEK as a translator of Kejojgakartaan values into knowledge, then operationalizing them in the curriculum through ESD, a concept is needed to help shape awareness, values, beliefs, and personal norms. Internalizing local wisdom into personal norms can use the Value-Belief-Norm Theory (VBN). VBN explains that pro-environmental behavior arises through a series of psychological processes, where values shape beliefs, which then influence personal norms, and finally drive action or behavior. The VBN model framework is divided into three dimensions: values, beliefs, and personal norms (Al Mamun et al., 2024; Eiman, 2024; Karakaş, 2024). These three dimensions can be explained through value orientation: New Environmental Paradigm (NEP), Awareness of Consequences (AC), Ascription of Responsibility (AR), and Personal Norms (PN) (Chunhua et al., 2023). The value of *Hamemayu Hayuning Bawana* can be positioned as an orientation that environmental awareness is a priority. By integrating VBN, this study can examine the psychological pathway from the philosophical understanding of Kejojgakartaan to its adoption in students' lifestyles. Based on the explanation of the theories above, there are interconnections between them. Kejojgakartaan values can be understood as a form of Traditional Ecological Knowledge that becomes the foundation for harmonizing humans and nature and studying how local wisdom becomes knowledge. Then, through the UNESCO framework of Education for Sustainable Development, these values are integrated into the higher education curriculum aimed at environmental sustainability awareness. To achieve the goal of internalization into student lifestyles, it is then explained through the Value-Belief-Norm Theory, where cultural values will shape ecological beliefs and personal norms that ultimately affect a sustainable lifestyle.

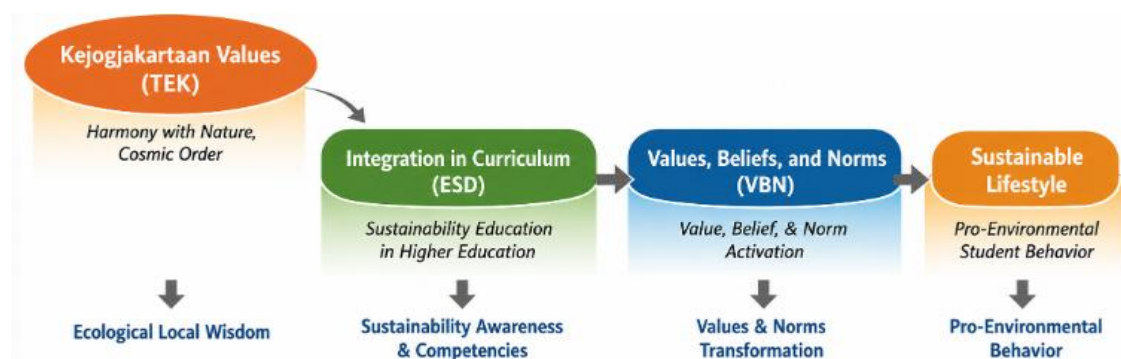


Fig. 1. Research theoretical design

Although there are studies on the application of one of the Kejojgakartaan values and the use of the ESD concept in education, there are still not many studies that discuss the integration of Kejojgakartaan values into sustainability competencies. There is still a lack of empirical studies that systematically analyze how Kejojgakartaan values are integrated into the higher education curriculum and how this integration affects student lifestyles. Although the DIY Department of Education, Youth, and Sports has officially issued a guidebook, the reality is that few universities have started to incorporate PKJ into their learning curriculum. Thus, there is a gap in explaining how local cultural values can be operationalized through the ESD framework, understood as TEK, and explained psychologically through VBN in shaping students' sustainable lifestyles.

This study integrates Traditional Ecological Knowledge (TEK), Education for Sustainable Development (ESD), and Value-Belief-Norm Theory (VBN) into a single conceptual model that explains the transformation flow from Kejojgakartaan cultural values to their implementation into students' sustainable behavior. This integration has not been

widely carried out in the context of Indonesian higher education. Furthermore, in this study, Kejojaksanaan values are not only positioned as culture-based character education but also as a form of TEK relevant to the SDG agenda. Conceptually, the novelty of this study lies in demonstrating that local cultural values can function as a bridge to implement the global SDG agenda in higher education. Based on these gaps and novelties, this study has several objectives: to analyze how Kejojaksanaan values are interpreted as a form of Traditional Ecological Knowledge in higher education; to examine the process of integrating PKJ into the higher education curriculum through the ESD framework; to explain how the internalization of Kejojaksanaan values affects students' values, belief, and personal norms based on VBN; and to evaluate the contribution of integrating Kejojaksanaan values in encouraging the formation of sustainable lifestyle habits among students.

2. Methods

This study uses a qualitative approach due to its suitability for achieving a deep understanding of the internalization process of Kejojaksanaan values into student behavior. The qualitative approach allows researchers not only to measure students' level of understanding of Kejojaksanaan values but also to explore how these values are interpreted, integrated, and implemented in daily behavior. Through this approach, researchers can delve deeper into the subjective experiences of students regarding their absorption and internalization of Kejojaksanaan values. Values such as *Hamemayu Hayuning Bawana*, *Sangkan Paraning Dumadi*, and *Manunggaling Kawula Gusti* become part of the ecological awareness that can be applied in student life. Thus, the qualitative approach serves as an instrument to answer the research question of how the process of internalizing cultural values into behavior occurs. The subject of this study is a lecturer who teaches courses that integrate PKJ at the Department of Fine Arts Education, Yogyakarta State University. The selection of the lecturer as the sole subject was based on the consideration that lecturers are key actors who have direct understanding of the curriculum design process, learning implementation, and observation of student development. The subject criteria included lecturers who have taught PKJ-integrated courses for at least one semester and are involved in preparing the syllabus or lesson plan (RPS) for those courses. Interviews with students and curriculum planners were not conducted due to limited access and time. The number of informants was selected based on the principle of data saturation. Data collection was conducted through interviews with the lecturer.

In addition to primary data, this study also collected and analyzed relevant secondary data. Syllabus and lesson plan analysis was conducted to identify how Kejojaksanaan values are integrated into learning objectives, materials, and evaluation to support understanding of the environment and its sustainability. In addition to analyzing departmental documents, the PKJ guidebook issued by Department of Education, Youth, and Sports DIY was also analyzed. A literature study was conducted to strengthen understanding of the internalization of Kejojaksanaan values into self-understanding. This combination of primary and secondary data is expected to provide a holistic understanding of the phenomenon under study. Data in this study came from two sources primary data and secondary data. Primary data were obtained directly from research informants through in-depth interviews. Primary data sources included the lecturer teaching the related course and the syllabus planner. Secondary data were obtained from official documents such as the syllabus, lesson plan (RPS), PKJ Guidebook for Higher Education from Department of Education, Youth, and Sports DIY, the study program curriculum, and supporting literature relevant to the research.

In qualitative research, the researcher acts as the main instrument (human instrument) who plays a role in planning, collecting, analyzing, and interpreting data. The researcher interprets findings in the field, allowing flexibility in responding to existing dynamics and understanding the subjective meanings of informants. Data collection in this study used two complementary main techniques. First, a documentation study was conducted on the syllabus, lesson plan (RPS), PKJ Main Book, PKJ Guidebook for Higher Education, and the

UNY 2025 Curriculum Guideline. The documentation study aimed to understand how Kejojaksanaan values are formally designed in curriculum policies and translated into learning documents. Second, an in-depth interview was conducted with one lecturer teaching the "Kejojaksanaan Education" course at the Department of Fine Arts Education, UNY. The interview aimed to explore the experiences, strategies, and challenges of the lecturer in integrating PKJ values into learning. The interview was conducted semi-structurally based on an interview guide developed from the TEK, ESD, and VBN theoretical frameworks. The researcher did not conduct direct observation of the lecture process and campus environment due to limited access. Additionally, interviews with students and curriculum planners were not conducted due to time and reach limitations. Thus, the data collected in this study predominantly reflect the perspective of the lecturer as the main actor in PKJ implementation.

This study used source triangulation and method triangulation. Source triangulation was conducted by comparing information obtained from policy documents (PKJ Main Book, PKJ Guidebook, UNY Curriculum Guideline) and implementation documents (RPS), as well as interview data from the lecturer. Method triangulation was conducted by comparing the results of the documentation study and the in-depth interview. The researcher acknowledges that the absence of data from students and curriculum planners is a limitation, so source triangulation could not be carried out optimally. Therefore, the findings of this study are more exploratory and need to be verified through further research involving more informants. Data analysis in this study aims to examine and discuss data in depth to obtain appropriate meaning, interpretation, and conclusions. According to Sugiyono, data analysis techniques in qualitative research are inductive, involving analysis based on the data obtained. Patterns of relationships are then described or become hypotheses, and with additional supporting data, conclusions are drawn as to whether the hypothesis can be accepted (Nasution & Fattah, 2023). This study used a combination of three complementary data analysis approaches. First, the Miles et al. (2014) interactive analysis model was chosen as the main framework. This model consists of three stages: data condensation, data display, and conclusion drawing (Saleh & Sirajuddin, 2017). This model was chosen for its flexibility in allowing simultaneous analysis with the data collection process, enabling the direction of the research to be determined based on initial field findings. It also allows researchers to transform raw data into meaningful information (Qomaruddin & Sa'diyah, 2024).

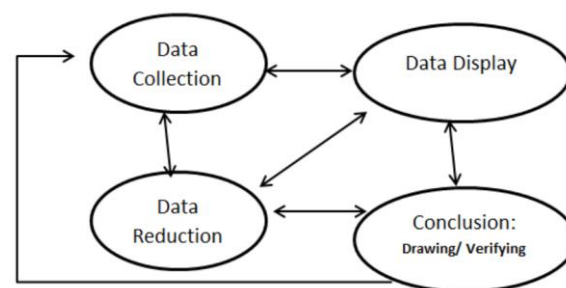


Fig. 2. Interactive model of qualitative data analysis
(Miles et al., 2014)

Furthermore, to analyze in-depth interview data aimed at exploring the subjective experiences of lecturers, this study used thematic analysis following the six phases of Braun and Clarke (2006). The six phases include data familiarization through repeated reading of interview transcripts, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and writing the report (Yardley, 2023). Thematic analysis was chosen for its ability to identify, analyze, and report patterns of meaning emerging from the subjective experiences of informants, enabling researchers to explore how Kejojaksanaan values are internalized and interpreted. Third, to analyze document data such as the syllabus, lesson plan (RPS), and PKJ guidebook, the researcher used content analysis

referring to Klaus Krippendorff's approach (2018). According to Krippendorff, content analysis is a method used to analyze qualitative data by identifying patterns and themes within texts or other media. The steps applied to analyze these data were sampling units, recording units, and context units (Krippendorff, 2018). This technique was chosen to systematically examine how Kejojaksanaan values are translated into learning components such as learning outcomes, materials, methods, and evaluation in the syllabus and lesson plan. Content analysis was used to assess the alignment of the Kejojaksanaan education program implementation with the guidebook issued by Department of Education, Youth, and Sports DIY.

The selection of the combination of three data analysis approaches was based on their suitability with the data characteristics and the variety of research objectives. The Miles et al. (2014) interactive analysis model was chosen as the main framework because it provides flexibility to conduct analysis simultaneously with data collection and allows transformation of raw data from various sources into meaningful information through three stages: data condensation, data display, and conclusion drawing. The Braun and Clarke (2006) thematic analysis was chosen specifically for analyzing in-depth interviews because this method excels in identifying patterns of meaning from the subjective experiences of informants, making it suitable for exploring the process of Kejojaksanaan value internalization. Meanwhile, Krippendorff's (2018) content analysis was chosen for examining documents such as the syllabus, lesson plan, and PKJ guidebook because it allows systematic text analysis to assess the suitability of implementation with official policies. Thus, these three approaches were methodologically selected to precisely answer each research objective that had been formulated.

3. Results and Discussion

This section presents initial research results obtained from document analysis, including PKJ Main Book, PKJ Guidebook for Higher Education (Department of Education, Youth, and Sports DIY, 2023), Yogyakarta State University 2025 Curriculum Development Guideline, and the syllabus and Lesson Plan (RPS) of the "Kejojaksanaan Education" course (BSB60203) at the Department of Fine Arts Education, UNY. Field data for this study were obtained from in-depth interviews with one lecturer teaching the "Kejojaksanaan Education" course at the Department of Fine Arts Education, UNY. Interviews with students and curriculum planners were not conducted due to limited access and time. Observation of the lecture process was also not possible. Thus, the data presented in this section mostly comes from document analysis and the lecturer's perspective as the main actor in PKJ implementation.

Table. 1 Summary of data sources

Data type	Data source	Status	Data function
Secondary data	PKJ Main Book	Analyzed	Understand the philosophical foundation and PKJ implementation strategy
Secondary data	PKJ Guidebook for Higher Education	Analyzed	Identify PKJ philosophical values and ideal implementation guidelines
Secondary data	UNY 2025 Curriculum Guideline	Analyzed	Understand curriculum policy and space for local value integration
Secondary data	RPS of "Kejojaksanaan Education" (BSB60203)	Analyzed	Identify how PKJ philosophical values are translated into learning
Primary data	Lecturer Interview	Planned	Explore experiences, strategies, and challenges of PKJ implementation

This study analyzed two main PKJ documents: the PKJ Main Book (Sutrisna et al., 2023) as the foundational document containing the philosophical foundation, ontology, epistemology, axiology, and PKJ implementation strategy, and the PKJ Guidebook for Higher Education (Department of Education, Youth, and Sports DIY, 2023) as an operational

derivative document providing concrete examples of implementation in higher education. Both documents consistently formulate three main philosophical values or core beliefs that form the foundation of Kejojaksanaan Special Education. These three values are called the Trilogy. The following is an analysis of the potential of each philosophical value in encouraging students' sustainable lifestyle, based on the content of both documents. The PKJ Main Book (Sutrisna et al., 2023) states that PKJ aims to create a new, superior civilization to produce "Jalma kang Utama," namely humans who are obedient to God Almighty, uphold humanity, unity, democracy, justice, are free spiritually and physically, and always foster harmony in social, national, and state life.

In the context of a sustainable lifestyle, *Jalma kang Utama* is not only intellectually intelligent but also has ecological awareness and moral responsibility towards the environment. The PKJ Main Book affirms that the superior generation that is the goal of PKJ is a generation that "appreciates the universe and all its contents so that peace and beauty of the world are created" (Sutrisna et al., 2023). The PKJ Guidebook for Higher Education emphasizes that "education in Yogyakarta must have its own distinctiveness, characteristics, or identity" (Department of Education, Youth, and Sports DIY, 2023), one manifestation of which is concern for environmental preservation. The Governor's remarks in the PKJ Main Book (2023) also emphasize that PKJ aims to form individuals who possess the spirit of the trilogy: *Hamemayu Hayuning Bawana* which is harmonious, *Sangkan Paraning Dumadi* which reflects wisdom, and *Manunggaling Kawula Gusti* which unites. *Hamemayu Hayuning Bawana* means "beautifying the beauty of the world" or "preserving the beauty of the universe." The guidebook explains that this value contains teachings about attitudes and behaviors that always prioritize harmony, alignment, and balance in the relationships between humans and God, humans with fellow humans, and humans with their natural environment (Department of Education, Youth, and Sports DIY, 2023). The hope and goal of this attitude is to create a sustainable, prosperous, peaceful, and prosperous life. This value is also reinforced by the Tri Setya Brata quoted in the guidebook, specifically the first substance: *Rahayuning Bawana Kapurba Waskithaning Manungsa*, which means the safety and sustainability of this world begin with human wisdom" (Department of Education, Youth, and Sports DIY, 2023).

Thus, conceptually, the internalization of *Hamemayu Hayuning Bawana* has the potential to encourage students to adopt pro-environmental behaviors such as reducing plastic waste, sorting waste, saving energy, using environmentally friendly materials, and participating in nature conservation activities. *Sangkan Paraning Dumadi* means "origin and purpose of creation" or "origin and purpose of human life." The guidebook explains that this value teaches every human to know and be aware of their origin (from God) and their final destination (returning to God). This awareness is expected to encourage humans to act with full moral responsibility (Department of Education, Youth, and Sports DIY, 2023). In the context of a sustainable lifestyle, the value of *Sangkan Paraning Dumadi* has relevance through the path of existential awareness. The PKJ guidebook states that "humans live in this world only temporarily, as if stopping for a moment to drink water (urip iku bebasan mung mampir ngombe)" (Department of Education, Youth, and Sports DIY, 2023). The awareness that life is not just for momentary pleasure encourages humans to consider the long-term impact of each action, including on the environment. The guidebook also quotes the teaching *Rahayuning Manungsa Dumadi Karana Kamanungsane*, which means "the safety of humans occurs because of their humanity" (Department of Education, Youth, and Sports DIY, 2023).

Thus, the internalization of *Sangkan Paraning Dumadi* has the potential to encourage students to reflect before acting, avoid excessive consumerism, consider the environmental impact of every decision, and act with a "sense of moral responsibility" based on existential awareness. *Manunggaling Kawula Gusti* means "the union of humans with their God" (vertical dimension) or "the union of the people with the King" (horizontal dimension). The guidebook explains that this philosophy contains two messages: individually, everyone must maintain their purity because God resides within every human; socially, collective welfare must be fought for by both the people and leaders through collaboration and

harmony (Department of Education, Youth, and Sports DIY, 2023). In the context of a sustainable lifestyle, the value of *Manunggaling Kawula Gusti* has relevance through two paths. First, the spiritual path: because nature is God's creation, protecting it is part of worship and devotion to God. Second, the social path: this value encourages mutual cooperation (gotong royong) and collaboration in protecting the environment. The guidebook also quotes the teaching Darmaning Satriya Mahanani Rahayuning Nagara, which means "the dedication of every person who dedicates themselves to the state brings safety to the state" (Department of Education, Youth, and Sports DIY, 2023). Thus, the internalization of *Manunggaling Kawula Gusti* has the potential to encourage students to participate in collective environmental activities (community work, gotong royong), initiate or join environmental care communities, and see nature as a "trust from God" that must be protected.

Table. 2 Summary of views based on PKJ guidebook and curriculum documents

Philosophical value	Impact on sustainable behavior	In PKJ main book	In PKJ guidebook	In RPS
<i>Hamemayu Hayuning Bawana</i>	Maintain ecological balance, reduce waste, save energy	Mentioned as core trilogy, linked to human-nature-God harmony	Explained in detail with example of <i>Tri Setya Brata</i>	Mentioned as main value, but no specific assignment related to environmental behavior
<i>Sangkan Paraning Dumadi</i>	Self-reflection before acting, avoid consumerism	Mentioned as foundation of existential awareness	Linked to <i>urip mung mampir ngombe</i> (life only passes by)	Mentioned in context of cultural reflection, not yet linked to sustainable consumption
<i>Manunggaling Kawula Gusti</i>	Collective environmental action, collaboration, see nature as God's trust	Mentioned as peak of Javanese spirituality	Explained two messages: individual and social	Mentioned in context of Javanese leadership, not yet linked to collective environmental action

The three philosophical values of PKJ conceptually have great potential to encourage a sustainable lifestyle. However, their implementation in the RPS remains theoretical and has not been translated into learning outcomes, methods, or assessments that explicitly lead to changes in student behavior. There is a gap between policy documents and implementation documents. Yogyakarta State University's curriculum policy supporting PKJ integration is outlined in the Yogyakarta State University 2025 Curriculum Development Guideline. This document was analyzed to understand the university-level curriculum policy that provides an umbrella for the integration of local values such as PKJ. The UNY 2025 curriculum guideline states that UNY's vision is "to become a world-class educational university that is excellent, creative, and sustainably innovative" (UNY, 2025). The keyword "sustainable" in this vision indicates that sustainability is a main orientation of UNY's institutional development, including curriculum development. UNY's mission relevant to this study is "to organize academic, vocational, and professional education that is excellent, creative, and sustainably innovative" (UNY, 2025).

Thus, institutionally, UNY has a commitment to sustainability education that aligns with efforts to integrate PKJ values to encourage students' sustainable lifestyles. The UNY 2025 curriculum guideline explicitly states that the curriculum must be "responsive to social needs" and "incorporate contemporary issues such as environmental sustainability, digital ethics, and social entrepreneurship into courses and other academic activities" (UNY, 2025). This shows that, in terms of policy, UNY opens space for integrating sustainability issues and local values into the curriculum. Furthermore, the document also states that the UNY curriculum is developed by paying attention to local context and cultural values (UNY, 2025). This sociological foundation provides a formal umbrella for study programs, including the Department of Fine Arts Education, to integrate local wisdom values such as

PKJ into their respective curricula. The UNY 2025 curriculum guideline includes the University-Wide Compulsory Course "Education and Sustainable Development" with code MWU60203 and a weight of 2 credits (UNY, 2025). This course is compulsory for all UNY students across all study programs.

The existence of this course shows that UNY institutionally has a formal commitment to sustainability education. However, based on document analysis, no explicit connection has been found between the "Education and Sustainable Development" course and the "Kejogjakartaan Education" course that is the focus of this study. These two courses are recorded as stand-alone courses (UNY, 2025; RPS PSR UNY, 2025). This indicates that the integration of PKJ values with sustainability education is still potential and has not been systematically institutionalized. Curriculum guideline provides flexibility for each study program to develop courses according to the characteristics and advantages of each program (UNY, 2025). This flexibility is what the Department of Fine Arts Education at UNY utilized to develop the "Kejogjakartaan Education" course (BSB60203) as a compulsory course in the first semester. University-level curriculum policy has enabled PKJ integration into UNY's curriculum, though its effectiveness requires field verification. The Department of fine arts education was selected as the research site because it has integrated PKJ through a compulsory first-semester course called "Kejogjakartaan Education" course (code: BSB60203).

Fine arts have a natural connection with *Hamemayu Hayuning Bawana*, which emphasizes "beautifying the world." Students who internalize this value consider the ecological impact of their work, such as using recycled material or raising environmental themes issue. *Sangkan Paraning Dumadi* fosters critical reflection on material origins. Students who contemplate where paper and paint come from develop existential awareness that encourages environmentally friendly material choices. *Manunggaling Kawula Gusti* addresses the social and spiritual dimensions of sustainability. Through collaborative art projects involving students, lecturers, and the community, this value strengthens social bonds and collective environmental responsibility. Based on the analysis of the RPS document for the "Kejogjakartaan Education" course (BSB60203) for the odd semester of the 2025 academic year (PSR UNY, 2025), several indications were found that this course has the potential to direct students towards a sustainable lifestyle, although not explicitly.

First, this course aims to invite students to explore the cultural background and Javanese personality, specifically Kejogjaan, according to ethical philosophy, ethical issues, Javanese worldview, Javanese personality, and Javanese leadership. This course is a theoretical course, with teaching methods of question and answer/discussion through Problem-Based Learning and Project-Based Learning. Second, the Course Learning Outcomes relevant to sustainability include students are able to appreciate and respect cultural diversity and integrate the principle of mutual cooperation (CPMK-2), and students are able to apply knowledge about Yogyakarta's values in designing learning programs based on local wisdom (CPMK-6) (RPS PSR UNY, 2025). However, there is no CPMK that explicitly mentions "sustainable behavior" or "environmentally friendly lifestyle". Third, the learning methods used include discussion, fieldwork, and independent assignments. In week 4, students are invited to visit the Mataram Kotagede Mosque to learn directly about its history and surrounding environment (RPS PSR UNY, 2025). This experiential learning method has the potential to foster ecological awareness if directed appropriately.

Fourth, the main references used include the book *Javanese Ethics* (Suseno, 1984) and the PKJ Guidebook for Higher Education (Department of Education, Youth, and Sports, 2023). Both references contain the value of *Hamemayu Hayuning Bawana* which has ecological relevance. However, references to sustainability education or sustainable lifestyle are not yet visible in the RPS bibliography (RPS PSR UNY, 2025). Fifth, the assessment components are dominated by participative assessment (50%), with details of 50% for case studies, as well as cognitive assessment including attendance (5%), assignments (20%), midterm exam (10%), and final exam (15%) (RPS PSR UNY, 2025). However, there are no assessment indicators that specifically measure changes in student behavior towards a sustainable lifestyle.

Table 3. Mapping of PKJ value implementation in RPS

RPS component	Present/absent	Relevance to sustainable lifestyle
Learning Outcomes (CPMK)	Present	No CPMK explicitly mentions sustainable behavior or environmentally friendly lifestyle
Material	Present	PKJ values are taught theoretically through discussion
Method	Present	PBL and PjBL are used, but projects are not yet specific to environmental issues
Assignment	Present	Case studies and independent assignments exist, but no assignment measures behavior change
Assessment	Present	Dominated by participative assessment (50%), but no indicators for sustainable behavior
References	Present	Uses <i>Javanese Ethics</i> (Suseno, 1984) and PKJ Guidebook, no ESD or sustainable lifestyle references

This course successfully introduces PKJ values theoretically to students. However, there remains a gap between the introduction of values (cognitive domain) and the formation of sustainable behavior (affective and psychomotor domains). An in-depth interview was conducted with one lecturer teaching the PKJ-integrated course at the Department of Fine Arts Education, UNY. This lecturer has been teaching PKJ-integrated courses since 2025, including Interior Design, and Fine Arts and the Future. The lecturer is directly involved in preparing the syllabus and lesson plans for PKJ-integrated courses. The interview was conducted online via call, with recording of questions and further development to obtain the necessary in-depth interview results for this research. The lecturer stated that they quite understand the three philosophical values of Kejojokartaan. According to them, these three values are very relevant to environmental issues and the SDGs. The lecturer sees Kejojokartaan values as a form of local wisdom that can help build environmental awareness if applied today. Regarding the deepening of values before teaching, the lecturer explained:

"These values have been around for a very long time since the establishment of Yogyakarta in the 17th century and have been applied by the ancestors of the Jogja community so that Jogja can maintain harmony. I still feel these values in my grandparents' and parents' generation with sustainable practices, for example planting a tree when felling a tree. Preparing a new tree when you know the existing tree is getting old" (Lecturer, 2026).

The lecturer also revealed that a discussion was held as a form of PKJ socialization, although there has been no formal training from Department of Education, Youth, and Sports or the university. This interview conclusion shown lecturer has a good and deep understanding of Kejojokartaan values, even connecting them with personal experiences from previous generations. This shows that the lecturer's understanding is not only theoretical but also based on lived experience. The lecturer explained that Kejojokartaan values are incorporated into the syllabus and RPS through discussion topics and assignments. The learning method used is case studies, with specific assignments or projects designed to internalize PKJ values. Regarding the effectiveness of the approach used, the lecturer stated:

"There is no further research to measure effectiveness. However, from reflections at the end of the course, students already have knowledge about these values, at least one of the values analyzed and made into a product work" (Lecturer, 2026).

The biggest challenge faced by the lecturer was:

"The term PKJ philosophical values is not as popular as Western philosophical values, for example Stoicism, so it needs more massive introduction" (Lecturer, 2026).

The lecturer also affirmed that they connect PKJ teaching with global issues such as the SDGs and climate change. This interview conclusion PKJ integration in learning has been carried out through various methods, but its effectiveness has not been systematically measured. The main challenge is the low popularity of PKJ values compared to Western philosophies. The lecturer observed that students are able to understand the importance of considering sustainability in art and design practices. However, regarding the belief that protecting the environment is a personal responsibility, the lecturer stated:

"Not entirely sure because I haven't conducted in-depth research on awareness. But at least they can answer that they have a responsibility in sustainability" (Lecturer, 2026).

Interestingly, the lecturer admitted that they do not conduct detailed observation regarding concrete changes in student behavior on campus, such as reducing plastic waste or saving energy. Regarding the time needed for internalization, the lecturer explained:

"If it comes to internalization, it certainly takes longer, not stopping at this one year in the course that implements PKJ" (Lecturer, 2026).

Factors that accelerate internalization, according to the lecturer, are habituation strategies built communally. Inhibiting factors include the ease of accessing environmentally unfriendly items around students, "for example the ease of buying something with a plastic bag." The lecturer has not been able to name students who have shown significant changes but noted "looking at the students' interest in creating art works with environmental themes." Conclusion from this part is that the lecturer observed changes in the cognitive domain (knowledge) and affective domain (interest), but not in concrete behavior. The lecturer themselves admitted to not conducting systematic observation of student behavior changes. Lecturer stated that the university or department has implemented a specific policy by requiring students to take courses related to PKJ. Regarding facilities and infrastructure, the lecturer assessed that:

"Campus facilities and infrastructure are available" to support PKJ learning. The lecturer also revealed that there is collaboration with other parties such as Department of Education, Youth, and Sports, communities, or local government in several activities. Institutional support in terms of policy and infrastructure is available, although PKJ socialization still needs to be improved. The acknowledged that teaching PKJ-integrated courses greatly influenced their perspective on environmental issues: "Yes, it greatly influenced my perspective on environmental issues that have actually been born from a strong philosophy, but forgotten due to lack of massive socialization to the next generation" (Lecturer, 2026).

The lecturer have suggestions for future PKJ development:

"In the short term, PKJ needs to be socialized more massively for both lecturers and students. PKJ implementation is not only in courses but becomes a proud spirit of visionary thinking. In the digital era, it is necessary to utilize various platforms and also the need for influencers to get involved in campaigning for these philosophical values" (Lecturer, 2026).

3.1 Analysis of result

This section presents the analysis of research findings based on the three theoretical frameworks described in the previous chapter, namely Traditional Ecological Knowledge (TEK), Education for Sustainable Development (ESD), and Value-Belief-Norm Theory (VBN). These three frameworks are used as analysis variables to answer the research questions regarding how Kejojaksanaan values are integrated into the higher education curriculum

and the extent to which this integration encourages students' sustainable lifestyle. It is important to emphasize from the outset that these three frameworks are positioned in this research as a single process that is causally related, not just three independent analytical lenses.

Table 4. Summary of analysis frameworks

Framework	Code	Status	Framework	Code	Status
TEK	TEK-1	Partial	VBN	VBN-1	Beginning to form
	TEK-2	Fulfilled		VBN-2	Beginning to form
	TEK-3	Broken		VBN-3	Not yet formed
	TEK-4	Partial		VBN-4	Not yet formed
ESD	ESD-1	Partial	ESD	ESD-3	Partial
	ESD-2	Partial		ESD-4	Partial

TEK explains the source and way traditional ecological knowledge is understood. ESD explains how this knowledge is integrated into the curriculum and learning. VBN explains how the knowledge learned in class is internalized into values, beliefs, personal norms, and finally sustainable student behavior. By understanding them as a single flow, readers will see how a break at one stage has a chain impact on the next stage. The analysis is based on data obtained from document studies (PKJ Main Book, PKJ Guidebook for Higher Education, UNY 2025 Curriculum Guideline, and the RPS of the "Kejogjakartaan Education" course) as well as in-depth interviews with lecturer teaching the PKJ course at the Department of Fine Arts Education, Yogyakarta State University. Table 4 presents a summary of the analysis based on all variables of the three theoretical frameworks. This table serves as the main reference in the following discussion. Status Description: Fulfilled = variable fully fulfilled based on data. Partial = variable partially fulfilled or still has gaps. Beginning to form = initial indications appear but not strong yet. Broken = variable not fulfilled due to certain factors. Not yet formed = variable not yet fulfilled based on available data.

3.2 Analysis based on traditional ecological knowledge

The TEK framework analyses how Kejogjakartaan values are understood as a traditional ecological knowledge system across four variables. TEK-1, Understanding Values as Knowledge System. The lecturer demonstrated deep, embodied understanding of the three values, stating:

"I still feel these values in my grandparents' generation with sustainable practices, for example planting a tree when felling a tree" (Lecturer).

Students, however, remain at the cognitive level—they can explain the values but not internalize them. This shift from embodied to declarative knowledge weakens internalization. Status: Partial. TEK 2, Ecological Relevance of Values. All three values show ecological relevance. *Hamemayu Hayuning Bawana* has direct relevance as "beautifying and preserving the world." *Sangkan Paraning Dumadi* offers existential awareness that life is temporary, discouraging greed. *Manunggaling Kawula Gusti* provides spiritual and social paths through nature as God's creation and mutual cooperation. Status: Fulfilled. TEK-3, Intergenerational Knowledge Transmission. The lecturer gained understanding through life experiences with grandparents and parents. Students learn through texts, discussions, and assignments. This shift from cultural experience to theoretical learning changes knowledge from tacit (lived) to explicit (spoken). Consequently, students may pass exams but not internalize values as daily guides. This break directly impacts ESD processes. Status: Broken. TEK-4, Position of Values vs Modern Knowledge. The lecturer sees Kejogjakartaan values as aligning with modern environmental knowledge. However, the RPS lacks references to ESD, SDGs, or modern ecology. No systematic efforts bridge the two. Integration remains implicit, depending on individual lecturer initiative. Status: Partial.

Table 5. Analysis based on TEK

Framework	Code	Variable	Status
TEK	TEK-1	Understanding values as a knowledge system	Partial
	TEK-2	Ecological relevance of values	Fulfilled
	TEK-3	Intergenerational knowledge transmission	Broken
	TEK-4	Position of values vs modern knowledge	Partial

The TEK analysis reveals that Kejojokartaan values possess strong ecological relevance, particularly *Hamemayu Hayuning Bawana*, and the lecturer demonstrates deep embodied knowledge gained through intergenerational cultural experience. However, a critical break occurs in the transmission process, where knowledge shifts from lived experience (tacit) to theoretical learning (explicit), leaving students with only declarative understanding without true internalization. Furthermore, although the lecturer sees alignment between Kejojokartaan values and modern environmental knowledge, the curriculum lacks systematic integration of TEK with ESD, SDGs, or modern ecology, making such integration dependent on individual lecturer initiative. Thus, while the values themselves are ecologically relevant and the lecturer embodies them, the broken transmission chain and absent curriculum integration prevent students from internalizing these values as guides for daily sustainable action.

3.3 Analysis based on Education for Sustainable Development (ESD)

The ESD framework analyzes how Kejojokartaan values are integrated into curriculum and learning across four variables. ESD-1, Integration in Curriculum. PKJ values appear in course descriptions and discussion materials but are not translated into measurable learning outcomes. No learning outcome mentions sustainable behavior, and assessment lacks indicators for behavioral change. Thus, values entered the material domain but not outcome or assessment domains. Status: Partial. ESD-2, Transformative Learning Methods. RPS lists PBL and PjBL, but projects remain simulative (artwork about the environment) rather than applicative (action for the environment). ESD demands real behavioral change, not symbolic representation, explaining why personal norms and behavior have not formed. Status: Partial. ESD-3, Connection to Global Agenda. The lecturer connects PKJ to SDGs and climate change orally, but this connection is not documented in the RPS. The lecturer is individually more advanced than curriculum documents, indicating that global agenda integration depends on individual initiative, not systematic institutionalization. Status: Partial. ESD-4, Contextual and Meaningful Learning. The RPS includes a field trip, but the lecturer identified an inhibiting factor: easy access to plastic bags on campus. The external environment sends contradictory messages. Students learn to protect nature in class but see unsustainable behavior tolerated outside. According to VBN, personal norms require consistency between internal beliefs and external support. This contradiction weakens internalization, explaining why VBN-3 and VBN-4 have not formed despite VBN-1 and VBN-2 emerging. Status: Partial.

Table 6. Analysis based on ESD

Framework	Code	Variable	Status
ESD	ESD-1	Integration in curriculum	Partial
	ESD-2	Transformative learning methods	Partial
	ESD-3	Connection to global agenda	Partial
	ESD-4	Contextual and meaningful learning	Partial

The ESD analysis reveals that PKJ integration into the curriculum remains partial across all four variables. Values appear in materials but not in learning outcomes or assessment. PBL and PjBL are used but remain simulative rather than applicative. Connection to the global agenda depends on individual lecturer initiative rather than systematic institutionalization. Most critically, the contradictory campus environment—where easy access to plastic bags tolerates unsustainable behavior—sends messages that directly

conflict with values taught in class. This inconsistency prevents the formation of personal norms and explains why behavioral change has not occurred despite emerging values and beliefs. Without systemic curriculum redesign and environmental consistency, ESD cannot achieve its transformative goals.

3.4 Analysis based on Value-Belief-Norm (VBN)

The VBN framework analyzes the psychological process of internalizing Kejojaksanaan values into sustainable behavior. This study uses generic indicators (reducing plastic waste, saving energy, sorting waste), which may not fully capture fine arts contexts. The following analysis should be read with this methodological awareness. VBN-1, Values. Students show "interest in creating artworks with environmental themes," indicating affective-level internalization of *Hamemayu Hayuning Bawana*. However, internalization has only reached the interest stage, not commitment or deep internalization. Status: Beginning to form. Implication of Finding and In-depth Discussion: VBN-2, Beliefs. Students verbally state responsibility toward sustainability, indicating awareness of consequences is forming. However, validity and depth require verification through direct student interviews. Status: Beginning to form. VBN-3, Personal Norms. The lecturer does not conduct detailed observation and notes that internalization takes longer than one semester. Personal norms—moral obligation to act pro-environmentally—remain unformed. As explained in ESD-4, the contradictory environment (easy plastic bag access) is a major obstacle. VBN requires consistency between internal beliefs and external support for personal norms to form. Status: Not yet formed. VBN-4, Behavior. No concrete behavior change has been detected using generic indicators. However, non-detection does not mean absence of change. Three alternative possibilities exist: generic indicators may be inappropriate for fine arts; systematic observation was lacking; one semester may be insufficient. Fine arts students have unique behavioral pathways. Using recycled materials, optimizing production waste, saving paint by efficient mixing—these are sustainable behaviors not captured by generic indicators. Therefore, this study offers alternative indicators: use of recycled materials, waste optimization, studio energy efficiency, local material selection, and (e) environmental advocacy themes. Status: Not yet identified.

Table 7. Analysis based on VBN

Framework	Code	Variable	Status
VBN	VBN-1	Values	Beginning to form
	VBN-2	Beliefs	Beginning to form
	VBN-3	Personal Norms	Not yet formed
	VBN-4	Behavior	Not yet formed

The VBN analysis reveals that internalization of Kejojaksanaan values has only reached the initial stages. Values and beliefs are beginning to form, evidenced by student interest in environmental themes and verbal statements of responsibility. However, personal norms remain unformed, primarily due to the contradictory campus environment that sends inconsistent messages. Concrete behavioral change has not been detected, though this may result from inappropriate generic indicators, lack of systematic observation, or insufficient time. Fine arts students exhibit unique behavioral pathways—using recycled materials, optimizing waste, saving paint—that generic indicators fail to capture. Thus, this study offers alternative fine-arts-specific indicators for future research. The absence of detected behavior change does not necessarily mean its absence; rather, it reflects methodological limitations that require further investigation.

3.5 Synthesis and integrated of triangulation TEK-ESD-VBN

The integration fails at three connected levels. Students learn values as theory, not lived experience. The curriculum asks for discussion, not action. The campus environment

contradicts the values taught. These three breaks together prevent values from becoming behavior. The ESD framework reveals that values appear in course materials but not in learning outcomes or assessment, and methods remain simulative rather than applicative, resulting in broken curriculum design. The VBN framework shows that values and beliefs are beginning to form, but personal norms and concrete behavior remain undeveloped due to a contradictory campus environment. From analyze we found that each barrier leads to the next. First, knowledge transmission fails: students learn values as theory, not as lived experience. Because of this, the curriculum design stays at the discussion level and never demands real action. And because the curriculum never demands action, and the campus environment contradicts what students learn, their personal norms never form. The three frameworks are not separate but casually linked. TEK reveals broken transmission, which directly causes ESD's partial integration. This then leads to VBN's failure to form personal norms and behavior. Together, these three barriers form a casual chain that explains why conceptual potential does not translate into real change. This casual chain is the main theoretical contribution of this study, showing that successful integration requires simultaneous alignment of all three frameworks, not just improvement in one area.

This study both supports and expands upon previous research. Like Zocher & Duarte (2022), it confirms that legitimization of local knowledge and student agency are critical success factors. However, this study expands the concept of agency by demonstrating that agency is not merely individual capacity but the result of system design, including learning outcomes, methods, assessment, and campus environment. Similarly, this study confirms Putra et al. (2025) regarding Tri Hita Karana in Bali but adds the critical qualification that innovators do not emerge automatically; applicative projects and appropriate assessment are necessary prerequisites. It also confirms Pangsuma et al. (2024) regarding Bugis local wisdom and PBL but finds that the same method loses effectiveness in the Kejojgaan context due to systemic differences, particularly the contradictory campus environment. This study makes two primary contributions to the field. First, it expands the concept of student agency from individual capacity to the result of learning system design. Second, it identifies three causally related chain barriers—transmission, curriculum design, and environment—that explain why integration often fails. Unlike most previous research, which focuses on single barriers in isolation, this study demonstrates their interconnection and provides an explanatory framework for understanding why implementation fails, not merely that it fails.

Based on comparisons across Bali, Bugis, and Yogyakarta, three prerequisites for successful integration emerge. First, local wisdom values must be translated into measurable learning outcomes, methods, and assessments, not merely listed in discussion materials. Second, learning must encourage real action, not simulative projects such as making artwork about the environment. Third, the campus environment must be consistent with the values taught, because without environmental consistency, even the best learning methods lose their effectiveness. However, three chain barriers prevent this potential from transforming into actual student behavior. Systemic improvement is therefore required at three levels simultaneously: knowledge transmission through direct experience, curriculum design through applicative methods and assessment, and the campus environment through consistent policies. Ultimately, agency is the result of system design, not individual innate characteristics.

3.6 Implication of findings and in-depth discussion

These findings show that the common assumption so far—that including local wisdom values in the curriculum will automatically change student behavior—is not fully correct. The value of *Hamemayu Hayuning Bawana* has been taught in class, students can explain its meaning, and the lecturer understands it deeply. However, real behavior change was not detected. This indicates that value integration requires more than just knowledge transfer. Theoretically, this study proposes that successful value internalization depends on three interrelated layers: how values are understood (internalized or merely known), how values are taught (through real action or simulation), and the alignment of the supporting

environment. When one of these layers does not function, the internalization process will be hindered. Several improvements are needed based on the findings of this study. First, the curriculum must be designed to create space for action, not just space for learning. Student projects need to be directed toward real action, for example, designing a plastic reduction campaign on campus or managing a campus area with conservation principles. Second, assessment must measure behavior change, not just cognitive understanding. Observation, reflective journals, and action portfolios are needed as assessment instruments. Third, the campus environment must be aligned with the values taught. Campus policies such as plastic-free canteens, segregated waste bins, and mandatory reusable water bottles need to be implemented so that the message received by students is consistent.

The barriers found in this study are difficult to solve because each challenge requires a different type of solution. Intervention at one level will not be effective if other levels are not also addressed. Improving the curriculum without changing the campus environment will cause students' good intentions to be continuously tested by the ease of not caring. Conversely, improving the environment without strengthening the curriculum will only produce compliance, not awareness. This dilemma shows that integrating local wisdom in higher education has no instant solution. All three levels must run simultaneously and reinforce each other. Kejojaksanaan values have great potential to shape a young generation that cares about the environment. This potential does not realize itself. It requires curriculum design that provides space for action, an assessment system that measures behavior change, and a campus environment consistent with the values taught. Without these three, education will only teach noble values inside the classroom while student behavior outside the classroom does not change much.

3.7 Synthesis of discussion

Kejojaksanaan values, particularly *Hamemayu Hayuning Bawana*, possess significant conceptual potential to encourage sustainable lifestyles. However, this potential does not automatically translate into behavioral change. The causes are systemic, not rooted in the values themselves or student inability. The value transmission process has shifted from cultural experience to theoretical learning. Lecturers rely more on lectures and discussions than direct practice. Students listen to explanations, read texts, and answer exam questions without experiencing how values are practiced daily. Consequently, students only know the values cognitively without internalizing them.

The curriculum is designed to help students understand values, not apply them in real action. Assignments remain simulative, such as creating artwork about the environment or writing field trip reports. Students are not tasked with real actions like designing plastic reduction campaigns or managing campus gardens. The campus environment sends contradictory messages: canteens sell drinks in single-use plastic, waste bins are not separated, and no policy requires reusable tumblers. Students are taught to protect nature in class but see the opposite practice outside. These three barriers form a causal chain. The transmission barrier weakens internalization from the start. The curriculum design barrier worsens the condition because learning is not directed toward real action. The environmental barrier cancels all previous efforts. Successful integration requires three simultaneous prerequisites: values must be internalized, not just known; learning must be applicative, not just simulative; and the environment must be consistent, not contradictory.

This study expands the concept of student agency. Agency is the ability to act according to learned values, but it will not emerge without curriculum space and environmental support. For example, students learning *Hamemayu Hayuning Bawana* should choose water-based paint over oil paint or use leftover materials. However, this ability requires assignments that demand conscious material choices. Agency is the result of learning system design, not individual innate characteristics. Reconnecting with the three frameworks, each barrier reflects failure in a specific domain. The transmission barrier reflects TEK failure: knowledge loses experiential dimension. The curriculum design barrier reflects ESD failure: learning is not transformative. The environmental barrier reflects VBN failure: personal

norms cannot form due to inconsistent messages. Thus, successful integration requires simultaneous alignment across three domains: TEK for internalized knowledge transmission, ESD for transformative learning design, and VBN for personal norm formation supported by a consistent environment.

3.8 Limitation

This study has several limitations; first data were limited to document analysis and interviews with one lecturer. The findings reflect the teacher's perspective rather than students' experiences. Interviews with students and curriculum planners were not conducted, leaving the picture of students' internalization incomplete. Without student confirmation, the researcher cannot verify whether their understanding reflects genuine internalization or responses to academic demands. Further research must involve student interviews to capture how they actually internalize the Kejojaksanaan values. Generic indicators of sustainable behavior were used, in fine arts-specific practices such as using recycled materials or optimizing production waste remained invisible. This study risks concluding that no behavior change occurred when change may have occurred in a different form. The study is also qualitative with a scope limited to one department at one university, requiring caution in generalization. The observation duration of only one semester is insufficient for deep behavioral change.

Students may have only reached the stage of recognizing values, not yet making them daily habits. Additionally, direct observation of lecturers and campus environment was not conducted. Findings about environmental contradictions rely entirely on the lecturer's statements. This study serves as an initial identification of systemic barriers across three domains: TEK (knowledge transmission losing experiential dimension), ESD (non-transformative curriculum design), and VBN (environment not supporting personal norm formation). The future agenda lies in simultaneously aligning these three domains. Without such alignment, the integration of local wisdom will never reach the goal of real behavioral change. Action research could test the effectiveness of applicative projects and green campus policies. Fine-art-specific indicators must also be developed. Without efforts, the great potential of Kejojaksanaan values will not translate into real student behavioral change.

4. Conclusions

This study aimed to analyze the integration of Kejojaksanaan philosophical values into higher education curriculum and evaluate their contribution to students' sustainable lifestyles. The finding reveals a significant gap between conceptual potential and actual implementation. The three philosophical values—*Hamemayu Hayuning Bawana*, *Sangkan Paraning Dumadi*, and *Manunggaling Kawula Gusti*—possess strong potential as a Traditional Ecological Knowledge framework to encourage ecological awareness. However, this potential remains largely untapped. The integration of PKJ into the curriculum through the Education for Sustainable Development framework is only partial. Values appear in discussion materials but have not been translated into learning outcomes, applicative projects, or behavioral assessments.

The main contribution of this study is the identification of three causally related chain barriers: transmission barrier, curriculum design barrier, and environmental barrier. To address these barriers, three concrete steps are recommended. First, at the course level, lecturers should replace simulative projects with applicative ones, such as designing campaign to reduce plastic on campus and measuring its impact over one semester. Second, at the assessment level, indicators must shift from generic measures to each program study practices. Third, at the university level, policies must create a consistent green campus environment by banning single-use plastic, providing facilities to support sustainability lifestyle. Without these concrete actions, the great potential of Kejojaksanaan values will not translate into real student behavioral change.

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Author Contribution

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During the preparation of this work, the authors used Grammarly to assist in improving grammar, clarity, and academic tone of the manuscript. After using this tool, the authors reviewed and edited the content as needed and took full responsibility for the content of the publication.

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References

- Al Mamun, A., Ma, Y., Reza, M. N. H., Ahmad, J., Wan, H. W. M. H., & Lili, Z. (2024). Predicting attitude and intention to reduce food waste using the environmental values-beliefs-norms model and the theory of planned behavior. *Food quality and preference*, 120, 105247. <https://doi.org/10.1016/j.foodqual.2024.105247>
- Berkes, F. (2018). Sacred ecology (4th ed.). Routledge. <https://doi.org/10.4324/9781315114644>
- Chunhua, J., Shuo, W., Zhirong, H., Li-Wei, L., & Jing, Y. (2023). Application of the extended value-belief-norm (VBN) theory to understand consumers' intention to use autonomous delivery vehicles (ADVs). *Heliyon*, 9(9), e20244. <https://doi.org/10.1016/j.heliyon.2023.e20244>

- Department of Education, Youth, and Sports DIY. (2023). *Buku panduan pendidikan khas Kejojaksanaan pendidikan tinggi*. Dewan Pendidikan DIY. <https://tabgrafika.com/buku-panduan-pendidikan-khas-kejojaksanaan-pendidikan-tinggi/>
- Dijoo, Z. K., & Khurshid, R. (2022). Environmental degradation as a multifaceted consequence of human development. In *Environmental Biotechnology: Sustainable Remediation of Contamination in Different Environs*. CRC Press- Tylor & Francis Group.
- Eiman, N. (2024). Recognizing the impact of value-belief-norm theory on pro-environmental behaviors of higher education students: Considering aspects for social-marketing applications Available to Purchase. *International Journal of Sustainability in Higher Education*, 25(2), 289–305. <https://doi.org/10.1108/IJSHE-04-2023-0135>
- Gruberg, H., Dessein, J., D' Haese, M., Alba, E., & Benavides, J. P. (2022). Eroding traditional ecological knowledge. A case study in Bolivia. *Human Ecology*, 50(6), 1047-1062. <https://doi.org/10.1007/s10745-022-00375-9>
- Hastangka, Rahma, A., Fitria, H., & Sihombing, A. A. (2025). Education for sustainable development (2005 – 2025): A critical policy analysis of global and local frameworks. *The Journal of Environmental Education*, 56(6), 477–492. <https://doi.org/10.1080/00958964.2025.2565483>
- Islamic, G., Ishaq, M., & Dayati, U. (2024). Character education through philosophical values in traditional Islamic boarding schools. *Kasetsart Journal of Social Sciences*, 45, 31–42. <https://doi.org/10.34044/j.kjss.2024.45.1.04>
- Jaya, H., Hambali, M., & Fakhrurrozi, F. (2023). Transformasi pendidikan: Peran pendidikan berkelanjutan dalam menghadapi tantangan abad ke-21. *Jurnal Review Pendidikan dan Pengajaran*, 6(4). <https://doi.org/10.31004/jrpp.v6i4.21907>
- Karakaş, G. (2024). Investigation of sustainable water consumption behavior within the framework of value belief norm. *Environment, Development and Sustainability*, 26(11), 28465–28483. <https://doi.org/10.1007/s10668-023-03819-4>
- Krippendorff, K. (2018). *Content analysis: An introduction to its methodology* (4th ed.). Sage Publications. <https://doi.org/10.4135/9781071878781>
- Magnis-Suseno, F. (1984). *Etika Jawa: Sebuah analisa falsafi tentang kebijaksanaan hidup Jawa*. Gramedia. <https://gpu.id/book/75888/etika-jawa-sebuah-analisa-falsafi-tentang-kebijaksanaan-hidup-jawa>
- Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). SAGE Publications. <https://study.sagepub.com/miles3e>
- Nasution, A. F. (2023). *Metode penelitian kualitatif*. Harfa Creative. https://sar.ac.id/stmik_ebook/view-AGNjAwV0AmHRDHNYF.html
- Oe, H., Yamaoka, Y., & Ochiai, H. (2022). A qualitative assessment of community learning initiatives for environmental awareness and behaviour change: Applying UNESCO Education for Sustainable Development (ESD) framework. *International Journal of Environmental Research and Public Health*, 19(6), 3528. <https://doi.org/10.3390/ijerph19063528>
- Pangsuma, N. S., Nurahman, A. A., Riandi, R., & Solihat, R. (2024). Innovation of ESD learning module based on Bugis local wisdom for critical thinking skills and environmental literacy. *Journal of Science Learning*, 7(3), 257–266. <https://doi.org/10.17509/jsl.v7i3.71247>
- Putra, I. K. O. P., Dewi, N. P. S. R., & Heny, A. P. (2025). Integrasi nilai-nilai Tri Hita Karana melalui peran mahasiswa sebagai inovator keberlanjutan ESD di lingkungan perguruan tinggi. *Wahana Matematika dan Sains*, 19(3), 25–36. <https://doi.org/10.23887/wms.v19i3.103671>
- Qomaruddin, Q., & Sa'diyah, H. (2014). Kajian teoritis tentang teknik analisis data dalam penelitian kualitatif: Perspektif Spradley, Miles dan Huberman. *Journal of Management, Accounting, and Administration*, 1(2), 77–84. <https://doi.org/10.52620/jomaa.v1i2.93>
- Rai, S. C., & Mishra, P. K. (2022). Traditional ecological knowledge and resource management: A conceptual framework. *Raditional Ecological Knowledge of Resource Management in Asia*. https://doi.org/10.1007/978-3-031-16840-6_1

- Saleh, S. (2017). *Analisis data kualitatif*. Pustaka Ramadhan. <https://eprints.unm.ac.id/14856/>
- Saxena, V. (2025). Water quality, air pollution, and climate change: Investigating the environmental impacts of industrialization and urbanization. *Water, Air, & Soil Pollution*, 236(2), 73. <https://doi.org/10.1007/s11270-024-07702-4>
- Singh, R. L., & Singh, P. K. (2017). *Principles and applications of environmental biotechnology for a sustainable future*. Springer. https://doi.org/10.1007/978-981-10-1866-4_2
- Song, W., & Cao, H. (2022). Historical evolution and reflections on “Harmony between man and nature”. *Advances in Applied Sociology*, 12(10), 605-612. <https://doi.org/10.4236/aasoci.2022.1210042>
- Stern, P. C. (2000). Toward a coherent theory of environmentally significant behavior. *Journal of Social Issues*, 56(3), 407-424. <https://doi.org/10.1111/0022-4537.00175>
- Sulistiyani, A. T., Sutarno, S. P., & Wahyunengseh, R. D. (2021). The local elites perception of “Hamemayu Hayuning Bawana” philosophies in the Green Village Program in Yogyakarta Province. *IOP Conference Series: Earth and Environmental Science*, 724(1), 012099. <https://doi.org/10.1088/1755-1315/724/1/012099>
- Sutrisna, W., Suwarna, D., Bernadus, W. S., & Totok, S. (2023). *Buku induk pendidikan khas Kejogjaan*. Dinas Pendidikan, Pemuda, dan Olahraga DIY. https://perpus.annuur.sma.mbs.sch.id/index.php?p=show_detail&id=5509&keyword=S
- United Nations Educational, Scientific and Cultural Organization (UNESCO). (2017). *Education for sustainable development goals: Learning objectives*. UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000247444>
- Wang, F., Yang, R., & Fisher, J. D. (2026). Living in harmony with nature: From concept to an index revealing gaps in nature wellbeing and human contributions. *Environmental Impact Assessment Review*, 119, 108357. <https://doi.org/10.1016/j.eiar.2026.108357>
- Yardley, E. (2023). *Braun and Clarke thematic analysis: How to do the six-step process in your qualitative research project*. Degree Doctor. <https://www.thedegreedoctor.com/blog/braun-and-clarke-thematic-analysis-how-to-do-the-six-step-process-in-your-qualitative-research-project>
- Zocher, J. L., & Duarte, C. G. (2022). Integration of indigenous and local knowledge into sustainability education: A systematic literature review. *Environmental Education Research*, 28(8), 1209-1228. <https://doi.org/10.1080/13504622.2022.2083081>

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