Ethno-Pedagogy Approaches in Community-Based Learning

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Abstrac

The ethno-pedagogy approach in community-based learning is an educational strategy that emphasizes the integration of local wisdom, cultural values, and traditional practices into the teaching and learning process. This approach is based on the view that every community has the potential for knowledge, value systems, and educational methods that are passed down through generations, which can be optimized to enhance the relevance of learning to the lives of learners. In practice, ethno-pedagogy facilitates the active involvement of the community as a source of learning, whether through oral traditions, arts, customary rituals, or local economic activities. This not only enriches the learning materials but also strengthens cultural identity, increases social participation, and supports the preservation of cultural heritage. This approach also contributes to the character formation of learners through the internalization of local values that are in line with sustainable community development. In the context of community education, ethno-pedagogy encourages collaboration between educators, community leaders, and learners in designing contextual, adaptive, and culturally-centered learning experiences. Thus, this approach becomes one of the relevant education models in facing the challenges of globalization, as it can harmonize modernization with the preservation of local identity.

Keywords: Ethno-pedagogy, community-based learning, local wisdom, contextual education, cultural preservation.

1. INTRODUCTION

The education curriculum in Indonesia, although it has undergone several changes, is expected to include ethnopedagogy content where learning activities must emphasize the local wisdom of students (Oktavianti & Artikel, 2018). Etnopedagogy in the 2013 curriculum is based on the Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 79 of 2014, which explains that learning from elementary schools/Islamic elementary schools to high schools/vocational high schools must include local content that serves as study materials or subjects in educational units that contain content and learning processes about local potential and uniqueness aimed at forming students' understanding of local advantages. and wisdom in their place of residence (Oktavianti & Artikel, 2018). One key strategy for creating human resources that are more capable of responding to the needs of local communities is community-based education. Rapid globalization has led to a trend in education becoming more uniform, often neglecting local knowledge and the cultural potential of many groups. An effective method for bridging the gap between formal education and community needs is ethnopedagogy, which integrates values, customs, norms, and local knowledge into the learning process. In addition to viewing culture as a subject of study, ethnopedagogy also sees it as a tool, resource, and epistemological basis that enhances students' educational experiences. This strategy aligns with the paradigm Participatory education, which states that the community is a legitimate source of knowledge and its recipient. Ethno-pedagogy is a tool used in community-based education to support inclusive, contextual, and sustainable learning processes. It enhances cultural identity, empowers communities, and makes education more applicable in everyday life. The urgency of applying ethno-pedagogy in community-based education is also driven by global challenges, such as the loss of regional languages, erosion of traditional values, and low community participation in the planning and implementation of educational programs (Oktavianti & Artikel, 2018). This method transforms learning into social change based on local wisdom in addition to transferring knowledge.

2. RESEARCH METHOD

Research on the ethno-pedagogy approach in community-based learning using a qualitative approach with a case study method. The qualitative approach is chosen because it can explore phenomena in depth and comprehensively, especially those related to social, cultural, and educational aspects in the

context of the community. Qualitative research is generally used in the field of social sciences and humanities, especially concerning micro-level studies. It primarily relates to patterns and human behavior and what lies behind that behavior, which is usually difficult to measure with numbers. The research was conducted in three local communities implementing community-based learning by integrating local wisdom:

Indigenous communities in the remote areas that still practice ancestral traditions.

Fishing groups that possess traditional ecological knowledge systems related to weather and the sea.

Urban communities that develop culture-based literacy activities.

The data were analyzed using thematic analysis techniques, which involved the processes of coding, categorization, and interpretation to find patterns of ethno-pedagogy implementation and its impact on the learning process and outcomes. The validity of the data is strengthened through the triangulation of sources and methods, as well as discussions of findings with stakeholders in the community.

3. DISCUSSION

Relevance and Contextualization of Learning

Ethno-pedagogy allows a learning process that is not separated from the realities of the community's life. In fishing communities, for example, knowledge about wind patterns, moon phases, and traditional navigation is used as learning material integrated with modern marine science. This results in learning that is not only theoretical but also applicable in daily life. In indigenous communities, teaching about sustainable forest management is based on local philosophies regarding the balance of nature. Learners not only study ecological concepts from textbooks but also directly experience practices such as planting traditional trees, land blessing rituals, and knowledge about endemic species. This approach strengthens intergenerational knowledge transfer, which is often lost in formal education. Ethno-pedagogy creates contextual learning by linking academic theories and concepts with the socio-cultural realities of the community. In fishing communities, for example, teaching about ocean circulation and coastal ecosystems is integrated with the fishermen's practical experiences regarding wind direction, fish migration signs, and moon phases. This knowledge is not only beneficial for enhancing fishing skills but also enriches learners' understanding of science through an applied approach. Learning that can involve Ethno-pedagogy will be able to become a stronghold and identity for each learner in navigating the Industry 4.0 revolution and the rapid technological developments shifting local wisdom in society (Hurriah et al., 2021). This shift occurs due to the lack of clear boundaries between local culture and foreign culture. This condition clearly indicates that education in Indonesia needs to implement learning that is oriented towards local wisdom. Ethnopedagogy is an approach in education that is culture-based (Hurriah et al., 2021) Ethno-pedagogy aims to examine the dimensions of pedagogy through the perspective of pedagogical sociology, so that ethno-pedagogy can be positioned as part of the discipline of pedagogy.

Community Participation as the Main Foundation

Research results show that the success of implementing ethno-pedagogy is closely related to community involvement. In many cases, traditional leaders, elders, and cultural practitioners play a role as nonformal educators who serve as key references in learning. They not only convey knowledge but also transfer values such as solidarity, mutual assistance, and respect for nature. Community participation is also evident in the process of planning local curricula. For instance, in urban communities, cultural literacy programs are designed collaboratively by artists, youth, and local academics so that the teaching materials are more relevant to the identity of the city. This fosters a strong sense of ownership, so the community is not just a program recipient but also becomes an agent of change. In many cases, Cultural figures, elders, and cultural practitioners hold very strategic positions. They function not only as guardians of tradition but also as non-formal educators whose social legitimacy is recognized by the community (Marpaung & Medan, 2023). Their presence brings a dimension of cultural authority that is not possessed solely by formal educators. They convey knowledge through various forms, such as folklore, customary rituals, cultural symbols, and everyday practices. The process of knowledge transfer is often interactive, collective, and based on real experiences rather than just written texts. More importantly, their role is not limited to conveying information but also includes the transfer of fundamental values that serve as the foundation of community life, such as solidarity, mutual assistance, and respect towards nature, honesty, and a sense of responsibility towards future generations. These values form an ethical framework that strengthens

social cohesion within the community, while also serving as an important cultural capital for sustainable development. Community participation is also very evident in the process of planning the local curriculum, where the community has the space to voice their needs, hopes, and priorities (Melalui & Lokal, 2022). For example, in the urban community that is one of the research locations, the cultural literacy program was not designed in a top-down manner solely by educational institutions, but was the result of a dialogue among various local actors involved in the arts who understand the development of cultural expressions, youth who represent the dynamics of the next generation, and local academics with conceptual capacity. This collaboration produced a curriculum that is more contextual, adaptive, and relevant to the identity of the city. This collaborative approach also fosters a strong sense of ownership among the community. They feel that the program emerged from a shared aspiration, not merely a product of imposed external intervention. With this sense of ownership, the community does not only play the role of beneficiaries but also as active agents of change who support, develop, and even innovate new forms of learning based on local wisdom.

Strengthening Cultural Identity and Social Cohesion

Ethno-pedagogy has a significant impact on strengthening cultural identity within society. One of the most important aspects of this impact is the paradigm shift of the younger generation towards local culture (Oktavianti & Artikel, 2018). If previously many young generations viewed their cultural heritage as something old-fashioned, outdated, and even irrelevant to modern life, the application of ethno-pedagogy has opened up new spaces for reflection. Culture, which had long been regarded merely as a series of ritualistic or symbolic traditions, is now beginning to be appreciated as a valuable intellectual heritage that contains ecological knowledge, social ethics, and life philosophies relevant to contemporary challenges. With this strategy, local culture can be revitalized without sacrificing its openness to the outside world. Generations The youth began to see both "traditional culture" and "global culture" as spaces for identity that can engage in dialogue, rather than as mutually exclusive choices. They learn how to embody traditional values in new environments through integration in community-based education, which teaches them that being modern does not mean abandoning cultural roots. Furthermore, ethno-pedagogy also creates social cohesion, which is the establishment of closer, trusting, and respectful relationships among community members. This shared value-based learning process acts as a bridge between generations, where the older generation, which has long served as the guardians of local knowledge, regains space to share and be valued by the younger generation On the other hand, the younger generation brings a spirit of innovation and new technology that can strengthen old ways without losing their meaning. The social cohesion built can also reduce the social fragmentation often arising from modernization and urbanization. When the community is invited to revive cultural practices through education, a stronger sense of collective identity is created. This not only binds them within the cultural sphere but also strengthens solidarity in facing economic, political, and environmental challenges.

Socio-Economic and Ecological Impact

The application of ethno-pedagogy not only has a significant impact on the educational dimension alone, but also has multidimensional implications that encompass the social, economic, and ecological aspects of the community. In many communities, education oriented toward local wisdom does not stop at the process of formal knowledge transfer, but becomes an empowering instrument that can comprehensively improve the quality of life. From an economic perspective, ethno-pedagogy-based education programs revive various traditional skills that had previously begun to be abandoned or eroded by modern industrial products. For example, traditional fish preservation techniques such as smoking, fermentation, or salting are not only preserved as part of cultural heritage, but also made into productive skills that can increase household income. These local processed products, when marketed creatively and with added value (for example, through modern packaging, halal certification, or digital promotion), has the potential to expand the market to a national, even international level. Thus, ethno-pedagogy not only preserves culture but also creates new economic opportunities and encourages the financial independence of communities. In addition, regional handicraft skills such as ikat weaving, wood carving, bamboo weaving, or traditional jewelry that were previously under threat of extinction are now regaining their relevance. Through community-based learning programs, the younger generation is trained not only to master production techniques but also to understand the cultural values and stories behind each product (Berkes, F. (2018). This provides a higher selling point in both the cultural tourism and creative economy markets. This process ultimately creates a sustainable economic value chain, where traditional knowledge becomes an asset that can be processed, developed, and passed down. Meanwhile, from the ecological side, the application of ethno-pedagogy becomes an important means

to revive environmentally sustainable management practices based on local traditions that have proven to be sustainable for hundreds of years. One example is the sea sasi in eastern Indonesia, which is a customary tradition that regulates specific times to prohibit fishing or harvesting marine resources in certain areas. This prohibition is based not only on spiritual beliefs, but also on highly relevant ecological principles: giving time for the ecosystem to recover, for fish to breeding, and marine resources to not be excessively exploited. This approach shows that local knowledge often has a strong scientific foundation even though it is not always packaged in modern academic language. By integrating traditions like marine sasi into community-based education curricula, communities not only learn to appreciate their ancestral heritage but also gain a scientific understanding of conservation and environmental sustainability. Furthermore, these practices can be adapted with modern technology and policies, such as GIS-based marine area mapping, community-based monitoring, or sustainable fisheries certification.

4. CONCLUSION

The application of ethno-pedagogy in community-based education has a wide and profound impact, both on educational and socio-cultural dimensions. This approach strengthens the relevance of learning to the lives of the community, enhances active participation of the community, and preserves local knowledge that has long been marginalized. Ethno-pedagogy serves not only as a teaching method but also as an empowerment instrument that connects the past, present, and future of the community. Through the synergy of traditional knowledge and modern science, this approach paves the way for a more inclusive, adaptive, and sustainable education system. However, challenges such as unsupported policies, a lack of educators, and cultural erosion must be addressed immediately through systematic strategies, such as developing culturally-based curricula, training educators, and documenting local knowledge. With adequate support, ethno-pedagogy can serve as a foundation for the future of education that not only educates a generation that is intellectually smart but also rooted in cultural identity and committed to socio-ecological sustainability.

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IMPLEMENTATION OF THE ECLIPSE (EXPLORING, COMPILING, LINKING, IMAGINING, PRODUCING, SHARING, EVALUATING) LEARNING MODEL BASED ON ETHNOECOLOGICAL ISSUES TO IMPROVE STUDENTS' COLLABORATION AND CRITICAL THINKING SKILLS

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Abstract

21st-century education demands that students possess collaborative and critical thinking skills as core competencies to face global challenges. However, these skills are still low because the learning models used tend to be conventional and lack contextualization. This article proposes the development of the ECLIPSE (Exploring, Compiling, Linking, Imagining, Producing, Sharing, Evaluating) learning model based on ethnoecological issues as an innovation to improve student skills. This model emphasizes the integration of local values and ecological issues in every stage of learning so that students can learn through real-life experiences, collaborate in groups, and hone critical reasoning through analysis of environmental problems based on local wisdom. The study used a quantitative experimental approach with 47 Non-Formal Education students at the University of Bengkulu as subjects. The results show that the ECLIPSE model based on ethnoecology is effective in improving students' collaborative and critical thinking skills and contributes to the development of contextual learning models in higher education.

Keywords: ECLIPSE, ethnoecology, collaboration, critical thinking

1. INTRODUCTION

21st-century education presents new challenges and opportunities that demand a transformation of the learning paradigm in higher education. This century is characterized by the rapid development of digital technology, the flow of globalization, and the complexity of social, cultural, and environmental issues. To navigate this era, students must not only master factual knowledge but also possess 21st-century skills, including critical thinking, collaboration, communication, creativity, and digital and ecological literacy.

In the context of higher education, collaboration skills are a core competency that cannot be ignored. Collaboration enables students to work in teams, appreciate differences, develop shared ideas, and solve problems collectively. Critical thinking skills, on the other hand, require students to analyze information, identify assumptions, evaluate arguments, and make logical and responsible decisions. These two skills are essential for students to compete in a competitive workplace and contribute to society. Unfortunately, various studies in Indonesia indicate that these skills are still relatively low.

Students tend to be passive in their learning, relying more on information than constructing knowledge independently. Lecturers' learning models are still predominantly conventional, with lectures emphasizing memorization rather than developing higher-order thinking skills. As a result, students are less accustomed to asking critical questions, engaging in healthy debate, or working effectively in teams. Furthermore, local issues related to ethnoecology are underutilized as learning resources. Ethnoecology, which examines the relationship between humans and the environment from a local cultural perspective, is rich in values, knowledge, and sustainable practices that can be integrated into learning. For example, the Bengkulu community has traditions of forest management, environmentally friendly agricultural practices, and wisdom in preserving water resources. Unfortunately, this local wealth is rarely incorporated into teaching materials in universities. Integrating ethnoecological issues,

however, allows students to learn in a more contextual way, making them relevant to their daily lives, and encouraging them to think critically about environmental issues.

To address these challenges, this study developed the ECLIPSE (Exploring, Compiling, Linking, Imagining, Producing, Sharing, Evaluating) learning model based on ethnoecological issues. This model is designed as an alternative learning model that not only trains cognitive skills but also collaboration skills, critical thinking, and ecological awareness. Each stage in the ECLIPSE model encourages students to actively explore issues, compile data, connect theory with practice, imagine solutions, produce work, share results, and evaluate reflectively. When applied to an ethnoecological context, students not only learn theory but also understand environmental realities and local wisdom.

2. LITERATURE REVIEW

2.1 Collaboration Skills

Collaboration is the ability to work together in a team to achieve a common goal by leveraging the potential of each member. According to Johnson & Johnson (2018), collaborative learning can improve students' academic achievement, social relationships, and interpersonal skills. In the context of higher education, collaboration trains students to respect differences of opinion, manage conflict, and integrate diverse ideas. Research by Laal & Ghodsi (2019) found that collaboration skills contribute significantly to the employability of college graduates.

2.2 Critical Thinking Skills

Critical thinking involves the ability to analyze, evaluate, and synthesize information logically. Facione (2015) defines critical thinking as a reflective thought process focused on sound decision-making. In the context of university students, critical thinking is crucial for navigating the overwhelming flow of digital information, not all of which is valid. A study by Suryani (2020) found that the low critical thinking skills of Indonesian students are influenced by a lack of real-world problem-based learning practices and a lack of argumentation training.

2.3 Ethnoecology in Learning

Ethnoecology is the study of the relationship between humans and the environment based on local knowledge systems and culture. Toledo (2018) emphasized that ethnoecology is key to maintaining ecosystem sustainability. In Indonesia, Marfai (2021) emphasized that local wisdom in environmental management, such as the subak system in Bali or customary forest practices in Sumatra, can be integrated into environmental education. Thus, ethnoecology not only enriches students' knowledge but also instills cultural identity and ecological awareness.

2.4. ECLIPSE Model

The ECLIPSE model was developed as an innovative learning framework with seven main stages:

Exploring: exploring real issues or problems.

Compiling: compiling related data, information, or references.

Linking: connecting information with relevant theories or concepts.

Imagining: imagining solutions or alternative solutions.

Producing: producing concrete products, works, or solutions.

Sharing: sharing results with others to get input.

Evaluating: critically evaluating processes and outcomes.

The advantage of this model is the integration of critical thinking skills with social skills within a systematic learning framework. When combined with ethnoecological issues, ECLIPSE can be an effective medium for fostering ecological awareness and enhancing students' skills.

Bengkulu is a region rich in natural resources and local wisdom in environmental management. For example, the Rejang people have a simbang tradition of protecting their customary forests, the Serawai

people have customary rules for managing agricultural land, and the Enggano people have developed culturally based conservation practices. However, Bengkulu faces serious challenges such as deforestation, marine ecosystem damage, and mineral resource exploitation.

Unfortunately, these local issues have not been widely integrated into higher education. Non-formal education students at the University of Bengkulu, for example, often receive theoretical material without connecting it to the ecological realities of their region. This makes learning feel distant from students' daily lives, thus discouraging them from thinking critically or collaborating to find solutions.

Some relevant studies in the last 10 years include: Kokotsaki, Menzies, & Wiggins (2016) showed that project-based learning can improve students' learning motivation and collaborative skills; Savery (2015) emphasized that problem-based learning is effective in developing critical thinking skills, but requires the support of a structured learning model; Nisa (2019) found that integrating local wisdom into science learning in elementary schools can increase students' environmental awareness; Marfai (2021) showed that ethnoecology-based education can strengthen students' cultural identity and ecological awareness. International research by Thomas (2020) highlighted the importance of learning models that combine digital technology with local issues to improve 21st-century skills.

However, there has been little research integrating the ECLIPSE model with ethnoecological issues for university students, particularly in Indonesia. This represents a research gap.

From the description above, the identified research gaps are: No research has explicitly developed an ECLIPSE model based on ethnoecological issues. Previous research has focused on PBL or PjBL, but not on the systematic ECLIPSE framework. The integration of local wisdom into learning in higher education is still minimal. Research on ethnoecology emphasizes environmental knowledge aspects, rather than developing students' collaboration and critical thinking skills.

This research is important because it can fill the gap in the literature on the sethnoecology-based ECLIPSE model in higher education; provide an alternative innovative learning model for lecturers at the University of Bengkulu; help students understand local issues; and build ecological awareness, as well as preserve local wisdom.

3. RESEARCH METHODS

This study uses an experimental quantitative approach to test its effectiveness in improving students' collaboration skills and critical thinking skills.The research subjects were 47 students of the Non-Formal Education Study Program, Faculty of Teacher Training and Education, University of Bengkulu, in the 2023/2024 academic year. The research was conducted at the Non-Formal Education Study Program, University of Bengkulu, for six months, from February to July 2024.

The instruments used in this study include:

Collaboration skills instruments: observation rubric and indicator-based questionnaire Johnson & Johnson (2018), covering communication skills, active contribution, coordination, and responsibility.

Critical thinking skills instruments: essay tests and assessment rubrics based on Facione's (2015) indicators, covering interpretation, analysis, evaluation, and inference.

Model validation instrument: expert validation sheet (learning expert lecturers, ethnoecologists, and education practitioners).

Student response instrument: questionnaire to determine student perceptions and satisfaction with the implementation of the model.

Field trial: the model was applied to all research subjects (47 students).

Skills test: pre-test and post-test of critical thinking skills, as well as observation of collaboration skills.

Student response questionnaire: to measure the acceptance and effectiveness of the model from the students' perspective.

The research data were analyzed using qualitative and quantitative approaches: Critical thinking skills data were analyzed using paired sample t-test to see significant differences between pre-test and post-test results. Collaboration skills data were analyzed using descriptive statistics (mean, percentage, category). Expert validation was analyzed using the validity index (Aiken's V). The critical thinking test

instrument was tested using Cronbach's Alpha, while the reliability of the collaboration rubric was tested using inter-rater reliability.

4. Results and Discussion

Research result

The study was conducted on 47 students in the Non-Formal Education Study Program at the University of Bengkulu. The ECLIPSE model was implemented in one course for one semester. Observations showed that students were more actively involved in the learning process.

In the exploring stage, students identify local issues such as the destruction of mangrove forests on the coast of Bengkulu, the tradition of protecting water sources, and conflicts over plantation land.

At the compiling stage, they collect information from literature, community interviews, and field observations.

In the linking stage, students try to connect local issues with theories of non-formal education, ecology, and socio-culture.

At the imagining stage, creative ideas emerged such as digital campaigns based on local wisdom, environmental education modules for village communities, and community-based conservation plans.

At the producing stage, student groups produce posters, educational videos, and ethnoecology-based learning modules.

The sharing stage is carried out through presentations in class and uploads on academic social media.

The evaluating stage is carried out through joint reflection, both by students and lecturers.

Throughout the learning process, student activity increased from meeting to meeting. During the production stage, they produced creative products in the form of learning modules, educational videos, and digital posters. The sharing stage took place through mini-seminars in class.

Critical Thinking Skills, Critical thinking tests were conducted before and after the implementation of the model. The results of the analysis showed a significant increase: The average pre-test score: 62.3 and the average post-test score: 81.7. The paired sample t-test showed a sig. (p) value = 0.000 < 0.05, so the increase was statistically significant. This increase was seen in the analysis aspect (from 60% → 82%), evaluation (from 58% → 80%), and inference (from 65% → 83%).

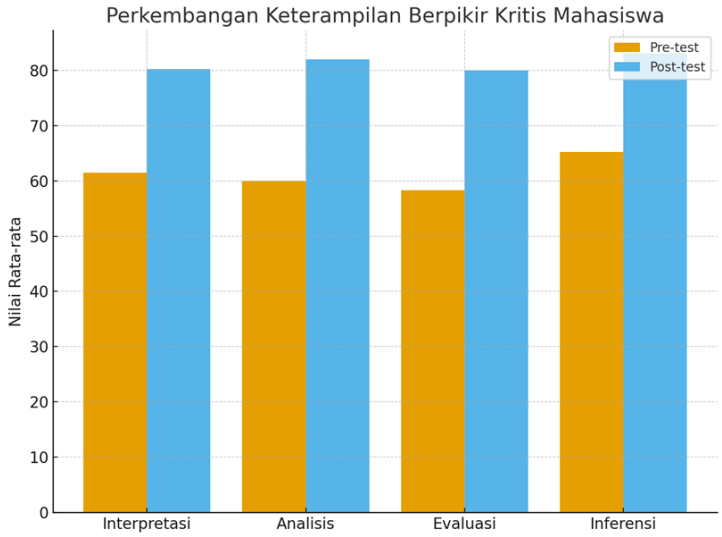

Fig. 1. Development of Students' Critical Thinking Skills

Collaboration Skills: Collaboration skills were measured through observations using the Johnson & Johnson (2018) rubric. The results: The “high” category increased from 21% of students (pre-model) to 76% of students (post-model). Open communication improved significantly; students engaged in more frequent discussions, asked questions, and provided feedback. Individual responsibility within the group also improved, as evidenced by timely completion of assignments and more equitable contributions.

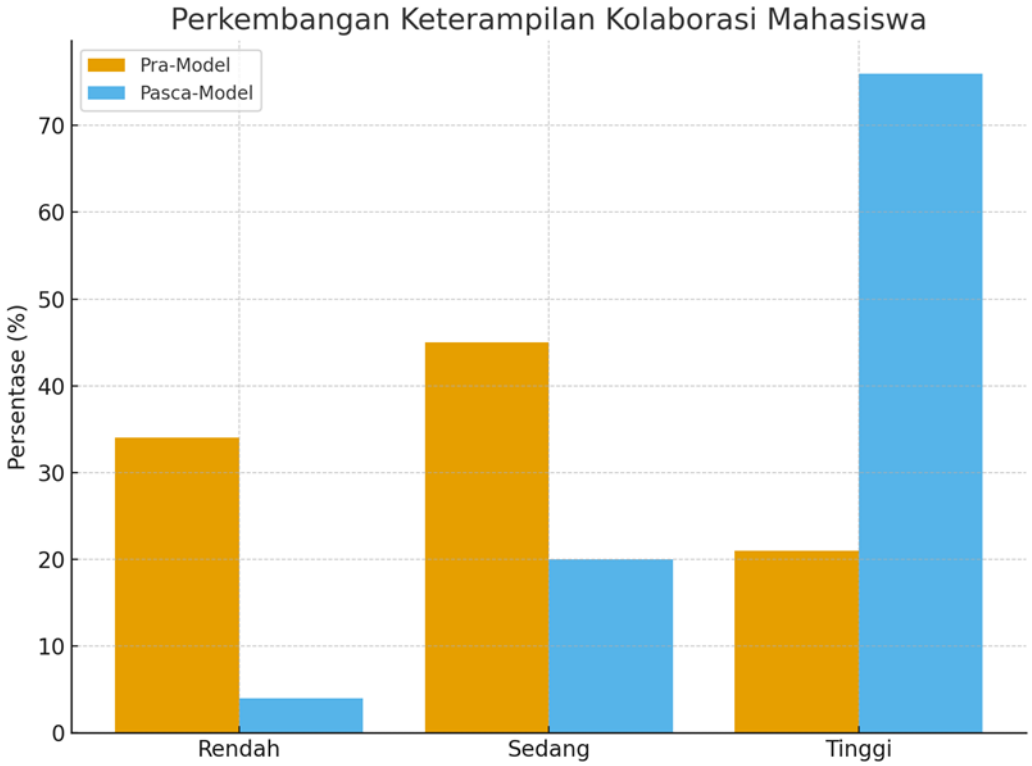

Fig. 2. Development of Students' Collaboration Skills

Student Response,A questionnaire response showed that 87% of students stated that this model made learning more engaging, 82% felt more motivated, and 90% considered the learning more relevant to real life. Criticisms raised the need for more flexible time management, as the production and evaluation stages require more time than the regular lecture allocation.

4.2 Discussion

The results of the study indicate that the ECLIPSE model significantly improves students' collaborative skills. The producing and sharing stages provide space for students to collaborate to produce products and share ideas, in line with Johnson & Johnson's (2018) cooperative learning theory, which emphasizes the importance of face-to-face interaction, individual responsibility, and shared goals. This study supports the findings of Laal & Ghodsi (2019) who stated that collaborative-based learning improves empathy, social skills, and learning motivation. The integration of ethnoecological issues makes students feel closer to the context being studied, thereby increasing their participation in group discussions.

The significant increase in students' critical thinking scores demonstrates that the ECLIPSE model effectively stimulates higher-order thinking skills. The linking stage encourages students to connect theory to real-world phenomena, while the evaluating stage trains them to critically evaluate proposed solutions.

These results align with Facione's (2015) critical thinking framework, which encompasses interpretation, analysis, evaluation, and inference. These findings also align with Suryani's (2020) study, which emphasized that problem-based learning can improve critical thinking skills in Indonesian students.

One of the strengths of this model is the integration of ethnoecological issues, which has been shown to strengthen students' ecological awareness and cultural identity. For example, when discussing the tradition of preserving indigenous forests, students understand not only the ecological aspects but also the cultural values inherent within them. This aligns with research by Toledo (2018) and Marfai (2021), which emphasizes the importance of ethnoecological-based education in supporting sustainable development.

Thus, this model not only improves cognitive and social skills, but also builds ecological awareness based on local wisdom.

This model has several advantages: Systematic: the steps are clear and directed, making it easier for lecturers and students; Contextual: ethnoecological issues make learning relevant to students' real lives; Collaborative: emphasizing group work in almost all stages; Reflective: the evaluating stage trains students to think critically and introspectively.

Despite its success, this study has limitations: The research subjects were limited to Non-Formal Education students at the University of Bengkulu, so the results cannot be generalized to other study programs. The duration of the study was relatively short, so the long-term impact has not been measured; and it has not been tested in the context of online or hybrid learning, which is currently increasingly relevant. However, this study adds to the literature on ethnoecology-based learning models, while strengthening the theory of collaborative learning and critical thinking and the ECLIPSE model can be adopted by other lecturers in higher education with adaptations according to their respective local contexts.

5. CONCLUSION

This study develops and tests the effectiveness of the ECLIPSE (Exploring, Compiling, Linking, Imagining, Producing, Sharing, Evaluating) learning model based on ethnoecological issues in improving collaboration skills and critical thinking skills of students of the Non-Formal Education Study Program, University of Bengkulu. Quantitative data proves a significant increase in students' critical thinking skills, with a clear difference between pre-test and post-test scores. Meanwhile, students' collaboration skills also increased, as seen from the increasingly even distribution of contributions, communication skills, and individual responsibilities within the group. The integration of ethnoecological issues in this model has a positive impact on students' learning motivation, ecological awareness, and strengthening of cultural identity. The ECLIPSE model is proven to be not only effective in training cognitive and social skills, but also able to provide contextual, reflective, and local value-oriented learning.

Thus, this study concludes that the ECLIPSE learning model based on ethnoecological issues is effective in improving students' collaboration and critical thinking skills, and is worthy of being used as an alternative learning innovation in higher education.

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