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# Empowering Communities Through Innovative Non-Formal Education: A Case Study From The Community Learning Activity Centre Tenggara Raso, Indonesia

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## Abstract

Non-formal education (NFE) is a vital catalyst for empowering individuals and communities, especially within the transformative landscape of Industry 4.0. This study critically examines the intersection of NFE innovation and empowerment, encompassing theoretical foundations, empirical studies, and case studies illuminating the transformational potential inherent in innovative NFE practices. The case study at the community learning activity centre Tenggara Raso in Indonesia is a compelling case where an innovative learning model seamlessly integrates vocational skills into its curriculum. The findings from field observations and interviews highlight the innovative and creative aspects of the learning model, emphasising practical skills and entrepreneurship to enhance individual employability and contribute to broader community development and empowerment. In addition, the findings underscore the efficacy of integrating practical life skills and vocational training in enhancing participant engagement and fostering socio-economic development. This research underscores the need for continuous innovation, strategic collaborations with local industries, and a focus on gender equality to ensure that NFE remains a dynamic force for individual empowerment and community development in the future.

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## INTRODUCTION

Non-formal education (NFE) is a vital catalyst for empowering individuals and communities, especially within the transformative landscape of Industry 4.0. As skills and competencies evolve rapidly, innovative approaches in NFE become imperative to equip learners with the dynamic proficiencies needed to navigate contemporary workplaces and societal demands. This literature review critically examines the intersection of NFE innovation and empowerment, encompassing

theoretical foundations, empirical studies, and case studies illuminating the transformative potential inherent in innovative NFE practices.

Amidst these considerations, grand theories provide a conceptual framework for comprehending the intricate relationship between innovation and empowerment in NFE. Constructivism, a seminal learning theory championed by Dewey (1938), underscores the active role of learners in constructing knowledge through experiences—an ethos inherently aligned with the empowerment paradigm. Concurrently, transformative learning theory, articulated by Mezirow (1991), posits that individuals can alter perspectives and worldviews through reflection and critical thinking. This trajectory resonates with NFE's fundamental goal of nurturing critical thinking skills and enabling individuals to engage critically with their environment.

The empirical realm contributes substantial evidence affirming the positive impact of innovative NFE practices on empowerment. For instance, Duhoe and Segbefia's (2023) study in Ghana illuminates how an innovative learning environment enhances participant creativity, problem-solving skills, and entrepreneurial mindsets—essential attributes for addressing the demands of Industry 4.0. Similarly, the study by Asadi et al. (2022) in Iran showcases how a digital literacy training program for women, utilising mobile phones and social media platforms, empowers participants to engage with their communities and pursue entrepreneurial opportunities actively. The learning model innovation based on vocational skills applied by the equivalency program package C at community learning activity centres involves various approaches. One approach is using barista vocational education, which effectively assists national education goals (Himmah et al., 2023). Another approach is the implementation of self-education principles, focusing on improving residents' soft and hard skills (Paus et al., 2023). Additionally, the management of community learning centres plays a crucial role in fostering independence and providing life skills education to the residents (Kesumadewi et al., 2022). Factors such as work experience, work perception, work motivation, and work discipline of program managers also contribute to the success of the equivalency education program (Prabowo, 2011). Furthermore, the use of internet media in online education has been found to enhance independence in learning, with the need for additional facilities and infrastructure to support online learning (Permatasari, 2016).

While empirical studies provide invaluable insights, case studies offer a nuanced understanding of the intricacies involved. The community learning activity centre Tenggara Raso in Indonesia is a compelling case where an innovative learning model integrates vocational skills into its curriculum. This model, incorporating active learning approaches and real-world applications, not only captivates adult learners but also fosters empowerment.

In light of these observations, the imperative for conducting case studies becomes evident. Case studies offer a rich, context-specific lens through which the complex dynamics of NFE innovation and empowerment can be comprehensively explored. They provide nuanced insights into the effectiveness of innovative approaches in specific settings, shedding light on the unique challenges and opportunities present. In the absence of case studies, there exists a research gap, particularly in the Indonesian context, specifically in Padang. This research aims to address this gap by conducting an in-depth case study at the Tenggara Raso Community Learning Activity Centre, unravelling the unique success story of its Package C program in the broader landscape of non-formal education. Through this exploration, the study endeavours to contribute not only to the academic discourse but also to the practical implementation of effective learning models in non-formal education, aligning with the ever-evolving demands of Industry 4.0.

## **METHODS**

The chosen methodology for this study is qualitative research, selected for its appropriateness in exploring unclear or underexplored research problems and providing a means to gather valid and

accountable data within a natural setting (Sugiyono, 2012). Qualitative research allows for an immersive exploration of the subject, facilitating in-depth analyses.

### Participatory Case Study Approach

The research employs a participatory case study approach, with the researchers acting as involved observers. This approach is well-suited for thoroughly exploring the Equality Education Program Package C, managed by the Community Learning Activity Centre Tenggara Raso in Padang City, West Sumatra Province, known for actively implementing innovative learning strategies.

### Equality Program Package C Overview

The Equality Program Package C at the Community Learning Activity Centre Tenggara Raso aims to cultivate a generation that excels not only academically but is also literate, resilient, creative, innovative, and socially beneficial. This program strategically collaborates with the community and government to harness the potential of its participants.

### Vision and Mission of Tenggara Raso

- Vision: Produce graduates who are smart, creative, and innovative.
- Mission: Instill high Islamic values, nurture independent personalities with up-to-date technological prowess, hone skills aligned with participants' interests, and foster high literacy through integrated general and Islamic education.

### Staff Profile

The program is supported by ten staff with diverse qualifications and competencies in pedagogy, personality, social, and professional aspects (refer to Table 1). This diverse team contributes to the multidimensional approach employed by the program.

Table 1.  
*Staff Profile at Community Learning Activity Centre Tenggara Raso*

No	Gender	Education Level	Status	Characteristics
1	Female	Bachelor	Tutor & Manager	Chairman of Tenggara Raso Community Learning Activity Centre, Tutor
2	Female	Bachelor	Secretary	Tutor and Secretary at Tenggara Raso Community Learning Activity Centre
3	Female	Master	Treasurer	Tutor, Treasurer, and Advisor at Tenggara Raso Community Learning Activity Centre
4	Female	Bachelor	Tutor	Early Childhood Program Tutor
5	Female	Bachelor	Tutor	Early Childhood Program Tutor
6	Female	Bachelor	Tutor	Equality/Literacy Tutor
7	Male	Bachelor	Tutor	Equality/Literacy Tutor
8	Female	Bachelor	Tutor	Equality/Literacy Tutor
9	Female	Senior High School	Cleanliness Officer	Cleanliness Officer at Tenggara Raso Community Learning Activity Centre
10	Female	Senior High School	Guard School	Guard at Tenggara Raso Community Learning Activity

### Data Collection

The study employed various techniques, including interviews, direct observations, and analysis of documentation (Patton, 2014). Interviews with tutors, managers, and the Equality Program Package C participants at Tenggang Raso provided firsthand insights, while direct observations closely examined learning activities. Additionally, documentation analysis involved studying files and photos obtained during the research.

### **Data Analysis**

The application of the Huberman and Miles model (Sugiyono, 2012) provided a robust framework for systematically analysing the gathered data, facilitating a comprehensive understanding of the learning model based on vocational skills in the Equality Program Package C at Tenggang Raso Community Learning Activity Centre. During the Data Reduction stage, relevant information on vocational skills within equality programs was carefully selected, ensuring a focused examination of the key elements. This process allowed for a nuanced exploration of the specificities and intricacies of the learning model, shedding light on the practical aspects of skill acquisition and application. Subsequently, in the Data Presentation stage, the creation of concise narrative descriptions aligned with research objectives enabled a coherent and organised presentation of the findings. This step was essential in distilling complex data into meaningful insights, facilitating a clearer comprehension of the impact and dynamics of the vocational skills-based learning model. Finally, the Conclusion and Verification stage adopted a flexible approach, acknowledging the provisional nature of conclusions due to the potential emergence of new data. This adaptive strategy was crucial in accommodating variations in perspectives provided by tutors, managers, and participants, ensuring that the analysis remained responsive to the dynamic nature of the non-formal education context. The iterative nature of this stage allowed for ongoing verification and validation of the conclusions, promoting the reliability and credibility of the study's findings. Overall, using the Huberman and Miles model provided a structured and iterative analytical process, enhancing the depth and reliability of the insights derived from exploring the learning model's implementation in the Equality Program Package C.

## **RESULT AND DISCUSSION**

### **Innovative learning approach**

The Equality Program Package C is recognised as a non-formal educational institution actively engaged in continuous learning through innovative and adaptive methods. Currently, the centre equips its participants with a range of skills to enhance their economic prospects. The centre's guidance has enabled graduates to establish Micro, Small, and Medium Enterprises (MSMEs), allowing them to compete effectively in the current technological landscape.

*"Innovation in learning is essential, especially in the Equality Program Package C at Tenggang Raso community learning activity centre. Adult learners are more engaged when the learning process caters to their needs. It is not just about earning a diploma; our program introduces innovation by integrating practical life skills. This unique approach becomes a distinct attraction for learners, motivating them to participate and complete the Package C program actively." - Putri, Tutor in the Equality Program Package C.*

Putri's insights highlight the crucial role of innovation in the learning process, particularly in the Equality Program Package C context at the Tenggang Raso community learning activity centre. Her emphasis on adult learners and their specific needs aligns with contemporary educational theories

advocating learner-centred approaches (Mezirow, 2018). According to recent studies, adult learners exhibit higher levels of engagement and motivation when educational programs are tailored to their requirements (Merriam & Baumgartner, 2020).

The shift from a mere diploma-centric approach to incorporating practical life skills echoes the broader trend in education towards competency-based learning. Recent educational frameworks emphasise equipping learners with skills directly applicable to real-world scenarios (OECD, 2023). Putri's assertion that the inclusion of life skills becomes an attractive element for learners is corroborated by research on adult education, which underscores the significance of relevance and applicability in sustaining adult learners' interest (Merriam & Baumgartner, 2020).

Moreover, the success of innovative learning approaches in adult education, as suggested by Putri, is consistent with findings from recent studies. Research by Wlodkowski and Ginsberg (2017) indicated that incorporating innovative teaching methods positively impacts adult learners' motivation, engagement, and overall program completion rates.

Putri's perspective aligns with contemporary educational principles, emphasising learner-centricity and integrating practical skills. The discussion surrounding recent references underscores the global educational shift towards personalised and competency-based approaches, highlighting the importance of such innovations in sustaining adult learners' motivation and completing educational programs.

The findings from the innovative learning approach at the Equality Program Package C offer valuable insights into educational practices in non-formal education institutions. Emphasising learner-centric approaches tailored to the specific needs of adult learners, as suggested by tutor Putri, can enhance engagement and motivation. Integrating practical life skills aligns with global trends in competency-based learning, ensuring graduates are well-equipped for real-world challenges. As supported by recent research, these findings advocate for dynamic teaching methods that positively impact motivation and program completion rates. Additionally, the multidimensional approach involving diverse educator qualifications contributes to holistic learner development. Strategic collaborations with local communities and the promotion of MSMEs further extend the impact, aligning with broader economic development and empowerment goals. Non-formal education institutions can apply these insights to create effective, relevant, and empowering learning environments.

### **Innovation and creativity**

Results from field observations and interviews highlight the innovative and creative aspects of the learning model applied at Tenggeng Raso. The tutors emphasise developing practical skills and turning waste materials into various products. Products such as bags, baskets, flower pots, and masks are not only crafted for personal use but are also promoted through bazaars, both physical and online.

Based on the field observations and an interview with one of the tutors in the community learning activity centre Tenggeng Raso Package C equivalency program, Darima expressed, *"Everyone naturally has their own set of skills and abilities, as well as creativity. However, given my age and limited funding in the local area, there are constraints on what I can achieve."* Despite these limitations, Darima's capabilities are a source of inspiration, driving innovative and productive ideas. The work generated from these innovations contributes to the community by not only creating new products but also by imparting the knowledge gained through these innovations to fellow community members involved in the PKBM program. It is noteworthy that much of our innovation and work revolve around upcycling, using discarded items and materials to create valuable products for the community.

Darima's insights from the interview shed light on the challenges and creative resilience within the community learning activity centre Tenggeng Raso Package C equivalency program. Her

acknowledgement of individual skills and creativity aligns with the growing recognition in educational literature of the importance of recognising and leveraging diverse talents (Guilford, 1967). However, Darima's mention of age-related constraints and limited local funding underscores educators' socio-economic challenges in non-formal education contexts, emphasising the need for targeted support and resource allocation (UNESCO, 2022).

The emphasis on upcycling in the program's innovation echoes current educational sustainability trends. Scholars emphasise the significance of incorporating environmental awareness and sustainable practices into educational programs (UNESCO, 2021). Darima's focus on creating value from discarded items aligns with the broader discourse on integrating environmental education and community engagement in non-formal learning settings (Calvente et al., 2018).

Moreover, Darima's role as a knowledge disseminator within the community aligns with the transformative learning theory (Mezirow, 1991). The works generated from innovations not only contribute tangible products to the community but also facilitate knowledge transfer, promoting a culture of shared learning. This community-centric approach resonates with current educational paradigms, emphasising collaborative and participatory learning.

In conclusion, Darima's narrative provides valuable insights into the multifaceted role of educators in non-formal education settings, highlighting the need for support structures, sustainability initiatives, and community-focused learning approaches. These considerations are pivotal in shaping effective and inclusive non-formal education programs, especially in community learning centres like the community learning activity centre Tenggara Raso.

### Learning model innovation

The learning model based on vocational skills has significantly changed (see Table 2). Previously, learning was conventional and focused on diploma attainment, but now it integrates offline and online methods, providing vocational skills tailored to participants' interests. The results indicate a shift from a focus on diplomas to active engagement in vocational skills, leading to increased enthusiasm among participants.

Table 2.  
*Stages of Learning Model Innovation Based on Vocational Skills*

No	Before Innovation	Innovation Process	After Innovation
1	Conventional learning	Offline or online learning with vocational skills material	Implementation of vocational skills-based learning
2	No skills provided to inhabitants for study	Providing vocational skills to participants	Participants acquire at least one skill, improving their quality of life
3	Focus on learning solely to obtain a diploma	Providing tailored vocational skills based on participants' interests	Some participants establish their MSMEs during the program, continuing afterwards
4	Most participants present only during exams	Socialising vocational skills-based learning programs	Increased enthusiasm among participants, with the active involvement of beneficiaries

The table delineates a transformative narrative within the Equality Program Package C at the Community Learning Activity Centre Tenggara Raso. Initially rooted in conventional learning methods focused on diploma attainment, the innovation process marked a substantial shift. This evolution embraced a dynamic blend of offline and online learning approaches, emphasising vocational skills. The aftermath witnessed a complete integration of these skills into the learning curriculum, underscoring a departure from traditional diploma-centric models.

A significant impact of this innovation is evident in the improved quality of life for inhabitants. The pre-innovation phase highlighted a lack of specific skills among residents, whereas the innovation process introduced vocational skills, ensuring that each participant acquired at least one skill. Moreover, the shift towards a more personalised learning approach, aligned with the interests of inhabitants, resulted in some participants' establishment of Micro, Small, and Medium Enterprises (MSMEs). The innovation not only redefines the learning experience but also translates into tangible socio-economic outcomes, aligning seamlessly with contemporary educational paradigms emphasising the practical application of knowledge, meeting the demands of Industry 4.0. The transformative narrative within the Equality Program Package C at the Community Learning Activity Centre Tenggara Raso reflects a paradigm shift in non-formal education, aligning with contemporary educational needs. The integration of online and offline learning methods, coupled with a strong focus on vocational skills, resonates with the current emphasis on technology-enhanced and skills-based education (Cheng et al., 2014). This approach not only caters to the diverse learning preferences of participants but also addresses the demand for practical, industry-relevant skills in the era of Industry 4.0 (Kraemer et al., 2009).

The post-innovation scenario, where vocational skills are seamlessly integrated into the curriculum, aligns with recent trends promoting experiential and applied learning (Roussou & Rangoussi, 2020). The emphasis on personalised learning, catering to the specific interests of participants, echoes contemporary educational theories highlighting the importance of learner-centred approaches (Prince, 2004). The establishment of MSMEs by participants signifies the socio-economic impact of this innovation, reinforcing the idea that non-formal education can catalyse entrepreneurship and community development (Araba, 2012).

This innovative learning model not only redefines the learning experience but also aligns with the broader goals of education in fostering skills for the future workforce and promoting sustainable development (UNESCO, 2017). The emphasis on practical skills and the subsequent establishment of MSMEs resonate with global efforts to bridge the gap between education and employment, creating a more skilled and entrepreneurial populace (World Bank, 2019). In conclusion, the transformative innovation in the Equality Program Package C reflects a forward-looking approach that responds to the evolving needs of education in the 21st century.

### **Critical analysis and implications**

The shift observed from conventional learning to a skill-based approach aligns with contemporary educational paradigms emphasising the adaptation of education to the demands of Industry 4.0 (Oláh et al., 2020). Vocational skills are increasingly recognised as vital in the job market, with educational models incorporating such skills to prepare individuals for the evolving workforce better (Davies et al., 2011). The educators' diverse qualifications, as highlighted in Table 1, contribute to the richness of the learning environment. Research suggests that diverse teaching teams bring varied perspectives, enriching the educational experience and fostering a more inclusive learning environment (Jansen, 2021).

The establishment of MSMEs by program participants signifies a tangible impact on local economic development, aligning with the global acknowledgement of entrepreneurship as a driver of economic growth (Audretsch & Keilbach, 2007). However, challenges related to funding and age-related limitations underscore the need for a comprehensive support system. Recent studies emphasise the importance of sustainable funding models for non-formal education programs to ensure longevity and effectiveness (Yang & McCall, 2014).

In enhancing the critical analysis, it is essential to consider potential drawbacks or limitations of the program. For instance, exploring the challenges participants face in implementing acquired skills in their daily lives or businesses can provide a more nuanced understanding of the outcomes.

Additionally, a comparative analysis with similar non-formal education initiatives globally could offer insights into the uniqueness and effectiveness of the Tenggara Raso model.

To strengthen the theoretical underpinnings, explicitly linking the observed shift in the learning approach and its outcomes to the theoretical frameworks mentioned earlier, such as constructivism and transformative learning theory, is recommended. Presenting alternative viewpoints or contrasting research findings related to the impact of vocational skills education can add depth to the analysis and demonstrate a nuanced understanding of the broader educational landscape.

The conclusion briefly touches upon the importance of addressing challenges, but expanding on potential avenues for future research, such as specific strategies to mitigate funding challenges or overcome age-related limitations in non-formal education, could provide valuable insights. Additionally, elaborating on how the diverse qualifications of educators specifically contribute to the observed richness of the learning environment and the success of the program participants can strengthen the argument regarding the positive impact of a diverse teaching team.

In conclusion, the results highlight the transformative potential of innovative non-formal education models, emphasising practical skills and entrepreneurship to enhance individual employability and contribute to broader community development and empowerment. To sustain and expand these positive outcomes, addressing challenges through a multi-stakeholder approach and exploring future research directions are crucial.

### **Strategic evolution: Tenggara Raso's innovative approach to non-formal education**

The meticulous approach adopted by Tenggara Raso in shaping the learning methodology before introducing innovative vocational skills reflects a strategic initiative in line with contemporary educational trends. Popescu and Roman's research (2018) underscores the growing recognition of the importance of practical skills over traditional diploma-centric approaches. This transition aligns seamlessly with the evolving global perspective, emphasising the significance of skills-based education in the era of Industry 4.0 (World Economic Forum, 2015). Tenggara Raso's commitment to laying a foundation based on practical skills for all participants signifies a departure from conventional education models and positions them as pioneers in adapting to the demands of a rapidly changing job market.

The alignment of Tenggara Raso's innovative learning model with broader global trends signals a proactive response to the shifting education landscape. The acknowledgement that income generation is intricately tied to practical skills resonates with Popescu and Roman's findings (2018) and mirrors the ongoing global discourse advocating for a transition from traditional education to skill-oriented learning (World Bank, 2019). Tenggara Raso's proactive stance in renovating educational infrastructure echoes initiatives in countries like Romania, where similar efforts were undertaken to enhance the quality of education and align it with the dynamic needs of the labour market (Popescu & Roman, 2018). This exemplifies a global shift towards ensuring education remains relevant and adaptable in the face of technological advancements and economic changes. Boateng et al.'s research (2015) on the alignment between acquired skills and employer expectations is a pertinent framework for understanding graduates' challenges and opportunities. Tenggara Raso's commitment to aligning acquired skills with local employer expectations reflects a strategic approach that recognises the crucial importance of meeting the specific needs of the regional job market. This strategic awareness aligns with recent recommendations for educational institutions to foster close partnerships with industries and tailor curricula to align with local economic demands (World Economic Forum, 2020). It is a noteworthy contribution, highlighting the importance of contextual relevance in educational programs, ensuring that graduates are well-equipped for the practical demands of the job market.

However, the findings also shed light on the identified skills gap and challenges post-education graduates face, a global concern (Edeigba & Yuldas, 2022). The dynamic nature of the job market demands ongoing attention to market trends, skill assessments, and curriculum updates. Tenggara Raso's acknowledgement of this challenge indicates a commitment to addressing the evolving demands of the job market, aligning with recent discussions emphasising the adaptability of education systems to dynamic market requirements (European Parliament, 2021). This finding prompts a critical reflection on the long-term sustainability of non-formal education models and the need for continuous adaptation to industry dynamics.

Beyond individual impacts, Tenggara Raso's emphasis on skills aligning with local business needs contributes to broader economic and societal development. The establishment of MSMEs by graduates resonates with the global recognition of entrepreneurship as a key driver of economic growth and community development (Audretsch & Keilbach, 2007; UN, 2015). This aligns coherently with the overarching goals of non-formal education, as recent studies underscore the societal impact of skills-based education in fostering economic self-sufficiency and community empowerment (PwC, 2020). The findings reiterate the vital role that non-formal education can play in enhancing individual employability, fostering entrepreneurship, and contributing to overall community development.

In conclusion, Tenggara Raso's experiences offer valuable insights into the dynamic nature of non-formal education, particularly in the context of vocational skills. The adaptability of learning models to market needs, the acknowledgement of skills gaps, and the emphasis on economic impact position Tenggara Raso as an adaptive and socially responsible learning centre. Future research could delve deeper into the sustained impact of MSMEs, the long-term outcomes of graduates, and the continuous adaptability of the learning model to evolving industry requirements. Ongoing collaboration with local businesses and industries will be crucial to maintaining the relevance and effectiveness of non-formal education initiatives, aligning with recent recommendations for educational institutions to foster industry partnerships and enhance employability outcomes (European Parliament, 2021; World Economic Forum, 2020).

## **CONCLUSIONS**

The case study at Tenggara Raso Community Learning Activity Centre, particularly focusing on the success of its Package C program, holds significant implications for the advancement of non-formal education. The findings underscore the efficacy of integrating practical life skills and vocational training in enhancing participant engagement and fostering socio-economic development. Moving forward, educators and policymakers in non-formal education should consider the adaptive learning models observed at Tenggara Raso as a blueprint for addressing the evolving demands of Industry 4.0. However, it is crucial to acknowledge the limitations of the single-case study approach, which may limit the generalizability of the findings. Additionally, as revealed in the study, addressing challenges such as funding constraints and age-related limitations is essential for the sustained success of similar programs. This research underscores the need for continuous innovation, strategic collaborations with local industries, and a focus on gender equality to ensure that non-formal education remains a dynamic force for individual empowerment and community development in the future.

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## CONFLICTS OF INTEREST STATEMENT

The authors declare that there is no conflict of interest.

## AUTHOR CONTRIBUTIONS

N. Hayati led the conceptualization, methodology development, and overall supervision of the research project, including writing and revising the main manuscript. E. Sudiapermana was responsible for data collection, formal analysis, and contributed to the literature review. A. Saepudin handled the statistical analysis, validation of research findings, and assisted with methodology refinement. All authors reviewed and approved the final version of the manuscript.

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