

Integrating Andragogy and Project-Based Learning to Enhance Life Skills Competency Among Adult Learners

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ABSTRACT

This research the integration of andragogy and project-based learning (PjBL) to enhance life skills competency among adult learners in a fashion training program at LKP Anggrek Padang, Indonesia. Despite the potential of PjBL to foster practical and cognitive skills, its effectiveness in informal adult education remains limited when disconnected from adult-centered learning principles. Using descriptive qualitative methods—participant observation, interviews with 12 learners and one instructor, and document analysis—this study examines how instructional practices align with Malcolm Knowles' andragogical principles. Findings show that while PjBL engaged learners in collaborative garment-making projects, teaching remained teacher-centered, with rigid instructions and external evaluations. Learner autonomy, experiential reflection, and intrinsic motivation were underemphasized, resulting in missed opportunities to develop critical life skills such as problem-solving, self-direction, and adaptability. The misalignment between adult learners' characteristics and pedagogical approach highlights a gap in instructor understanding of andragogy. The study concludes that effective life skills development requires more than PjBL implementation—it demands intentional integration with andragogical foundations. Recommendations include andragogy-based teacher training and curriculum redesign for vocational programs targeting adults.

Keywords: Andragogy, Project Based Learning, life skills, adult learners, vocational training

INTRODUCTION

In today's rapidly evolving global economy, the need for life skills education is becoming increasingly important, particularly in vocational training institutions. Life skills, which encompass a range of abilities such as critical thinking, communication, teamwork, problem-solving, and self-management, are crucial in preparing individuals for the world of work. While vocational institutions focus on providing specific trade-related skills, they also aim to develop non-technical competencies that are often considered as important as technical knowledge for successful employment (OECD, 2019). However, despite their

importance, many vocational institutions face challenges in integrating life skills effectively into their curricula, which can hinder the overall effectiveness of their training programs.

In Indonesia, Lembaga Kursus dan Pelatihan (LKP) play a pivotal role in fostering both life skills and vocational competencies, particularly among marginalized adult learners such as women and youth from low-income communities who seek pathways to economic empowerment and social mobility (Kebudayaan, 2021). As non-formal education institutions, LKPs are strategically positioned to respond flexibly to local labor market demands and community needs, offering short-term, skill-based training programs that aim to enhance employability and entrepreneurial capacity. However, despite their potential to serve as transformative learning spaces, many LKPs continue to rely on conventional, teacher-centered instructional models that prioritize rote learning and passive knowledge transmission over active engagement. Such approaches often fail to align with the core principles of andragogy—the theory of adult learning—which emphasize self-directed learning, the integration of learners' prior experiences, intrinsic motivation, and problem-centered instruction (Zen et al., 2025). This pedagogical misalignment not only undermines the quality of learning but also constrains the development of critical life skills, including analytical thinking, autonomous decision-making, emotional regulation, and adaptability in dynamic environments. These competencies are increasingly recognized as essential for navigating complex socioeconomic challenges, achieving sustainable employability, and exercising personal agency in both professional and personal domains. Therefore, reorienting LKP teaching practices toward learner-centered, experiential, and contextually relevant methodologies is imperative to fully realize their potential in empowering adult learners and contributing to inclusive human capital development.

Project-Based Learning (PjBL) has been widely recognized as an effective instructional approach for developing both technical competencies and essential soft skills—such as collaboration, communication, and critical thinking—through meaningful, real-world tasks (Thomas, 2000). In vocational education, PjBL involves students working on projects that emphasize the development of technical skills and practical knowledge in a specific field or industry (Ahmad et al., 2023). Studies in Indonesian vocational schools demonstrate that PjBL significantly improves students' practical abilities and work readiness through learner-centered, production-oriented tasks (Megayanti et al., 2020).

However, when implemented without grounding in adult learning principles—such as self-direction and experiential learning—PjBL risks becoming a teacher-directed activity rather than a learner-driven process (Stojanovic, 2022). To maximize its impact, especially in vocational contexts with adolescent or adult learners, PjBL should be designed to align with andragogical frameworks that emphasize autonomy, relevance, and reflection.

Andragogy, as conceptualized by (Knowles, 1984), emphasizes self-directed learning, readiness to learn based on social roles, and intrinsic motivation—principles highly relevant to adult learners in non-formal education. Yet, empirical studies on integrating andragogy with active learning models like PjBL in Indonesian LKPs remain. Most existing research focuses on formal education settings, leaving a significant gap in understanding how andragogical principles can optimize PjBL for life skills development in informal adult training. Implementing adult learning requires applying adult principles by involving students in learning, designing learning that emphasizes experimental principles, and adapting learning that can be directly applied (Setiawati & Shofwan, 2023).

This case study addresses this gap by examining the integration of andragogy and PjBL in a fashion vocational program at LKP Anggrek Padang, West Sumatra. The study aims to: (1) describe the implementation of PjBL, (2) evaluate its alignment with andragogical principles, and (3) identify challenges and opportunities in enhancing life skills competency among adult learners. Using qualitative methods, the research contributes to both theoretical and practical knowledge by proposing a contextually grounded model for adult-centered project-based learning in LKPs. The findings highlight the necessity of aligning pedagogy with adult learning theory to move beyond technical training toward holistic life skills development.

METHOD

This study utilized a qualitative case study design to investigate the integration of andragogy and Project-Based Learning (PjBL) in enhancing life skills competency among adult learners at LKP Anggrek Padang, West Sumatra. The case study approach was selected to obtain an in-depth understanding of pedagogical practices within their natural context, in line with the principles of contextual inquiry emphasized in Indonesian qualitative research traditions (Sugiyono, 2019).

The focus of the case was the eight-week fashion vocational training program, where learners engaged in a garment-making project from concept to final product. Data were collected from three main sources: twelve adult learners aged 18–45, the primary instructor, and instructional documents such as lesson plans, learner portfolios, and assessment sheets. Participants were selected through purposive sampling based on their active participation and diversity in age and prior experience. Data collection techniques included participant observation during six learning sessions to document teaching interactions, semi-structured in-depth interviews with all learners and the instructor, and document analysis to evaluate alignment between practice and adult learning principles. All interviews were audio-recorded, transcribed verbatim, and analyzed thematically. Thematic analysis was conducted following the stages proposed by Miles and Huberman as adapted by (Safarudin et al., 2023): data reduction, data display, and conclusion drawing/verification. Triangulation of data sources was applied to ensure credibility, while member checking was used to validate interpretations.

DISCUSSION

PjBL and Andragogy: A Misaligned Integration

The implementation of Project-Based Learning (PjBL) at LKP Anggrek Padang demonstrated structural alignment with project-based pedagogy—learners engaged in a semester-long garment-making project that involved designing, pattern-making, sewing, and presenting final products. These activities reflect key components of PjBL such as authenticity, collaboration, and product creation. However, despite this procedural resemblance, the pedagogical approach remained inconsistent with the principles of andragogy, which emphasize self-directed learning, experiential foundations, intrinsic motivation, and learner autonomy (Bouchrika, 2024).

In practice, the instructor retained full control over project design, timeline, and assessment criteria. Learners were given predefined themes (e.g., "traditional-modern fusion") and standardized patterns, with little opportunity to propose their own ideas or adapt designs based on personal interests. This top-down approach contradicts Knowles' assertion that adult learners are most motivated when they participate in planning and evaluating their learning (Knowles, 1984). Furthermore, decision-making was centralized; for instance, fabric choices, color schemes, and even stitching techniques were dictated by the instructor rather than explored through learner experimentation.

This misalignment is not unique to this context. The training process is controlled by the owner of the skill being taught or an expert who helps develop the skill through structured experiences (Amanda, 2025). PjBL is reduced to a series of guided tasks rather than an inquiry-driven process, undermining its potential for fostering critical thinking and ownership. In this case, while learners were physically active, they remained cognitively passive—following instructions rather than solving real-life problems.

Moreover, the absence of learner reflection sessions further weakened the experiential foundation central to both andragogy and authentic PjBL (Thomas, 2000). Without structured opportunities to analyze successes and failures, learners treated mistakes as deviations to be corrected, not as learning moments. This mechanistic view of learning limits the development of metacognitive skills essential for lifelong adaptability.

Thus, while Project-Based Learning (PjBL) can take shape in adult education settings, it often remains disconnected from the core spirit of learner-centered andragogy. The integration of andragogical principles is superficial at best—merely acknowledging learners' lived experiences without meaningfully integrating them into the learning process. This gap undermines PjBL's transformative potential for adult learners. However, when tutors possess a deep understanding of Technological Andragogy Content Knowledge, they are better equipped to align PjBL with the foundational principles of andragogy. According to (Solfema et al., 2024), such knowledge enables tutors to design learning experiences that are not only more effective, efficient, and engaging but also truly responsive to the needs, experiences, and goals of adult learners. By integrating technology, content, and andragogical strategies, tutors can transform PjBL into a powerful tool that empowers adult learners to achieve their learning goals meaningfully and independently.

Beyond Technical Skills: Life Skills Through Autonomy and Reflection

While learners at LKP Anggrek Padang successfully produced wearable garments and demonstrated improved technical proficiency in sewing, cutting, and design, the development of broader life skills—such as problem-solving, decision-making, self-regulation, and adaptability—remained limited. This outcome highlights a critical distinction between technical mastery and holistic life skills competency, the latter of which requires more than skill repetition: it demands learner agency and reflective practice.

The observed program emphasized product completion over process exploration. Learners followed predetermined steps with minimal deviation, reducing opportunities to encounter and resolve authentic challenges. For instance, when fabric shortages or stitching errors occurred, solutions were immediately provided by the instructor rather than co-constructed through group discussion or trial-and-error experimentation. As a result, learners did not develop resilience or independent problem-solving strategies.

Furthermore, autonomy—the cornerstone of adult learning (Knowles et al., 2014)—was constrained throughout the project cycle. Learners had little say in project scope, team roles, or time management. Tasks were segmented and assigned uniformly, leaving no space for personal initiative or creative risk-taking. This lack of ownership diminished intrinsic motivation and weakened the connection between learning and real-life application. As Arulsamy et al., (2023) found in their study, when learners are not involved in decision-making, they tend to view training as an external obligation rather than a means of personal empowerment.

Equally missing was structured reflection—a vital mechanism for internalizing life skills. Andragogy posits that adults learn best when they critically reflect on experiences, yet no formal reflection sessions were conducted. Learners were not asked to evaluate their collaboration, analyze mistakes, or articulate how the skills learned could be applied beyond the classroom. Without such metacognitive engagement, learning remained surface-level, focused on "how to sew" rather than "what I learned about myself as a learner".

Life skills in non-formal vocational programs are often reduced to instrumental outcomes, neglecting the cognitive and affective dimensions essential for lifelong adaptation. In contrast, when PjBL is implemented with intentional support for autonomy and reflection, learners demonstrate increased confidence, responsibility, and ability to transfer skills across contexts. The Life Skills for All model empowers learners by placing them at the center of the learning process, integrating various basic skills, and emphasizing the central role of the local community in their educational experiences (Suoranta et al., 2023). This approach can be strengthened through the implementation of project-based learning models in Vocational High Schools, which create a more realistic and results-oriented learning environment focused on developing practical skills relevant to the world of work and everyday life (Tejawiani et al., 2023). By combining these two approaches, learners not only enhance their autonomy and self-confidence but also acquire hands-on competencies aligned with real-world demands. Projects can be designed around local needs and contexts, thereby strengthening community engagement and increasing the relevance of learning. Thus, the integration of the Life Skills for All model with project-based learning fosters a synergistic approach that holistically supports learner empowerment, both personally and professionally.

Thus, while technical competence was achieved, true life skills development was hindered by the absence of learner-centered practices. The case underscores that life skills do not emerge automatically from project work—they must be intentionally cultivated through pedagogical designs that value autonomy, encourage reflection, and connect learning to personal and social identity.

An Integrated Model for Adult-Centered PjBL in LKPs

The findings from LKP Anggrek Padang reveal that while Project-Based Learning (PjBL) has the structural potential to enhance life skills, its effectiveness in adult vocational education is severely limited without intentional integration with andragogical principles. To bridge this gap, this study proposes an Integrated Andragogy-Informed PjBL Model specifically designed for non-formal adult learning settings like LKPs. This model does not merely combine two approaches but reorients PjBL through the lens of adult learning theory, ensuring that pedagogy aligns with the characteristics, needs, and aspirations of adult learners.

The proposed model consists of four interconnected components: Learner-Initiated Project Design, Facilitative Instruction, Structured Reflection Cycles, Self-Directed Assessment. In learner-initiated project design, projects should emerge from learners' personal interests, community needs, or real-life challenges (e.g., designing modest fashion for local markets or upcycling used fabrics). This reflects Knowles' principle of readiness to learn, where motivation arises from social roles and practical relevance (Knowles et al., 2014).

Facilitative instruction, instructors shift from directive teachers to facilitators who guide inquiry, support problem-solving, and encourage peer collaboration. This role transformation is critical, as Rahmawati et al., (2024) emphasize that instructor mindset determines whether PjBL becomes learner-driven or remains teacher-controlled.

Structured Reflection Cycles, regular reflection sessions—using journals, group discussions, or portfolio reviews—enable learners to analyze their experiences, evaluate decisions, and connect skills to broader life goals. This embodies Arulsamy et al., (2023) concept of critical reflection as a core mechanism for adult learning and life skills internalization. Self-Directed Assessment, learners co-create assessment criteria and engage in self- and peer-evaluation, fostering ownership and metacognitive awareness. This supports intrinsic motivation and aligns with Larmer et al.'s (2015) emphasis on “voice and choice” in authentic PjBL.

This integrated model moves beyond technical skill acquisition toward holistic life skills development by embedding autonomy, experience, and reflection into every phase of the project cycle. It is particularly relevant for LKPs, where programs are often short-term and resource-constrained, yet serve adults seeking empowerment and economic independence.

For scalability, the model requires institutional support: Instructor training programs grounded in andragogy and transformative pedagogy Pratiwi & Nelmira, (2024), Curriculum redesign that prioritizes process over product, Policy incentives from local education offices to adopt learner-centered approaches in non-formal settings. By reimagining PjBL not just as a method, but as a vehicle for adult empowerment, this model offers a practical pathway for LKPs to fulfill their mission of developing not only skilled workers, but capable, reflective, and resilient individuals.

CONCLUSION

This study reveals that while Project-Based Learning (PjBL) is implemented in form at LKP Anggrek Padang, its integration with andragogical principles remains superficial. Despite engaging learners in collaborative garment-making projects, instructional practices are predominantly teacher-centered, limiting opportunities for self-directed learning, experiential reflection, and intrinsic motivation—core tenets of adult education. As a result, learners develop technical skills but show limited growth in essential life skills such as problem-solving, autonomy, and adaptability. The misalignment between PjBL and andragogy highlights a critical gap in pedagogical understanding among instructors in informal vocational settings. Without intentional efforts to embed learner agency and reflective practice into project design, PjBL risks becoming a mechanically executed task rather than a transformative learning experience.

This research contributes by proposing an Integrated Andragogy-Informed PjBL Model for adult learning in LKPs, emphasizing four key components: (1) learner-initiated project design, (2) facilitative instruction, (3) structured reflection cycles, and (4) self-directed assessment. This model offers a practical framework for aligning active learning methods with the principles of adult-centered education.

For meaningful life skills development, it is not enough to adopt innovative methods like PjBL; they must be grounded in adult learning theory. Institutional support—through instructor training, curriculum redesign, and policy incentives—is essential to foster a shift from teacher-led to learner-empowering practices in non-formal education.

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