

Embedding Heutagogy Principles into the Outcome-Based Education Curriculum

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Abstract

This study addresses the need to optimize student agency within structural frameworks by embedding heutagogical principles into the Outcome-Based Education (OBE) curriculum. The objective is to identify relevant heutagogical integration points and develop an updated framework for Community Education (*Penmas*). Utilizing a qualitative curriculum development method, the research was conducted within the Penmas Department at FIP Unimed in 2026. The research subjects comprised 25 specialized Penmas stakeholders from the North Sumatra region, selected via total sampling. Data collection was executed through a systematic literature review on OBE and heutagogy alignment. The data analysis technique utilized a qualitative matrix involving learning needs analysis, heutagogy material mapping, and structural framework synthesis. The results reveal that integrating self-determined learning shifts the educator's role to a facilitator and empowers students via double-loop learning, flexible pathways, and learner-generated content. In conclusion, this structural synchronization successfully equips Penmas graduates across all professional tracks with the metacognitive skills and innovative competencies required to thrive as autonomous, internationally competitive professionals in Society 5.0.

Keywords: Outcome-Based Education, Heutagogy, Community Education, Self-Determined Learning, Curriculum Development

INTRODUCTION

A curriculum serves as a foundational blueprint in formal education, encompassing a structured set of plans, objectives, content, learning materials, and instructional methods designed to guide learning activities toward specific academic achievements (Ministry of Education and Culture [MoEC], 2003). In the context of Indonesian higher education, curriculum development must dynamically synthesize multiple vital dimensions, including spiritual faith, Pancasila values, students' intrinsic potential and interests, regional diversity, and rapid technological advancements. To address these complex demands, the Department of Community Education (*Pendidikan Masyarakat* or *Penmas*) has systematically transitioned toward an

Outcome-Based Education (OBE) framework. According to Sevima (2023), this curriculum model shifts the primary evaluation metric from content delivery to measurable learning outcomes, ensuring students acquire the critical competencies required to maintain international competitiveness.

The implementation of an OBE curriculum requires a rigorous, multi-stage development cycle to ensure systematic alignment. This process begins with establishing distinct graduate profiles, defining program learning outcomes (PLOs), designing core study materials, and structuring the overarching curriculum framework (Sevima, 2023). Following this, educators determine specific course outcomes, execute the learning process, assess final achievements, and establish

continuous monitoring and evaluation protocols. Within this structure, graduate profiles outline the specific characters, attitudes, knowledge, and skills expected of students upon entry into the workforce, while program objectives map out their targeted professional trajectories a few years after graduation (Yumelking, 2023). Ultimately, learning outcomes explicitly clarify what graduates must know, understand, and perform across cognitive, affective, and psychomotor domains.

Rooted in the foundational concepts introduced by William G. Spady in the 1990s and Jean Piaget's cognitive development theory, OBE prioritizes future-focused, performance-based learning where education is measured by actual student achievements rather than instructional inputs (Rao, 2020; Wang, 2013; Shaheen, 2019). Achieving globally competitive Penmas graduates necessitates an absolute paradigm shift from Input-Based Education (IBE) to OBE, effectively transforming the traditional lecturer-centered environment into a student-centered classroom (Samadhi, 2023). Unlike traditional systems that evaluate students relative to their peers based on instructional hours, OBE uses a criteria-based assessment model—such as weighted Course Learning Outcomes (CPMK) evaluations—where students are given additional, expanded opportunities and targeted support to meet predefined competency standards (Chamisijatin & Permana, 2020).

To properly operationalize this outcome-oriented framework, curriculum design must adhere to the four pillars of OBE outlined by Samadhi (2023): Clarity of Focus, which ensures stakeholders collaboratively formulate clear graduate profiles; Designing Down,

which maps the curriculum backwards from broad program goals to specific weekly assessment instruments; High Expectations, which establishes challenging standards to prevent shallow "checklist learning"; and Expanded Opportunities, which accommodates diverse learning pathways. Faculty members must seamlessly align program objectives with the specific course outcomes detailed in Semester Learning Plans (RPS) and syllabi (Wahyudi & Wibowo, 2018). However, while the structural execution of defining outcomes, creating supporting activities, and assessing criteria-based performance is clear (Prihantoro, 2020), optimizing student agency within this highly structured framework remains a persistent educational challenge.

To enhance student autonomy within the OBE framework, integrating the heutagogical approach offers a progressive solution that elevates traditional pedagogical and andragogical paradigms. While pedagogy relies on educator-directed instruction and andragogy advances toward self-directed learning via single-loop reflection, heutagogy focuses entirely on self-determined learning (Blaschke, 2012). According to Richardson et al. (2018), heutagogy places full responsibility for the learning journey onto the student, shifting the educational experience from linear content mastery to non-linear, inquiry-based exploration focused on metacognition and adaptive capability development. In a heutagogical environment, the educator steps back from controlling materials to act purely as a facilitator, cultivating a complex, collaborative space where students actively manage and genuinely enjoy their personal development (Handayani et al., 2021; Sumarsono, 2020).

In the era of Society 5.0, this holistic, learner-centered paradigm positions students as active agents who learn through personal experiences, transforming how knowledge is acquired and applied (Hase & Kenyon, 2000). In practice, heutagogy relies on interdependent learning, where students validate knowledge through peer collaboration and research, alongside double and triple-loop learning that challenges them to reflect on how new information impacts their personal values, beliefs, and problem-solving capacities (Chimpololo, 2020). Furthermore, it encourages active participation in practice across integrated online and in-person learning spaces, empowering students to co-create content, share knowledge, and address complex problems within dynamic learning communities.

Embedding these heutagogical principles directly into the existing OBE curriculum framework offers several profound structural benefits for higher education institutions. As noted by Samadhi (2023), this integration effectively fosters:

- a. Stakeholder-aligned learning outcomes that ensure educational relevance to real-world industrial demands;
- b. Greater accountability in institutional education delivery;
- c. Enhanced adaptability to rapid global disruptions like Industry 4.0 and ongoing national education reforms; and
- d. Improved alignment with international accreditation and certification standards.

Consequently, there is a compelling need to systematically update the OBE curriculum in the Penmas

Department by merging these two models to optimize graduate capabilities.

This study directly addresses this need by exploring the structural integration of self-determined learning within an outcome-based system in the Penmas Department. Specifically, the research addresses two core problems: (1) identifying the exact heutagogical principles that are highly relevant to an OBE curriculum, and (2) designing a comprehensive, OBE-based Penmas curriculum that effectively incorporates these heutagogical principles. The primary objectives are to accurately identify these integration points and systematically develop the updated Penmas curriculum framework. The expected outputs of this research include a final registered copyright report, scientific publications in indexed proceedings and accredited national journals, and substantial theoretical contributions to future OBE curriculum designs, heutagogy mapping, and the development of Graduate Learning Outcomes (CPL) across Penmas courses.

RESEARCH METHODS

This study is designed as a qualitative curriculum development research project aimed at systematically integrating the architectural pillars of Outcome-Based Education (OBE) with the learner-centric principles of heutagogy. To establish a rigorous foundation for this method, the research process operationalizes a systematic design and analysis framework that translates theoretical models into functional academic structures. The procedural trajectory of this curriculum development model is graphically structured and illustrated using a fishbone diagram, which details the multi-layered

interconnections, inputs, and sequential stages required to transform traditional community education structures into an advanced, self-determined learning ecosystem.

The research is physically and institutionally conducted within the Department of Community Education (*Pendidikan Masyarakat* or Penmas), located inside the Faculty of Education (*Fakultas Ilmu Pendidikan* or FIP) at Universitas Negeri Medan (Unimed). The temporal scope of this study encompasses the structured phases of data gathering, stakeholder coordination, and curriculum mapping executed during the academic period. To ensure the curriculum remains highly relevant to broader socio-economic and industrial shifts, the research targets a specific, expert population. The research population comprises 25 distinct Penmas stakeholders from the North Sumatra region, representing academic experts, institutional leaders, and field practitioners. Due to the limited and highly specialized number of these key actors, a total sampling technique is employed, thereby including all 25 stakeholders directly as the subjects of this study to maximize data validity.

For the structural development of the curriculum, data collection is primarily executed through a comprehensive, systematic literature review focused on the overlapping mechanisms of Outcome-Based Education and heutagogical framework parameters. As defined by Creswell (2018), a literature review serves as a rigorous written summary of scientific articles, books, and institutional documents that synthesizes past and current information, organizes existing literature into distinct conceptual themes, and critically identifies the need for

further research. This data collection technique allows the researchers to gather global benchmarks, existing policy indices, and validated pedagogical-to-heutagogical transition metrics necessary to build the structural foundation of the updated Penmas curriculum.

The data analysis technique follows a qualitative alignment matrix where the qualitative data extracted from the literature review are systematically analyzed, coded, and aligned with the Penmas Department's intended learning outcomes. The data analysis process is divided into three interconnected phases. First, an intensive Learning Needs Analysis is conducted through a thorough curriculum analysis, which involves: (1) conducting a rigorous competency standards analysis; (2) analyzing the fundamental basic competencies to be achieved by the department; (3) identifying and determining precise indicators of learning outcomes; (4) defining core, essential materials; and (5) specifying the exact, desired learning experiences for the participants.

Following the initial analysis, the subsequent phases of the data analysis and development process focus on structural mapping and framework synthesis. In the second phase, a specialized Heutagogy Material Map is created based on the initial heutagogical analysis; this map serves to align the core community education curriculum content directly with the identified self-determined learning needs of the students. In the final phase, the ideal curriculum framework is designed by synthesizing the newly mapped data with the overarching graduate profiles, the department's core vision and mission, current workforce demands, and evolving human resource requirements unique to the Penmas discipline. Through this

comprehensive analysis, the study successfully embeds OBE and heutagogy into a unified framework to support the

development of a highly competitive graduate profile.

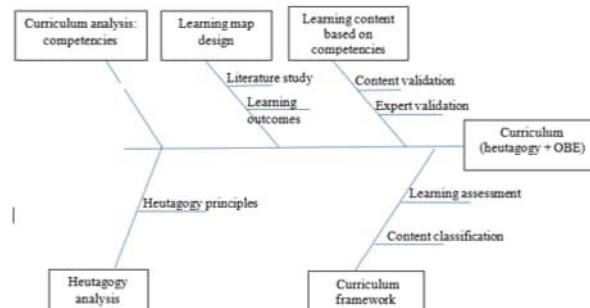


Figure 1. Research Flow

RESULTS AND DISCUSSION

Results

The analysis of the research data reveals the core configuration of heutagogical learning principles as a self-determined learning framework designed for higher education. The findings demonstrate that this student-centered approach prioritizes the systematic development of learner autonomy, capacity, and long-term capability. Emerging as a hallmark of Education 3.0, this model utilizes technology-driven learning platforms and internet connectivity to shift the traditional educational paradigm. Under this framework, the role of the instructor is transformed from a primary information transmitter into a learning facilitator. Consequently, students are empowered to use online platforms to independently define their own learning goals, construct individual learning pathways, and navigate complex, future-focused workforce demands with targeted guidance.

The findings further clarify the structural mechanisms of learner-directed education, illustrating an active, proactive, and highly engaging academic process. Within this framework, learners

function as the primary agents of their own education, meaning that meaningful learning emerges directly from personal, hands-on experience. This approach establishes deep student independence across three specific operational dimensions: the autonomous achievement of final learning outcomes, the independent determination of personal learning strategies, and the self-directed development of learning materials. A critical operational component identified in this process is the execution of double-loop learning and deep self-reflection. Through double-loop learning, students do not merely fix surface errors; instead, they deeply analyze problems, actions, and outcomes while evaluating how these cognitive processes actively shape their underlying values, personal beliefs, and everyday behaviors.

The practical field data outlines five distinct operational characteristics that define the active heutagogical environment. First, the curriculum maintains a highly flexible structure that dynamically adapts to the fluid nature of the learning process. Second, the learning pathways are entirely learner-driven, allowing students to map out their own unique learning contexts, activities, and

goals. Third, the system relies on collaborative learning networks and co-designed assessments that are carefully tailored to meet individual student needs. Fourth, the framework embeds rigorous reflective practices—including structured journals, experiential learning projects, and action research—to deepen intellectual understanding. Fifth, the model promotes the generation of learner-generated content, ensuring that the educational materials produced align directly with the students' evolving personal knowledge bases and immediate learning requirements.

The research also maps the structural evolutionary relationship between pedagogy, andragogy, and heutagogy, highlighting how they handle learner responsibility. Traditional pedagogy operates on an educator-led, highly dependent model characterized by linear, sequential instruction and a reliance on extrinsic motivation. Moving upward, andragogy introduces a self-directed, goal-oriented structure where adult learners assume greater responsibility and are propelled by intrinsic motivation. In contrast, the heutagogical approach breaks away from these models by establishing a non-linear, inquiry-based framework. Here, students assume total, uncompromised responsibility for their entire educational journey, focusing heavily on metacognition, the cultivation of highly

adaptive skills, and long-term professional growth while facilitators actively engineer complex, collaborative environments that spark curiosity and critical thinking.

Regarding curriculum development, the results map the specific structural architecture of the community education curriculum as an adaptable, non-formal framework focused on cultivating specialized skills that match evolving socio-technological advancements. The data identifies six defining characteristics of this curriculum model: the joint identification of community needs, collaborative program planning, co-creation of content with the community, shared evaluation protocols, structural flexibility to adapt to shifting local conditions, and participatory program development involving community members. While both formal schooling and community education share the broad objective of developing knowledge, skills, and technology for societal preparation, formal systems rely on rigid legitimacy and standardization. Conversely, the community education curriculum thrives on flexibility and participatory development designed to actualize human potential, enhance the quality of life, provide alternative pathways for self-development or employment, and directly address learning needs left unmet by formal schooling.

Table 1. Learning Outcomes Description

Competencies	Aspect	Description	<i>Learning Outcomes)</i>			
			Educator	Manager	Researcher	Entrepreneur

Able to utilize science and technology in his/her field of expertise and able to adapt to situations faced in solving problems	Attitude	Applying the principles, principles, approaches, strategies and methods of social andragogy to plan training programs, outreach, community empowerment and other non-formal education as well as informal education.	√	√	√	√
		Implementing training programs, community empowerment and other non-formal education as well as informal education based on the principles, principles, approaches, strategies and methods of social andragogy.	√	√	√	√

		Carrying out evaluation of training programs, outreach, community empowerment and other non-formal education as well as informal education based on the principles, principles, approaches, strategies and methods of social andragogy.	√	√	√	√
Mastering the theoretical concepts of a particular field of knowledge in general and the theoretical concepts of specific parts of that field of knowledge in depth, and being able to formulate procedural problem solving.	Knowledge	Mastering various theories of human behavioral sciences, especially andragogy, social pedagogy, critical pedagogy, and lifelong education.	√	√	√	√
		Mastering various concepts of human behavioral sciences, especially andragogy, social pedagogy, critical pedagogy, and lifelong	√	√	√	√

		education in order to be able to play a role as an educator and manager in the fields of training, counseling, community empowerment, and other non-formal education and informal education.				
Able to make strategic decisions based on information and data analysis and provide guidance in selecting various alternative solutions.	Skills	Able to make strategic decisions based on analysis, information and data, provide guidance in selecting various alternative solutions independently and in groups in the fields of training, counseling, community empowerment and non-formal education as well as informal education.	√	√	√	√
		Able to apply creative innovative ideas in training programs, outreach,	√	√	√	√

		community empowerment and other non-formal education as well as informal education.				
Responsible for own work and can be given responsibility	Managerial	Able to play a role as a motivator, communicator, facilitator, designer, developer and implementer of training programs, counseling, community empowerment and other non-formal education as well as informal education in a professional and accountable manner.	√	√	√	√
		Able to utilize and review science, technology and art in the management of training programs, outreach, community empowerment and other non-formal education as well as informal education	√	√	√	√

		based on the principles, principles, approaches, strategies and methods of social andragogy.				
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Discussion

The integration of heutagogical learning principles within the Outcome-Based Education (OBE) framework marks a profound paradigm shift for higher education, specifically inside the Community Education (*Pendidikan Masyarakat* or Penmas) discipline. While the standard implementation of OBE guarantees structural accountability and measurable competencies, embedding self-determined learning principles addresses a critical missing piece: the optimization of student agency. The research results demonstrate that within an Education 3.0 ecosystem, utilizing internet connectivity and technology-driven learning platforms allows the instructor to step out of the traditional role of a primary information transmitter. Instead, the educator shifts into a learning facilitator. This structural transition directly empowers students to take ownership of their academic development by setting independent learning goals and mapping personal learning pathways, which directly prepares them to navigate unpredictable and complex demands in the future workforce.

This shift in ownership is further realized through the specific operational dimensions of learner-directed education found in the results, namely autonomous achievement, independent strategic planning, and self-directed material

development. By positioning the learner as the primary agent of their education, meaningful knowledge transforms from a static transmission into a dynamic product of personal, hands-on experience. The discussion of this process highlights the vital role of double-loop learning and deep self-reflection. Unlike standard pedagogical correction, which focuses merely on repairing immediate surface errors, double-loop learning forces Penmas students to analyze problems, actions, and subsequent outcomes in a way that challenges and reshapes their underlying values, personal beliefs, and problem-solving behaviors. When structured this way, the non-linear, inquiry-based framework of heutagogy forces students to take total, uncompromised responsibility for their learning journeys, effectively cultivating deep metacognitive awareness and long-term professional adaptability.

The operational reality of this model is supported by five distinct characteristics that bridge heutagogical theory with the practical architecture of a community education curriculum. Specifically, a flexible curriculum structure, learner-driven paths, collaborative learning networks with co-designed assessments, deep reflective practices, and learner-generated content form an adaptable framework that aligns with the non-formal nature of community empowerment. Unlike formal schooling

systems that lean heavily on rigid legitimacy and standardization, the Penmas curriculum thrives on flexibility and participatory development. By centering the curriculum design around the joint identification of community needs, collaborative program planning, and shared evaluation protocols, the educational process mirrors the democratic and adaptive demands of the society it serves, turning lifelong learning from an abstract concept into a practical institutional reality.

This comprehensive integration is clearly operationalized in the curriculum's targeted graduate profiles and learning outcomes across four critical professional tracks, as detailed in Table 1. Whether preparing to graduate as an Educator, Manager, Researcher, or Entrepreneur, students must universally master and apply complex behavioral science concepts such as andragogy, social pedagogy, critical pedagogy, and lifelong education across all evaluation and development stages. The alignment matrix verifies that across the domains of Attitude, Knowledge, Skills, and Managerial competencies, graduates are systematically equipped to make strategic, data-driven decisions independently and within groups. By utilizing and reviewing science and technology through an innovative, heutagogical lens, these future Penmas professionals are uniquely prepared to operate as motivators, facilitators, and designers who can launch creative community empowerment initiatives in a completely accountable and internationally competitive manner.

CONCLUSION

The integration of heutagogical principles into the Outcome-Based

Education (OBE) curriculum within the Community Education (Penmas) Department effectively transforms the educational paradigm from an input-based system to a self-determined learning ecosystem centered on absolute student autonomy. Through the operationalization of double-loop learning, flexible curricular pathways, and the digital platforms of Education 3.0, students not only achieve measurable academic competencies but also develop into proactive, adaptive, and lifelong learners. Ultimately, the finalized learning outcomes matrix confirms that this structural synchronization successfully equips future Penmas graduates across all professional tracks—as Educators, Managers, Researchers, and Entrepreneurs—with the critical metacognitive skills, strategic decision-making capabilities, and innovative managerial competencies required to thrive in the dynamic workforce of Society 5.0.

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