

Implementation of Outcome-Based Education in Higher Education Curricula: A Comparative Study of Student Empowerment at UNNES and Chulalongkorn University

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Abstract

As higher education systems worldwide face increasing pressure to demonstrate measurable learning outcomes and respond to changing societal and labor-market needs, Outcome-Based Education (OBE) has become increasingly important for curriculum transformation. This study analyzes OBE implementation in the Non-Formal Education Program at Universitas Negeri Semarang (UNNES), Indonesia, and the Lifelong Learning Program at Chulalongkorn University, Thailand, focusing on implementation strategies, challenges, and opportunities. Using a qualitative comparative case study, data were collected from lecturers, students, program managers, and alumni through interviews, observations, curriculum document analysis, and focus group discussions, and analyzed using the Miles and Huberman interactive model and cross-case comparison. Findings show that UNNES implements OBE with reference to the Indonesian National Qualifications Framework (KKNI), emphasizing local needs and community empowerment, whereas Chulalongkorn University integrates OBE within a lifelong learning framework characterized by credit flexibility, Recognition of Prior Learning, and alignment with the ASEAN Qualifications Reference Framework (AQRF). Both institutions face challenges related to authentic assessment consistency, faculty preparedness, and diverse student backgrounds. Nevertheless, international collaboration, portfolio-based assessment, and sister-curriculum development offer significant opportunities. The study demonstrates how institutional contexts shape OBE implementation and contributes to developing adaptive, inclusive, and student-empowering higher education models in Southeast Asia.

Keywords

Outcome Based Education (OBE); Non Formal Education; Lifelong Learning; Higher Education Curriculum; Sister Curriculum

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1. INTRODUCTION

Higher education plays a crucial role in preparing students to meet the demands of the workplace and society. Various factors, such as globalization, demographic change, government policies,



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technological developments, and climate change, are influencing significant changes in the world of work (Wardana & Magriasti, 2024); (Mason et al., 2022). This is a strong signal for universities to produce graduates who are relevant to the times. University graduates are required to be able to keep up with developments in both new competencies and technology, enabling individuals to meet the demands of the rapidly changing world of work and to meet their life needs appropriately (Pramesti et al., 2024); (Cahyani et al., 2025).

As higher education continues to evolve, there is a growing emphasis on aligning educational outcomes with the competencies required in the modern workplace (Awashreh, 2026); (Kumar, 2025). Outcome-Based Education (OBE) has emerged as a crucial framework in this context, focusing on achieving specific and measurable learning outcomes that equip students with relevant skills and knowledge (Hanafiah et al., 2024); (Keo et al., 2025). A study conducted in Vietnam and Laos showed that OBE is an effective framework for teaching, learning, and assessment in higher education, as it promotes student-centered learning and quality improvement (Muzakir, 2023); (Nguyen et al., 2024). OBE implementation is associated with several key benefits, such as improved learning experiences, increased job competitiveness, and clarity of expectations (Novrizal & Muhammad, 2025); (Jaya et al., 2025).

While the global adoption of OBE reflects a broader shift toward competency-based and student-centered higher education, its implementation is inevitably shaped by regional qualification frameworks, national education policies, and institutional priorities. In Southeast Asia, these contextual differences are particularly important because universities must reconcile globally recognized outcome-based principles with national qualification systems and locally defined educational missions. This global-regional interaction ultimately becomes visible at the institutional level, where universities translate OBE principles into distinct curriculum structures, assessment practices, and approaches to student empowerment.

In Southeast Asia, countries like Malaysia have implemented OBE at all levels of education to better prepare graduates for the workforce. The Malaysian Qualifications Agency (MQA) monitors educational quality to ensure it aligns with OBE principles, addressing issues such as graduate unemployment and skills mismatch (Royani et al., 2025); (Leong, 2022). However, only a few universities in Indonesia are able to achieve global-level higher education quality. Based on the 2020 performance report of the Indonesian Directorate of Higher Education, several issues remain, including a gap between the profile of university graduates and the workforce-ready qualifications required by society and the workplace, as well as a lack of synergy between higher education and industry (Gustiawan et al., 2025); (Suminar et al., 2025). Higher education is vital in equipping students with the skills and knowledge necessary to successfully adapt to the needs of the workplace and society (Wynda, 2025). Universities in Indonesia are encouraged to implement changes to increase the relevance of higher education graduates to the needs of the workplace and industry through innovative educational and teaching strategies, thereby producing superior and competitive graduate competency standards.

Universitas Negeri Semarang (UNNES) in Indonesia and Chulalongkorn University in Thailand are leading institutions that both offer undergraduate programs in non formal education and lifelong learning. Outcome-Based Education (OBE) is a transformative approach that shifts the focus from traditional content-based learning to measurable learning outcomes (Sholeh & Murhayati, 2025); (Juarsa & Kalsum, 2025). By ensuring students achieve certain competencies, OBE aligns higher education curricula with industry needs and global academic standards (Khasanah et al., 2025); (R. Ali & Jamin, 2025).

The Non Formal Education (NFE) study program at UNNES and the Lifelong Learning study program at Chulalongkorn University share a common vision: empowering students through a flexible and inclusive learning approach. However, an in-depth analysis of how OBE is implemented in both programs is needed to identify best practices, challenges, and opportunities for collaboration. This study

aims to analyze the implementation of an OBE-based curriculum at both institutions, with a focus on the development of a Sister Curriculum Model that can improve student learning outcomes and foster cross-institutional academic collaboration. The findings of this study will provide valuable policy recommendations for improving curriculum design and implementation in higher education.

To address these issues, this study adopts a comparative institutional perspective to examine OBE implementation at UNNES and Chulalongkorn University, focusing on similarities, differences, challenges, and opportunities for developing a collaborative Sister Curriculum Model. Conceptually, the proposed model seeks to integrate the contextual strengths of UNNES with the flexibility and lifelong learning orientation of Chulalongkorn University to support student empowerment and cross-institutional academic collaboration. Detailed procedures for comparative analysis, stakeholder engagement, and data collection are presented in the Method section.

Outcome-Based Education (OBE) has been widely recognized as a framework that shifts higher education from content-based instruction toward student-centered and competency-oriented learning. Artha et al., (2023) emphasize this shift toward student-centered learning outcomes, while (I. K. A. J. Artha et al., 2022) further highlight the importance of aligning teaching methods, assessment, and learning activities with clearly defined competencies. Consistent with these perspectives, Yusup et al., (2025) demonstrate that OBE can enhance graduate employability, critical thinking, and alignment between education and industry needs. Taken together, these studies indicate that the value of OBE extends beyond defining measurable outcomes to ensuring coherence between curriculum design, learning processes, and competencies relevant to students' future lives. However, these studies predominantly emphasize academic, competency, and institutional dimensions, leaving the contribution of OBE to student empowerment comparatively underexplored.

Despite these potential benefits, other studies reveal tensions between standardized OBE requirements and the diversity of students' learning experiences. Susanto & Yohana, (2025) argue that rigidly prescribed learning outcomes may inadequately accommodate differences in students' backgrounds, learning styles, and social contexts. Similarly, Hakim et al., (2023) show that an excessive emphasis on formal academic and technical competencies may marginalize experiential, community-based, and digital forms of learning. These concerns complement the findings of Patriasih et al., (2025), who identify institutional and faculty difficulties in shifting from conventional lecture-based practices toward outcome-oriented and student-centered approaches. Collectively, these findings suggest that effective OBE requires not only standardized learning outcomes but also sufficient flexibility in teaching and assessment to recognize diverse ways of learning and demonstrating competence.

This tension becomes particularly important when OBE is viewed through social and cultural perspectives. While previous OBE studies have primarily associated successful learning with measurable academic and professional competencies, literacy-oriented research emphasizes that learning practices are embedded within students' social and cultural contexts. Rachmawati et al., (2024) conceptualize literacy as extending beyond reading and writing to socially situated practices, while Saputro & Shovmayanti, (2024) emphasize the importance of recognizing students' diverse literacy practices, experiences, and identities. In comparison with conventional OBE perspectives that prioritize standardized outcomes, these studies suggest a broader understanding in which learning outcomes should also accommodate student agency and sociocultural diversity. Therefore, integrating OBE with literacy and empowerment perspectives provides a stronger conceptual foundation for examining whether outcome-based curricula merely measure competency achievement or also empower students to exercise agency, develop critical thinking, and navigate diverse social and professional contexts. This study introduces a new approach to student-centered OBE by integrating concepts from literacy research and empowerment theory. Unlike previous research that has focused primarily on institutional and policy implementation, this study shifts the focus to how students experience and engage with OBE in higher education. This study highlights three key contributions. First, it positions OBE as a social and cultural process by exploring how students' literacy practices and sociocultural backgrounds shape their

learning experiences. Second, it expands the concept of empowerment beyond academic achievement, emphasizing the role of OBE in fostering critical thinking, personal agency, and social mobility. Third, it proposes a more inclusive assessment method that recognizes multiple forms of literacy, digital competencies, and real-world problem-solving skills, rather than relying solely on standardized tests. Furthermore, this study offers an international and interdisciplinary perspective by analyzing best practices from various educational systems and integrating insights from education, sociology, and digital media studies.

By bridging OBE with literacy studies and student empowerment theory, this study develops a new framework for designing an inclusive and student-centered OBE curriculum. The findings of this study will contribute to higher education policy and practice by providing strategic recommendations for institutions to create more equitable, relevant, and adaptive learning experiences. This research aims to redefine how learning outcomes are understood and assessed, so that OBE not only prepares students for the workforce but also equips them with the skills, confidence, and agency to navigate an increasingly complex and globally connected world.

2. METHODS

This study employed a qualitative comparative case study design to examine the implementation of Outcome-Based Education (OBE) across two institutional cases: the Non-Formal Education (NFE) Program at Universitas Negeri Semarang (UNNES), Indonesia, and the Lifelong Learning Program at Chulalongkorn University, Thailand. Each institution was treated as a distinct case, allowing OBE implementation to be examined within its specific social, cultural, policy, and institutional context and subsequently compared across cases. The comparative case study design was selected because it enables systematic identification of convergent and divergent patterns in curriculum design, teaching practices, assessment, student empowerment, and institutional responses to OBE.

Participants were selected using purposive sampling based on their direct knowledge of and involvement in OBE implementation within the two programs. The inclusion criteria were: (1) holding a position or role directly related to curriculum policy, management, teaching, or learning within the respective program; (2) having direct experience with OBE curriculum design, implementation, assessment, or evaluation; (3) for lecturers and program managers, having sufficient institutional experience to explain the implementation of OBE at the program level; (4) for students, having participated in OBE-oriented learning and assessment activities; and (5) for alumni, having completed the relevant program and being able to reflect on the relevance of learning outcomes to professional or community contexts. These criteria ensured that participants could provide information-rich perspectives on OBE implementation.

A total of 24 informants participated in the study. At UNNES, the participants comprised 2 policymakers/program managers, 4 lecturers, 4 students, and 2 alumni. Similarly, at Chulalongkorn University, the participants comprised 2 policymakers/program managers, 4 lecturers, 4 students, and 2 alumni. Participants were purposively selected based on their direct involvement in or experience with OBE implementation, including curriculum development, teaching and assessment, program management, and participation in OBE-oriented learning. Data collection continued until data saturation was achieved, indicated by the point at which additional data no longer generated substantively new themes within and across the two institutional cases.

Data collection techniques included document analysis, in-depth interviews, observation, and focus group discussions (FGDs). Document analysis included the curriculum, lesson plans (RPS), and internal university policies related to OBE implementation. Interviews were conducted with lecturers, students, and program managers to obtain their subjective experiences. Observations were conducted during lectures and fieldwork, while focus group discussions (FGDs) were used to capture collective

perspectives on the challenges and opportunities of OBE implementation. To ensure data validity, this study employed triangulation techniques across both sources and methods. Source triangulation was conducted by comparing information from various informants (lecturers, students, program managers), while method triangulation was achieved by combining interviews, observations, and document analysis.

Data analysis was conducted using the Miles and Huberman model, which includes three stages (Pahleviannur et al., 2022): (1) data reduction through selection, simplification, and organization of field data; (2) data display in the form of descriptive narratives, tables, and comparative matrices of OBE implementation at both universities; and (3) conclusion drawing/verification to draw conclusions regarding the practices, challenges, and opportunities of OBE implementation in the UNNES NFE Program and Chulalongkorn University's Lifelong Learning Program.

Following the within-case analysis, a cross-case analysis was conducted to systematically compare OBE implementation between UNNES and Chulalongkorn University. First, data from each institution were analyzed independently to identify institution-specific themes and patterns related to curriculum orientation, learning outcomes, teaching and assessment practices, student empowerment, implementation challenges, and institutional opportunities. Second, the themes generated from the two cases were organized into a cross-case comparison matrix using common analytical dimensions. Third, patterns of convergence and divergence between the cases were identified by comparing similarities, differences, and context-specific practices across these dimensions. Finally, the comparative findings were interpreted in relation to the institutional and sociocultural contexts of each university to identify complementary strengths and areas for potential collaboration. This cross-case procedure enabled the study to move beyond separate institutional descriptions toward a systematic explanation of how different contexts shape OBE implementation.

3. FINDINGS AND DISCUSSIONS

Implementation of an OBE-based curriculum in the Non Formal Education (NFE) Program at UNNES and Lifelong Learning at Chulalongkorn University.

The research results show that UNNES and Chulalongkorn both start from the Outcome-Based Education (OBE) framework, but their implementation bases differ. UNNES ties OBE to the Indonesian National Qualifications Framework (KKNI), which requires that learning outcomes align with national competency levels, so its curriculum is geared toward meeting both formal government standards and local community needs. Chulalongkorn, on the other hand, develops OBE within a lifelong learning framework that focuses on flexibility, recognition of non formal experiences, and compatibility with international standards such as the ASEAN Qualifications Reference Framework (AQRf). An UNNES lecturer emphasized that "OBE serves as a bridge between students' academic achievements and real community needs. However, we often get caught up in the formalities of the KKNI, resulting in rigid implementation." In contrast, a Chulalongkorn lecturer stated: "Our OBE is designed for fluidity. Learners can move in and out of programs without losing their learning achievements." These findings reveal different institutional orientations in OBE implementation between UNNES and Chulalongkorn University.

UNNES formulates learning outcomes aligned with the university's conservation vision, encouraging students to develop not only technical skills but also a concern for environmental, cultural, and community empowerment issues. The implementation of project-based assessments, such as village community empowerment programs, digital literacy training, and cultural preservation activities, demonstrates that the curriculum focuses on applied competencies. However, student interviews revealed inconsistencies. One student stated: "Sometimes we feel confused because in one course our projects are highly valued, but in another course there is still a lot of theory and written exams." This

indicates a gap between the spirit of the OBE curriculum and its implementation in the classroom. Lecturers also acknowledged limitations in designing authentic assessment instruments that truly reflect the CLO/SLO. From a policy perspective, curriculum workshops have been conducted, but their continuity is still minimal, resulting in uneven results across all courses.

At Chulalongkorn, a lifelong learning program is developed using a flexible credit system, allowing students to combine work experience, online learning, and formal study into one academic achievement package. For example, students who take online courses from other universities can apply for course credits. Lecturer Chulalongkorn explained: "We created a Degree Plus system that allows professionals to bring their work experiences, MOOCs, and training programs into formal recognition." International students report finding it very helpful: "I didn't need to start from zero. My professional training counted as credits, which motivated me to continue my studies." Compared with UNNES, the findings show that Chulalongkorn provides greater flexibility in recognizing professional experience, online learning, and prior learning as part of formal academic achievement.

This comparison of the two institutions emphasizes the pattern of complementarity. UNNES is strong in connecting learning outcomes with local needs, so students develop competencies directly relevant to the community and the world of work in the region. Students stated that "Studying at NFE feels real because we are directly involved in the field, for example, assisting villagers in training." Meanwhile, Chulalongkorn excels in providing access to global mobility: students can take international classes, utilize credit transfer, and network with multinational industries. A Chulalongkorn student admitted: "This system allows me to work and study at the same time without borders."

In terms of assessment, both institutions still face a gap between theory and practice. UNNES still relies heavily on written exams, although some courses have shifted to real-life projects. Even though Chulalongkorn has made more progress, some students still feel that the assessment of teamwork and leadership isn't transparent. An UNNES lecturer stated: "Developing assessment rubrics that can measure creativity or leadership is difficult. We often revert to written exams as a safe option." An UNNES student added: "If all assessments could be based on real-life projects, I think the results would better reflect our capabilities in the field." Overall, the findings reveal inconsistencies in authentic assessment practices at both institutions, particularly in measuring complex competencies such as creativity, teamwork, and leadership.

The findings also reveal differences in the extent and institutionalization of stakeholder engagement in OBE implementation across the two institutions. UNNES has conducted workshops with industry, local governments, and alumni, but these have been sporadic. A lecturer stated: "We need a permanent forum so that businesses and the community can regularly provide input on the curriculum." On the other hand, Chulalongkorn already has an advisory board consisting of industry representatives and alumni, who are regularly involved in curriculum reviews. A Chulalongkorn student said: "We get to work on real projects from industry, which makes our learning more practical and relevant." This kind of stakeholder involvement makes the curriculum more adaptable to real-world needs. The cross-case findings indicate that stakeholder involvement at Chulalongkorn is more institutionalized through an advisory board, whereas stakeholder engagement at UNNES remains relatively episodic.

The findings identify faculty capacity as a recurring implementation issue across both institutional cases. Interviews revealed that UNNES lecturers felt unfamiliar with techniques for developing authentic assessment rubrics, integrating learning technology, and utilizing a Learning Management System (LMS). One lecturer stated: "We've participated in OBE training, but only once. We need regular mentoring to become more familiar with it." Meanwhile, Lecturer Chulalongkorn emphasized the importance of international collaboration: "We need regional workshops to learn from each other, because ASEAN universities face similar challenges." These findings indicate that faculty capacity remains an important implementation issue at both institutions, although the specific professional

development needs differ between the two contexts.

Students also emphasized the importance of transparent assessment standards for cross-institutional credit recognition. One student stated, "If we want our credits to be recognized across campuses, we want to know the assessment standards used." Students also emphasized the importance of transparent assessment standards for cross-institutional credit recognition. One student stated, "If we want our credits to be recognized across campuses, we want to know the assessment standards used." The findings also indicate that cultural and linguistic considerations remain relevant when establishing common assessment standards across the two institutional contexts.

. Furthermore, cultural and linguistic aspects are also crucial: while core competencies can be standardized, contextual examples and case studies must remain relevant to each local environment. Thus, a harmonized curriculum does not eliminate local identity but instead connects to the global realm.

In the implementation of OBE at UNNES, learning outcome indicators are formulated with reference to the Indonesian National Qualifications Framework (KKNI) and the university's conservation vision. Several indicators emerging in the Non Formal Education Study Program include: (1) students' ability to design community empowerment programs based on real needs; (2) skills in managing activities oriented towards cultural and environmental conservation; (3) communication and collaboration competencies with communities, NGOs, and local governments; (4) application of digital literacy to support learning in the community; and (5) professional, ethical, and conservation-based attitudes in line with institutional values. These indicators are typically assessed through project assignments, fieldwork, social skills observations, and written reports. However, interviews with students and lecturers revealed that some indicators, such as creativity and leadership, have not been consistently measured due to limited rubrics and variations among lecturers.

Meanwhile, at Chulalongkorn University, OBE indicators are geared toward global competencies and lifelong learning skills compatible with the ASEAN Qualifications Reference Framework (AQRf) and international standards. Indicators frequently mentioned in the Lifelong Learning program include: (1) critical thinking and problem-solving skills applicable in industrial and global community contexts; (2) future literacy, including digital, data, and technology literacy; (3) cross-cultural and cross-sector collaboration skills, for example in joint projects with multinational industries; (4) adaptive leadership demonstrated through real-life projects and team management; and (5) self-directed learning and the ability to manage flexible learning paths through the Degree Plus system or the recognition of credits from online courses and work experience. These indicators are assessed primarily through digital portfolios, industry-based project assessments, and recognition of prior learning.

Overall, the cross-case findings reveal a parallel orientation toward outcome-based learning but different institutional strengths: UNNES demonstrates stronger local and community relevance, whereas Chulalongkorn demonstrates greater flexibility, international orientation, and recognition of diverse learning pathways.

Challenges and Opportunities in Implementing Outcome Based Education (OBE) Principles in the Higher Education Curriculum

The Non Formal Education (NFE) Program at Universitas Negeri Semarang (UNNES) utilizes OBE as the fundamental framework for curriculum development and the formulation of program learning outcomes. The official profile of the NFE Study Program demonstrates its focus on developing graduates capable of managing non formal programs, facilitating communities, and empowering individuals based on cultural conservation and local needs. This was emphasized by the Program Coordinator, who stated in an interview that "OBE helps us formulate the direction of graduate outcomes so that they are not merely theoretical, but truly applicable to the needs of the community." Thus, OBE is positioned as a strategic link between higher education and the world of social work.

Although the policy framework and vision of the NFE of UNNES curriculum have adopted OBE principles, practice presents challenges. One lecturer stated that the development of authentic assessment rubrics often "falls into the trap of assessing memorization, not practical skills." Students, meanwhile, added that they "often feel that learning outcomes are unclear and vary from one course to another." This statement reinforces research findings that the implementation of project-based and portfolio-based assessments remains inconsistent across courses, resulting in students' learning experiences not always coherently aligned with program outcomes.

Lecturer capacity constraints are a major operational barrier. In an interview, one lecturer stated, "We're used to the lecture method, and switching to project-based learning requires a lot of adaptation. Training does exist, but it's not in-depth enough." This indicates the need for ongoing capacity development. Students also expressed their hope that lecturers would use simulations and field practice methods more frequently, as "they feel more relevant to future work than just written exams."

On the infrastructure side, challenges are no less real. Several lecturers acknowledged that the UNNES e-learning platform does not fully support digital portfolio assessment. NFE students reported that internet access at community practice locations also often hinders the implementation of technology-based learning. "During the thematic KKN (Community Service Program), we had difficulty uploading progress reports on time because of the signal," said one student. This underscores the importance of supporting digital facilities and ecosystems to ensure OBE does not stop at the curriculum document level. In interviews with NFE alumni, it was stated that the experience of implementing community-based projects such as job skills training gave them "confidence and a tangible portfolio to show to partner institutions." This demonstrates that OBE in NFE has strong potential to produce learning outcomes that are not only academic, but also socio-economic, in line with the contextual and participatory characteristics of non formal education.

On the other hand, the Lifelong Learning Program at Chulalongkorn University demonstrated greater readiness to implement OBE. The Vice Dean of the Faculty of Education explained that "We integrate OBE at Chulalongkorn with credit flexibility through the Flexi MOOC platform. Each participant can build their own learning path, but it is still measurable through competency achievement." This statement indicates that Chulalongkorn has successfully synergized the flexibility of lifelong learning with the OBE system. However, challenges remain. One program manager stated that "participants come from various ages and professions, making it difficult to align achievement indicators." Adult students in the program also expressed, "We want flexibility, but sometimes the assessment rubric feels rigid and too academic." This highlights the dilemma between the flexibility of lifelong learning and the measurable demands of OBE. Nevertheless, there is considerable opportunity for innovation. A Chulalongkorn lecturer suggested that OBE could be linked to Recognition of Prior Learning (RPL), allowing for formal recognition of work skills and prior experience. A part-time student interviewed stated, "We are happy that our work experience is recognized as part of our learning outcomes, not just exam scores." In this way, Chulalongkorn pioneered a more inclusive implementation of OBE.

A comparison of UNNES and Chulalongkorn reveals rich potential for collaboration. The UNNES NFE Study Program Coordinator expressed a desire to learn from Chulalongkorn regarding "flexible credit accumulation mechanisms that can be integrated with community-based learning." Conversely, Chulalongkorn was drawn to UNNES's practices in linking the curriculum to community empowerment. This opens up the opportunity for a complementary sister curriculum: UNNES strengthens digitalization and flexibility, while Chulalongkorn enriches the social and cultural context of learning outcomes.

Adaptation of academic culture was also highlighted. An UNNES lecturer acknowledged that "OBE will be successful only if lecturers are ready to change their mindset, not just replace the RPS." At Chulalongkorn, a student noted that they "felt added value when lecturers provided personalized

formative feedback, not just numerical feedback.” This confirms that the shift to OBE is not just about curriculum structure, but also an academic culture that supports student reflection and growth.

Interviews at both institutions indicate that implementing OBE is a long journey that requires policy support, resources, and cultural change. The UNNES Non Formal Education Program (NFE) is uniquely positioned to utilize OBE as a tool for community empowerment and enhancing students' practical competencies, while Chulalongkorn has embraced OBE as a framework for lifelong learning with global flexibility. This collaboration has the potential to create a more inclusive, contextual, and internationally competitive OBE model.

The Non Formal Education (NFE) Program at Universitas Negeri Semarang (UNNES) utilizes OBE as the foundational framework for curriculum development and the formulation of program learning outcomes. The official profile of the NFE Study Program demonstrates its orientation toward developing graduates capable of managing non formal programs, facilitating communities, and empowering individuals based on cultural conservation and local needs. Therefore, learning outcomes (LOs) are designed not only for academic competencies but also for contextualized practical and social competencies. The official statement and program profile emphasize the role of NFE as a bridge between higher education and the needs of the surrounding community, making OBE relevant for ensuring measurable and accountable learning outcomes. Although the policy framework and curriculum vision of the NFE of UNNES have adopted OBE principles, field practice has demonstrated significant challenges in integrating CLOs (Course Learning Outcomes) into daily teaching practices. Research into the need to develop assessment instruments for courses like Business Correspondence indicates that many lecturers and students still rely on traditional assessment methods; authentic rubrics and assessments that measure tangible skills (e.g., the ability to write business letters in accordance with the National Competency Standards) have not been consistently used across courses. This leads to misalignment between courses, sometimes preventing students from receiving a coherent learning experience that leads to program outcomes.

Lecturer capacity constraints are a major operational barrier to the transformation to the OBE paradigm in non formal education. Many lecturers in non formal education possess strong pedagogical competencies, but not all have received intensive training in designing measurable CLOs, creating performance rubrics, or using portfolio- and project-based assessments. Consequently, implementing authentic assessments requires a systematic investment of time and professional development support—not just occasional workshops—to ensure sustainable changes in teaching methodology. The experience at UNNES also demonstrates the need for mentoring and peer review among lecturers to synchronize teaching and assessment practices. In terms of infrastructure, OBE is ideally supported by an adequate LMS, a digital portfolio repository, and practice facilities for community-based learning. In some NFE programs, the availability of such facilities remains uneven; some courses are capable of implementing field projects and digital portfolios, while others are hampered by laboratory access, network access, or administrative support. This resource imbalance poses the risk that OBE will remain merely a strategic document without consistent operational implementation at the course level. Strengthening infrastructure investment is a key step to ensure the effectiveness of authentic assessment and applied learning.

On the other hand, the Non Formal Education (NFE) of Universitas Negeri Semarang (UNNES) is developing highly contextual and participatory OBE practices. A concrete example is the development of a training curriculum involving trainers, participants, and validation by experts and stakeholders, ensuring that learning outcomes are relevant to the needs of entrepreneurship and the local market. This participatory approach enables OBE to assess not only academic outcomes but also socio-economic impacts on learners and communities, enabling NFE to present a more inclusive and applicable OBE model.

Chulalongkorn University, through its Lifelong Learning Program and initiatives like Chula

MOOC Flexi, demonstrates an OBE model that emphasizes flexibility, open access, and credit accumulation for non traditional learners. The MOOC Flexi platform is a practical example of how OBE is linked to learning pathways, allowing participants to choose courses based on their future competency needs and accumulate credits that can be recognized in formal pathways under certain conditions. This approach demonstrates how OBE can be expanded into a lifelong learning framework, where learning outcomes become units that can be recognized across learning contexts. However, the flexibility of lifelong learning also poses challenges in measuring and validating outcomes. While short courses, MOOCs, and work experience are recognized as forms of learning, robust assessment mechanisms, such as Recognition of Prior Learning (RPL), portfolio rubrics, or credible competency-based assessments, are needed to ensure transferable learning outcomes are formally recognized. Chulalongkorn has initiated this initiative through a public educational materials repository and MOOC platform, but accreditation and quality assurance schemes for flexible learning still require refinement to ensure smooth credit recognition.

A comparison of the contexts between UNNES's NFE and Chulalongkorn's Lifelong Learning reveals concrete collaborative opportunities: UNNES can leverage Chulalongkorn's experience in managing online platforms and flexible credit accumulation mechanisms, while Chulalongkorn can learn from UNNES's NFE experience in aligning the curriculum with the needs of strong local communities. A sister curriculum model that adopts core transferable competencies, such as communication skills, digital literacy, problem-solving, and community leadership, can be designed so that each institution adapts to its local context while maintaining mutually recognized achievement indicators. Collaborative activities such as joint rubric-building workshops, lecturer exchanges, and integrated pilot courses are effective strategies for aligning OBE between institutions.

Adapting academic culture is key to ensuring OBE does not stop at curriculum documents but becomes everyday practice. At UNNES, strengthening a culture of formative assessment, peer assessment, and continuous feedback can change lecturers' and students' perceptions of learning objectives. Meanwhile, at Chulalongkorn, ensuring that flexibility does not compromise quality means establishing a quality assurance (QA) mechanism capable of assessing non formal learning outcomes and MOOC modules against clear standards. Both require cultural change led by faculty and program leaders, incentive systems for learning innovation, and an active academic development unit.

Practically, recommended OBE implementation strategies for both programs include strengthening faculty capacity through ongoing training programs on SLO/CLO design, rubric development, and authentic assessments; developing measurable pilot courses with tangible success indicators (graduate employability, stakeholder feedback, and credit transfer); and investing in digital infrastructure for portfolios and a Learning Management System (LMS). Initial data from these pilots should be analyzed quantitatively and qualitatively to allow for iterative improvements. These practices have been suggested in the OBE literature in Indonesian higher education and are relevant to the context of UNNES and Chulalongkorn.

The implementation of OBE in NFE UNNES and Lifelong Learning Chulalongkorn represents a strategic opportunity to bridge formal and non formal education, expand access to lifelong learning, and produce adaptable and socio-economically relevant graduates. The technical, cultural, and infrastructure challenges are real, but with cross-institutional collaboration, an emphasis on authentic assessment, and a commitment to professional development, the two programs can complement each other. UNNES with its contextual strengths and community connectedness, Chulalongkorn with its digital flexibility and lifelong learning mechanisms, forming an inclusive and replicable OBE model in the region.

Discussion

Implementation of Outcome-Based Education (OBE) in the UNNES Non Formal Education (NFE) Program and Lifelong Learning at Chulalongkorn University

The implementation of Outcome-Based Education (OBE) in the UNNES Non Formal Education (NFE) Program emphasizes that all elements of education must be directed towards achieving measurable, relevant, and contextual learning outcomes. This is evident in the UNNES NFE curriculum, which is not solely theory-oriented but also emphasizes students' practical competencies, such as community program management, training facilitation, and community empowerment. This ensures that graduates are projected to be able to do what is required in the social work world, not simply to know.

At UNNES, the implementation of OBE is also reflected in the formulation of learning outcomes designed to align with community needs. The NFE program emphasizes the profile of graduates who possess managerial and social skills, as well as empowerment competencies that are contextualized to the Indonesian reality. Spady's theory (Al Aluf, 2024) reinforces this approach, as he believes that final educational outcomes must be linked to the students' real needs in their social and professional lives. With this framework, the UNNES NFE curriculum is designed around community projects and field practice, allowing students to demonstrate authentic, measurable skills.

Meanwhile, the implementation of OBE in Chulalongkorn University's Lifelong Learning Program has distinct characteristics. This program adopts the same principles as Spady (Cahyani et al., 2025), namely a focus on learning outcomes, but is applied within the context of lifelong learning. The curriculum is designed flexibly with a credit accumulation scheme that allows participants to learn through various channels, including Massive Open Online Courses (MOOCs). According to (Murtadho et al., 2023), this flexibility is valid in OBE as long as it maintains measurability of outcomes. Therefore, even though participants come from different ages and professions, the entire learning process remains directed toward achieving predetermined competencies. Chulalongkorn University also utilizes the Recognition of Prior Learning approach, which theoretically aligns with OBE principles because it values the learning outcomes individuals have acquired through work and non formal experiences. Thus, adult students do not need to repeat what they have already mastered but can directly validate their skills in the form of measurable outcomes (Cabrera et al., 2025); (Cabrera et al., 2025). Learning outcomes can emerge from a variety of experiential contexts, not just the traditional classroom (Salim et al., 2025); (Duchatelet et al., 2024).

This comparison demonstrates that both UNNES and Chulalongkorn apply OBE theory, albeit with different adaptations. UNNES emphasizes the curriculum's connection to the community as a form of local application, while Chulalongkorn emphasizes the flexibility and internationalization of lifelong learning. Both approaches are consistent with Spady's OBE grand theory (Yelfi Dewi, 2022), where the primary focus is ensuring that all students, with their respective paths and contexts, are able to achieve predetermined final competencies.

Challenges and Opportunities in Implementing OBE Principles in Higher Education Curriculum

Although OBE theoretically provides clear direction for learning outcomes, its implementation in the field is not without challenges. At UNNES, the main obstacle lies in the limited capacity of lecturers to transform traditional teaching patterns into project-based learning in accordance with OBE principles. Spady (1994) emphasized that OBE requires a paradigm shift, not just a technical shift. This means that lecturers need to truly internalize that the primary goal of learning is to ensure students are able to do something in real life, not simply understand concepts. This challenge is reflected in research findings that indicate that assessments at UNNES are often trapped in rote learning, thus not aligning with the essence of OBE. On the infrastructure side, UNNES also faces obstacles in providing digital resources. According to Spady's theory, learning outcomes must be measurable and documentable, but at UNNES's NFE, the limited e-learning platform hinders consistent recording of student portfolios. This demonstrates that while OBE theory is clear, its implementation is highly dependent on the readiness of the supporting system. Without adequate technological support, the authentic assessment that is the soul of OBE will be difficult to implement (Siregar et al., 2026); (Q. I. Ali, 2024).

Meanwhile, at Chulalongkorn University, challenges arise from the diversity of the student body. The OBE principle demands clear achievement standards, but when students come from diverse ages, backgrounds, and experiences, it is difficult to standardize assessment indicators. Spady acknowledges that OBE should be inclusive, but in practice, flexibility often conflicts with measurable outcomes. Some adult students feel that the assessment rubrics are too academic, thus not fully reflecting their professional competencies. Nevertheless, the opportunities offered by OBE at both campuses are significant. At UNNES, the implementation of OBE provides the opportunity to produce graduates who are truly relevant to the needs of society. Students involved in community-based projects not only earn academic credit but also build a practical portfolio that can enhance their competitiveness in the workforce. This aligns with Spady's idea that OBE should connect learning with the realities of life, enabling graduates to be more adaptable to social and economic changes (Dhandi, 2025); (Ghosh & Sankar, 2025).

At Chulalongkorn, opportunities arise from integrating OBE with lifelong learning. With RPL and a flexible credit system, OBE becomes more inclusive, allowing adult students to access formal education without losing recognition for their existing experiences. This aligns with the OBE principle, which emphasizes that all learning outcomes, both formal and non formal, should be valued as long as they can be measurably proven. In other words, Chulalongkorn has successfully made OBE a strategic tool for connecting the world of work, professional experience, and formal education within a unified framework. The implementation of OBE at NFE UNNES and Lifelong Learning at Chulalongkorn University demonstrates that Spady's theory is not merely a concept, but also a framework that can be adapted to suit the context. UNNES emphasizes connectedness with the community as a learning space, while Chulalongkorn emphasizes flexibility across ages and professions. Challenges remain, both in terms of lecturer capacity and assessment suitability, but the opportunities arising from the implementation of OBE are also enormous for improving the quality, relevance, and inclusiveness of higher education in Southeast Asia (Keo et al., 2025); (Siregar et al., 2026).

4. CONCLUSION

Based on the research results, the implementation of Outcome-Based Education (OBE) in the Non-Formal Education (NFE) Program at UNNES and the Lifelong Learning Program at Chulalongkorn University demonstrates a shared commitment to measurable, relevant, and applicable learning outcomes. At UNNES, OBE emphasizes community empowerment and practice-based learning, enabling students to develop social, pedagogical, and managerial competencies, whereas at Chulalongkorn University, OBE emphasizes flexibility through Recognition of Prior Learning (RPL) and a lifelong learning model responsive to diverse learner backgrounds and experiences. Despite these strengths, UNNES continues to face challenges related to lecturer readiness and digital learning infrastructure, while Chulalongkorn University encounters difficulties in standardizing assessments for adult learners with diverse professional experiences. OBE contributes directly to student empowerment by enabling learners to take a more active role in achieving relevant competencies, apply their knowledge in authentic contexts, and gain recognition for learning acquired through diverse educational and professional experiences. In this way, OBE strengthens student agency, confidence, and capacity to navigate academic, professional, and community contexts. Overall, the findings demonstrate that OBE can serve as a strategic framework for enhancing the relevance, inclusiveness, and competitiveness of higher education while accommodating different institutional and learner contexts.

These findings imply that effective OBE implementation depends on sustained faculty capacity, authentic assessment practices, and adequate digital and learning infrastructure. Institutional support for reflective and student-centered learning can further strengthen learners' agency in managing and demonstrating their learning outcomes. Cross-sectoral and international collaboration may enhance the relevance, flexibility, and transferability of competencies across academic, professional, and community

contexts. Collectively, these conditions position OBE as a framework not only for measurable competency achievement but also for developing empowered, adaptable, and globally responsive learners.

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