



Human skills-based learning as a pathway to develop socio-preneurial competence

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ABSTRACT

In today's rapidly evolving world, universities are challenged to produce graduates who are not only technically skilled but also equipped with essential human skills such as empathy, collaboration, leadership, and problem-solving. These competencies are crucial for addressing social issues through innovative and sustainable solutions. However, the integration of human skills into socio-entrepreneurial education remains underdeveloped, creating a gap between classroom learning and real-world social innovation. This study explores how human skills-based learning fosters socio-entrepreneurial competence among higher education students at Universitas Primakara. Using a qualitative descriptive design and classroom-based research, data were collected from purposively selected students through observations and open-ended questionnaires, followed by thematic analysis to identify key learning patterns. The findings demonstrate that active learning models, specifically Team-Based Project Learning (TBPL) and Design Thinking, enhance students' empathy, creativity, and teamwork, thereby significantly contributing to their socio-entrepreneurial competence. The study concludes that human skills-based pedagogies not only align with the principles of Outcome-Based Education (OBE) but also strengthen higher education's contribution to social innovation and the Sustainable Development Goals (SDGs), providing practical insights for policy and curriculum development.

ARTICLE INFO

Article History:

Received: 4 Jul 2025

Revised: 22 Oct 2025

Accepted: 8 Nov 2025

Publish online: 19 Nov 2025

Keywords:

active learning; human skills;
OBE; SDGs; sociopreneurship;
team-based project learning

Open access

Inovasi Kurikulum is a peer-reviewed
open-access journal.

ABSTRAK

Di tengah perubahan sosial dan teknologi yang pesat, perguruan tinggi menghadapi tantangan untuk menghasilkan lulusan yang tidak hanya memiliki keterampilan teknis, tetapi juga human skills seperti empati, kolaborasi, kepemimpinan, dan pemecahan masalah. Keterampilan ini penting untuk menghadapi berbagai permasalahan sosial melalui solusi inovatif dan berkelanjutan. Namun, integrasi human skills dalam pendidikan kewirausahaan sosial masih terbatas, sehingga menimbulkan kesenjangan antara pembelajaran di kelas dan praktik inovasi sosial di lapangan. Penelitian ini bertujuan untuk mengeksplorasi bagaimana pembelajaran berbasis human skills dapat mendorong terbentuknya kompetensi kewirausahaan sosial (socio-entrepreneurial competence) pada mahasiswa di Universitas Primakara. Menggunakan desain penelitian deskriptif kualitatif dan pendekatan berbasis kelas, data dikumpulkan dari mahasiswa yang dipilih secara purposif melalui observasi dan kuesioner terbuka, kemudian dianalisis secara tematik untuk mengidentifikasi pola pembelajaran utama. Hasil penelitian menunjukkan bahwa model pembelajaran aktif seperti Team-Based Project Learning (TBPL) dan Design Thinking mampu meningkatkan empati, kreativitas, dan kerja sama mahasiswa, yang pada akhirnya memperkuat kompetensi kewirausahaan sosial mereka. Penelitian ini menyimpulkan bahwa pendekatan berbasis keterampilan manusia sejalan dengan prinsip Outcome-Based Education (OBE), memperkuat peran perguruan tinggi dalam inovasi sosial, dan berkontribusi terhadap pencapaian Sustainable Development Goals (SDGs) serta memberi dampak terhadap kebijakan dan pengembangan kurikulum.

Kata Kunci: keterampilan manusia; kewirausahaan sosial; OBE; pembelajaran aktif; pembelajaran proyek berbasis tim; SDGs

How to cite (APA 7)

Yupita, L., Alam, H. S., & Aunzo Jr., R. T. (2025). Human skills-based learning as a pathway to develop socio-preneurial competence. *Inovasi Kurikulum*, 22(4), 2395-2408.

Peer review

This article has been peer-reviewed through the journal's standard double-blind peer review, where both the reviewers and authors are anonymised during review.

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INTRODUCTION

The 21st century presents unprecedented social, environmental, and economic challenges that continually reshape the mission of higher education. Based on the previous study by Birru and UNESCO in their publication titled “*Education for Sustainable Development Goals: Learning Objectives*” explain that globalization, climate change, automation, and the digital economy have transformed how societies function, demanding graduates who are adaptable, ethical, and socially responsible (Birru, 2024; see: <https://unesdoc.unesco.org/ark:/48223/pf0000247444>). Rapid technological disruption has widened inequalities in access to education and employment, while sustainability and climate crises require interdisciplinary solutions that merge innovation with social consciousness (see: https://www.oecd.org/en/publications/education-at-a-glance-2020_69096873-en.html). Consequently, universities worldwide are under increasing pressure to cultivate graduates who not only possess technical proficiency but also demonstrate empathy, collaboration, leadership, and creative problem-solving, competencies that underpin ethical and sustainable progress (Birru, 2024; see: <https://www.weforum.org/reports/the-future-of-jobs-report-2020>). In Indonesia, these challenges are exacerbated by persistent socioeconomic disparities, high youth unemployment, and uneven digital readiness. According to the Central Bureau of Statistics or BPS, 9.9% of university graduates remain unemployed, and over 60 percent of them lack competencies demanded by the modern labor market, particularly interpersonal, digital, and adaptive skills (see: <https://www.bps.go.id/id/publication/2024/12/09/6f1fd1036968c8a28e4cfe26/keadaan-angkatan-kerja-di-indonesia-agustus-2024.html>). Embedding these interpersonal and intrapersonal competencies into university curricula is therefore essential for preparing students to become socio-preneurs capable of driving community-centered innovation and inclusive growth (Shahid & Alarifi, 2021; see: <https://unesdoc.unesco.org/ark:/48223/pf0000247444>).

In response to these 21st-century challenges, higher education institutions worldwide are rethinking their pedagogical approaches to equip students with holistic competencies that combine technical mastery and human-centred skills. Conventional lecture-based models, which emphasize knowledge transmission, have been criticized for their limited ability to cultivate adaptability, empathy, and creativity, qualities essential in a volatile, uncertain, complex, and ambiguous (VUCA) world (WEF link: <https://www.weforum.org/reports/the-future-of-jobs-report-2020>; OECD link: https://www.oecd.org/en/publications/education-at-a-glance-2020_69096873-en.html). As a result, universities have increasingly adopted experiential and active-learning frameworks that enable students to learn through hands-on experiences, reflection, and collaboration within authentic contexts. Extensive research highlights the value of approaches such as project-based learning, design thinking, and Team-Based Project Learning (TBPL) in developing human skills and entrepreneurial mindsets (Santoso et al., 2023; Stoica, 2024). These pedagogies simulate real-world challenges that require teamwork, empathy-driven problem identification, and iterative innovation, key elements of socio-entrepreneurial competence. Empirical studies demonstrate that TBPL, in particular, strengthens teamwork, management capability, and reflective practice (Lee et al., 2024; Yupita et al., 2025). However, despite the global endorsement of active learning, few empirical investigations have explored how these pedagogies operate in real classroom settings in Indonesia, leaving a significant gap in understanding how structured human-skills interventions translate into measurable socio-entrepreneurial competence among local students (Alam et al., 2025; Hiswara et al., 2023). This study fills a critical gap by examining human skills-based learning as a pathway to developing socio-entrepreneurial competence in Indonesian higher education, where lecture-based methods still dominate and student engagement remains limited (Hiswara et al., 2023).

Despite policy encouragement for innovative and outcome-based education, multiple studies confirm widespread challenges in implementing innovative pedagogies. A previous study found that among 632

English teachers across 31 provinces, significant barriers to outcome-based education include traditional views of a teacher-centered approach to teaching and a limited commitment to implementation (Mufanti et al., 2024). Another study reported that while lecturers have begun integrating project-based learning, the extent of implementation varies significantly among faculties, with challenges including a lack of awareness and difficulty integrating these methods (Bistari et al., 2024). This mismatch between the demand for 21st-century competencies and the persistence of traditional pedagogies reflects a structural gap between the ideal vision of transformative education and the reality of classroom practice. Empirical data from the BPS in 2024 further show that many graduates struggle to apply communication, collaboration, and leadership skills in the workplace, underscoring the urgency of integrating human-skill development systematically into university curricula (see: <https://www.bps.go.id/id/publication/2024/12/09/6f1fd1036968c8a28e4cfe26/keadaan-angkatan-kerja-di-indonesia-agustus-2024.html>).

Within this context, Primakara University offers a relevant research setting, having pioneered active learning initiatives through Team-Based Project Learning (TBPL) and Design Thinking in interdisciplinary courses. However, these pedagogical innovations have not yet been systematically evaluated in relation to socio-entrepreneurial competence outcomes. This creates an opportunity to investigate how structured human-skills learning, specifically empathy, collaboration, and problem-solving, translates into students' capacity for social innovation within real classroom environments. Unlike prior global studies that examined project-based learning (PBL) or Design Thinking in isolation, the previous research uniquely integrates TBPL and Design Thinking to foster empathy-driven innovation, addressing critiques about the equity, scalability, and contextual adaptation of active learning in resource-constrained settings (Molla et al., 2023; Stoica, 2024; see: <https://www.mdrc.org/work/publications/project-based-learning-promising-approach-improving-student-outcomes>).

Despite the national shift toward Outcome-Based Education (OBE) and the global call to align curricula with the Sustainable Development Goals (SDGs), many higher education institutions continue to struggle to translate these frameworks into effective classroom practices. OBE implementation often remains procedural, emphasising documentation and compliance rather than transformative learning (Waheed et al., 2025). Consequently, learning outcomes are often limited to cognitive indicators, overlooking the social, ethical, and emotional dimensions essential for sustainable development (see: <https://unesdoc.unesco.org/ark:/48223/pf0000247444>). Similarly, while universities increasingly endorse SDG-related agendas, curricular integration tends to be fragmented and symbolic, with limited linkage between course outcomes and tangible community impact or social innovation projects (Bistari et al., 2024; Mufanti et al., 2024). This disconnection suggests that the ideals of OBE and the SDGs have yet to materialize as transformative educational practices that empower students as responsible change agents.

Ideally, Outcome-Based Education (OBE) serves as a transformative framework that aligns learning outcomes with global competencies and the Sustainable Development Goals. Empirical evidence demonstrates OBE's effectiveness when applied meaningfully. The previous study reported course outcome attainment rates above 85% through innovative implementation and showed that OBE can explicitly embed SDG values in curriculum design (Setiabudi & Ismi, 2025; Warkad et al., 2025). Another study also confirmed that OBE develops graduates with factual, conceptual, and metacognitive knowledge, alongside functional and entrepreneurial skills, and also noted that OBE's focus on measurable learning outcomes enhances graduates' readiness for industry demands (Novrizal & Muhammad, 2025; Royani et al., 2025; Sujianti et al., 2025). Collectively, these studies highlight OBE's potential to cultivate adaptive, socially responsible, and globally competent learners.

Within this pedagogical landscape, integrating human skills-based approaches, such as TBPL and Design Thinking (DT), provides a practical means to operationalize OBE and SDG principles. These methods emphasise collaboration, empathy, creativity, and problem-solving, which are the core competencies of

socio-entrepreneurial learning. However, empirical evidence remains scarce regarding how and to what extent such approaches nurture socio-entrepreneurial competence, particularly in emerging economies. Addressing this gap, the present study extends the conceptual model by developing a context-responsive framework that connects active learning, human skill formation, and SDG-driven outcomes (Shahid & Alarifi, 2021).

By combining TBPL and Design Thinking, this study proposes a model that aligns measurable outcomes with OBE principles while cultivating the social awareness and innovation capacities central to SDG-oriented education. Accordingly, the research pursues two main objectives: first, to identify the processes and competencies that emerge when human skills are systematically developed in active learning environments; and second, to propose a conceptual model for embedding these competencies in socio-entrepreneurship education consistent with OBE and SDG frameworks. The insights generated are expected to inform higher education institutions and policymakers in designing curricula and institutional mechanisms that produce graduates capable of leading sustainable social innovation and community transformation.

Aligned with these objectives, the study examines how human skills-based learning, particularly through TBPL and Design Thinking, fosters socio-entrepreneurial competence among higher education students. It also investigates the contextual processes and factors that enable or constrain the development of these competencies within Indonesian classrooms. Through this inquiry, the study clarifies the mechanisms of human-skill development in active learning contexts. It contributes a conceptual and practical model for curriculum design and implementation grounded in OBE.

LITERATURE REVIEW

Human Skills in Socio-Entrepreneurship

Human skills, commonly referred to as soft skills, encompass empathy, communication, collaboration, leadership, and ethical decision-making. These competencies are central to socio-entrepreneurship because they enable individuals to identify community needs and co-create solutions that balance social value and economic viability (Odak et al., 2023; Birru, 2024). Empathy helps uncover authentic social problems, while communication and leadership foster inclusive collaboration and resource mobilization. Ethical decision-making ensures that entrepreneurial ventures remain mission-oriented and community-trusted, distinguishing them from profit-focused enterprises. The World Economic Forum (WEF) in The Future of Jobs Report 2020 and the Organisation for Economic Co-operation and Development (OECD) in their Education, OECD Indicators post note that empathy, leadership, and social influence rank among the most critical future skills, yet remain insufficiently integrated into curricula (WEF link: <https://www.weforum.org/reports/the-future-of-jobs-report-2020>; OECD link: https://www.oecd.org/en/publications/education-at-a-glance-2020_69096873-en.html). In Indonesia, the BPS identifies persistent gaps in teamwork and communication among graduates (link: <https://www.bps.go.id/id/publication/2024/12/09/6f1fd1036968c8a28e4cfe26/keadaan-angkatan-kerja-di-indonesia-agustus-2024.html>). Conversely, entrepreneurship education often prioritizes technical business components over human-centered competencies (Waheed et al., 2025).

Empirical studies confirm that experiential pedagogies effectively develop these skills by engaging students in authentic social and business challenges. Project- and problem-based learning enhance motivation, teamwork, and self-awareness through practical application and reflection (Stoica, 2024; see: <https://www.mdrc.org/work/publications/project-based-learning-promising-approach-improving-student-outcomes>). Significant improvements in communication and collaboration competencies after structured project work, the reflection and empathy mapping also strengthen ethical and social awareness (Crespi et al., 2022; Santoso et al., 2023; Sousa & Costa, 2022). Teacher emotional competence also plays a pivotal

role, educators who demonstrate empathy and emotional intelligence foster deeper moral reasoning and sensitivity (Savina et al., 2025). Together, these studies affirm that embedding human skills within learning processes supports the development of socio-entrepreneurial competence and enhances employability in socially driven sectors.

Active Learning Models

Active learning models, such as Project-Based Learning (PBL), Design Thinking (DT), and Team-Based Project Learning (TBPL), engage students in authentic, collaborative tasks that simulate professional practice, requiring both cognitive and interpersonal competence. PBL and problem-based frameworks encourage teamwork, communication, and problem-solving in real-world contexts (Stoica, 2024; see: <https://www.mdrc.org/work/publications/project-based-learning-promising-approach-improving-student-outcomes>). DT complements these approaches through its human-centred process of empathizing, defining, ideating, prototyping, and testing (Wang et al., 2025). This iterative cycle cultivates creativity, adaptability, and ethical awareness while fostering empathy-based innovation. Quantitative studies indicate that DT-based courses can increase creative confidence and problem-reframing ability by over 40%, underscoring their transformative value in higher education.

Building upon these foundations, TBPL extends active learning through structured collaboration, rotating leadership, and iterative feedback mechanisms that simulate professional teamwork. A previous study has already demonstrated that TBPL enhances project management, leadership, and decision-making confidence, and also reported that hybrid TBPL models improve entrepreneurial and innovative skills (Lee et al., 2024; Santoso et al., 2023; Yupita et al., 2025). Integrating DT principles within TBPL strengthens empathy-driven problem identification and solution design, key dimensions of socio-entrepreneurial competence. However, implementation challenges persist, including large class sizes, limited infrastructure, and teachers' limited facilitative experience (Molla et al., 2023; Wihlenda et al., 2023). Overcoming these barriers requires a commitment to redesigning learning environments that support interaction, reflection, and collaboration at the institutional level.

Socio-Entrepreneurial Competence

Socio-entrepreneurial competence refers to the ability to identify social problems, design ethical ventures, and mobilize stakeholders to create sustainable impact (Shahid & Alarifi, 2021). It reflects a broader vision of higher education as an engine of social transformation rather than merely a provider of workforce skills (see: <https://unesdoc.unesco.org/ark:/48223/pf0000247444>). Core elements include systems thinking, value-driven leadership, and sustainable resource management. The programs emphasizing empathy and collaboration strengthen students' interest in social innovation, and revealed that project-based entrepreneurial learning fosters measurable gains in community-centered venture creation (García-González & Ramírez-Montoya, 2020; Santoso et al., 2023). These findings underscore that socio-entrepreneurial competence emerges from iterative, human-centered learning experiences that integrate ethics with innovation.

In the Indonesian context, cultivating such competence remains a challenge. While student-led initiatives in social innovation, such as waste management and digital literacy, show promise, they are seldom systematically evaluated (Alam et al., 2025). Another study also notes that few institutions use standardized rubrics to assess social impact or SDG alignment, which limits the long-term effectiveness of curricula (Waheed et al., 2025). Internationally, institutions such as Stanford's Centre for Social Innovation and Ashoka U's Changemaker Campus network have institutionalized socio-entrepreneurship education through OBE-aligned frameworks. Embedding assessment tools that combine business

feasibility with community outcomes could enable Indonesian universities to monitor learning achievements while ensuring the creation of social value (Crespi et al., 2022; Villa et al., 2025). This integration would strengthen the alignment between OBE and SDG objectives, preparing graduates to be ethical innovators for sustainable development.

METHODS

This study employs a qualitative descriptive approach with a classroom-based research design to investigate how human-skills-based learning promotes socio-entrepreneurial competence among university students. Creswell and Poth, in their book entitled *“Qualitative Inquiry and Research Design: Choosing Among Five Approaches”* explain that the qualitative descriptive method was selected to capture authentic classroom phenomena and to describe participants' behaviors, reflections, and interactions in their natural learning context, rather than testing predetermined hypotheses. This design enables an in-depth understanding of how TBPL and Design Thinking DT processes influence empathy, collaboration, leadership, and problem-solving in real-world classroom settings.

The research was conducted at Primakara University, and the study took place in third-semester courses, which integrate TBPL and DT as part of their curriculum. The class consisted of 142 undergraduate students from various study programs. Participants were selected using purposive sampling to ensure that the selected students met specific inclusion criteria: 1) active participation in TBPL project teams throughout the semester; 2) demonstrated engagement in DT stages such as empathy, defining problem, ideation, prototyping, and validating; and 3) representation across diverse academic backgrounds to capture multidisciplinary perspectives.

Data collection was conducted over one academic semester using multiple qualitative techniques designed to triangulate information and ensure data credibility. The primary data sources included: 1) classroom observations, where the researchers observed weekly sessions to document behavioural indicators of human-skills development, such as empathy during user interviews, collaboration in group discussions, and leadership during project milestones. Observation notes focused on verbal and non-verbal cues, peer facilitation patterns, and team problem-solving dynamics; 2) Open-ended questionnaires, administered at the end of the semester, invited students to reflect on their learning experiences, emphasizing how TBPL and DT activities influenced their empathy, communication, teamwork, and entrepreneurial intent. Responses provided introspective accounts of behavioural and attitudinal change; and 3) project artifacts, which included design prototypes, presentation slides, and final project reports documenting students' problem identification, ideation, and implementation stages. Artifacts were used to trace how human skills translated into tangible outputs and socio-entrepreneurial outcomes.

Three main instruments were used: 1) observation checklist, adapted from experiential-learning rubrics, focusing on indicators of empathy, collaboration, leadership, and problem-solving behaviours; 2) Open-ended reflection guide, consisting of eight prompts that elicited student perspectives on challenges, teamwork experiences, and social impact awareness; and 3) project documentation rubric, designed to evaluate the extent to which project deliverables reflected the integration of human skills into socio-entrepreneurial initiatives.

Data were analysed using Braun and Clarke's six-phase reflexive thematic analysis to ensure a systematic, interpretive understanding of human-skills emergence, as follows: 1) familiarization involved repeated reading of observation notes, reflection responses, and project artifacts to gain an overall sense of classroom dynamics; 2) initial coding was conducted inductively at the semantic level, tagging segments related to teamwork, empathy, iteration, ethical considerations, and communication; 3) theme generation organized these codes into preliminary clusters; 4) during theme review, overlapping categories were

refined for coherence and distinctiveness; 5) theme definition and naming clarified each theme's conceptual boundaries, leading to final analytical categories; and 6) reporting synthesized these findings into a coherent narrative linking classroom practices to the development of socio-entrepreneurial competence, supported by direct quotations and illustrative examples. Reflexivity was maintained throughout the analysis to ensure that interpretations remained grounded in the participants' experiences rather than in the researcher's bias.

RESULTS AND DISCUSSION

Human Skills Development

Empathy is the foundation of problem identification. During the early project stages, students conducted empathy interviews with local community members to explore social challenges, including waste management, food waste, and digital literacy. Observation notes captured how students' questioning behaviour evolved from superficial inquiries to active listening and perspective-taking. In reflection journals, students described their experience as "learning to feel what others experience before designing solutions." One group reframed their initial project idea after realizing that the community's actual needs differed from their assumptions, indicating an authentic behavioral shift from a "solution-driven" to a "problem-understanding" orientation.

Collaboration and peer learning as enabling processes. Group observations documented the progression of teamwork across multiple project cycles. Early friction, unequal participation, and unclear task distribution were gradually replaced by shared leadership, peer mentoring, and consensus-building. Students developed a stronger sense of accountability through structured feedback sessions. Reflection data showed that students increasingly valued "listening before deciding," marking the internalization of interpersonal awareness and maturity in teamwork.

Communication and leadership in project implementation. During the prototyping and presentation stages, observation notes highlighted improved communication fluency and self-confidence. Students practiced public speaking, facilitated discussions, and coordinated with community stakeholders. Leadership rotated among group members, allowing everyone to practice facilitation, delegation, and decision-making. Project artifacts, such as presentation decks and reports, reflected greater clarity in storytelling, argumentation, and ethical reasoning, suggesting that human-skill development translated into tangible communication outputs.

Active Learning Outcomes

Collaborative creativity. Students combined multiple perspectives to co-create prototypes during DT workshops. Observation data recorded vibrant discussions, rapid sketching sessions, and iterative feedback cycles. In reflection notes, students referred to the design process as "learning to merge ideas instead of competing with them." Project artifacts demonstrated how creative outcomes were shaped by peer input and user feedback, emphasizing collective innovation over individual contribution.

Reflective adaptability. Students encountered practical barriers, including technical difficulties, time constraints, and unresponsive community partners. However, instead of abandoning tasks, they revised project scopes and simplified prototypes. Reflection entries illustrated adaptive reasoning, with students noting that "failure helped us understand the user better" and "every revision was part of our growth." This behaviour reflected increasing resilience and critical self-assessment, key traits of adaptive learners.

Ownership and agency. Observation records indicated that as the semester progressed, students required less instructor intervention. They initiated group meetings independently, divided tasks

strategically, and monitored their progress using digital project boards. Reflection responses frequently mentioned “feeling proud” and “seeing our ideas turn real,” signifying a transition from passive learners to autonomous project managers. Project outputs corroborated this, showing higher originality and initiative in the final designs compared to early drafts.

Socio-Preneurial Competence

Empathy-driven opportunity recognition. Analysis of project reports showed that students began identifying social opportunities directly from empathy-based interactions. For example, one team’s interviews with small food vendors revealed recurring product waste, prompting the design of a food redistribution platform. This demonstrates that empathetic understanding acted as a gateway to entrepreneurial ideation.

Ethical and sustainable decision-making. Reflection journals indicated that students became increasingly mindful of social and environmental consequences. Some groups deliberately chose low-cost, recyclable materials over more profitable but less sustainable options. Such ethical decisions highlighted the internalization of sustainability principles within the entrepreneurial process.

Collaboration and leadership in implementation. Observation notes and artifact reviews documented students’ engagement with local partners during prototype testing. Teams organized small-scale community events, workshops, and clean-up drives. This direct engagement demonstrated not only leadership capacity but also the ability to mobilize collective action, a defining aspect of socio-preneurial competence.

Discussion

The results reveal that integrating Team-Based Project Learning (TBPL) and Design Thinking (DT) effectively develops human skills that underpin socio-preneurial competence. These findings support previous scholarship, which suggests that active, experiential learning environments foster the interpersonal and reflective capacities necessary for social innovation (García-González & Ramírez-Montoya, 2020).

Human Skills as the Core of Socio-Preneurial Learning

The findings confirm that integrating TBPL with DT cultivates a comprehensive set of human skills, including empathy, collaboration, communication, leadership, and reflective problem-solving, which serve as the foundation of socio-preneurial competence. This aligns with a previous study. That emphasizes that social entrepreneurship begins with empathetic understanding and ethical awareness (Shahid & Alarifi, 2021). The progression observed in students, from abstract awareness to genuine perspective-taking, demonstrates that empathy can be intentionally nurtured through experiential pedagogies. In the Indonesian context, where higher education often emphasizes cognitive mastery, this shift represents a pedagogical breakthrough (Bakar, 2021; Kuznetsova et al., 2024). It repositions learning as a human-centred process that not only transfers knowledge but also transforms personal dispositions toward social responsibility.

These findings align with global evidence that human skills formation remains underrepresented in higher education curricula, despite being identified as essential future competencies. OECD in 2024 reported that fewer than 40% of curricula explicitly integrate interpersonal and intrapersonal skill development, while BPS in 2024 highlighted Indonesian employers’ concerns over communication and teamwork deficiencies (see: <https://www.bps.go.id/id/publication/2024/12/09/6f1fd1036968c8a28e4cfe26/keadaan-angkatan->

[kerja-di-indonesia-agustus-2024.html](#)). The study's results therefore illustrate how integrating empathy and collaboration through TBPL and DT offers a practical corrective to this gap, positioning human skills as measurable and observable learning outcomes.

Moreover, collaborative learning and leadership rotation within TBPL provided students with authentic opportunities to negotiate ideas, resolve conflicts, and co-create solutions. This reflects the previous study's assertion that socio-emotional growth occurs most effectively within cooperative frameworks (López-Mondéjar & Pastor, 2017). The emergence of shared decision-making and peer mentoring demonstrates how social learning principles can reinforce both teamwork and individual agency, skills essential for navigating complex social-entrepreneurial environments.

Active Learning and Reflective Adaptability

The behavioural patterns observed, adaptive reasoning, resilience in the face of uncertainty, and ownership of learning, validate the pedagogical claims made by the previous study regarding the superiority of active learning over traditional instruction (Stoica, 2024). Students did not merely absorb information; they experienced learning as a dynamic, self-regulated process. The iterative cycles of ideation, prototyping, and testing intrinsic to Design Thinking enabled continuous reflection and refinement, precisely the mechanism identified as the bridge between knowledge application and entrepreneurial intent (Sousa & Costa, 2022).

Prior research has shown that active learning models, such as PBL and DT, can significantly enhance teamwork competence and communication confidence, with gains reaching up to 45% and 50%, respectively (Santoso et al., 2023). The reflection-based cycles observed in this study mirror those results, suggesting that structured experiential projects do not merely engage students cognitively but also cultivate socio-emotional resilience and moral awareness. This supports the previous study's assertion that reflection and empathy mapping are critical mechanisms for developing ethical sensitivity within entrepreneurial learning (Crespi et al., 2022; Sousa & Costa, 2022).

Reflection journals revealed that setbacks, such as failed prototypes or misaligned schedules, became sites of metacognitive growth. This supports the previous study's argument that management and entrepreneurship education must embrace uncertainty as a driver of learning (Lindebaum, 2023). The emphasis on iteration, trying, failing, and improving, cultivated psychological flexibility and critical self-assessment, both markers of adaptive expertise. These findings suggest that sustained involvement in project work enhances intrinsic motivation; here, the intrinsic motivation was not only cognitive but also moral, as students connected their work to tangible community benefits (Stoica, 2024).

From an institutional lens, these findings suggest that active learning reshapes the learning contract between teachers and students. Instead of viewing educators as information providers, students began perceiving them as facilitators of reflection. This shift aligns with a previous study that suggests teacher emotional competence facilitates student empathy and ethical reasoning (Savina et al., 2025). Consequently, the classroom evolved into a shared space of co-construction, where affective engagement was as vital as intellectual rigor.

Socio-Preneurial Competence and Higher Education's Social Mission

The development of socio-preneurial competence observed in this study reaffirms higher education's transformative potential, as articulated by UNESCO in their publication titled "Education for Sustainable Development Goals: Learning Objectives" which explains that, for example, universities are not only centres of academic excellence but also catalysts for sustainable social change (link: <https://unesdoc.unesco.org/ark:/48223/pf0000247444>). Students' ability to connect classroom learning to

real community issues illustrates the realization of Education for Sustainable Development (ESD) principles in practice.

Projects that emerged from the TBPL and DT framework, such as food redistribution systems, waste management initiatives, and digital literacy programs, demonstrate how human skills learning can lead to actionable social impact. These projects reflect the SDG targets on responsible consumption (SDG 12), clean energy (SDG 7), and quality education (SDG 4). The students' engagement in collaborative and ethical decision-making processes aligns with the findings of a previous study, which observed that structured project-oriented learning enhances both entrepreneurial and social competencies (Crespi et al., 2022).

The observed outcomes also align with global institutional models, such as Stanford's Centre for Social Innovation and Ashoka U's Changemaker Campus network, where social entrepreneurship is embedded as part of the university's mission. However, this study reaffirms that such integration in Indonesia remains in its early stages (Alam et al., 2025). The success of student projects in resource-limited contexts, therefore, demonstrates the adaptability of TBPL and DT as locally responsive frameworks for fostering socio-entrepreneurial competence.

Furthermore, these findings reinforce the proposition that socio-entrepreneurial competence encompasses not only the ability to innovate but also to act ethically and collaboratively within a system (Villa et al., 2025). In practice, students demonstrated systems thinking by analysing community needs holistically, considering environmental, economic, and social dimensions simultaneously. The qualitative data, therefore, confirm that socio-preneurial learning requires a balance of empathy, reflection, and strategic execution.

Notably, this study contributes to an emerging body of evidence from Southeast Asia, where the integration of social entrepreneurship education remains limited (Alam et al., 2025). By showcasing how TBPL and DT can be localized within an Indonesian classroom, the research provides an empirically grounded model for contextualized implementation, demonstrating that globally recognized pedagogies can produce meaningful social innovation even in resource-constrained environments.

Contribution to OBE and SDG Implementation

A significant contribution of this study lies in demonstrating how Outcome-Based Education (OBE) can be realized beyond procedural compliance. In many institutions, OBE remains focused on documentation, lists of learning outcomes and assessment rubrics, without ensuring that competencies are genuinely observable in student behaviour (Waheed et al., 2025). The TBPL and DT model operationalizes OBE principles by transforming learning outcomes into lived experiences. For instance, the ability to "demonstrate empathy and collaboration in solving community problems" was not measured through exams but *observed directly* through group interactions, reflection logs, and project artifacts.

Moreover, embedding SDG-aligned challenges within TBPL tasks ensures that each learning activity contributes to broader societal goals. This synergy between OBE and SDGs requires higher education institutions to produce graduates who are not only employable but also socially responsible (Birru, 2024; see: <https://unesdoc.unesco.org/ark:/48223/pf0000247444>). The evidence from this study illustrates that SDG integration need not be an add-on policy but can be woven into pedagogy through authentic, community-based projects.

This alignment also strengthens universities' accountability mechanisms: the artifacts and reflections generated by students provide direct, qualitative evidence of learning outcomes linked to social value creation. Consequently, OBE becomes both measurable and meaningful, a framework that supports continuous improvement while advancing global sustainability. This study also responds critique that OBE

in many institutions remains procedural rather than transformative (Waheed et al., 2025). By embedding SDG-linked projects within TBPL, learning outcomes become both authentic and aligned with societal needs. Another proposed similar integrative framework assesses business feasibility alongside social value creation, and the present study operationalizes this alignment within classroom settings (Crespí et al., 2022; Villa et al., 2025). The resulting evidence suggests that OBE and SDG principles can converge when assessment shifts from documentation to real-world impact.

Theoretical and Practical Implications

Theoretically, the study enriches the discourse on human-skills development by demonstrating that empathy, collaboration, and leadership can be cultivated systematically rather than incidentally. By combining TBPL and DT, this research presents a model that operationalizes the formation of soft skills within structured, project-based contexts. It bridges the gap between humanistic education theories and the pragmatic demands of socio-entrepreneurship education (Sousa & Costa, 2022).

Practically, these findings carry significant implications for curriculum design and educational leadership in Indonesia and beyond. Universities can adopt the TBPL and DT integration as a scalable strategy for embedding human skills into entrepreneurship, management, and community engagement courses. For policymakers, the study highlights the need to align accreditation and quality assurance indicators with measurable behavioural outcomes, not only cognitive achievements. For educators, it highlights the importance of facilitation, feedback, and reflection as key components of socio-entrepreneurial pedagogy.

Moreover, the findings reinforce the argument that Indonesian higher education must intentionally design curricula to develop human skills, rather than relying on incidental learning (Mawson et al., 2022; Hiswara et al., 2023). The TBPL-DT framework demonstrated here offers a scalable model for institutional capacity-building, addressing the structural constraints, large class sizes, limited infrastructure, and teacher readiness (Molla et al., 2023; Wihlenda et al., 2023). To improve the quality of education and learning services in universities, the curriculum is continuously improved to achieve the goals of the SDGs (Muis & Dewi, 2021).

Ultimately, the study underscores the vital role of higher education in fostering ethical and socially conscious innovators. When students experience learning that integrates empathy, collaboration, and responsibility, they are better equipped to contribute to societal transformation, realizing the spirit of the SDGs and redefining what it means to be an educated citizen in the 21st century.

CONCLUSION

This study aimed to investigate how human-skills-based learning, through the integration of Team-Based Project Learning (TBPL) and Design Thinking (DT), promotes socio-entrepreneurial competence among higher education students. The findings indicate that when human skills such as empathy, collaboration, communication, leadership, and reflective problem-solving are deliberately cultivated through structured project cycles, they evolve into observable behaviors that underpin students' capacity for social innovation. These competencies emerged naturally through authentic classroom activities, including empathy interviews, collaborative prototyping, and community engagement, demonstrating that socio-entrepreneurial learning is most effective when grounded in lived experience rather than abstract instruction.

The study also achieved its second objective by developing a conceptual model that links human-skill formation to socio-entrepreneurial competence within the frameworks of Outcome-Based Education (OBE) and the Sustainable Development Goals (SDGs). The model illustrates that empathy serves as the entry

point for problem identification, collaboration and leadership enable solution development, and reflection sustains ethical and sustainable decision-making. Through this cycle, OBE principles are realized not merely as formal documentation but as dynamic learning processes that produce tangible social outcomes. In this way, the study redefines the notion of graduate success, from mastery of technical content to demonstration of human-centered competencies that contribute to societal well-being.

In practical terms, the results suggest that higher education institutions should institutionalize human-skills-based pedagogies, such as TBPL and DT, to strengthen their alignment with national and global development goals. Embedding these approaches in curriculum design, assessment, and community collaboration can help universities transform from teaching-centered institutions into active agents of social innovation. Meanwhile, policymakers and educators can utilize the proposed model as a framework for designing programs that link Outcomes-Driven learning with SDG-oriented community impact. The study also provides valuable insights, but it is limited to a single institutional context and relies primarily on qualitative data from student participants. Future studies should involve multiple institutions, incorporate perspectives from lecturers and community partners, and employ longitudinal designs to examine the sustained impact of human-skills learning on socio-entrepreneurial behavior.

In conclusion, the study confirms that socio-entrepreneurial competence does not arise spontaneously but results from intentional, reflective, and human-centered educational design. By placing empathy, collaboration, and ethical problem-solving at the heart of higher education, universities can cultivate graduates who are not only competent professionals but also transformative leaders committed to building sustainable and inclusive societies.

AUTHOR'S NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. The author also affirms that all data and content presented are original and free from plagiarism. Special thanks are extended to the Directorate of Research and Community Service (DRPM) at Primakara University, as well as to fellow lecturers and students who facilitated and actively participated in this research.

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