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BRIDGING DIGITAL BUSINESS WITH LIFELONG EDUATION AND COMMUNITIES: A BUSINESS-EDUCATION MODEL FOR SOCIAL ENTREPRENEURSHIP AND SELF-SUFFICIENCY AT NAN COLLEGE, UTTARADIT RAJABHAT UNIVERSITY, THAILAND

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Abstract

The objectives of this study were to synthesize the stakeholders' prioritized needs of Nan College, a regional satellite of Uttaradit Rajabhat University (URU), to develop its business-education master plan for social entrepreneurship and self-sufficiency; and to test the master and strategic plan appropriateness within the education and social entrepreneurship for self-sufficiency of Nan College. A qualitative research technique was mainly applied to conduct this study with 5 groups of stakeholders and experts- namely, university executives and council members, administrators and faculty members of Nan College, local government and private sector representatives in Nan Province, Grade 12 students from local public schools, and experts in higher education and educational business. Those people were regarded as the stakeholders which were selected from a list of people concerned with Nan College affairs. The purposively selected stakeholders and experts functioned as the key informants and were involved in the model testing and verification. Data collection methods included using questionnaires, in-depth interviews, participant observation, expert seminars, and focus group discussions. Statistical analysis and qualitative content analysis were performed. Content analysis was employed for category identification relevant to the research objectives. The findings indicated that there was a gap between the needs of the URU and stakeholders, resulting in a decision on an integrated digital lifelong education teaching and learning method in Nan Province. The college and URU should reinvent themselves in line with an education business-based approach, fostering social entrepreneurship and self-sufficiency, based on the results of the integrated Triple Bottom Line (TBL), Systems Theory, and PESTLE analysis under the CIPP Model of the Nan College context. A master plan was developed and tested. It contained an integrated characteristic of social entrepreneurship, self-sufficiency, digital lifelong education, and sustainability. Consequently, the study

established an empirically grounded operational strategy for social business within a hybrid digital and conventional education ecosystem. All the plan's components and strategies were found appropriate and viable in transitioning the college into a self-reliant educational and business institution across economic, environmental, social, and systemic dimensions. Policy, academic, and strategic recommendations were proposed to ensure holistic and interdisciplinary development across URU's knowledge domains.

Introduction

An unpredictable number of factors have affected higher education since the 21st century, both in the Thai and global contexts. Most institutions are rapidly facing digital transformation pressure to integrate AI, big data, applications, and online platforms into their teaching, learning, and curriculum design processes. Additionally, there is a lack of teaching and administrative staff's digital competency and infrastructure to cope with the digital transformation and technological disruption, and inequality (Selwyn, 2021; Williamson & Eynon, 2020). The latter has happened in terms of gender, rural/urban dividision, and socioeconomic status (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2021). In Thailand, an aging population, rising rate, and shrinking youth cohorts have occurred in a similar tendency to those of Japan, Germany, and most parts of Southeast Asia, leading to institutional under-enrollment (Marginson, 2016)

Nan College, a satellite campus of URU located in northern Thailand, exemplifies both the challenges and potential of regional institutions. Despite the resource limitations and declining enrollments, it benefits from strong community ties, cultural capital, and a decentralized operating structure. While Nan College can currently sustain operations, business-based analysis reveals critically low self-generated income. Nearly 73% of funding comes from URU and the government. This is financially unsustainable for long term.

However, projections indicate the potential for increased revenue if strategic reforms are adopted. Yet, there is no strategic reform policy indicated at the URU council or even at the college level.

However, a review of relevant literature and research indicated that there had been studies on strategic management in higher education institutions (Kotler & Murphy, 1981) and the concept of the "Entrepreneurial University". These studies revealed an emphasis on income generation and organizational agility but remained a practical gap among academics. This gap here refers to the limited application of these concepts in local campus settings, which often face resource constraints and unique contextual challenges, particularly the URU's Nan College.

Simultaneously, although the concept of "Social Entrepreneurship" has been widely discussed in the development of social enterprises (Dees, 1998; Zahra et al., 2009). Its application in the context of public higher education institutions remains scarce. There has been a lack of a strategic plan that simultaneously addresses both organizational financial sustainability and local community well-being for Nan College and URU in their long-term plan (Uttaradit Rajabhat University, 2025). This represented a contextual gap that has not yet been sufficiently explored. Furthermore, sustainability assessment in the education sector might need to use frameworks like the Triple Bottom Line (Elkington, 1994), or strategic tools such as the TOWS Matrix or the Balanced Scorecard (Kaplan & Norton, 1996) in their planning and implementation process. Most of them are mainly put on the private business sector. Applications in the context of regional educational

institutions are rare, thus revealing a methodological gap. This gap necessitates the development of context-appropriate methodologies for public educational organizations in rural areas.

In a discussion section with the experts during the study field work in Nan College, they suggested to apply the Transition Theory and PESTLE analysis to reinforce the Triple Bottle Line (TBL) theory in this research's model development process. They said "the integrated TBL, Transition Theory and PESTLE analysis will help the model developer's concept in serving the process as its critical tool for examining how people navigate periods of disruption and transformation the developed model in the future. Whether in the context of personal development, career progression, healthcare, or education, understanding transition processes is vital for designing responsive, supportive, and empowering environments" (Fieldwork's workshop for data collection among the experts in Nan College, 1-2 February 2025).

A preliminary study's collective result through an URU stakeholders and expert group discussion in 1-2 February 2025 at Nan College proposed a business-oriented management approach that incorporated social entrepreneurship to generate income, resulting in mitigating management risks. The study found that this approach has practical applicability in enhancing financial sustainability and improving the quality of life for the Nan College community, based on its developed and tested model of the S-O-C-I-A-L Model (Strategic alignment, Ownership, Collaboration, Innovation, Accountability, Lifelong Learning). However, the study has not yet proposed any master or strategic plan for the model's implementation. Therefore, this research focuses on investigating how Nan College can reposition itself as a business-oriented, community-integrated higher education institution that grounds in lifelong learning and digital innovation, as a practical master plan and strategic plan.

Some significant knowledge gaps have been found as follows. While Triple Bottom Line (TBL) and Systems Theory have been extensively applied in business contexts, their integrated application in small-scale, regionally embedded higher education institutions remains underexplored (Norman & MacDonald, 2004; Skyttner, 2005). Most sustainability frameworks in education focus on either environmental sustainability or institutional management independently. There is limited empirical evidence on social entrepreneurship in public higher education, particularly satellite campuses with resource constraints, which remains insufficiently researched (Dees, 1998; Zahra et al., 2009). The gap is particularly pronounced in Southeast Asian contexts where cultural, economic, and policy factors differ significantly from Western models (UNESCO, 2021). Additionally, current literature lacks comprehensive models that effectively integrate digital transformation with lifelong learning strategies in resource-constrained regional institutions. While studies exist on digital education (Organisation for Economic Co-operation and Development, 2021) and lifelong learning principles (Panyanuwat, 2005; UNESCO, 2022), few examine their synergistic application within hybrid traditional-digital pedagogical platforms in developing country contexts.

Research Objectives

1. To synthesize the stakeholders' prioritized needs of Nan College, a regional satellite of Uttaradit Rajabhat University,

2. To develop its business-education master plan as social entrepreneurship and self-sufficiency.

3. To test the master and strategic plan appropriateness within the educational and social entrepreneurship for the self-sufficiency of Nan College.

Research Methods

This study received an "Institutional Review Board's approval with a certificate number "COP 68/005", on January 21, 2025, from Payap University. This qualitative study was conducted in 3 main sequential steps as follows.

1. The population consisted of 6 groups of people including 12 university executives, 6 experts from 5 universities, 34 Nan College executives and teaching staff, 32 Nan provincial and community stakeholders and 187 Nan College's students, who enrolled in 2025.

A cluster random sampling technique was used to select 44 fourth-year students, while other key informants from the province and community were selected in line with the criteria set as the representatives of the networking agencies concerned with Nan College.

2. This study applied a rapid rural appraisal (RRA) in collecting data and current situations with 5 groups of stakeholders and experts. This study prioritized testing all data collection instruments for content validity and reliability with a different group representing the entire study sample. Then, the tested instruments were modified for better mutual understanding among all respondent samples.

Two sets of interview formats and in-depth interviews were employed to collect data from those key informants for the first round after literature review, while focus group discussions were used with the experts for the master and strategic plan judgment. Then, five selected samples from each group were involved in the final workshop for testing the appropriateness of the master and strategic plan that was developed in the following session. At last, 25 representatives were involved in a workshop as an expert judgement process for the master and strategic plan, with some more recommendations for modification.

The study synthesized institutional data gathered from documentary surveys and analysis, stakeholder interviews, and environmental scans to map Nan College's assets. The assets were then categorized according to Triple Bottom Line (TBL) (Elkington, 1994; Slaper & Hall, 2011), Systems Theory (Checkland, 1999; Skyttner, 2005; von Bertalanffy, 1972), and PESTLE Analysis for strategic planning. Content analysis was employed for the master and strategic plan categories and identification relevant to the research objectives and conceptual framework of the study. Then, the notion "Social Entrepreneurship" (Dees, 1998; Zahra et al., 2009) was applied to emphasize a mission-driven business-based education model that could pinpoint social problems while ensuring financial sustainability of Nan College, while TBL functioned to evaluate organizational performance based on economic, social,

and environmental outcomes. However, an AI application on information source search was conducted under the close control of this study.

In response to this study's second objective, it integrated TBL and systems theories to form a multidimensional and dynamic approach to studying the institutional transformation of Nan College. This was a sequential means to provide an asset-based, theory-informed master plan grounded in the stakeholders' needs and community data. There were several advantages to TBL selection in facilitating a comprehensive assessment across economic, environmental, and social domains. Meanwhile, system theory would enhance the understanding of complex relationships among institutional units' functions, competencies, and their environments. Together, they would offer a pragmatic systemic model for self-sufficiency and social business program planning and development. URU's Nan College, with its vision of fostering social entrepreneurship, requires a strategic marketing and management framework. So, the study drew upon other interrelated concepts and theories and was supported by "Lifelong and Self-Directed Learning" (Knowles, 1975; UNESCO, 2021). It was intended to facilitate adult learners to continuously acquire competencies to adapt and thrive across life transitions, because all Nan College's potential learners would be adults.

With the concepts mentioned above, this study crystallized the collective concepts from a group of 25 experts to integrate the applicability of Philip Kotler's 7Ps and Marketing Mix 4.0, Peter Drucker's Management by Objectives (MBO) and business theories, and Michael Porter's Five Forces to formulate a conceptual framework for master plan and strategic plan development (Drucker, 2007; Kotler et al., 2017; Porter, 2008). Then, the CIPP Model (Stufflebeam & Coryn, 2014) was applied to formulate a conceptual framework for this study.

The Nan College's identified and prioritized needs were synthesized to develop a master plan and strategic plans based on the business-based education of its scenario, working as the URU's offline campus platform. Business administration theories and concepts were applied to develop the master plan's characteristics, components, driving mechanisms, and conditions. Then, all plans' appropriateness was tested and verified by using an expert judgment approach (Figure 1).
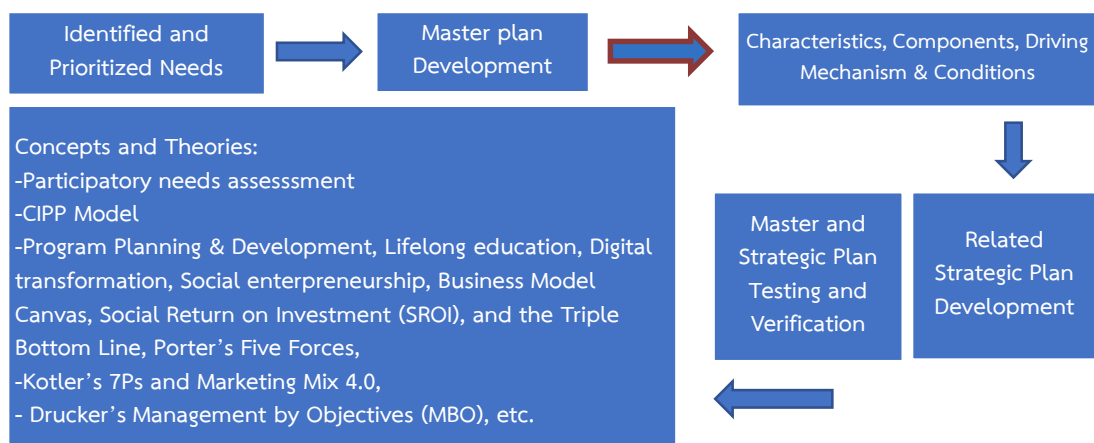

Figure 1 Conceptual Framework of the Study

Research Results

The findings indicated a wide gap between the needs of the URU and stakeholders, resulting in a decision to develop an integrated digital adult and lifelong education teaching and learning method in Nan Province. The results from the experts revealed that there was an urgent need to reinvent Nan College for self-reliance under the fiscal and limited student enrollment constraints, digital transformation, and technological disruption. URU should also reinvent itself in line with the education business-based model for social entrepreneurship and self-sufficiency with suitable personnel's vision and competency.

The findings emerged from the stakeholders and experts developed 3 College scenario cases as follows. The "Best-Case Scenario" for 100 percent should be self-reliance and full financial independence with additional revenue of 12,307,319 THB from the Government. The approach should be an expanding program offering more courses, increase operational costs, but achieve full independence, with a 4-year break-even for self-reliance. The S-O-C-I-A-L Model Scenario could gain 75 per cent of self-reliance, 25 per cent support from URU, with additional revenue of 9,230,490 THB. The approach should be based on partnering with other URU units, expanding the client base, and diversifying revenue streams, with a 3-year break-even for self-reliance. Thirdly, the "Worst-Case Scenario" should be 50 per cent of self-reliance, with 50 per cent support from URU, with additional revenue of 6,153,660 THB. The approach should be office cost reduction and partial integration of growth strategies, with a 2-year break-even for self-reliance. However, there must be "Revenue Enhancement Strategies" for the 3 main issues - asset utilization, human capital, and business ventures.

The documentary analysis indicated that, firstly, the current resource management at Nan College was constrained by rigid bureaucratic structures, URU policy implementation neglect, and state regulations. Secondly, those factors limited their responsiveness and autonomy, indicating a need for reform. Then, the researcher and experts synthesized that six strategic conditions as the key management issues were identified as that 1) university policy reform, 2) strong leadership, 3) financial self-management, 4) social enterprise–driven educational business, 5) market adaptation with innovation, and 6) operational efficiency encompassing risk management, staff capacity building, and the integration of lifelong learning through distance and interdisciplinary platforms. The proposed concept and model were validated by stakeholders, experts, and administrators' consultation, confirming their viable applicability and feasibility. It was the "S.O.C.I.A.L." model (Strategic alignment, Ownership, Collaboration, Innovation, Accountability, Lifelong learning) (Table 1). It was confirmed as a strategic management framework for promoting operational efficiency, financial sustainability, and enhancing community well-being at Nan College. The findings led this study to develop a master plan and social business-based operational strategies with a recommended application to Nan College.

Table 1 The S.O.C.I.A.L. Strategic Framework for Nan College

Letter	Concept	Application to Nan College
S	Strategic Alignment	Formulate a strategic plan that aligns Nan College's objectives with those of the parent university.
O	Ownership & Autonomy	Promote community engagement and shared ownership in institutional planning and governance.
C	Collaboration	Initiate collaborative projects with local administrative organizations, private sectors, government agencies, and culturally grounded community groups.
I	Innovation	Leverage technology to design and manage future-oriented curricula focused on essential skills.
A	Accountability	Establish transparent monitoring, auditing, and reporting systems using blockchain technology.
L	Lifelong Learning	Develop flexible, credit-transferable curricula that respond to the needs of learners across all age groups.

Additionally, there were three sequential steps in developing the master plan process. First, the "S.O.C.I.A.L" model among the stakeholders and experts was reviewed by using a group discussion process with mutual understanding and design. Based on the field survey, identified needs, and theoretical integration, the study characterized URU's Nan College's master plan relating to the "S.O.C.I.A.L" model as previously proposed. The six strategic conditions as mentioned above were confirmed by the stakeholders' and experts' judgment. The main driving mechanism, mediating the model's components in terms of the administrative and academic inputs, is the process. It was suggested in the form of integrating business and marketing strategies for the College's operations. This study developed the master plan structure as the sequential issues: vision, policy, missions, strategic plans, monitoring and evaluation plans, while its strategic plans would include the S.O.C.I.A.L. strategic framework for Nan College's suggested application. The master plan development process was significantly applied from the review results of the program planning and development process. Secondly, as for conceptualizing of the master plan, the master plan development process consisted of 3 sequential steps. The first step was the study integrated Triple Bottom Line (TBL) and Systems Theory within the CIPP Model, and Nan College's context. The second was that PESTLE Analysis was applied as a strategic management tool for evaluating the external macro-environmental factors that might impact an organization or educational provision system. The third was that when applying PESTLE to the transformation of education systems, particularly in integrating digital learning and lifelong education, each domain helped identify opportunities and constraints that must be managed for successful reform. PESTLE Analysis was

integrated within the CIPP Model as well as in the master plan development regard. Benefits of Integrating PESTLE with CIPP would function as the master plan four pillars: 1) comprehensive analysis by combining internal program evaluation with external environmental factors for a holistic understanding of educational transformation challenges; 2) strategic alignment for assuring educational initiatives align with broader societal, economic, and political contexts, increasing relevance and sustainability; 3) risk mitigation by identifying potential barriers across multiple domains before implementation, allowing for proactive planning and adaptation; and 4) enhanced decision-making by providing structured data from both internal and external sources to inform evidence-based decisions in educational transformation. PESTEL Analysis's acronym stands for political, economic, social, technological, legal, and environmental aspects.

Following the above six factors, the stakeholders and experts, who joined in the seminar and discussion, came to a conditional suggestion for Nan College's role shift. The College should be modified to be capable enough in identifying the driving mediating conditions of master plan development, focusing on educational transformation itself from a conventional type to digital lifelong education with a global commitment to the UN's SDG 4. Consequently in implanting the master plan, URU and Nan College would face 1) an economic investment in EdTech infrastructure and affordability of digital devices; 2) changing learner demographics (aging society), social equity, and accessibility of digital learning; 3) application competency development in technological use of AI, learning management systems (LMS), and mobile learning platforms; 4) legal compliance with data protection laws (e.g., GDPR), and accreditation of online degrees; and 5) promoting e-learning as a greener alternative, integrating environmental sustainability in curricula and practical business-based education in terms of social entrepreneurship.

Thirdly, as for designing master plan and strategic plans, this study conducted a focus group in an expert and key informant seminar on "Policy Establishment for the College and URU Paradigm Shift". This seminar resulted in a business-education master plan, which consisted of characteristics, components of inputs and processes, with mediating and driving mechanisms under tangible and suitable conditions, leading to the plan's goals. The characteristics were based on "an integrated characteristic of social entrepreneurship, self-sufficiency, digital lifelong education, and sustainability." The components and processes were designed in line with the above-mentioned on "the PESTLE Analysis with CIPP Model". That integration would function as the master plan's six pillars of the PESTLE. Consequently, the study established an empirically grounded operational strategy for social business within a hybrid digital and conventional education ecosystem. However, the PESTLE framework (sometimes written as PESTEL) is an environmental scanning tool used in strategic management to analyze external factors that may influence an organization. It usually has six pillars of political, economic, social, technological, legal, and environmental pillars. Then, vision was developed as "Nan College as a self-reliant, socially innovative learning hub aligned with local needs". Moreover, strategic plans were developed. There were 6 strategic plans to follow the above strategic plan synthesis

as follows. They consisted of 1) social enterprise incubation plan: developing campus-based business labs and implementations; 2) integrated curriculum development plan: embedding entrepreneurship across URU disciplines; 3) sustainable infrastructure upgrading for practicability: using green buildings and ICT tools with AI and digital platform linkage between Nan College, URU and partnership network; 4) participatory governance fortification: establishment of community engagement with stakeholders, partnerships, people, and marketing mix; 5) hybrid pedagogy and andragogy through distance and satellite agencies: establishment of blended digital platforms with hands-on local learning relevant to needs and future self-adjustment; and 6) program planning and monitoring, evaluation, and feedback for improvement, including income-generating activities. The master plan's implementation timeline should cover 2025–2029.

The findings revealed that while testing the developed plans' appropriateness, the majority of experts mutually agreed that transforming Nan College into a socially embedded, digitally enabled, and financially self-reliant educational institution was both timely and strategic. This hybrid education-business master plan would foster localized development, prepare citizens for the digital economy, and reflect global best practices in community-based education.

Discussion

Regarding selection of theories and approaches, this study found that the application of a participatory approach in its research methodology could produce tangible and intangible scenarios of the stakeholders' needs and Nan College, suitable for the PESTLE's 6 pillars (Aguilar, 1967; Elkington, 1994) and the CIPP Model (Stufflebeam & Coryn, 2014). The gap between the needs of the URU's Nan College and stakeholders affected a decision to develop an integrated digital adult and lifelong education teaching and learning method in Nan province. The results led to an urgent need to reinvent Nan College for self-reliance under the constraints of fiscal and limited student enrollment, digital transformation, and technological disruption. This study focused on reinventing Nan College in line with the business-based education model for social entrepreneurship and self-sufficiency with a special relevance to lifelong education concept (UNESCO, 2022).

Responding to this second research objective, the conceptual and theoretical framework development was aware of the selection reasons. TBL was selected to align institutional development with sustainability goals and community impact, while systems theory supported holistic, adaptive design within interconnected academic and community ecosystems. Systems Theory represented a foundational conceptual framework that facilitated the analysis of complex phenomena through a holistic lens (von Bertalanffy, 1972). At the core of Systems Theory, there were several key principles consisting of holism, where the whole was greater than the sum of its parts; interdependence, which implied that changes in one part of a system could influence the entire structure; feedback, both positive and negative, which regulated system behavior and adaptation; and equifinality which referred

to the concept that systems could reach similar outcomes through different pathways. These principles were instrumental in advancing our understanding of dynamic systems that must adapt to internal and external stimuli.

This study analyzed that their synergy could provide both strategic breadth and operational depth needed to realize social entrepreneurship and self-reliance at Nan College. Consequently, both theories were integrated to develop the conceptual framework under the CIPP Model for developing the Nan College's master and strategic plans.

As for master plan development, the business-education master plan was developed as a strategic and integrated business administration and marketing plan into the higher education services of Nan College, a sub-campus of URU in Thailand. The characteristic of the plan was a social entrepreneurship education for self-reliance and sufficiency which was reinforced by a digital transformation and inter-agency cooperative platform among the URU's academic units. Based on the CIPP model (Stufflebeam & Coryn, 2014), its components consisted of relevant inputs relevant to academic factors, organizational administration, personnel competency management, teaching and learning environment and digital transformation platform, and risk management. Its process was related to lifelong teaching and learning relevant to a developed curriculum-business-oriented toward social entrepreneurship. The driving mechanism consisted of personnel and mediating competency in specific and participatory purposes, under conditions varied to academic and administrative purposes for effective outcomes and impacts.

In sum, this study provided a temporal roadmap that respected institutional rhythm while enabling systemic change. It affirmed the concept of equifinality-multiple pathways to institutional transformation (Skyttner, 2005). Each phase built cumulatively, starting from groundwork (pilot and curriculum) to infrastructural readiness, entrepreneurial mobilization, evidence-based assessment, and final integration. Strategically, this sequence mirrored a "learning organization" cycle. It invited real-time feedback and values emergent knowledge. Academically, it allowed flexibility for faculty and administrative stakeholders to synchronize innovation cycles within different knowledge domains-such as education, management, agriculture, and IT-particularly when blended learning is part of the educational model.

Furthermore, the scenario analysis of risks and impact considerations could be discussed in 5 aspects, without ignoring the integrated approach grounded in social entrepreneurship, digital lifelong learning, and financial self-sufficiency; otherwise, it would likely result in continued institutional fragility and diminished social impact.

The implications of this study extended beyond theoretical contributions to practical impacts at multiple levels. At the learner and community level, the developed master plan enhanced access to digital lifelong learning and creates pathways for adult learners in Nan province to acquire entrepreneurial skills and competencies that directly supported employability and community well-being (Knowles, 1975; UNESCO, 2022). At the organizational level, the plan

established a framework for Nan College and URU to transition from heavy reliance on government funding toward financial self-reliance by embedding social entrepreneurship and diversified revenue strategies within the institutional fabric. The integration of Systems Theory and the Triple Bottom Line ensured that management processes were both holistic and adaptive, enabling stronger governance, risk management, and sustainability outcomes (von Bertalanffy, 1972; Elkington, 1998). At the policy and regional level, this study offered a scalable model for similar satellite campuses in Thailand to reposition themselves as socially engaged, self-sufficient institutions, aligning with the national agenda for higher education transformation (Kotler & Murphy, 1981; Porter, 2008; Uttaradit Rajabhat University, 2025). These impacts confirmed the study's significance in bridging educational provision, organizational reform, and community development within resource-constrained settings.

Conclusion and Suggestions

The S.O.C.I.A.L. model, master plan, and strategic plans could be applied for reinventing the overall replanning of Nan College's and URU's education-business-based approach for curriculum development and management by means of lifelong education and self-sufficiency.

By integrating TBL, Systems Theory, and PESTLE Analysis to lead a mechanism of the whole conceptual framework of this study, Nan College could mobilize its diverse assets for impactful, self-reliant, and socially driven education. This transformation would require strategic coordination across policy, curriculum, infrastructure, and stakeholder systems, contributing to a scalable model for other Rajabhat institutions.

The strategy matrix functioned as a bridge between strategic intentions and available institutional capacities. It embodied the principle of "strategic fit" within the organizational systems lens. Each checkmark indicated not just alignment, but a potential value-creation loop-where assets like cultural capital or green infrastructure directly informed targeted interventions such as heritage-based enterprise or sustainable campus design.

This matrix revealed how interdisciplinary resources could be activated across multiple knowledge bodies within URU, enabling cross-faculty synergies and deeper learner-community engagement. In essence, it translated complexity into action, fulfilling Systems Theory's tenet of holism.

Recommendation for using to benefit

This developed master plan indicated the strategic plan's viability of the college by integrating with lifelong education and community development concepts. Drawing on interdisciplinary frameworks including various main business-based education theories and concepts, the study proposed a master and strategic plan of business-education hybrid rooted in local wisdom, digital andragogy with various teaching techniques and channels, and social entrepreneurship for sustainable development. The result of an expert judgment on the model

appropriateness was unanimously accepted. The college transformation into a community-engaged, business-education enterprise, targeted investment, collaborative governance, and strategic curriculum redesign were strongly recommended for the college to work with the mutual participation of stakeholders, agencies, and communities.

Recommendation for future research

This study strongly recommended Nan College and URU develop a lesson learnt from this study's PAR and PRA technique for designing the relevant further research in tangible and intangible environmental utilization of Nan College for self-sufficiency and sustainability, with a holistic view of social, economic and environmental aspects.

Some future research and master plan implementation should be recognized as an integral part of URU's Nan College reinvention relating to these study findings. Recommendations are laid out here as a guideline to do so as follows.

1. At the policy level, URU should support blended education infrastructure through provincial and national investment, leading to social entrepreneurship for self-help, self-reliance, and self-sufficiency of Nan College. Then, the College should formalize social enterprise as a function within the university charters.

2. At the academic level, URU should promote transdisciplinary research on sustainability and entrepreneurship, to encourage open-access knowledge dissemination platforms via the digital lifelong education principle.

3. At the strategic level, URU should establish a Nan Social Business Hub with URU-wide engagement with the community and partnership, particularly the potential learners. Nan College should seek to build joint credentials and micro-certifications on social innovation for local farmers, arts and craft producers, with marketing for self-sufficiency. In the meantime, its natural resources should be utilized, such as carbon credit issues, and conservation for sustainability.

4. The study results in an integration of cross-disciplinary theories and concepts for the education-business-based model and master plan should be applied for further modification for other higher education institutes' program planning and development for self-sufficiency.

References

Aguilar, F. J. (1967). *Scanning the business environment*. Macmillan.

Checkland, P. (1999). *Systems thinking, systems practice*. Wiley.

Dees, J. G. (1998). *The Meaning of Social Entrepreneurship*. Stanford University.

Drucker, P. F. (2007). *The practice of management*. Routledge.

Elkington, J. (1994). Towards the sustainable corporation: Win-win-win business strategies for sustainable development. *California Management Review, 36*(2), 90–100. https://doi.org/10.2307/41165746

———. (1998). *Cannibals with forks: Triple bottom line of 21st century business*. New Society.

Kaplan, R. S., & Norton, D. P. (1996). *The balanced scorecard: Translating strategy into action*. Harvard Business Review Press.

Knowles, M. S. (1975). *Self-directed learning: A guide for learners and teachers*. Prentice Hall.

Kotler, P., Kartajaya, H., & Setiawan, I. (2017). *Marketing 4.0: Moving from traditional to digital*. John Wiley & Sons.

Kotler, P., & Murphy, P. E. (1981). Strategic planning for higher education. *The Journal of Higher Education*, *52*(5), 470–489. https://doi.org/10.1080/00221546.1981.11778119

Marginson, S. (2016). *The dream is over: The crisis of Clark Kerr's California Idea of higher education*. University of California Press.

Norman, W., & MacDonald, C. (2004). Getting to the bottom of "Triple Bottom Line". *Business Ethics Quarterly, 14*(2), 243–262. https://doi.org/10.5840/beq200414211

Organisation for Economic Co-operation and Development. (2021). *OECD Digital education outlook 2021: Pushing the frontiers with AI, blockchain, and robots*. https://doi.org/10.1787/589b283f-en

Panyanuwat, A. (2005). *Pluralistic approaches to community studies: Lessons from field research*. Project to enhance learning for a happy community. https://dol.thaihealth.or.th/Media/Index/41f7b4a8-c9ed-e711-80e3-00155d65ec2e (In Thai)

Porter, M. E. (2008). The five competitive forces that shape strategy. *Harvard Business Review*, *86*(1), 78–93.

Selwyn, N. (2021). *Education and technology: Key issues and debates* (3rd ed.). Bloomsbury.

Skyttner, L. (2005). *General systems theory: Problems, perspectives, practice* (2nd ed.). World Scientific.

Slaper, T. F., & Hall, T. J. (2011). The triple bottom line: What is it and how does it work. *Indiana Business Review*, *86*(1), 4–8.

Stufflebeam, D. L., & Coryn, C. L. S. (2014). *Evaluation theory, models, and applications* (2nd ed.). Jossey-Bass.

United Nations Educational, Scientific and Cultural Organization. (2021). *Reimagining our futures together: A new social contract for education*. UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000379707
_____. (2022). *Lifelong learning opportunities for all: medium-term strategy 2022–2029*. UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000380778.locale=en

Uttaradit Rajabhat University. (2025). *Five-year strategic plan (2024-2028)*. Uttaradit Rajabhat University.

von Bertalanffy, L. (1972). *General system theory: Foundations, development, applications* (Rev. ed.). George Braziller.

Williamson, B., & Eynon, R. (2020). Historical threads, missing links, and future directions in AI in education. *Learning, Media and Technology, 45*(3), 223–235. https://doi.org/10.1080/17439884.2020.1798995

Zahra, S. A., Gedajlovic, E., Neubaum, D. O., & Shulman, J. M. (2009). A typology of social entrepreneurs: Motives, search processes and ethical challenges. *Journal of Business Venturing, 24*(5), 519–532. https://doi.org/10.1016/j.jbusvent.2008.04.007