Exploring Essential Skills for Sustainable Community Leadership: A Data Analysis Perspective on SDGs Alignment and Model

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Abstract

This research explores the essential skills required by Thai Buddhist moral teacher monks as community leaders for sustainable development. These monks, representing Buddhism, play a crucial role in conserving teachings and fostering spiritual well-being. The study, employing mixed methods, identifies a comprehensive set of 17 skills necessary for their leadership roles, ranging from academic coordination to digital media-based Dhamma teaching and environmental management. The findings highlight a direct alignment between these skills and specific United Nations' Sustainable Development Goals (SDGs). The identified skills contribute significantly to achieving inclusive education, sustainable economic growth, resilient infrastructure, responsible consumption, environmental protection, and the promotion of peaceful societies. In conclusion, this research emphasizes the importance of cultivating a diverse skill set among Thai Buddhist moral teacher monks, offering valuable insights for policymakers, educators, and religious institutions seeking to enhance leadership capabilities and align efforts with global sustainability objectives.

Keywords: Sustainable Development Goals, Data Analysis, Sustainable Community

1. Introduction

Religious and spiritual life plays a crucial role in shaping social structures and community values. In this context, Thai Buddhist monks not only serve as spiritual leaders but also as invaluable community guides, responsible for upholding and advancing Buddhist values. This research delves into an in-depth exploration of the required skills of Thai Buddhist moral teacher monks as community leaders for sustainable development, with a specific focus on the alignment of these skills with the United Nations' Sustainable Development Goals (SDGs) [1][2][3].

The background of this research lies in the complexity of the tasks and responsibilities faced by Thai Buddhist monks as community leaders [4]. They are expected not only to preserve and propagate the teachings of Buddhism but also to contribute to sustainable development within society. With the changing times and social dynamics, the required skills for Buddhist monks have evolved. Hence, this study aims to identify and comprehensively understand the essential skills needed by Thai Buddhist monks as community leaders by adopting a data mining approach to elucidate critical aspects of these requirements.

The primary objective of this research is to conduct a comprehensive exploration of the necessary skills required by Thai Buddhist moral teacher monks in their role as community leaders for sustainable development. This involves a meticulous examination of the multifaceted responsibilities placed upon these monks, aiming to identify and understand the specific skill sets crucial for effective community leadership. By employing both qualitative and quantitative methods, including in-depth interviews and closed-ended questionnaires, the research seeks to unveil nuanced insights into the skills demanded by the evolving dynamics of their role [5].

Furthermore, a key objective is to establish a correlation between the identified skills and the United SDGs. This entails scrutinizing the skills against the backdrop of global development objectives, thereby contributing to a broader understanding of how the leadership qualities of Thai Buddhist monks can align with and contribute to achieving

sustainable development on a global scale. Applying a data mining approach to analyze and interpret the intricate relationships between the identified skills and the SDGs represents a pioneering aspect of this research, promising a more profound comprehension of the intersections between community leadership, religious practice, and the pursuit of sustainable development goals [6].

The research methodology involves a combination of qualitative and quantitative techniques, including in-depth interviews, closed-ended questionnaire data collection, and the application of participatory empirical techniques during a 15-day ordination process. This approach provides a robust foundation for exploring skill requirements and their connections to the SDGs. This research introduces novelty by incorporating a data mining approach into the understanding and development of skills for Thai Buddhist monks as community leaders [7]. By integrating data mining methods, the study aims to provide in-depth and detailed insights. It is anticipated that the outcomes of this research will not only contribute significantly to the development of leadership skills for Thai Buddhist monks but will also enhance our understanding of how spirituality and religious values can contribute to broader sustainable development goals.

2. Literature Review

2.1. Sustainable Development Goals

Sustainable Development Goals (SDGs), adopted by 193 United Nations member states in 2015, stand as a comprehensive blueprint for achieving a better and more sustainable future for all. These 17 interconnected goals address global challenges, ranging from poverty and hunger to climate change and inequality, with the overarching vision of leaving no one behind. The SDGs encompass diverse aspects of economic, social, and environmental dimensions, recognizing the intricate interplay between these elements in shaping a sustainable and equitable world [8].

Figure 1. Sustainable Development Goals Models

One of the fundamental strengths of the SDGs lies in their universality, applying to all nations and communities, irrespective of their level of development. This inclusive approach emphasizes the shared responsibility of every individual and entity in working towards a common vision of a more prosperous and sustainable planet. The goals not only set ambitious targets but also underscore the importance of collaboration, urging nations, organizations, and communities to work together to overcome global challenges [9].

Each of the 17 goals addresses a specific facet of sustainable development, such as ending poverty, ensuring quality education, promoting gender equality, and combating climate change. Achieving these goals requires a holistic approach that integrates economic growth, social inclusion, and environmental sustainability. Moreover, the SDGs recognize the interconnectedness of these goals, acknowledging that progress in one area can positively impact others, while setbacks in one domain can hinder overall development [10].

In the context of the research on the skills of Thai Buddhist moral teacher monks as community leaders, the identification of skills aligned with specific SDGs highlights the potential contribution of religious and community leaders to the global sustainability agenda. The synergy between the monks' skills and the SDGs not only emphasizes the relevance of their roles in broader societal development but also offers insights into how local efforts can resonate with and support the achievement of global objectives. By understanding and aligning community leadership skills with the SDGs, the research contributes to the broader discourse on how diverse actors can collectively work towards a sustainable and inclusive future.

2.2. SDGs Implementation

The implementation of the Sustainable Development Goals involves a complex and multifaceted process that requires concerted efforts at local, national, and global levels. Achieving the ambitious targets set by the SDGs necessitates transformative actions in various sectors, including economic, social, and environmental dimensions. Successful implementation hinges on effective governance, collaboration among stakeholders, and the integration of the SDGs into existing policies and frameworks [11].

At the national level, governments play a pivotal role in translating the aspirations of the SDGs into actionable policies and strategies. This often involves aligning national development plans with the SDGs, establishing monitoring mechanisms, and allocating resources to priority areas. Additionally, fostering a strong institutional framework is crucial to ensure coordination among different sectors and levels of government, facilitating a cohesive approach to sustainable development [12].

The involvement of local communities is equally critical in the SDGs implementation process. Recognizing that the goals are interconnected and context-specific, local stakeholders, including community leaders, businesses, and civil society organizations, need to actively participate. Engaging communities ensures that interventions are culturally sensitive, address local needs, and empower individuals to contribute to the broader agenda of sustainable development [13].

Global partnerships are integral to the successful implementation of the SDGs. Given the interconnected nature of global challenges, collaboration among nations, international organizations, and the private sector is essential. This involves sharing knowledge, technology, and resources to address transboundary issues such as climate change, poverty, and health. Moreover, fostering a sense of global citizenship encourages a collective responsibility for the well-being of the planet and its inhabitants [14].

The challenges in SDGs implementation are manifold, ranging from resource constraints to geopolitical complexities. However, numerous success stories and best practices demonstrate that positive change is possible when there is a commitment to the shared values embedded in the SDGs. As the international community continues to navigate the path toward 2030, the lessons learned from ongoing efforts provide valuable insights into effective strategies, potential pitfalls, and the need for sustained commitment to realizing the vision of a more sustainable and equitable world.

3. Method

3.1. Data Collection

The effectiveness of any research hinges on the robustness of its data collection methods [15]. In this study, a mixed-methods approach was employed to garner comprehensive insights into the skills required by Thai Buddhist moral teacher monks for sustainable community leadership. The qualitative aspect involved in-depth interviews with the administrative committees of seven temples in Pathum Thani province, providing a nuanced understanding of emergent problems, necessary skills for teaching Dharma, expectations for overall development, and valuable suggestions. This qualitative data collection method ensured the inclusion of diverse perspectives from experienced practitioners and decision-makers within the temple community.

On the other hand, the quantitative dimension involved closed-ended questionnaires distributed to 26 moral teacher monks in Patumthani Province. This purposive sampling technique aimed to capture a diverse range of experiences and perspectives among the monks, providing quantitative data to complement the qualitative findings. The

questionnaires were designed to gather structured responses regarding specific skill requirements, allowing for statistical analysis and comparison across different dimensions.

Additionally, the participatory empirical technique during a 15-day ordination process was integrated into the data collection methodology. This immersive approach allowed the researcher to gain firsthand insights into the daily lives and characteristics of Thai Buddhist monks, contributing to a richer understanding of the context in which these skills are applied. The combination of these data collection methods ensured a comprehensive and multi-dimensional exploration of the skills needed for sustainable community leadership.

3.2. Research Architecture/Steps

The research architecture or steps outlined in this study were designed to systematically navigate through the complexities of exploring the skills of Thai Buddhist moral teacher monks and their alignment with the Sustainable Development Goals (SDGs). The initial step involved identifying the population for qualitative data collection, specifically the temple administrative committees, and the sample for quantitative data collection, which comprised 26 moral teacher monks.

The qualitative phase commenced with in-depth interviews, addressing key aspects such as emergent problems during Dharma teaching, required skills, expectations for overall development, and suggestions. This qualitative data collection was followed by the distribution of closed-ended questionnaires to the sampled moral teacher monks. These questionnaires, encompassing a range of skills, enabled a structured and quantitative analysis of the identified skill requirements.

The research architecture also incorporated the participatory empirical technique [16][17], conducted during a 15-day ordination process, providing a firsthand understanding of the daily life and characteristics of Thai Buddhist monks. This step contributed to the holistic exploration of the monks' roles as community leaders and the practical application of the identified skills in their daily activities.

The final phase involved data analysis, where both qualitative and quantitative data were synthesized and interpreted to identify the essential skills required by Thai Buddhist moral teacher monks. The alignment of these skills with specific SDGs was then explored, marking the culmination of a structured and comprehensive research architecture designed to address the research objectives effectively. The systematic approach ensured the reliability and validity of the findings, contributing valuable insights to the field of community leadership and sustainable development. The statistical formulas used to describe the research findings are [18][19][20]:

$\bar{X}$ (Mean): The average value of the leadership skill scores measured on a scale of 1 to 5 for each leadership skill. $\bar{X}$ is calculated by summing all the values and then dividing by the total number of samples.

$$X = \frac{\Sigma X_i}{n} \tag{1}$$

X : Mean (average)

ΣX_i : Each individual value in the sample

n : Total number of samples

S.D. (Standard Deviation): The standard deviation value of the skill scores. Standard deviation measures how much each individual value deviates from the mean. The higher the S.D., the greater the variation between individual values.

$$S.D. = \sqrt{\frac{\Sigma (X_i - X)^2}{n}} \tag{2}$$

$S.D.$: Standard Deviation

X_i: Each individual value in the sample

X: Mean (average)

n: Total number of samples

4. Result and Discussion

4.1. The Need Requirement Skills Based on Community

In Table 1, the identified need requirement skills of Thai Buddhist moral teacher monks as community leaders for sustainable development are presented, each skill rated on a scale from 1 to 5, with 5 indicating a high level of requirement. The skills encompass a diverse range, reflecting the multifaceted role that these monks play in their communities.

Table 1. The required skills of Thai Buddhist moral teacher monk as the Community Leadership for sustainable development.

		$\underline{x}$	S.D.
1	Dhamma teaching skills through digital media	4.24	0.97
2	Pollution managing skills	4.23	0.95
3	Leadership skills for monks	4.15	1.01
4	Teaching material production skills	4.12	1.11
5	Skills for integrating teachings between religions	4.12	1.03
6	Academic coordination skills with well-equipped external agencies	4.08	1.32
7	Religious Human Resource Management Skills	4.04	1.00
8	Skills in maintaining public utilities within the temple	4.00	1.10
9	Preparation skills before entering society	4.00	1.06
10	Buddhist research skills	3.96	1.15
11	Higher education curriculum development skills	3.96	1.11
12	Office automation skills	3.92	0.93
13	Foreign language skills with native speakers	3.88	1.31
14	Basic agricultural skills	3.85	1.26
15	Statistics and computational skills	3.81	1.20
16	Property management skills within religious places	3.81	1.20
17	Skills in using AI in teaching Dhamma	3.73	1.37

The highest-rated skill is "Dhamma teaching skills through digital media" (x=4.24, S.D.=0.97), emphasizing the increasing importance of leveraging technology for disseminating Buddhist teachings. Following closely are "Pollution managing skills" (x=4.23, S.D.=0.95) and "Leadership skills for monks" (x=4.15, S.D.=1.01), highlighting the monks' responsibilities beyond spiritual guidance to address environmental concerns and exhibit effective leadership within their communities.

"Teaching material production skills" (x=4.12, S.D.=1.11) and "Skills for integrating teachings between religions" (x=4.12, S.D.=1.03) emphasize the monks' roles as educators who not only preserve Buddhist teachings but also foster interfaith understanding. "Academic coordination skills with well-equipped external agencies" (x=4.08, S.D.=1.32) underscore the need for collaboration with external entities to enhance the educational and community development initiatives led by the monks.

Skills such as "Religious Human Resource Management Skills" (x=4.04, S.D.=1.00), "Skills in maintaining public utilities within the temple" (x=4.00, S.D.=1.10), and "Preparation skills before entering society" (x=4.00, S.D.=1.06) highlight the monks' organizational and community management responsibilities. Additionally, skills like "Buddhist research skills" (x=3.96, S.D.=1.15) and "Higher education curriculum development skills" (x=3.96, S.D.=1.11) underscore the intellectual and educational dimensions of their leadership roles.

The study also revealed that some skills, such as "Office automation skills" (x=3.92, S.D.=0.93), "Foreign language skills with native speakers" (x=3.88, S.D.=1.31), "Basic agricultural skills" (x=3.85, S.D.=1.26), "Statistics and computational skills" (x=3.81, S.D.=1.20), "Property management skills within religious places" (x=3.81, S.D.=1.20), and "Skills in using AI in teaching Dhamma" (x=3.73, S.D.=1.37), while considered important, may not be as pronounced in their current roles.

These findings shed light on the diverse and evolving skill set required of Thai Buddhist moral teacher monks as community leaders. The standard deviations (S.D.) indicate the variability in responses, emphasizing the nuanced perspectives among participants regarding the significance of these skills. Overall, this analysis provides a comprehensive overview of the identified skills, setting the stage for further exploration of their implications for sustainable community development and their alignment with the United Nations SDGs.

4.2. The Need Requirement Skills Based on SDGs

The exploration of the need requirement skills of Thai Buddhist moral teacher monks in relation to the United Nations Sustainable Development Goals (SDGs) is encapsulated in Table 2 to 8. These tables illustrate the skills associated with specific SDGs, providing valuable insights into the alignment of the monks' capabilities with the global agenda for sustainable development.

Table 2. Show skills related with Goal 4.

Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	
1	Dhamma teaching skills through digital media
2	Teaching material production skills
3	Buddhist research skills
4	Higher education curriculum development skills
5	Statistics and computational skills

In Table 2, Skills Related to Goal 4 (Ensure inclusive and equitable quality education). The skills identified in this table, including Dhamma teaching skills through digital media, Teaching material production skills, Buddhist research skills, Higher education curriculum development skills, and Statistics and computational skills, underscore the significant role of Thai Buddhist moral teacher monks in promoting inclusive education and lifelong learning opportunities for all. These skills reflect their commitment to disseminating knowledge through diverse channels and enhancing the quality of education within their communities.

Table 3. Show skills related with Goal 8.

Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	
1	Office automation skills
2	Statistics and computational skills

In Table 3, Skills Related to Goal 8 (Promote sustained, inclusive, and sustainable economic growth). In alignment with Goal 8, Thai Buddhist moral teacher monks exhibit skills such as Office automation skills and Statistics and computational skills. These capabilities highlight their contribution to economic growth, full and productive employment, and the creation of a sustainable economic environment within their communities.

Table 4. Show skills to related with Goal9.

Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	
1	Preparation skills before entering society

In Table 4, Skills Related to Goal 9 (Build resilient infrastructure and promote sustainable industrialization). Preparation skills before entering society emerge as a critical skill related to Goal 9, emphasizing the monks' role in building resilient infrastructures and fostering sustainable industrialization within their societal framework.

Table 5. Show skills to related with Goal12.

Goal 12: Ensure sustainable consumption and production patterns	
1	Skills in using AI in teaching Dhamma

2	Skills in maintaining public utilities within the temple

In Table 5, Skills Related to Goal 12 (Ensure sustainable consumption and production patterns). Skills in using AI in teaching Dhamma and Skills in maintaining public utilities within the temple are identified in Table 2-4, reflecting the monks' commitment to ensuring sustainable consumption and production patterns within their religious practices and community settings.

Table 6. Show skills to related with Goal15.

Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
1   Pollution managing skills
2   Basic agricultural skills

In Table 6, Skills Related to Goal 15 (Protect, restore, and promote sustainable use of terrestrial ecosystems). Table 2-5 underscores the monks' role in Goal 15 by showcasing Pollution managing skills and Basic agricultural skills. These skills reflect their dedication to protecting terrestrial ecosystems, managing forests sustainably, combating desertification, and promoting biodiversity.

Table 7. Show skills to related with Goal16.

Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
1   Leadership skills for monks
2   Skills for integrating teachings between religions
3   Religious Human Resource Management Skills
4   Property management skills within religious places

In Table 7, Skills Related to Goal 16 (Promote peaceful and inclusive societies). Skills such as Leadership skills for monks, Skills for integrating teachings between religions, Religious Human Resource Management Skills, and Property management skills within religious places, as presented in Table 2-6, highlight the monks' vital contribution to fostering peace, inclusivity, and justice within their communities.

Table 8. Show skills to related with Goal17.

Goal 17: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development
1   Academic coordination skills with well-equipped external agencies
2   Foreign language skills with native speakers

In Table 8, Skills Related to Goal 17 (Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development). The skills outlined in Table 2-7, including Academic coordination skills with well-equipped external agencies and foreign language skills with native speakers, underscore the monks' involvement in strengthening the means of implementation and fostering global partnerships for sustainable development.

In summary, the diverse skill set of Thai Buddhist moral teacher monks aligns with multiple SDGs, showcasing their integral role in advancing the global agenda for sustainable development. This alignment emphasizes the monks' multifaceted contributions to education, economic growth, infrastructure development, sustainable consumption, environmental protection, societal harmony, and global collaboration. The findings underscore the interconnectedness of their roles as community leaders with the broader global efforts towards sustainable development.

5. Conclusion

The research on the need requirement skills of Thai Buddhist moral teacher monks as community leaders for sustainable development yields several significant findings. The investigation identified a comprehensive set of 17 skills that are deemed crucial for the effective leadership of these monks. These skills span diverse areas, including academic coordination, pollution management, teaching material production, digital media-based Dhamma teaching, leadership, inter-religious teaching integration, foreign language proficiency, public utilities maintenance within temples, Buddhist research, curriculum development for higher education, religious human resource management, societal integration preparation, basic agricultural knowledge, office automation, statistics and computational abilities, property management within religious places, and the utilization of AI in Dhamma teaching.

The research also uncovered a nexus between these identified skills and the United Nations' Sustainable Development Goals (SDGs). Notably, several skills were found to align with specific SDGs, such as inclusive and equitable quality education (Goal 4), sustained and inclusive economic growth (Goal 8), resilient infrastructure and sustainable industrialization (Goal 9), sustainable consumption and production patterns (Goal 12), protection and restoration of terrestrial ecosystems (Goal 15), promotion of peaceful and inclusive societies (Goal 16), and strengthening of global partnerships for sustainable development (Goal 17). In conclusion, the study sheds light on the multifaceted roles and skills required of Thai Buddhist moral teacher monks acting as community leaders. The identified skills not only contribute to the sustainable development of local communities but also resonate with broader global aspirations encapsulated in the SDGs. The research underscores the importance of nurturing a diverse skill set among these monks to enable them to effectively lead communities towards sustainable and inclusive development.

6. Declarations

6.1. Author Contributions

Conceptualization: M.P.; Methodology: M.P.; Software: M.P.; Validation: M.P.; Formal Analysis: M.P.; Investigation: M.P.; Resources: M.P.; Data Curation: M.P.; Writing Original Draft Preparation: M.P.; Writing Review and Editing: M.P.; Visualization: M.P.; Authors has read and agreed to the published version of the manuscript.

6.2. Data Availability Statement

The data presented in this study are available on request from the corresponding author.

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6.4. Institutional Review Board Statement

Not applicable.

6.5. Informed Consent Statement

Not applicable.

6.6. Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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