School Administration Model in Driving the Sustainable Development Goals (SDGs)

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Abstract

The objectives of this qualitative research were 1) to synthesize structural components of the school administration model in driving the Sustainable Development Goals (SDGs) from concepts and theories, and to check empirical confirmation; 2) to investigate the problem states and the factors supporting solutions in driving the Sustainable Development Goals (SDGs); 3) to develop the school administration model in driving the Sustainable Development Goals (SDGs); and 4) to prepare the policy recommendations and guidelines for policy implementation for the school administration model in driving the Sustainable Development Goals (SDGs). Key informants consisted of forty respondents, the instruments used were a synthesis table, a confirmation form, an unstructured interview form, and a meeting record form. The data were analyzed by frequency, percentage, and content analysis and classified into issues. The study results revealed as follows: 1. The structural components consisted of nine core components with twenty-three sub-components; and the empirical confirmation was 100 percent. 2. The problem states and factors supporting solutions consisted of political stability, local adaptation, limited resources, lack of awareness, curriculum gaps, teacher preparation, monitoring and evaluation, local ownership, and teacher professional development. 3. The components of the school administration model consisted of 1) principles; 2) objectives, 3) operational procedures, 4) evaluation, and 5) conditions for achievement. 4. The policy recommendations and guidelines for policy implementation consisted of policy support, teacher professional development, curriculum enhancement, resource mobilization, community engagement, global citizenship education, monitoring and reporting, recognition and awards, and continuous improvement and evaluation.

Keywords: School Administration Model, Sustainable Development Goals (SDGs).

1. Introduction

Thailand's 20-Year National Strategy (2017–2036) [7] stated in terms of a strategy for Thailand's sustainable development and growth, emphasizing the achievement of the Sustainable Development Goals (SDGs) to address social, economic, and environmental aspects while promoting good governance and cooperation. The ultimate goal is to position Thailand as a developed ASEAN nation by 2037.

In accordance with the Thirteen National Economic and Social Development Plan (2022–2027) [6] determined the Sustainable Development Goals (SDGs) place emphasis on the main goal is to raising everyone's quality of life

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overall, with a special emphasis on factors that support physical and mental health, a clean environment, opportunities for people to maximize their potential to improve their livelihoods, and a dedication to protecting the environment and natural resources for future generations.

Moreover, the United Nations (2023) [11] stated that Sustainable Development Goal 4 aims for inclusive, equitable education by 2030, ensuring equal access to primary, secondary, and tertiary education, eradicating gender disparities, and promoting literacy and numeracy. It promotes sustainable development, human rights, gender equality, and cultural diversity, with global scholarships and qualified teacher supply.

According to Alarifi et al. [1], the foundations of high-quality public education include teaching students how to properly interact with the knowledge community, maintaining lifelong learning, helping them participate in development, raising student productivity and performance, producing high-quality educational products, developing teachers' educational competency, tying the curriculum to industry demands, and raising the bar for administrators in educational institutions.

Therefore, SDG Action [8] viewed education as the enabler for sustainable development; higher education institutions (HEIs) are a crucial player in this endeavor since they are in the epicenter of knowledge creation and intergenerational transfer for sustainable development. HEIs are also in charge of developing curricula and training teachers for use in classrooms. Lastly, HEIs work at the interfaces between science, policy, and practice as well as upskilling corporations. At every step of lifelong learning, HEIs can and should play a significant role in developing SDG 4 paths and capacities both domestically and internationally.

Likewise, Kleespies & Dierkes [4] indicated the importance of the Sustainable Development Goals to students of environmental and sustainability studies. As prospective future members of society, students play a critical role in advancing the SDGs, addressing pressing human issues, and shaping the planet's destiny. As of right now, this study aims to close the gap in international research and investigate how students around the world perceive the SDGs. The goal is to find out how significant the SDGs are to students in each nation. Within each country and associated with factors unique to that nation in order to find trends and differences between the nations. The findings are meant to give today's decision-makers in various nations direction for their next course of action.

Based on the description above and a report of issues and trends in education for sustainable development [2], education for sustainable development is also an important tool for achieving the Sustainable Development Goals. This idea was supported by the Second Committee of the 74th United Nations General Assembly, which adopted a resolution on Education for Sustainable Development, which emphasized that education for sustainable development is an important component in achieving the goal of quality education and is a key to achieving the Sustainable Development Goals.

Therefore, school administrators play a crucial role in supporting and creating opportunities for sustainable development, particularly in education. It should focus on quality education, encouraging teachers to learn related knowledge and skills, and promoting lifelong learning in the community. School administration should also create an open learning environment that promotes diversity, cultural differences, and abilities, fostering confidence and responsibility for a sustainable environment and society. As a research team that would like to studying the school administration model in driving

the Sustainable Development Goals (SDGs), the results will benefit the educational quality for students in the near future.

2. Research Questions

2.1 What are the structural components of the school administration model in driving the Sustainable Development Goals (SDGs) from concepts and theories and check empirical confirmation?

2.2 What are the problem states and the factors supporting the success in driving the Sustainable Development Goals (SDGs)?

2.3 What is the school administration model in driving the Sustainable Development Goals (SDGs)?

2.4 What are the policy recommendations and guidelines for policy implementation for the school administration model in driving the Sustainable Development Goals (SDGs)?

3. Research Objectives

3.1 To synthesize structural components of the school administration model in driving the Sustainable Development Goals (SDGs) from concepts and theories and check empirical confirmation.

3.2 To investigate the problem states and the factors supporting the success in driving the Sustainable Development Goals (SDGs).

3.3 To develop the school administration model in driving the Sustainable Development Goals (SDGs).

3.4 To prepare the policy recommendations and guidelines for policy implementation for the school administration model in driving the Sustainable Development Goals (SDGs).

4. Materials and Methods

The researcher divided into two phases as follows:

Phase 1: To synthesize structural components of the school administration model in driving the Sustainable Development Goals (SDGs) from concepts

and theories, and check empirical confirmation, dividing into two steps:

Step 1.1: The synthesizing of structural components of the school administration model in driving the Sustainable Development Goals (SDGs) from thirty academic papers from both Thai and foreign educators that were published via electronic media. Data were analyzed by frequency.

Step 1.2: The checking empirical confirmation of derived structural components of the school administration model in driving the Sustainable Development Goals (SDGs) from Step 1.1 by focus group discussion of five experts and relevant representatives of school administrators to correct, rearrange, and define the appropriate and comprehending. The instrument used was a confirmation form. The data were analyzed by percentage.

Phase 2: To investigate the problem states and the factors supporting the success in driving the Sustainable Development Goals (SDGs). The instrument used was a semi-structured interview form in an in-depth interview with thirteen administrators of small-sized schools that had less than 150 students under Chiang Mai Primary Educational Service Area Office 1. The data were analyzed by classifying into issues.

Phase 3: To develop a school administration model in driving the Sustainable Development Goals (SDGs) was separated into two steps:

Step 3.1: A school administration model for driving the Sustainable Development Goals (SDGs) was constructed by a research team by considering the results from Phrase 1 and Phase 2 to be model components of the school administration model in driving the Sustainable Development Goals (SDGs). The instrument used was model components consisting of 1) principles, 2) objectives, 3) operational procedures, 4) evaluation, and 5) conditions for

achievement. The data were selected appropriate issues to construct a model.

Step 3.2: The verification of accuracy and appropriateness of a school administration model in driving the Sustainable Development Goals (SDGs). The researchers provided a workshop of nine experts in various fields, faculty lecturers, and school administrators, selected by purposive sampling. The instrument used was a verification form of accuracy and appropriateness. The data were analyzed by percentage. Nine experts also corrected and edited all components and sub-components.

Phase 4: To prepare the policy recommendations and guidelines for policy implementation for the school administration model in driving the Sustainable Development Goals (SDGs) by organizing a brainstorming session consisting of fifteen local community leaders, school administrators, school board or representatives of Educational Service Area administrators, supervisors, experts, and independent academics, including the research team, selected by purposive sampling. The data were analyzed by classifying them into issues.

5. Results

The research results were as follows:

Phase 1: Results of synthesizing structural components of the school administration model in driving the Sustainable Development Goals (SDGs) from concepts and theories, and checking empirical confirmation dividing into two steps:

Step 1.1: Results of synthesizing the core components and sub-components of driving the Sustainable Development Goals (SDGs). The research team studied thirty academic papers from both Thai and foreign educators that were published via electronic media, consisting of concepts, articles, and relevant research on driving the Sustainable Development Goals (SDGs) as follows: 1) Anggal (2022); 2) Annan-Diab & Molinari (2017); 3) Aroonsrimorakot & Vajaradul (2016); 4) Blasco, Brusca & Labrador (2021); 5) Cai & Wolff (2023); 6) Chaleta, et al. (2021); 7) Damigos et al. (2021); 8) El-Jardali, Ataya & Fadlallah (2018); 9) Ferrer-Estévez & Chalmeta (2021); 10) Gedeon (2022); 11) Glavič (2020); 12) Jang & Shin (2022); 13) Kasemcheunyot (2020); 14) Kioupi & Voulvoulis (2019); 15) Kleespies & Dierkes (2022); 16) Leal Filho et al. (2019); 17) Manopattanakron, Pimthongm & Pongsophon (2022); 18) Mishra (2018); 19) Okubo et al. (2021), 20) Purcell, Henriksen & Spengler (2019); 21) Rahman et al. (2023); 22) Ribeiro et al. (2023); 23) Sa-u & Pathranarakul (2020); 24) SDG Action (2022); 25) Seangyai & Wisutthirattanakun (2021); 26) Times Higher Education (2023); 27) UNESCO. (2017), 28) UNESCO Department of Economic and Social Affairs Sustainable Development (2021); 29) United Nations Thailand (2023); and 30) Woraurai (2022).

The core components and sub-components of driving the Sustainable Development Goals (SDGs) were shown on Table 1.

Step 1.2: Checking empirical confirmation of derived structural components of the school administration model in driving the Sustainable Development Goals (SDGs) from Step 1.1 by focus group discussion of five experts and representatives of school administrators to select the appropriate components. All components and sub-components were overall accepted, and five experts corrected and defined the definitions for implementation as follows:

Table 1: The synthesizing table of the core components and sub-components of driving the Sustainable Development Goals (SDGs).

No.	Components	No.	Sub-Components	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	28	30	Total
1	Policy	1.1	The government department	✓		✓	✓		✓	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓					✓			✓	✓	✓			20
		1.2	Support schools.	✓	✓	✓			✓	✓		✓	✓	✓			✓	✓	✓			✓						✓	✓							14
		1.3	Policy integration agency.	✓			✓	✓	✓		✓	✓				✓	✓	✓	✓									✓	✓	✓	✓					14
		1.4	Implement policy agency.	✓			✓	✓		✓	✓	✓	✓	✓					✓	✓	✓	✓	✓				✓	✓	✓			✓	✓	✓		19
		1.5	Providing opportunities.			✓	✓			✓	✓	✓		✓		✓	✓	✓	✓									✓	✓		✓			✓		14
		1.6	Inclusive practices.	✓	✓	✓			✓	✓	✓	✓	✓				✓	✓	✓																	11
2	Vision.	2.1	SDG alignment.	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓			✓	✓	✓	✓				21
		2.2	Long-term commitment	✓	✓	✓						✓				✓	✓										✓	✓	✓	✓			✓		10
		2.3	Supporting.	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓		✓			✓	✓	✓		✓		✓	✓		21
		2.4	Global citizenship	✓			✓	✓	✓		✓		✓			✓	✓										✓	✓					✓		11
		2.5	Equity.	✓	✓			✓	✓	✓			✓	✓			✓	✓									✓	✓	✓	✓			✓		13
		2.6	Stakeholders.	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			22
3	Leadership.	3.1	Administrators.	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓					✓			✓	✓	✓	✓	✓	22
		3.2	Decision-making	✓		✓					✓	✓		✓	✓			✓			✓						✓						✓		11
		3.3	Global awareness	✓					✓	✓			✓		✓	✓	✓			✓		✓	✓				✓						✓		12
		3.4	Resource management	✓	✓				✓	✓	✓		✓		✓					✓		✓	✓				✓				✓		✓		13
		3.5	School board committee	✓			✓	✓	✓	✓		✓	✓	✓	✓						✓	✓	✓	✓		✓	✓			✓					16
4	Curriculum and Instruction.	4.1	Curriculum integration.	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓					✓	✓			✓	✓			✓			✓	✓	✓		17
		4.2	Pedagogical approaches.	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓					✓	✓			✓	✓			✓			✓	✓	✓	✓	18
		4.3	Resource access.	✓			✓	✓				✓				✓	✓	✓	✓			✓	✓	✓				✓	✓				✓		14
		4.4	Innovation.	✓		✓		✓	✓	✓			✓				✓	✓			✓	✓	✓									✓			12
		4.5	Global citizenship education.	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓					✓	✓			✓	✓		✓		✓	✓	✓	✓	✓		19
5	Professional Development.	5.1	Teacher training.	✓	✓	✓			✓	✓							✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓	✓	✓	16
		5.2	Access to quality education.	✓		✓					✓					✓					✓						✓	✓	✓	✓			✓	10
		5.3	Resource development.	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓		✓			✓	✓	✓	✓	22
		5.4	Continuous learning.	✓			✓	✓				✓			✓	✓	✓	✓			✓						✓			✓			✓	13
		5.5	Partnership.	✓	✓	✓		✓				✓						✓			✓	✓	✓				✓						✓	11
		5.6	Cooperative learning.	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓				✓	✓	✓		✓	✓			✓	✓		✓	✓	✓	✓	21
6	Community.	6.1	Collaboration.	✓			✓			✓	✓			✓	✓					✓	✓	✓	✓		✓			✓	✓		✓		✓	17
		6.2	Resource mobilization.	✓			✓			✓			✓	✓					✓	✓	✓		✓		✓			✓		✓	✓	✓	✓	16
		6.3	Community promotion.	✓			✓		✓				✓	✓					✓	✓	✓	✓	✓	✓		✓			✓		✓	✓	✓	15
		6.4	Environment.				✓				✓										✓						✓			✓			✓	6
		6.5	Culture.	✓			✓		✓				✓				✓	✓			✓						✓	✓					✓	10
7	Monitoring.	7.1	Goal setting.	✓	✓	✓		✓	✓						✓	✓	✓	✓		✓	✓	✓	✓		✓					✓	✓	✓		17
		7.2	Clear objectives.		✓						✓			✓							✓	✓			✓			✓			✓			8
		7.3	School supervisors.	✓	✓		✓		✓	✓			✓	✓			✓	✓			✓	✓	✓	✓		✓			✓		✓	✓		17
		7.4	Data collection.	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓			✓	✓			✓	✓			✓	✓	✓	✓	✓	✓	✓	21
		7.5	Regular reporting.		✓	✓					✓									✓	✓				✓	✓		✓			✓			9
8	Communication	8.1	Internal communication	✓					✓	✓	✓		✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓						17
		8.2	Clear messaging.																	✓				✓	✓						✓			4
		8.3	Regular updates.	✓					✓	✓	✓						✓			✓				✓	✓			✓						8
		8.4	Continuous Improvement		✓	✓	✓					✓			✓	✓				✓				✓		✓	✓			✓				11
		8.5	Student engagement.	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓		✓	✓		✓	✓	✓	✓			✓	✓			✓	✓		21
9	Research and Innovation.	9.1	Research institutions.	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓			✓	✓	✓			✓	✓			✓	✓	20
		9.2	Workshops.	✓					✓								✓					✓												5
		9.3	Funding.	✓					✓		✓	✓			✓		✓	✓					✓									✓		9
		9.4	Technology.	✓	✓			✓	✓				✓	✓					✓			✓	✓	✓			✓				✓			13
		9.5	Innovation centers	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓				✓			✓	✓	✓	✓	✓	✓			✓	✓	✓	21

1. Policy consists of 1.1 Ministry of Education: The government department responsible for setting educational policies and guidelines related to SDG integration. 1.2 The Office of Educational Service Areas: Implement policies and support schools at the regional level.

2. Vision consists of 2.1 SDG Alignment: School leaders align the school's mission, vision, and values with the SDGs. 2.2 Supporting: School leaders support the importance of the SDGs within the school community and beyond. 2.3 Stakeholders: Engage with teachers, students, parents, and the community to promote SDG awareness and commitment.

3. Leadership consists of 3.1 Administrators: Provide leadership and direction for SDG integration within their schools. 3.2 School Board Committee: Collaborate to develop and implement SDG-related initiatives.

4. Curriculum and Instruction consist of 4.1 Curriculum Integration: Embed SDG-related content and concepts across subjects and grade levels. 4.2 Pedagogical Approaches: Promote teaching methods that foster critical thinking, problem-solving, and active learning related to the SDGs. 4.3 Global Citizenship Education: Develop programs that cultivate students' sense of global citizenship and social responsibility.

5. Professional Development consists of 5.1 Teacher Training: Provide training and workshops to teachers on SDGs, effective pedagogy, and related resources. 5.2 Resource Development: Create resources and materials to support SDG education, such as lesson plans and teaching aids. 5.3 Cooperative Learning: Encourage cooperative learning and collaboration among educators to share best practices related to SDGs.

6. Community consists of 6.1 Collaboration: Collaborate with external organizations, government agencies, NGOs, and local communities to advance SDG-related projects. 6.2 Resource Mobilization: Seek funding and resources from partners to support SDG initiatives within the school. 6.3 Community Promotion: Engage the local community in SDG awareness campaigns and activities.

7. Monitoring consists of 7.1 Goal Setting: Set measurable targets and benchmarks for SDG-related achievements within the school. 7.2 School Supervisors: Monitor schools' progress in implementing SDG-related activities. 7.3 Data Collection: Collect data on SDG-related activities, student learning outcomes, and progress toward goals.

8. Communication consists of 8.1 Internal Communication: Communicate the school's commitment to the SDGs to staff, students, and parents through newsletters, meetings, and events. 8.2 Student Engagement: Involve students in advocating for the SDGs, and promoting youth leadership and activism.

9. Research and Innovation consists of 9.1 Educational Research Institutions: Conduct research and innovation on the impact of SDG integration in schools. 9.2 Innovation Centers: Develop innovative solutions and technologies to support SDG education.

Phase 2: To investigate the problem states and the factors supporting solutions in driving the Sustainable Development Goals (SDGs). The researchers used a semi-structured interview form in an in-depth interview with thirteen administrators of small-sized schools that had less than 150 students under Ching Mai Primary Educational Service Area Office 1. Results of the problem states and the factors supporting solutions were shown in Table 2.

Phase 3: To develop a school administration model in driving the Sustainable Development Goals (SDGs) was separated into two steps:

Step 3.1: Results of a school administration model in driving the Sustainable Development Goals (SDGs) were constructed by a research team by considering the results from Phrase 1 and Phase 2 to be model components of the school administration model in driving the Sustainable Development Goals (SDGs) consisted of principles, objectives, operational procedures, evaluation, and conditions for achievement.

Step 3.2: Results of the verification components of a school administration model in driving the Sustainable Development Goals (SDGs), the accuracy was at 92 percent and appropriateness was at 89 percent.

Table 2: Results of the problem states and the factors supporting solutions.

The problem states	The factors supporting solutions
1. Political Stability: Political stability is crucial for the consistent and long-term implementation of SDG-related policies and practices in school administration. Political instability can disrupt progress.	Continuity of education policies and initiatives across political transitions ensures that SDG-related efforts remain on track.
2. Local Adaptation: Balancing the need for standardized approaches to SDG integration with the importance of allowing schools and communities to adapt the goals to their unique contexts can be a challenge.	Principals and school administrators who champion the SDGs and create a supportive environment for their implementation play a crucial role in the success of the model.
3. Limited Resources: Many schools in Thailand, particularly in rural areas, face resource constraints in terms of funding, infrastructure, and qualified staff. Implementing SDG-related initiatives may require additional resources that are often not readily available.	Effective allocation of resources, including seeking external funds and infrastructure improvements, teaching materials, and technology support the implementation of SDG initiatives within schools.
4. Lack of Awareness: Many people, organizations, and governments have limited awareness of the SDGs, their significance, and their targets. This lack of awareness can result in indifference or inaction.	Promote widespread awareness and education about the SDGs at the grassroots level, in schools, and through media campaigns to mobilize public support and engagement.
5. Curriculum Gaps: The existing curriculum in many schools may not adequately cover topics related to sustainability, making it challenging to educate students about the SDGs and their importance.	Update and expand the curriculum enhancement to include issues involving to sustainability, social responsibility, and global citizenship. Ensure that the curriculum aligns with the SDGs.
6. Teacher Preparation: Not all educators may feel adequately prepared to teach SDG-related topics. Training and professional development opportunities may be lacking, leaving teachers ill-equipped to address sustainability issues effectively.	Recruitment and retaining qualified teachers can reduce a persistent issue, affecting the implementation of SDG-related initiatives. This includes improving teacher quality, curriculum content, and the overall learning environment.
7. Monitoring and Evaluation: Establishing effective systems for monitoring and evaluating the impact of SDG-driven changes in school administration can be resource-intensive and complex.	Implement monitoring and reporting mechanisms to track progress in integrating the SDGs into the school administration model. Share successes and challenges with relevant stakeholders.
8. Local Ownership: Achieving buy-in and commitment from local school administrators, teachers, and communities to align their practices with the SDGs can be challenging. It may require significant awareness-building and capacity-building efforts.	Active involvement of parents, local communities, and civil society creates practical opportunities for students to engage with real-world sustainability projects and initiatives for SDGs to take ownership of education outcomes.
9. Teacher Professional Development: Ensuring that education in Thailand meets the standards of quality and relevance set out in the SDGs is a significant challenge to improve teacher quality, curriculum content, and the overall learning environment.	Invest in the power of technology and innovation to develop teacher solutions for achieving the SDGs, such as renewable technologies, digital platforms for education, and the integration of sustainable practices.

Nine experts also corrected and edited all components and sub-components as follows:

1. Model principles consisted of:

1.1 Demonstrate strong leadership commitment to the SDGs by setting the vision, values, and priorities for their integration into the school's culture.

1.2 Engage all stakeholders, including students, teachers, parents, staff, and the local community in the SDG integration process.

1.3 Prioritize teacher training and professional development to equip educators with the knowledge and skills needed to effectively teach the SDGs.

1.4 Establish systems for monitoring and reporting progress toward SDG-related goals and objectives.

2. Model objectives consisted of:

2.1 To embed the SDGs as a core component of the school's mission, culture, and administrative framework.

2.2 To educate that educator to have the knowledge, skills, and resources needed to effectively teach the SDGs.

2.3 To build collaborative relationships with local organizations, businesses, and community groups to support SDG initiatives.

2.4 To implement sustainable practices within the school's operations and facilities, serving as a model for students and the community.

2.5 To regularly monitor progress toward SDG-related goals and objectives and transparently communicate results.

3. Model operational procedures consisted of:

3.1 Plan (P) consisted of 1) Establish a planning committee comprising representatives from different stakeholder groups, including school leaders, teachers, students, parents, and community members. 2) Conduct a comprehensive needs assessment to identify the school's current status regarding SDGs, including existing initiatives, strengths, weaknesses, and areas for improvement. 3) Prioritize

specific SDGs or targets that align with the school's mission, vision, and values. 4) Create a detailed action plan that outlines specific initiatives, activities, and timelines for integrating the prioritized SDGs into the school's operations and curriculum. 5) Allocate financial, human, and material resources to support SDG initiatives, ensuring that budgetary considerations are in line with the action plan.

3.2 Act (A) consisted of 1) Offering ongoing professional development opportunities and workshops for teachers to enhance their capacity to effectively teach the SDGs. 2) Collaborate with teachers to implement the SDG-focused curriculum developed during the Planning phase. 3) Raise awareness among students, teachers, parents, and the community about the importance of SDGs in education. 4) Collaborate with local organizations, businesses, and community groups to support and enhance SDG initiatives. 5) Continue to engage with policymakers and government agencies to advocate for supportive policies and regulations related to SDG integration.

3.3 Observe (O) consisted of 1) Collect relevant data and information related to SDG integration efforts, including student performance, engagement, and behavior. 2) Evaluate whether SDG-related goals and objectives are being met and identify areas that require improvement. 3) Ensure that the plan includes timelines, responsible parties, and resource allocations. 4) Prepare comprehensive reports that summarize the progress, achievements, and challenges related to SDG integration. 5) Communicate the findings of the observation phase to all stakeholders, highlighting successes, challenges, and the plan for continuous improvement.

3.4 Reflect (R) consisted of 1) Review and analyze the data collected during the observation phase, including student performance, engagement, behavior, and feedback from stakeholders.

2) Reflect on the feedback and input gathered from stakeholders during the reflection phase. 3) Consider how feedback can inform future decision-making and planning. 4) Identify successful SDG initiatives that can be scaled up within the school or replicated in other schools. 5) Share best practices and lessons learned with other educational institutions.

4. Model evaluation consisted of:

4.1 Define specific objectives for evaluating the school's SDG integration efforts, such as assessing student learning outcomes, gauging community engagement, or measuring the impact of sustainability practices.

4.2 Analyze both qualitative and quantitative data to gain a comprehensive understanding of the school's progress in SDG integration.

4.3 Evaluate the professional development and training programs provided to teachers to determine their effectiveness in preparing educators for SDG integration.

4.4 Compile the assessment findings into a comprehensive report that includes an overview of the school's SDG achievements, challenges, and recommendations for improvement.

4.5 Share progress updates and revised action plans with stakeholders and the community.

5. Model conditions for achievement consisted of:

5.1 Policy commitment from school leadership, including the principal and senior administrators, to prioritize and champion SDG integration.

5.2 Active engagement of all stakeholders, including students, teachers, parents, staff, and local community members, in SDG initiatives.

5.3 The school's curriculum is intentionally aligned with the SDGs, ensuring that SDG-related content is integrated across subjects and grade levels.

5.4 Ongoing professional development opportunities for teachers to enhance their knowledge and skills in teaching SDGs.

5.5 Establishment of systems for monitoring and reporting progress toward SDG-related goals and objectives.

The model's name of the school administration model in driving the Sustainable Development Goals (SDGs) is POO(PAOR)EC. The summary model is shown in Figure 1.
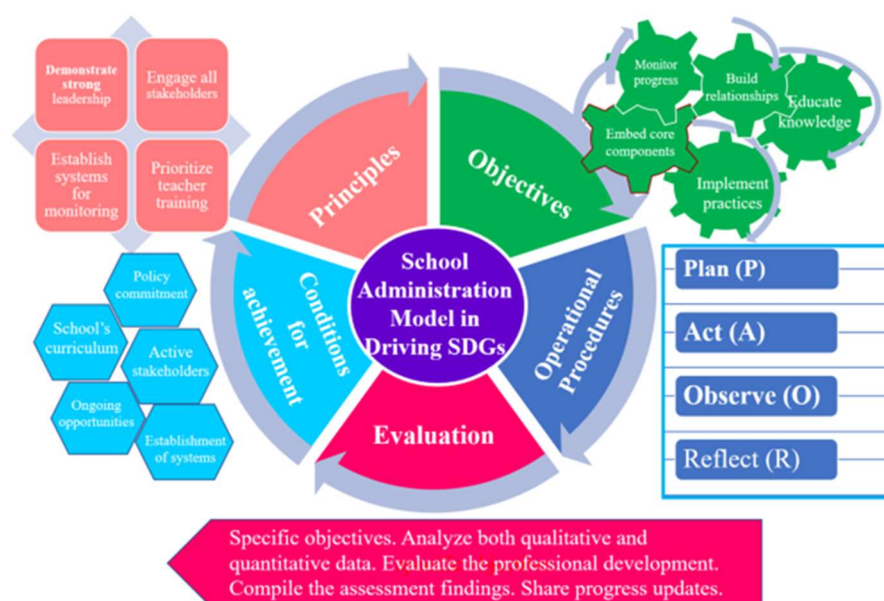

Figure 1: Research Framework

Phase 4: Results of policy recommendations and guidelines for policy implementation for the school administration model in driving the Sustainable Development Goals (SDGs) to propose parent agencies such as the Office of Basic Education Commission, the Office of Educational Service area both the secondary and the primary education, and others by organizing a brainstorming session via Zoom program of fifteen informants and the research team classified the issues in Table 2.

Table 3: Results of policy recommendations and guidelines for policy implementation.

Policy Recommendations	Guidelines for Policy Implementation
1. Policy Support: Advocate for supportive policies at local, regional, and national levels that prioritize sustainability in education.	Establish a policy advocacy task force within the school administration. Collaborate with educational associations and other stakeholders to influence policy changes that align with the SDGs.
2. Teacher Professional Development: Develop and implement teacher training programs that focus on sustainability education and the SDGs. Encourage ongoing professional development to keep educators updated on best practices.	Establish partnerships with teacher training institutions, NGOs, and educational experts to design comprehensive training modules. Offer incentives and recognition for teachers who participate in sustainability-focused professional development.
3. Curriculum Enhancement: Review and update the curriculum to integrate SDG-related topics across various subjects. Ensure that learning materials and textbooks reflect sustainability principles.	Form curriculum review committees composed of educators, subject matter experts, and representatives from relevant industries. Create guidelines for the integration of SDGs into lesson plans and assessments.
4. Resource Mobilization: Seek external funding sources, grants, and donations to address resource constraints and invest in sustainable infrastructure and technology.	Create a dedicated office or department responsible for grant applications and resource management. Develop a transparent process for allocating resources based on sustainability priorities.
5. Community Engagement: Foster partnerships with local communities, NGOs, and businesses to support sustainability initiatives and provide real-world learning opportunities for students.	Establish community liaison positions within schools to coordinate engagement efforts. Develop clear guidelines for collaboration, including project planning, monitoring, and evaluation.
6. Global Citizenship Education: Promote global citizenship education that emphasizes understanding and addressing global challenges, including the SDGs.	Integrate global citizenship topics into the curriculum, emphasizing cultural awareness, social justice, and global interconnectedness. Encourage international exchange programs and partnerships with schools from diverse regions.
7. Monitoring and Reporting: Implement monitoring and reporting mechanisms to track progress in integrating the SDGs into the school administration model.	Establish clear indicators and benchmarks for tracking SDG integration. Regularly collect data and report progress to school stakeholders, parents, and the broader community.
8. Recognition and Awards: Recognize and reward schools, teachers, and students for their efforts in driving the SDGs, fostering motivation and enthusiasm.	Establish a recognition program that acknowledges achievements related to the SDGs. Consider certificates, awards, or public recognition at local or national levels.
9. Continuous Improvement and Evaluation: Commit to a culture of continuous improvement by regularly evaluating the effectiveness of SDG initiatives.	Conduct regular evaluations using predefined criteria to assess the impact of SDG integration. Use evaluation results to refine policies, practices, and curricular content.

6. Discussion

The authors selected the significant issues to discuss as follows:

In terms of structural components of the school administration model in driving the Sustainable Development Goals (SDGs) from concepts and theories and checking empirical confirmation, the Ministry of Education establishes educational policies for SDG integration, with regional policies implemented by the Office of Educational Service Areas. School leaders align their mission, vision, and values with SDGs, promoting critical thinking and global citizenship education. Collaboration with external organizations is crucial, consistent with UNESCO's [10] suggestion of education as a public good, a global common good, and a fundamental human right. The Education 2030 agenda emphasizes inclusive, equitable quality education for sustainable development. Factors affecting access include poverty, conflicts, disasters, gender inequality, and privatization. The concept of education for sustainable development (ESD) aims to scale up education and develop sustainability competencies.

In terms of the problem states and the factors supporting the success in driving the Sustainable Development Goals (SDGs), the implementation of Sustainable Development Goals in school administration faces challenges like political instability, limited resources, lack of awareness, and inadequate teacher preparation. Despite these obstacles, ensuring teacher quality and curriculum content remains a significant challenge. The success of implementing Sustainable Development Goals (SDGs) in education depends on several factors; it requires political stability, local adaptation, limited resources, awareness, curriculum gaps, teacher preparation, monitoring, local ownership, and professional development, promoting education, and improving the learning environment in accordance with Kioupi & Voulvoulis [5], who indicated that strong discipline competencies (such as those in the natural, social sciences, engineering, and business) should be used in conjunction with sustainability competencies. Working in cross-disciplinary or inter-disciplinary teams to solve sustainability problems necessitated the expression of divergent viewpoints on the same problems and benefits from the synthesis of various viewpoints to foster the emergence of novel conceptualizations and inventive strategies.

In terms of the school administration model in driving the Sustainable Development Goals (SDGs), the school administration model focuses on achieving the SDGs through strong leadership commitment, stakeholder engagement, teacher training, and monitoring progress. It involves establishing a planning committee, conducting needs assessments, creating action plans, allocating resources, offering professional development opportunities, and collaborating with teachers. The model's summary model is POO(PAOR)EC, requiring policy commitment, active stakeholder engagement, curriculum alignment, and continuous professional development. It was quite different from the six principles for responsible management education, which consisted of 1) purpose: the students' abilities were developed to be future generators of sustainable value, 2) values: our academic activities and curricula will be incorporated into the values of global social responsibility, 3) method: educational frameworks, materials, processes, and environments will be created to enable effective learning experiences for responsible leadership, 4) research: the conceptual and empirical research will be engaged in advance our understanding of sustainable value, 5) partnership: managers will be extended our knowledge, and 6) dialogue: educators, students, business, and government will be supported in dialogue.

However, the National Scheme of Education B.E. 2560-2579 (2017-2036) [9] determined the key success factors of the goals of each strategy are the educational institutions that must adhere to them as guidelines for operations, and there is a review and improvement of measures and success goals to keep up with changes occurring in each area for the development of learner potential. Now, the paradigm of educational management as a state education organizer has become an educational arrangement for all sectors of society that focuses on providing education for equality and inclusive education as well as promoting lifelong learning for everyone, which is in line with the SDGs.

In terms of the policy recommendations and guidelines for policy implementation for the school administration model in driving the SDGs, the policy recommendations outline guidelines for implementing sustainability in education, including advocating for policies, implementing teacher professional development programs, updating curriculum, seeking external funding, fostering community engagement, promoting global citizenship education, monitoring progress, rewarding schools, teachers, and students, and continuously improving SDG initiatives' effectiveness. It was similar to the findings of El-Jardali, Ataya & Fadlallah [3], who revealed that the 2030 Agenda for Sustainable Development outlines a wide range of interconnected objectives, such as ending poverty and fostering economic growth, as well as promoting social inclusion, environmental sustainability, and world peace by that year. To achieve the Sustainable Development Goals (SDGs), policy decisions must be supported by evidence that has been co-designed and co-produced with the appropriate stakeholders, taking political and local circumstances into account.

It can be concluded that Thailand's school administration model is crucial in achieving the Sustainable Development Goals (SDGs). By integrating sustainability principles into education, Thailand is fostering comprehensive development across social, economic, and environmental dimensions. This approach, aligned with equilibrium and sustainability principles, positions Thailand to reflect a commitment to a future for its citizens and the world. The model involves teacher training, curriculum enhancement, cross-disciplinary approaches, and community partnerships, empowering students with global citizenship skills and ensuring dynamic implementation.

7. Recommendations

7.1 The school administration model in driving the Sustainable Development Goals (SDGs) can be the initiation for other educational institutions.

7.2 Educational administrators can consider problems and adopt factors supporting the success of driving the Sustainable Development Goals (SDGs).

7.3 Educational administrators can consider policy recommendations and guidelines for policy implementation of driving the Sustainable Development Goals (SDGs).

8. Recommendation for Further Research

8.1 There should be a study of the school administration model in driving the Sustainable Development Goals (SDGs) across all regions.

8.2 There should be a study of a school administration model in driving the Sustainable Development Goals (SDGs) across all of Thailand.

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