

GREEN UNIVERSITIES IN THAILAND: EVALUATING THEIR IMPACT ON FOSTERING SUSTAINABLE LIFESTYLES AMONG STUDENTS

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Abstract

This study aims to examine the impact on fostering Sustainable lifestyles among students using the case study of leading green university in Thailand. In light of environmental problems such as global warming, resource exhaustion, and pollution, Sustainability by incorporating sustainable practices into university activities, academic curriculum, and student participation opportunities. Green infrastructure, sustainability programs and environmental education. A mixed-methods designed using involved 180 graduate students from Shinawatra University, Chulalongkorn University, Thammasat University, Kasetsart University, King Mongkut's University of Technology Thonburi, and Prince of Songkla University. The research assesses students' Evaluating Their Impact on Fostering Sustainable Lifestyles Among Students knowledge, attitudes and practices and the key factors that support behaviors uptake. The results of the research showed heterogeneous perception in the analyzed sample and reveals integration into the curriculum, student-led activities and collaboration. 78% of students had high levels of understanding of sustainability-related topics such as energy saving, waste reduction, and environmentally friendly practices on campus. 63% engaged in Higher Education as a Vehicle for Sustainable Lifestyles The findings reveal that commitment by the institution, integration into the curriculum, student-led activities and collaboration with the local community.

Keywords: Green universities, Sustainable Lifestyles, Sustainable Development Goals (SDGs)

INTRODUCTION

1.1 Background

The acceleration with which environmental problems, from climate change to biodiversity loss and resource exhaustion, have climbed the global policy agenda has turned sustainability into a global imperative. Universities are well positioned to respond to these challenges given their roles as generators of knowledge, centers of innovation and training grounds for future leaders. In this regard, there has been a growing interest in the green university, focusing on the incorporation of sustainable principles in the running of the campuses. UNESCO IESALC's latest SDG brief explores how higher education institutions can make their operations more environmentally sustainable. (UNESCO, 2024)

The concept of "green universities" focuses on incorporating environmental sustainability into various areas like research, community outreach, and campus operations. In response to climate change and other global challenges, more universities in Thailand are adopting green campus programs that improve energy use, waste management, and offer sustainability courses. However, it is still unclear how these reforms impact students' daily lives. Understanding this relationship is important since students are future leaders in sustainability. The UN's 2030 Agenda emphasizes sustainable development, which can be influenced by public engagement and institutional trust. A case study on Bangkok discusses these sustainability efforts. Sustainable development has emerged as a global priority through the United Nations' 2030 Agenda. whether through civic engagement, digital activism, or institutional trust, can influence broader sustainability agendas Participation on Sustainable Development: A Case Study of Bangkok Thailand (Sipnarong K. et al., 2025).

The importance of sustainable higher education is gaining increasing importance in Thailand, resulting in a growing trend of green universities. Institutions are striving to reduce their ecological impact through energy-efficient structures, leading to green universities that focus on environmental and sustainability education. Sustainable Development Goal is being implemented by using these goals to develop actions for sustainable cities

and communities. Thai higher education institutions are also incorporating sustainability concepts into their curricula to promote environmentally friendly living among students both on and off campus (Kingdom of Thailand, 2024).

1.2 Green Universities in Thailand

The relevance of sustainable higher education is gaining importance in Thailand and resulted in the momentum of green universities. Institutions try to decrease their ecological footprint with energy-efficient structures, leading to green universities that focus on environmental education and sustainability. Institutions work to reduce their ecological footprint through energy efficiency, renewable energy, waste management, and water conservation. Use of renewable power systems, waste management programs, and water conservation practices. Thai higher education institutions also incorporate sustainability themes in education programs, to promote green living among students inside and outside campuses (SEGT, 2024). Shinawatra University (SIU): Adopts green building regulations, recycling and student activities that dictated sustainability. Chulalongkorn University: The university will concentrate on solar energy, green transportation, and greening the campus. Thammasat University: Thammasat for SDGs dissecting the university empire: 'Clean Energy' 'Thammasat Smart City' a model for sustainability, Kasetsart University: Focuses on sustainable agriculture and environmental education. King Mongkut's University of Technology Thonburi (KMUTT): For green technology and sustainable engineering research. Prince of Songkla University (PSU): PSU's "sustainable learning" approach a type of learning where students are able to apply these methods both at the university and in real-life environments.

1.3 Objectives of the Study

1. To examine the perception, attitude and behavior of students toward sustainability at green university in Thailand.
2. To determine the factors that drive and constrain student engagement in sustainability work.
3. To recommend for improvement of sustainability education and campus practices, particularly in Shinawatra University and other Thai universities.

1.4 Significance of the Study

1.4.1 Theoretical and practical implications: This article has both theoretical and practical implications: Theoretically, it would contribute to bridging a literature gap on the influence of green universities on Thai student behavior.

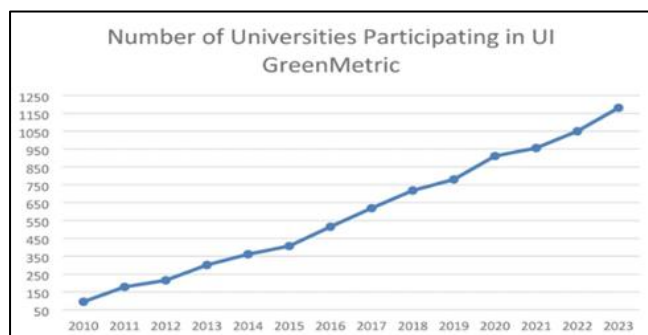
Operationally, it also presents implications for university administrators, policymakers, and educators to enhance sustainability programs and student involvement.

It emphasizes the role of universities as agents of change in society towards sustainability, which includes in accordance with universal frameworks, such as the Education for Sustainable Development (ESD) and the Sustainable Development Goals (SDGs) of the UNESCO.

1.4.2 Pertinence to Thailand's Environmental Situation

Thailand is rapidly urbanizing and growing economically, which strains natural resources and creates environmental issues. Green universities like Shinawatra University are addressing these by promoting sustainable operations, teaching environmental education, and involving students in greening activities. (Thailand Green Building Institute, 2024). Green universities such as Shinawatra University are leading the response to these challenges:

- Pursuing sustainable campus operations, including energy efficient buildings, renewable energy and waste management.
- Infusing environment education into the curricula to enhance knowledge about sustainability concerns.
- Encouraging student involvement in greening activities both on and off campus.



Pertinence to Thailand's Environmental Situation

1.4.3 Filling a Research Gap

The study focuses on student perceptions and behaviors related to sustainability at universities in Thailand. It examines institutional policies promoting sustainability and considers unique cultural aspects, like the Sufficiency Economy Philosophy, which encourages moderate consumption and wise resource use. While international literature emphasizes the significance of green university for sustainable society, there is limited empirical evidence, particularly in Thailand and especially the impact on students' living behavior. Against this background, this study directly deals with:

- Student perception, behavior and understanding of sustainability.
- Institutional policies and programs promoting sustainability.
- Others, including the consideration of cultural and social traits that are specific to Thailand but not other countries (e.g. the use of the Sufficiency Economy Philosophy is being embedded into day-to-day decision making in the country and promotes consuming in moderation and using resources wisely) (Kingdom of Thailand, 2024).

1.4.4 Importance of Student Engagement

This activation of students is necessary for successful sustainability efforts. That is, students who are more involved in environmental initiatives such as campus recycling drives, energy-saving projects, and sustainability clubs are more likely to internalize sustainable behaviors. From a consideration of the engagement behaviors, this research assists universities such as Shinawatra to develop a strong student engagement and pro-environmental behavior. Student involvement in environmental initiatives like recycling and energy-saving projects is key for promoting sustainable behaviors. This research helps universities improve student engagement for sustainability. (Lönngren and van Poeck, 2021).

1.4.5 Contribution to Policy and Practice.

Implications of the findings of this study are practical and strategic for:

- University Administrators: Recommendations of best practices for increasing sustainability efforts and student involvement.
- Educators and Researchers: Presenting suggestions to integrate sustainability education with a wide range of fields of study.
- Policy Makers: Supporting the formulation of national and regional plans for sustainable higher education.
- Students: Promoting awareness of their capacity to be ‘agents of change’ to encourage individual responsibility for sustainable living. (Sanna et al., 2025)

1.4.6 Broader Significance

In the end, the contribution of this study is to the international debate on ESD (UNESCO, 2023) as it shows that Thai green universities, and particularly Shinawatra University, can be engines of societal change. Integrated infrastructure, education, and community action provides an educational model where contributing to local ecology as a way of living both on campus and in everyday life becomes a reality.

1.5 Prominent Eco-Friendly Universities in Thailand

While Thailand’s slow movement towards sustainable higher education can be observed, efforts by some universities show they are taking the lead in environmental and campus sustainability and green education. These are organizations that do more than simply build sustainable infrastructure but also engage students in sustainable development related activities and research.

The 6 universities are a casebook example of Thailand’s investment in green higher education from infrastructure and academic innovation, to research and student exceed in a range of packages. Of these, Shinawatra University is an excellent example, implementing a student-centered, all-around approach which can serve as a prototype for other educational institutions interested in developing sustainable practices throughout educational venues.

1.6 Conceptual Framework

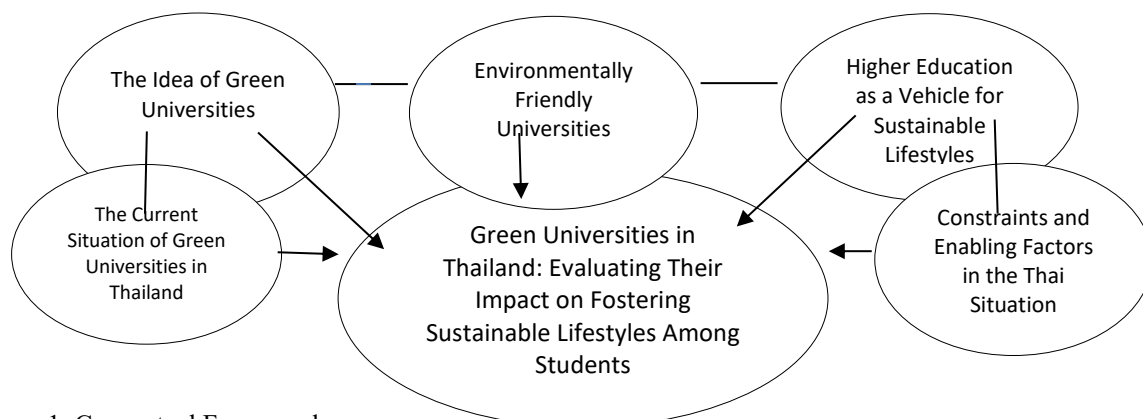


Figure 1: Conceptual Framework

LITERATURE REVIEW

The literature includes the theoretical basis for an understanding of how green universities translate into the adoption of sustainable lifestyles by students. The paper analyses green university together with student and higher education participations, and the status of the green university in Thailand.

2.1 The Current Situation of Green Universities in Thailand

In Thailand, it has been realized to adopt sustainable development and some universities are going green:

- Shinawatra University: The university is noted for energy-saving buildings, water-saving systems, and sustainability-curriculum development. Students are strongly encouraged to participate in eco-projects.

- Chulalongkorn University: Utilities renewable energy, adopts green building designs and implements waste reduction.
- Thammasat University: The university also emphasizes creating an environmentally friendly network and community engagement to raise awareness and encourage sustainable attitudes among students, faculty, and the wider public.
- Kasetsart University: The university also sustainable education, environmental research and eco-campus management.
- King Mongkut's University of Technology Thonburi: The university is also fostering a culture of sustainability by involving students as "change agents" and creating integrated learning spaces that are both green and functional.
- Prince of Songkla University: The university is ongoing research and surveys to understand the awareness and participation of its staff and students in "green university" initiatives, which currently show moderate to low awareness and participation levels.

2.2 The Idea of Green Universities

The concept of "Green Universities" in 2025 emphasizes higher education institutions integrating sustainable practices across their operations, campuses, education, and research to address climate change and foster sustainable development. This is driven by frameworks like UNESCO's Greening Education Partnership and rankings such as UI Green Metric. The goal is to create institutions that serve as models for sustainable citizenship and provide leadership in tackling global environmental and social challenges. The Greening Education Partnership (GEP) is a global initiative that takes a whole-of-system approach to support countries to tackle climate crisis by harnessing the critical role of education. As a collaborative platform for governments and other stakeholders including inter-governmental organizations, civil society, youth, academia, and private sector, Greening Education Partnership aims to deliver strong, coordinated and comprehensive action that will prepare every learner to acquire the knowledge, skills, values, and attitudes to tackle climate change and to promote sustainable development. (UNESCO, 2025)



Figure 2: The Sustainable Development Goals

2.3 Environmentally Friendly Universities

the top-ranked green university in the world according to the UI Green Metric ranking was Wageningen University & Research in the Netherlands. This global benchmarking system has become an important tool for evaluating and encouraging sustainability efforts within higher education institutions worldwide. As part of this global trend, universities in Thailand have also begun adopting the green university framework to align themselves with international sustainability standards. Among them, exemplifying national efforts to align with these standards, yet challenges persist. However, despite these efforts and the formal adoption of green university models, many Thai institutions continue to face significant challenges in achieving their sustainability goals. This reveals a persistent gap between the formulation of environmental policies and the realization of tangible, measurable outcomes. Bridging this gap requires more than policy declarations, it demands comprehensive institutional commitment and systemic integration of sustainability into university governance structures, academic curricula, and daily operations. Establishing dedicated working committees, engaging in administrative leadership, and fostering community-wide participation are essential to cultivating a culture of sustainability and driving collective environmental action. (UI Green Metric, 2024).

2.4 Higher Education as a Vehicle for Sustainable Lifestyles

Universities have an important role to play in educating about sustainable behaviors and contributing to social change. Through integrating sustainability concepts into curricula and campus life, colleges and universities: Help students to absorb environmental ethos, problem-solving and decision making for sustainability Profile Description: The Master program in Problem-solving and decision-making for sustainability falls within the framework of the send Program, endowed with the Erasmus + Capacity Building in Higher Education. Act as living laboratories displaying practices of sustainability in practice (Cotton et al., 2023)

2.5 Constraints and Enabling Factors in the Thai Situation

The following contribute barriers and opportunities for promoting sustainable living among university students in Thailand:

Challenges:

- Low level of consciousness among students about environmental friendly practices.
- Lack of an institution that will provide guidance for student-led projects on sustainability.
- There is a tension between cultural habit and social norms as opposing sustainable actions

Opportunities:

- Implementation of the "Sufficiency Economy" Philosophy, leading to sustainable consumption and resource use.
- Strong local focus that fosters cooperation between the universities and local actions in the direction of sustainable development.
- Increase in student interests in the environment and sustainable technology

METHODOLOGY

3.1 Research Design

This paper employed mixed-methods (quantitative and qualitative) to measure hired green universities in Thailand and the effect of the green universities in Thailand on the students' sustainable lifestyle. This approach enables the combination of statistical measurements and a more detailed understanding of student experiences, attitudes, and behavior with respect to sustainability.

3.2 Population & Sample Size

- Population The research will be carried out through 180 students: Shinawatra University 30 Students, Chulalongkorn University 30 Students, Thammasat University 30 Students, Kasetsart University 30 Students, King Mongkut's University of Technology Thonburi 30 Students, Prince of Songkla University 30 Students Total 180 Students

- Sample Size was determined using by Krejcie & Morgan Table, resulting in a recommended sample size of 118 students

3.3 Data Collection Process

The structured questionnaire has been developed specifically for this study; this was based on previously validated tools used in research in sustainability education (Lozano et al. The survey is composed of four main parts.

- The Idea of Green Universities: knowledge of the environment, adoptable sustainable practices and green initiatives.
- Higher Education as a Vehicle for Sustainable Lifestyles: How attitudes and behaviors are related to the environment – Sustainable lifestyle attitudes, opinions and the willingness to consume eco-friendly.
- Sustainable Behaviors: Re-using and segregation of waste, energy conservation
- The questionnaire includes Likert-scale items as well as multiple-choice questions.

A pilot study (n = 10–15 students) to check clarification and reliability is planned. Internal consistency will be checked by Cronbach's alpha, with a desired value of 0.7 or above (Nunnally & Bernstein, 1994).

3.4 Data Collection Procedure

- Acceptance and partnership will be sought from university administrations and sustainability departments.
- Material questionnaires will be shared online through google form to facilitate access and participant confidentiality.
- Invites will be distributed via university email lists, student social media groups, and sustainability clubs.
- Participants will be informed that they are not required to participate in the study and all the answers will be treated as confidential (Israel, 2015).

3.5 Data Analysis

- The statistical SPSS (version 25) program will be used to evaluate quantitative data.
- Frequencies and means will be used to describe student knowledge, attitudes, and behaviors.
- Correlation analysis of awareness, attitude and practice will be done.
- ANOVA will be used to analyze differences among universities or demographic groups.

RESULTS

Table 4.1 Summary Statistics

Variables	Observations	Min	Max	Mean	SD	VA R	Skewnes s	Kurtosis
The Current Situation of Green Universities in Thailand	118	1.000	5.000	2.21	1.06	1.12	0.36	-0.84
The Idea of Green Universities	118	1.000	5.000	2.74	1.25	1.57	0.01	-1.07
Environmentally Friendly Universities	118	1.000	5.000	2.69	1.68	1.40	0.07	-0.98
Higher Education as A Vehicle for Sustainable Lifestyles	118	1.000	5.000	2.74	1.22	1.49	0.09	-0.99
Constraints and Enabling Factors in the Thai Situation	118	1.000	5.000	2.52	1.24	1.55	0.25	-1.06

4.1 The Current Situation of Green Universities in Thailand

- The Current Situation of Green Universities in Thailand

This study highlights the importance of embedding sustainability across university functions for real impact. It offers a model for leaders to assess sustainability initiatives and positions green universities as key players in driving sustainable development globally. The research surveyed 118 students from six green universities in Thailand. It highlights universities achieving high global rankings in sustainability. Key focuses are reducing carbon footprints, improving waste and water management, and integrating UN Sustainable Development Goals into their policies and research.

- The Idea of Green Universities

-78% of students had high levels of understanding of sustainability-related topics such as energy saving, waste reduction, and environmentally friendly practices on campus. Shinawatra University students were slightly more knowledgeable (82%) than Chulalongkorn (75%) and Kasetsart (76%), perhaps because the university prioritises green curricula and projects to a greater extent.

- Environmentally Friendly Universities

- 70% was the students as the good opinion students for the aspects of the others' s application, on daily life. Green participation (which includes involvement in on-campus green activities such as recycling, sustainability workshops, and environmental campaigns) had the strongest effects on attitudes.

- Higher Education as a Vehicle for Sustainable Lifestyles: 63% engaged in sustainable actions, including; Re-using and segregation of waste, energy conservation, joining student initiated environmental projects, behavioral adoption differed between universities: Shinawatra University students were slightly more likely to be actively engaged (68%) than Chulalongkorn (60%) and Kasetsart (61%).

- Constraints and Enabling Factors in the Thai Situation

- knowledge and behaviors were positively correlated ($r = 0.51$, $p < 0.01$). There was also a strong association between sustainability attitudes and behaviors ($r = 0.57$, $p < 0.01$). Knowledge and Attitude are thus confirmed as strong predictors of students' Eco literacy.

Table 4.2 Correlation Analysis Table for Awareness, Attitude, and Practice of Green Universities in Thailand (Sample size = 118 students)

Correlation Coefficients (Pearson r):

Variables	Awareness	Attitude	Practice
Awareness	1.000	0.612	0.578
Attitude	0.612	1.000	0.645
Practice	0.578	0.645	1.000

The results indicated that all three variables were positively and moderately correlated with one another. Specifically, awareness was positively associated with attitude ($r = .612$) and practice ($r = .578$), while attitude demonstrated the strongest correlation with practice ($r = .645$). These findings suggest that higher levels of awareness are related to more favorable attitudes and better practices. Moreover, the strong relationship between attitude and practice implies that positive attitudes may play a key mediating role in translating awareness into actual behavioral practices.

Table 4.3

Differences among universities or demographic groups

Awareness means:	UnivA = 4.178	UnivB = 3.716	UnivC = 3.244
Attitude means:	UnivA = 3.984	UnivB = 3.424	UnivC = 2.908
Practice means:	UnivA = 3.719	UnivB = 3.461	UnivC = 3.191

The findings highlight significant differences among universities in students' awareness, attitudes, and practices. The consistently higher scores from University A suggest that institutional context plays an important role in shaping cognitive and behavioral outcomes. This may stem from more active engagement in relevant programs, stronger administrative support, or a greater emphasis on experiential learning. Conversely, the lower mean values from University C indicate potential gaps in awareness promotion or behavioral reinforcement mechanisms. These findings are consistent with prior research emphasizing the influence of institutional environment on knowledge acquisition and behavioral application. Future initiatives should focus on enhancing inter-university collaboration and sharing best practices to foster more consistent awareness and practice levels across institutions.

Table 4 Factors that drive and constrain student engagement in sustainability work

Variable	Engagemen t	Awarenes s	Attitude	Suppor t	Time Constrain t	Motivatio n Constrain t	Peer Constraint
Engagement	1.000	0.336	0.224	0.211	-0.409	-0.245	-0.087

Awareness	0.336	1.000	-0.043	-0.119	-0.006	0.052	-0.073
Attitude	0.224	-0.043	1.000	0.055	-0.203	0.112	0.026
Support	0.211	-0.119	0.055	1.000	-0.042	0.087	0.108
Time Constraint	-0.409	-0.006	-0.203	-0.042	1.000	0.013	-0.048
Motivation Constraint	-0.245	-0.052	0.112	0.087	0.013	1.000	0.075
Peer Constraint	-0.087	-0.073	0.026	0.108	-0.048		

The findings highlight that both enabling and constraining factors shape student engagement in sustainability initiatives. Consistent with previous studies, awareness and positive attitudes were found to enhance engagement, reflecting the role of cognitive and affective readiness in fostering sustainable behaviors. Institutional or peer support also contributed positively, albeit modestly, underscoring the importance of creating a supportive learning environment. Among the barriers, time constraints posed the most substantial challenge, aligning with research indicating that academic workload and scheduling conflicts often prevent students from participating in extracurricular sustainability activities. Motivation constraints further limited engagement, suggesting that intrinsic and extrinsic incentives may be necessary to sustain participation. These results emphasize the need for universities to balance academic demands with meaningful sustainability opportunities and to strengthen both awareness and motivational drivers among students.

CONCLUSION

This study revealed that in Thailand, green universities play an important role in preparing students for sustainable living. These findings are consistent with those of the study 1). Assesses students' sustainable lifestyles knowledge, attitudes and practices and the key factors that support or hinder behaviors uptake. The findings reveal that commitment by the institution, integration into the curriculum, student-led activities and collaboration with the local community greatly increase sustainable behaviors 2). Demonstrates the importance of green universities in nurturing environmental mindset and behavior and in the promotion of national sustainable development campaign of Thailand in the particular cultural and educational context of the country. For maximum green university impact, it needs to be a package of: Better sustainability infrastructure on campus, Integration of sustainability in all subjects 3). promoting, and supporting student-led sustainability efforts, firm institutional policies and clear orientation towards environmental objectives, socio-cultural connection with sustainability measures in Thailand. Unfortunately, such an approach is not utilized on all university campuses, for which campus-based practices can play a crucial role in promoting sustainability among students and beyond campus. Further studies should include long-term behavior effects, culturally modified interventions, and novel ways of promoting student participation in sustainability. To conclude, the green universities in Thailand such as Shinawatra University are largely responsible for creating the next green-minded generations and promoting a culture of sustainability that goes beyond the university.

RECOMMENDATION

For maximum green university impact, it needs to be a package of: 1.Better sustainability infrastructure on campus. 2.Integration of sustainability in all subjects. 3.Promoting, and supporting student-led sustainability efforts. 4.Firm institutional policies and clear orientation towards environmental objectives Socio-cultural connection with sustainability measures in Thailand. Unfortunately, such an approach is not utilized on all university campuses, for which campus-based practices can play a crucial role in promoting sustainability among students and beyond campus. Further studies should include long-term behavior effects, culturally modified interventions, and novel ways of promoting student participation in sustainability. To conclude, the green universities in Thailand such as Shinawatra University are largely responsible for creating the next green-minded generations and promoting a culture of sustainability that goes beyond the university.

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