

Factors Associated with Green School Practices of State Universities: Inputs to EduTourism Development Plan

DOI: 10.5281/zenodo.14511328

Elyn Mae P. Alcantara

State University of Northern Negros, Philippines

<https://orcid.org/0009-0009-2339-1132>

Abstract

The world is increasingly prioritizing environmental responsibility and sustainability in various industries, including tourism and education. State Universities (SUCs) play a significant role in promoting sustainability through their educational programs and research projects like Edutourism. However, few studies have explored how these initiatives intersect with Edutourism, a promising avenue for fostering sustainable tourism experiences. The study delved into the factors influencing green practices within SUCs, focusing on the availability of resources using the framework of the 5 As of Tourism (attraction, accommodation, accessibility, amenities, and activities), and the extent of green practices. A survey-correlational research design was used with administration, faculty, and students as respondents. Statistical tools such as frequency, percentage, mean, standard deviation, t-test and Pearson correlation were used to analyze the data. The study found accessibility and amenities have a strong positive correlation, with better amenities resulting into more attractions. Furthermore, schools that promote water conservation, have greater green environments, and have better access to amenities are more likely to adopt efficient waste management practices. But there is a weak correlation between accommodation and the availability of resources in terms of activities, and between accommodation and the presence of attractions. Additionally, the study revealed a significant connection between students' involvement, waste management and amenities, water conservation and resource availability, energy conservation and amenities, and comprehensive green school practices and amenities. Level 3 SUCs generally have higher level of resource availability and green practices implementation, but there is a need for continued improvement in resource availability and green practices, particularly for Level 2 SUCs.

Keywords: green practices, attraction, amenities, accommodation, activities, SUC levelling, state universities, edutourism development plan.

Introduction

Background of the Study

Tourism and education are among the industries that have seen a global shift in recent years toward sustainability and environmental responsibility. The need of teaching students and the general public about mitigating and adapting to climate change is becoming more widely acknowledged by universities around the world (Cordero et al., 2020). Through the incorporation of sustainability into their research projects, academic programs, and campus management, State Universities (SUCs) have a major impact on public attitudes and behaviors related to environmental stewardship. Thus, educational establishments are now in the forefront of society's initiatives to advance sustainability (Bourke et al., 2022).

One noteworthy endeavor is the green school movement, which prioritizes improving financial sustainability while minimizing environmental damage. By improving the learning environment, increasing teacher satisfaction with the educational process, and increasing student and teacher awareness of environmental challenges, this initiative seeks to improve educational outcomes and student academic performance (Karpudewan et al., 2011; Saadeh, 2014, as cited in Baghdadi, 2022). According to Ghanem (2020), incorporating green technology into the classroom is a state-of-the-art strategy for solving environmental problems and accomplishing sustainable development. The fundamental tenet of green schools is to make educational establishments more ecologically conscious, like natural reserves.

An excellent place to start when trying to encourage students' interest in sustainability and environmental consciousness is by implementing green schools. Leadership from school presidents is crucial in promoting green schools, encouraging individuals to adopt pro-environmental attitudes, and embracing sustainable practices both at home and in school (Pebriantika et al., 2020).

Green practices in schools offer tangible examples of sustainability, making them ideal settings for Edutourism programs. Edutourism, which merges travel with educational experiences, holds significant potential for driving sustainable development (Basri et al., 2022). As globalization accelerates, educational tourism in Asia is growing (Rahimi, 2018, as cited in Canson & Caelian, 2022). Apart from providing a boost to the nation's economic growth, edutourism has enormous potential to create jobs and earn a substantial amount of foreign exchange. In 2021, over

6 million students from various nations are studying abroad (Global Migration Data Portal, 2024). The growing number of universities is accompanied by increased competition within the higher education sector (Kamdi et al., 2016).

In line with this trend, the Philippine Commission on Higher Education (CHED) launched the Edutourism: Study in the Philippines program in 2021, aiming to position the Philippines as an international hub for higher education excellence within specific ASEAN niches (CHED, 2021).

Academic institutions, particularly state universities, can become prominent tourist destinations due to the substantial role of educational tourism in global travel. A university is well-positioned to draw tourists when it has the services, activities, attractions, lodgings, and accessibility that are required (Sujaritchai & Artnarong, 2016, as cited in Canson & Caelian, 2022). The factors that support and hinders green practices in higher education have been extensively studied (Abo-Khalil, 2024). However, to have a potential means of sustainable travel experiences, more research must systematically examine how these practices relate to edutourism (Alipour et al., 2020).

This study aimed to develop an edutourism plan by examining the components related to green practices at state universities. A tailored survey research instrument was employed to explain further how green practices could enhance educational tourism and promote green practices.

Objectives of the Study

This study aimed to examine the factors associated with state universities' green practices in Negros Island as inputs to the EduTourism Development plan.

Specifically, this study intended to answer the following objectives:

1. To determine the state universities' profile in terms of SUC leveling.
2. To determine the availability of resources of state universities in terms of the 5 As of tourism, namely, attractions, accessibility, accommodations, activities, and amenities as assessed among stakeholders when taken as a whole and classified according to SUC leveling.
3. To determine the extent of green practices of state universities in terms of water conservation, energy conservation, green environment, student involvement in green school, and waste management as assessed among stakeholders when taken as a whole and when classified according to SUC leveling.
4. To examine if there is a significant difference in the availability of resources of state universities when grouped according to SUC leveling.
5. To examine if there is a significant difference in the extent of green practices of state universities when grouped according to SUC leveling.
6. To examine if there is a significant relationship between the availability of resources and green practices among state universities.
7. To craft an Edutourism development plan as an output of the study.

Literature Review

Sustainability and Green School

To establish favorable social-ecological conditions, the Theory of Sustainability presents a vital framework for creating effective interventions and make use of insights from diverse contexts. "Sustainability" pertains to two leading Social-Ecological Systems (SES) elements. An ideal situation where human health and well-being are preserved within the natural environment is what the term "sustainable" meant initially. Preserving ecological balance and enhancing human well-being are highly valued from this perspective. Second, sustainability stresses how resilient a system is to different types of disruptions, focusing on how long a particular condition persists and how resilient it is over time (Waring et al., 2015).

Green School Practices

A school's daily operations are closely related to several green practices. Faculty, staff, students, parents, or community organizations can plan and direct these operational methods. To implement these approaches, schools only need to provide leadership and direction rather than additional resources (Bourke et al., 2022). Establishing green schools is a good place to start if it encourages students to take an interest in sustainability and environmental awareness. According to this viewpoint, the principal's leadership will help embody green schools by encouraging people to adopt pro-environmental and clean-living behaviors at home and school (Pebriantika et al., 2020).

Student Involvement in Green School

Including stakeholders in sustainable building renovations, including end-user needs and stakeholder cooperation, seems increasingly crucial. Given the situation, several prior research on green building stakeholders, their involvement, and interactions over the past ten years have been carried out to support the advancement of green construction. A thorough overview of stakeholder collaboration in sustainable urban initiatives was provided, stressing the significance of stakeholders' active participation and qualitative input. It shows that stakeholders' involvement and cooperation, particularly for green building initiatives, are becoming increasingly crucial (Li et al., 2022).

Water Conservation

Water conservation is a crucial component of a green school (Bourke et al., 2022). Using water wisely on college campuses can be a powerful tool for encouraging sustainability. Along with saving money and resources, it aims to promote behavioral and technological innovation for a more peaceful cohabitation of human activities and the natural world (Marinho et al., 2014).

Energy Conservation

Another crucial green school effort that should be implemented and taught in schools is energy conservation. There are numerous direct and indirect advantages to schools using less energy. Sometimes the influence is incalculable for a single school, but it can have a significant effect on the state or the country (Bourke et al., 2022). University campus buildings are using more energy. This is true even though the campus's low building density and shortened operation hours during the summer and winter, when energy consumption is at its highest, provide them a greater chance to save energy (Chung & Rhee, 2014).

Green Environment

The general environmental quality of the school's surroundings is connected to the green environment. This has to do with school pest management and air quality. Numerous studies show that indoor air quality has an impact on both adult school professors and staff as well as pupils. According to research, indoor settings have an impact on students' productivity, health, and general well-being (Bourke et al., 2022).

Waste Management

Reducing the environmental impact of an educational facility also depends on the waste management practices implemented there (Bourke et al., 2022). When waste production in schools is evaluated, it becomes evident how much waste is generated in a community overall by students and school personnel, as well as any recycling habits that may be improved with education (such as the so-called separate collection of waste in schools). It is crucial to educate youngsters about the significance of environmental issues since educating students about positive conduct also benefits the behavior of their families (Rada et al., 2016).

Attractions

Canson and Caelian (2021) further argued that since educational tourism accounts for a significant portion of worldwide tourism initiatives, academic institutions can serve as tourist attractions. Universities are prepared as tourism destinations when they have all the needed components and conditions, including accommodations, activities, facilities, accessibility, and attractions. At the same time, liability emphasizes the need for the tourists to communicate for improved client service. Universities that engage in educational tourism have realized their civic mission.

Accommodations

International educational tourism can, therefore, result in an increase in sales of goods and services, related tax revenue, and the creation of jobs, but there are also some negatives. Students profit by spending money on food, school supplies, and transportation and increasing business for local travel agencies and insurance companies if they drive their vehicles. Construction enterprises profit as 'dead' lands are used to develop new accommodation. One drawback is a rise in the cost of living for people, as evidenced by higher rents for accommodations and businesses in the university district than in the outskirts (Tomasi et al., 2020).

Activities

The two phases of the tourism experience can also be adapted, with the first phase being the connection with the tourism center and the subsequent involving the tourists. Visitors should participate in the attraction's activities and learn new skills there because their experiences' emotional influence has a big impact on their learning. It instructs the travelers to display positive characteristics and offer a pleasant travel experience (Saidi et al., 2020).

Accessibility

According to the framework of edu-tourism, mobilities "include both the global movements of people, things, capital, and information as well as the more local processes related to everyday transportation, public space movements, and the movement of material things within everyday life" (Urry, 2007, p. 82 as cited in Alipour et al., 2020). Roads, road systems, and public transportation are all considered accessible when referring to a location. It also refers to online reservations and a query system that lets visitors schedule a trip or request travel information. Additionally, it relates to the attractions' year-round accessibility and ability to be reached on foot or by other types of vehicles (Canson & Caelian, 2020).

Amenities

The growth and expansion of its tourist attraction objects (TAO) have been recognized in managing tourism or destinations, especially from the planned outreach initiatives carried out by stakeholders and officials overseeing educational tourism (Bare et al., 2021). Tourism-related amenities, camping grounds, games, housing, food stands or diners, and highway infrastructure should all be expanded and added (Sulaiman et al., 2019). Moreover, an approach to market penetration could be carried out by expanding the number of consumers who visit by providing

new amenities that suit market demands, producing an "all-in" package to attract more tourists, and organizing appealing events with educational content (Indrianto et al., 2021).

Methodology

This section presents the research design, respondents of the study, research instrument utilized, ethical considerations, and data-gathering, processing and analysis procedures of the study.

Research Design

The research study utilized survey-correlational research design. According to Cherry (2023), a survey-correlational study design uses survey data to investigate the connections between two or more variables. Additionally, survey-correlational method is a flexible approach since it enables researchers to design data-gathering systems that helped ensure the acquisition of the data needed (survey responses) from all the locations it was used (a random sample of respondents taking the survey). This research design assisted the study in gathering data fast, easy, and cheap even with a large number of respondents located in various locations.

Survey-correlational research according to Bhandari (2022), shows how strongly and/or in which direction two or more variables are related. A correlation's direction can be zero, positive, or negative. When two variables change in the same direction, it is said that there is a positive correlation.

The main objective of this study was to determine the relationship between the availability of resources and green practices of state universities in order to craft an edutourism development plan, which can be achieved with the use of a survey-correlational research design.

Respondents of the Study

The study focused on state universities situated in Negros Island. All state universities on the island were categorized according to their SUC levels. From the data collected, four state universities met the criteria for inclusion: two universities were classified as SUC Level 2, and the other two as SUC Level 3. The total population across these institutions was 63,668, with 20,484 from SUC Level 2 and 43,184 from SUC Level 3, composed of students, faculty, and administrators.

With a 5% margin of error, Slovin's formula was used to calculate the necessary sample size, which came out to be 398 respondents. This sample size was proportionately dispersed based on the percentage of respondents from each SUC (State Universities and Colleges) level in order to ensure that each subgroup within the study was appropriately represented. To be more precise, 271 respondents were assigned to SUC Level 3 and 127 respondents were assigned to SUC Level 2. However, in the actual data collection, there were 650 respondents who participated, with 249 (32%) from SUC level 2 and 401 (68%) from SUC level 3.

This proportional allocation is essential for achieving a representative and statistically significant analysis across the various SUC levels. This methodical distribution of the sample size guarantees that the insights obtained are reliable and resilient, taking into account the varied viewpoints and experiences of respondents from every SUC level. This approach not only strengthens the validity of the study's conclusions and improves the data's reliability, but it also makes the conclusions more actionable and broadly applicable to the goals of the investigation.

Research Instrument

The researcher utilized a modified survey instrument taken from two different studies as mentioned in the previous discussions. All items in the survey instrument used from the studies of Bourke (2022) and Canson and Caelian (2022) were modified and some were deleted to fit the study's objective. The survey's first section addressed the demographic profile of Negros Island's state universities, including the institutions' names, accreditation status, and respondent classification.

The second part of the survey looked on the availability of resources among state universities in terms of 5 As of tourism resources (attraction, accommodation, activities, amenities, and accessibility). The respondents answered each item using a four-point Likert scale, where 4 represents always available and 1 represents not available, to reveal the availability of resources of the state universities based on the 5 As of tourism.

The third part of the survey questionnaire determined the extent of green practices implementation based on the five categories in the green school feature checklist highlighting the students' participation in waste disposal, water and energy conserving, green school, and green environment. The respondents answered to the assertions on a four-point Likert scale, where 4 represents the very high extent of practice and 1 represents no practice.

Validity of the Questionnaire

The survey instrument was subjected to validity testing using the criteria for validation of survey questions of Good and Scates (1972, as cited in Oducado, 2020). The instrument was evaluated by three validators who are experts in the field of study. Their comments were included in the corrections of the final instrument.

Reliability of the Questionnaire

The instrument underwent pilot testing to determine its reliability among 62 respondents at the stand alone Senior High School campus situated in Sagay City with representatives from administration (2), faculty (30), and students (30) who were not part of the actual survey. The reliability coefficient was computed using Cronbach's Alpha formula. For the first section, which concentrated on resource availability, and the second half, which dealt with green practices, the reliability indices were especially high at .925 and .954, respectively. These numbers highlight the robustness and consistency of the survey in measuring the targeted variables, showing a high degree of dependability for both parts.

Ethical Considerations

To guarantee that the research was carried out in a manner that upholds respondent rights, respects human dignity, and maintains the integrity of the study. Seeking Approval from the RERB Office and Other Related Office/Institutions. Before the conduct of the study, the researcher sought the approval from the Research Ethics Review Board, The School of the Graduate Studies of Central Philippine University, and the College President of the institutions involved for the smooth and formal dissemination of the survey instruments and data collection.

Data-Gathering Procedure

Before the distribution of the survey instruments to the intended respondents, the researcher first acquired the endorsement letter from the Dean of the School of Graduate Studies to conduct data gathering. Then, permission from the presidents of the four state universities involved in the study to perform a data collection activity was secured. After receiving the approval, the researcher asked from the relevant office about the overall population of the universities to include the administrators, faculty members, and students.

The research employed stratified random sampling with the SUC leveling as the chosen stratum. This was to ensure that the sample would be representative of the four state universities.

The survey questionnaires were distributed to the respondents upon securing their informed consent.

Data-Processing Procedure

The researcher reviewed the survey forms to make sure the replies are complete after collecting the survey instruments from the respondents and compiling all the required responses. The researcher used the mean range value to interpret the data gathered using the following interpretations:

Availability of Resources based on 5 As of Tourism

<u>Mean Range</u>	<u>Description</u>	<u>Interpretation</u>
3.25 - 4.00	Always Available	SUCs have resources that are always available on their campus.
2.50 - 3.24.	Sometimes Available	SUCs have resources that are sometimes available on their campus.
1.75 - 2.49	Rarely Available	SUCs have resources that are rarely available on their campus.
1.00 - 1.74.	Not Available	SUCs have resources that are not available on their campus.

Extent of Green Practices Implementation

<u>Mean Range</u>	<u>Description</u>	<u>Interpretation</u>
3.25 - 4.00	Highly Practiced	SUCs strongly implement green practices on their campus.
2.50 - 3.24.	Moderately Practiced	SUCs moderately implement green practices on their campus.
1.75 - 2.49	Low Practiced	SUCs partially implement green practices on their

1.00 - 1.74.

Not Practiced

campus.

SUCs do not implement green practices on their

campus.

Data Analysis Procedure

In this study, a variety of statistical tools were utilized to analyze the data effectively.

For Objective 1, frequency and percentage were employed to determine the distribution of responses. This approach allowed for a clear understanding of response patterns.

For Objectives 2 and 3, the analysis focused on calculating the mean and standard deviation. The mean provided an average score for the responses, while the standard deviation measured the degree of variability or dispersion around this average, offering insight into the consistency of the responses.

To address Objectives 4 and 5, the study looked into significant differences in the availability of resources and implementation of green practices among state universities with the use of the t-test for independent samples. This test was instrumental in comparing means between two groups. It enabled the identification of statistically significant variations in the availability of resources in terms of the 5 As of tourism (attraction, accommodation, accessibility, amenities, and activities) and green practices in terms of water conservation, energy conservation, green environment, student involvement in green school, and waste management.

For Objective 6, Pearson's correlation was used to determine the relationships between state universities' resources in terms of the 5 As of tourism and their green practices. It helped identify the direction and intensity of the correlations between resource availability and the amount of green practices. A more detailed knowledge of how different resource factors relate to green practices was made possible by this correlation study. Through these carefully chosen statistical tests, the study aimed to deliver a comprehensive analysis and valuable insights into the available resources and green practices among state universities.

Results and Discussion

Table 1 provides a breakdown of the respondents according to SUC leveling. There was a total of 650 respondents included in the study. There were 249 (38.3%) respondents from Level 2 state universities, which means that they have met the minimum requirements for a university but may still need to improve certain aspects (Bayudan-Dacuycuy et al., 2023). For the Level 3 state universities, 401 (61.7%) were selected as respondents. A Level 3 SUC leveling indicates that the university met the highest standards and are considered fully developed (Guiamalon, 2022).

The majority of the respondents included in the study are from Level 2 SUCs (62%) included in the study have achieved Level 3, signifying a high level of development and quality in higher education. However, a significant proportion (38%) are still at Level 2, suggesting there is room for improvement in certain areas (Malolos & Tullao, 2018).

Table 1

State Universities' (SUCs) Profile in terms of SUC Leveling

SUC Leveling	<i>F</i>	%
Level 2	249	38
Level 3	401	62
Total	650	100

Availability of Resources based on 5 As of Tourism

The four state universities' resource availability is statistically analyzed in Table 2 using the five As of tourism, namely, attractions, accessibility, accommodation, activities, and amenities. Based on the SUC Leveling (Level 2 or Level 3), the analysis was conducted. As resources are occasionally available but not always so, the average mean for resource availability across all five As is often between 2.88 and 3.40 (David, 2023). Furthermore, the relationship between resource availability and certification level is unclear. For some aspects of tourism, for instance, Level 2 SUCs are occasionally rated higher than Level 3 SUCs, and vice versa (Kabil et al., 2022). Both Level 2 and Level 3 SUCs exhibit

comparable degrees of attraction, with an average mean of roughly 3.0. Based on accessibility, Level 3 SUCs are marginally more accessible than Level 2 SUCs, with an average mean score of 3.4 as opposed to 3.1. The accommodation levels of Level 2 and Level 3 SUCs are comparable, with an average mean around 3.0. With an average mean activity level of about 2.9, Level 2 and Level 3 SUCs exhibit comparable activity levels. Level 3 SUCs rank somewhat higher than Level 2 SUCs in terms of amenities, with an average mean score of 3.3 as opposed to 3.1. Although most SUCs have resources that are occasionally available for the five A's of tourism, there is still opportunity for improvement in a few areas. According to the data, a higher accreditation level by itself does not ensure greater access to resources (UNWTO, 2024).

Table 2

Level of Availability of Resources of the State Universities (SUCs) in terms of 5 As of Tourism

5 A's of Tourism	Accreditation Level	n	SD	Mean	Interpretation
Attraction	Level 2	249	.69409	3.0405	<i>Sometimes Available</i>
	Level 3	401	.60225	3.1290	<i>Sometimes Available</i>
Accessibility	Level 3	401	.60225	3.1290	<i>Sometimes Available</i>
	Level 3	401	.40414	3.4036	<i>Always Available</i>
Accommodation	Level 2	249	.69154	3.1124	<i>Sometimes Available</i>
	Level 3	401	.66685	2.9988	<i>Sometimes Available</i>
Activities	Level 2	249	.74712	2.9384	<i>Sometimes Available</i>
	Level 3	401	.79595	2.8880	<i>Sometimes Available</i>
Amenities	Level 2	249	.59057	3.1381	<i>Sometimes Available</i>
	Level 3	401	.42360	3.2769	<i>Always Available</i>

Scale: 1.00-1.74 Not Available 1.75-2.49 Rarely Available 2.50-3.24 Sometime Available 3.25-4.00 Always Available

Extent of Green School Practices Implementation

A statistical analysis of the level of green practices implemented by the four state universities (SUCs) on Negros Island is described in Table 3 using five dimensions: waste management, water conservation, student involvement, energy conservation, and green environment. The SUC Leveling is the analysis's underpinning. Concerning energy saving, level 2 SUCs have an average of 2.89, whereas level 3 SUCs have an average of 3.18. As a result, the degree of energy conservation measures in level 2 and level 3 SUCs is comparable (UNESCO, 2023). The mean score for level 2 SUCs was 2.86, demonstrating moderate practice in a green setting, whereas the mean score for level 3 SUCs was 3.16, indicating moderate practice. Green environment practices are similar at level 2 and level 3 SUCs, according to Yue et al. (2020). SUCs at both levels strongly underscore student involvement; the mean score for level 2 SUCs is 3.26, while the mean score for level 3 SUCs is 3.36. Level 2 and Level 3 SUCs show high total student involvement in green practices (Elshaer et al., 2023). Waste management is moderately practiced by level 2 SUCs (mean of 2.95) and similarly by level 3 SUCs (mean of 3.24). Level 2 and 3 SUCs employ similar waste management strategies (Molina & Catan, 2021). According to Bautista (2020), the mean water conservation rate for level 2 SUCs is 2.86, whereas the mean water conservation rate for level 3 SUCs is 3.22. Water conservation techniques at Level 2 and Level 3 SUCs are similar. Toledo and Lingon (2024) state that both Level 2 and Level 3 SUCs demonstrate moderate green practices in energy conservation, waste management, water conservation, and the green environment. Green practices have a high level of student involvement, making it a vital topic for both levels, according to Hausheer

(2023). Green activities are being implemented in both university categories, as evidenced by the need for substantial differences in the degree of green practices between Level 2 and Level 3 SUCs (German et al., 2023).

Table 3

The Extent of Green Practices of the State Universities (SUCs) in Negros Island based on the Green School Practices Dimensions

Green School Practices Dimension	SUC Level	n	Mean	SD	Interpretation
Energy Conservation	Level 2	249	2.8902	.73856	Moderately Practiced
	Level 3	401	3.1804	.56619	Moderately Practiced
Green Environment	Level 2	249	2.8557	.69043	Moderately Practiced
	Level 3	401	3.1552	.50111	Moderately Practiced
Student Involvement	Level 2	249	3.2590	.67905	Highly Practiced
	Level 3	401	3.3607	.47634	Highly Practiced
Waste Management	Level 2	249	2.9500	.66468	Moderately Practiced
	Level 3	401	3.2386	.51315	Moderately Practiced
Water Conservation	Level 2	249	2.8648	.74850	Moderately Practiced
	Level 3	401	3.2247	.53480	Moderately Practiced
Scale: 1.00-1.74 Not Practiced 1.75-2.49 Low Practiced 2.50-3.24 Moderately Practiced 3.25-4.00 Highly Practiced					

Difference in the Availability of Resources and Green Practices Implementation

The five As of tourism (attraction, accessibility, accommodations, activities, and amenities) are compared in Table 4 between Level 2 and Level 3 SUCs according to their mean scores and standard deviations. Significant difference between Level 2 and Level 3 SUCs in mean scores are indicated by the significant values for attraction, accessibility, amenities, and overall availability of resources being less than .05. Level 3 SUCs have a higher mean score than Level 2 SUCs in these categories, indicating that they typically have more resources available to them (Dimitriadou et al., 2023). The significant values for activities and accommodation are higher than .05, suggesting that there is no significant difference in the mean ratings between the two levels (Williady et al., 2022). Level 3 SUCs exhibit a marginally higher availability of resources in terms of attraction (Ariesta et al., 2020). Accessibility-wise, level 3 SUCs are substantially more accessible (Niosi, 2021). Between the two levels, there is no discernible variation in the availability of lodging (Mastoi et al., 2022). There is slight difference between the two levels regarding the available resources in terms of activities (Rawat & Kumar, 2023). In level 3 SUCs, several amenities are available (Muñoz-Parreño et al., 2020). Level 3 SUCs are typically better relate to resource availability, particularly regarding facilities and accessibility. Level 2 and 3 SUCs have similar access to activities and accommodations (Wei et al., 2022). According to Hashemi (2021), the results propose that Level 3 SUCs can offer a more excellent range of services and facilities to its students and visitors, contributing to the attraction and accessibility of destinations.

Table 4

Difference in the State Universities' Availability of Resources when Grouped according to SUC Leveling

Availability Resources	of	Level 2		Level 3		<i>t</i>	<i>Sig</i> (2 tailed)	Interpretation
		Mean	SD	Mean	SD			
Attraction		3.0405	.69409	3.1290	.60225	-1.659	.006	Reject Ho
Accessibility		3.2470	.59758	3.4036	.40414	-3.650	.000	Reject Ho
Accommodation		3.1124	.69154	2.9988	.66685	2.083	.595	Retain Ho
Activities		2.9384	.74712	2.8880	.79595	.815	.038	Reject Ho
Amenities		3.1381	.59057	3.2769	.42360	-3.228	.000	Reject Ho
Overall		3.0881	.58642	3.1564	.45408	-1.569	.000	Reject Ho

The five aspects of green practices are students' involvement, waste management, water conservation, energy conservation, and the green environment. Table 5 contrast the mean scores and standard deviations for these dimensions for Level 2 and Level 3 SUCs. The significant values for every Green Practices characteristic are less than .05, indicating that the mean scores of Level 2 and Level 3 SUCs vary significantly (Wahyudi et al., 2022). Level 3 SUCs generally implement more green practices, as evidenced by their higher mean score in every area than Level 2 SUCs (Strain et al., 2020). Level 3 SUCs score significantly higher on numerous green practices, such as waste management, water conservation, student involvement, energy saving, and green environment, than level 2 SUCs (Olivero, 2023). According to Beattie (2024), Level 3 SUCs display a considerably greater commitment to environmentally friendly activities than Level 2 SUCs. According to Akkermans (2023), the results indicate that Level 3 SUCs successfully integrate sustainability into their operations and engage their staff and students in green projects.

Table 5

Difference in State Universities' Extent Green Practices Implementation when grouped according to SUC Leveling

Green Practices	Level 2		Level 3		<i>t</i>	<i>Sig</i> (2 tailed)	Interpretation
	Mean	<i>SD</i>	Mean	<i>SD</i>			
Energy Conservation	2.8902	.73856	3.1804	.56619	-5.306	.000	Reject Ho
Green Environment	2.8557	.69043	3.1552	.50111	-5.941	.000	Reject Ho
Student Involvement	3.2590	.67905	3.3607	.47634	-5.810	.000	Reject Ho
Waste Management	2.9500	.66468	3.2386	.51315	-2.067	.000	Reject Ho
Water Conservation	2.8648	.74850	3.2247	.53480	-5.855	.000	Reject Ho
Overall	2.9639	.700424	3.2319	.51832	-4.996	.000	Reject Ho

Relationship between Availability of Resources and Green Practices Implementation

The correlations between different variables relating to SUCs' resource availability and green practices are exhibited in a correlation matrix in Table 6. These factors include the availability of resources (accessibility, accommodations, activities, amenities, and attraction) and environmentally friendly practices (water conservation, waste management, student involvement, energy conservation, and green environment). According to Mosquera and Ylagan (2024), there is a high correlation between accessibility and accommodation, meaning that SUCs with greater accessibility also typically have better accommodations. SUCs that have more facilities are probably more attractive, according to a strong positive correlation between amenities and attractiveness (Fatmawati & Olga, 2023). SUCs with better green environments are more likely to adopt efficient waste management techniques, according to a high positive association between waste management and green environments (Zheng & Zhao, 2023). There is a substantial positive correlation between water conservation and green environments. SUCs that prioritize water conservation are also more likely to have higher green environments (Chen et al., 2021). There appears to be a connection between accessibility and amenity availability, as implied by a moderately favorable correlation (Alamineh et al., 2023). According to Eldér et al. (2020), there is a moderately positive relationship between accessibility and the existence of attractions. The relatively positive correlation between the two implies a connection between the activities offered and the amenities available (Hayes, 2023). Waste management and energy conservation present a lower positive correlation, suggesting they are related (Arta et al., 2022). A low correlation between activities and accommodations indicates that the two are not significantly related (Hafez et al., 2023). A weak link between accommodation and attractions suggests that the two have low correlation (Galván-Mendoza et al., 2022). According to Deborah et al. (2021), the slight correlation between waste management and student involvement suggests low connection between the two. Students' involvement and amenities ($r = .598$) indicate that schools with high levels of student involvement in environmental initiatives are more likely to have good amenities (Español, 2023); green environment and resource availability ($r = .563$), a strong correlation here implies that schools with more green spaces and eco-friendly practices also offer better amenities (Huang et al., 2023); and energy conservation and amenities ($r = .610$), which suggests that schools with higher levels of energy conservation tend to also have better amenities (Yukon, 2023); green school practices and amenities ($r = .670$), which shows a very strong correlation between schools with comprehensive green school practices and the availability of good amenities (Wan Hussain et al., 2021); waste management and amenities ($r = .562$), a positive correlation suggests that schools with effective waste management practices are also more likely to have better amenities (Yue et al., 2020); and water conservation and resource availability ($r = .616$), which

would suggest that schools that prioritize water conservation efforts tend to have better amenities (Maurer et al., 2020). SUCs with outstanding facilities and easy access are typically more appealing. The green environment and practices, particularly waste management, are strongly related. Moreover, there is less correlation between activity accommodations and other characteristics (Wu et al., 2022). These findings reveal how several factors of the development and sustainability of SUCs are interrelated. Prioritizing green practices can enhance SUCs' overall appeal and sustainability as well as enhance accessibility and amenities (Streimikiene et al., 2020).

Table 6

Correlations between SUCs Availability of Resources and Green Practices Implementation

Control Variables			Accessi bility	Accomm odation	Activities	Amenities	Attraction	Availability of Resources	Energy Conservation	Green Environm ent	Student Involvem ent	Waste Manag ement	Water Conserva tion	Green School Practices
Accreditation Status	Accessibility	r		.484	.471	.616	.557	.718	.463	.468	.458	.420	.431	.505
		Significance (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
		df		647	647	647	647	647	647	647	647	647	647	647
	Accommodation	r	.484		.698	.632	.534	.801	.355	.320	.311	.309	.385	.379
		Significance (2-tailed)	.000		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
		df	647		647	647	647	647	647	647	647	647	647	647
	Activities	r	.471	.698		.666	.680	.871	.398	.415	.333	.371	.459	.443
		Significance (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000	.000
		df	647	647		647	647	647	647	647	647	647	647	647
	Amenities	r	.616	.632	.666		.654	.865	.610	.555	.598	.562	.657	.670
		Significance (2-tailed)	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000
		df	647	647	647		647	647	647	647	647	647	647	647
	Attraction	r	.557	.534	.680	.654		.835	.528	.556	.400	.537	.581	.586
		Significance (2-tailed)	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000
		df	647	647	647	647		647	647	647	647	647	647	647
	Availability	r	.654	.715	.824	.810	.782		.926	.522	.453	.479	.550	.567
		Significance (2-tailed)	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000
		df	647	647	647	647	647		647	647	647	647	647	647
	Availability of Resources	r	.718	.801	.871	.865	.835		.569	.563	.499	.532	.616	.625
		Significance (2-tailed)	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000
		df	647	647	647	647	647		647	647	647	647	647	647
	Energy Conservation	r	.463	.355	.398	.610	.528	.569		.758	.634	.752	.758	.889
		Significance (2-tailed)	.000	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000
		df	647	647	647	647	647	647		647	647	647	647	647
	Green Environment	r	.468	.320	.415	.555	.556	.563	.758		.619	.818	.777	.903
		Significance (2-tailed)	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000	.000
		df	647	647	647	647	647	647	647		647	647	647	647
	Student Involvement	r	.458	.311	.333	.598	.400	.499	.634	.619		.644	.670	.791
		Significance (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000
		df	647	647	647	647	647	647	647	647		647	647	647
	Waste Management	r	.420	.309	.371	.562	.537	.532	.752	.818	.644		.768	.909
		Significance (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000
		df	647	647	647	647	647	647	647	647	647		647	647
	Water Conservation	r	.431	.385	.459	.657	.581	.616	.758	.777	.670	.768		.904
		Significance (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000		.000
		df	647	647	647	647	647	647	647	647	647	647		647
	Green School Practices	r	.505	.379	.443	.670	.586	.625	.889	.903	.791	.909	.904	
		Significance (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
		df	647	647	647	647	647	647	647	647	647	647	647	647

Note: *Statistically significant at 5% level

r = +1: Perfectly positively correlated, r = -1: Perfectly negatively correlated, r = 0: No linear relationship between variables, r between 0.30 and 0.50: Moderate correlation, r between 0.51-0.99: Strong, r between 0 and 0.30: Negligible correlation (<https://www.edu.miami.edu/>)

Conclusion

In terms of the five As of tourism—attraction, accessibility, accommodation, activities, and amenities—Level 2 and Level 3 State Universities and Colleges (SUCs) differ significantly from one another. Level 3 SUCs improved resource availability in the categories of amenities, accessibility, and attraction; accessibility is a particular strength. The accommodations and activities at the two levels, however, are not that different. In general, Level 3 SUCs are better

positioned to enhance the tourism experience since they offer a greater variety of accommodations and resources that make them attractive and accessible tourist destinations.

According to the result, there are notable differences between Level 2 and Level 3 State Universities and Colleges' (SUCs') green practices. Level 3 SUCs' higher mean ratings in waste management, water conservation, student involvement, energy conservation, and green environment show a stronger commitment to green practices. This indicates how successfully they incorporate sustainability into their operations and include local communities in green practices initiatives. The results highlight the significant role that institutional support plays in promoting environmental sustainability in higher education.

The correlation matrix shown in the result indicates a strong relationship between the availability of resources and green practices at State Universities and Colleges (SUCs). Improvements in facilities, accessibility, and green practices appear to have strong positive relationships, which not only increase sustainability but also draw more tourists. Better accessibility, for example, is linked to better lodging and attractions, and improved green spaces encourage efficient garbage disposal and water conservation.

Furthermore, the strong relationships shown between amenities, energy saving, and student involvement emphasize how crucial it is to get students involved in environmental projects because this engagement is correlated with the provision of high-quality amenities. Overall, the correlations highlight the importance of green practices in creating a sustainable and appealing environment, even though some relationships—such as those between student involvement and waste management or accommodations and activities—showed lower relationships.

Sustainability theory, in essence, advocates for the harmonious coexistence of economic, environmental, and social dimensions. It posits that development should meet the needs of the present without compromising the ability of future generations to face their own.

The study draws attention to the differences in Level 2 and Level 3 SUCs' access to resources. This signifies that institutional and financial resources, among other economic matters, have a big impact on educational quality and sustainability in general. Green practices are more predominant in Level 3 SUCs, which suggests a greater emphasis on economic sustainability. By embracing eco-friendly methods, these companies can increase their long-term financial viability and reduce operational costs.

The study also noticeable reveals that Level 3 SUCs are more committed to environmental sustainability. Their strategies for conserving energy, waste, and water are constant with sustainability principles. The data about the occurrence of mold and environmental factors emphasize the importance of establishing sustainable and healthy learning environments.

The greater levels of facilities and accessibility found in Level 3 SUCs propose that they focus more on social inclusion and equity. These elements help create a more welcoming and encouraging learning atmosphere. Students' vigorous involvement in green activities points to a positive social component. Students are frequently engaged in their colleges' environmental projects.

According to the Natural Resource-Based View, the natural resources of an area influence its economic development. In relation to resource availability, its participation in the SUCs could be considered institutional or human capital. At Level 3 SUCs, these resources are more effortlessly accessible. Green practices are an opportunity for these institutions, especially Level 3 SUCs, which could provide more effective or sustainable methods of resource consumption. Moreover, it can be insinuated that Level 3 SUCs may possess a competitive advantage due to their more easily accessible resources and eco-friendly operations.

The study reveals that, from both staff and student perspectives, Level 3 SUCs offer a more friendly environment. They have improved resources, strong green practices, and a positive reputation. On the other hand, both levels might use some exertion.

Level 3 SUCs have more access to resources that can enhance student experience and academic performance. A better standing and a healthier environment may also be sustained by level 3 SUCs' increased commitment to sustainability. The findings indicate that perceived control, positive attitudes, and norms are connected with better results. In conclusion, addressing differences in perspectives, traditions, and perceived control over resources is essential to promote a comprehensive approach to green activities. SUCs can become more competitive in attracting stakeholders and collaborating on environmental conservation projects by making effective use of their resources and bringing institutional norms into line with green practices. This approach warrants long-term benefits for the institutions and society as a whole by boosting an environmental stewardship culture across the SUC system and supporting sustainable development goals.

Recommendations

The following recommendations are made in light of the findings to better the green practices of Philippine State Universities and Colleges (SUCs).

Policymakers should take into account of providing Level 2 SUCs with more funds and institutional resources to close the gap in resource availability and enhance their overall green school practices. This would ensure equal access to resources and opportunities for advancing equity and social inclusion for all SUCs.

These organizations can support green school practices, such as renewable energy, energy efficiency, waste reduction, and water conservation, by implementing laws and incentives.

A sustainable campus culture is also suggested by incorporating green school practices into SUC operations, research, and education.

Furthermore, students might be inspired to actively participate in green school practices projects to foster engagement and ownership. Incorporating green school practices education into the curriculum is vital for increasing awareness and giving students the information and abilities, they need to help create a sustainable future.

Additionally, institutions can have the capacity to put in place the structure and regulations that would encourage green activities. Creating laws and policies that promote green school practices in higher education, such as carbon neutrality goals, green procurement criteria, and environmental standards, can help attain this. Mechanisms for transparency and accountability might also be applied to ensure SUCs are keeping their promises on green school practices.

Moreover, professors and staff may receive support and training to improve their ability to apply green school practices and efficiently manage resources.

For SUCs, it is also necessary to set up continuous performance evaluation and monitoring mechanisms, which should include green school practices and edutourism development. Institutions can determine areas for improvement, track their progress over time, and adjust their plans of action to accommodate changing demands and constraints with the support of regular reviews.

These SUCs may also efficiently utilize natural and artificial resources by applying the many techniques created for sustainable natural resource management, bearing in mind both the financial and environmental advantages. Above all, innovation and research are promoted in conservation and sustainable resource use areas.

Implementing these suggestions would aid SUCs address the demands of both current and future generations, making the Philippines' higher education system more resistant and sustainable.

References

Abo-Khalil, A. (2024). Integrating sustainability into higher education institution challenges and opportunities for universities worldwide.

Allen, S., & Marquart-Pyatt, S. T. (2018). Workplace energy conservation at Michigan State University. *International Journal of Sustainability in Higher Education*, 19(1), 114–129.

Alipour, H., Fatemi, H., & Malazizi, N. (2020). Is edu-tourism a sustainable option? A case study of residents' perceptions. *Sustainability*, 12(15), 5937.

Arta, I. N. P., Sudja, I. N., Agung, A. A. P., & Abantao, B. J. V. (2022). The effect of training and work environment on performance mediated by the work motivation of teachers and employees at SMK Negeri 2 Bangli. *International Journal of Sustainability, Education, and Global Creative Economic (IJSEGCE)*, 5(2), 73–87. <https://doi.org/10.1234/ijsegce.v5i2.207>

Bare, R. R., Mukmin, A., Kesuma, A. I., Akib, H., & Yahyaddin, M. (2021). Development of edu-tourism based for local competencies. *Ilkogretim Online - Elementary Education Online*, 20(5), 6299–6307. <http://eprints.unm.ac.id/21258/>

Basri, M., Paramma, M. A., Hudriati, A., & Tamrin, D. S., (2022). Communal attitudes on English educational tourism in Eastern Indonesia. *International Journal of Language Education*, 6(2), 141-156.

Bayudan-Dacuycuy, C., Orbeta, A., Kristina, M., & Ortiz, P. (2023). Policy Notes: The quest for quality and equity in the Philippine higher education: Where to from here?

Bhandari, P. (2023). Correlation vs. Causation | Difference, Designs & Examples.

Bourke, N., Simmons, K., & Ousley, M. (2022). Green schools: An examination of practices and possibilities in Alabama. *Interdisciplinary Journal of Environmental and Science Education*, 18(4), e2292.

Canson, M. C. I., & Caelian, M. V. (2022). Educational tourism destination readiness and opportunities of a state university. *Philippine Social Science Journal*, 5(1), 25–35. <https://doi.org/10.52006/main.v5i1.464>

- Chen, M., Jeronen, E., & Wang, A. (2021). Toward environmental sustainability, health, and equity: How the psychological characteristics of college students are reflected in understanding sustainable development goals. *International Journal of Environmental Research and Public Health*, 18(15), 8217. <https://doi.org/10.3390/ijerph18158217>
- Chung, M. H., & Rhee, E. K. (2014). Potential opportunities for energy conservation in existing buildings on university campus: A field survey in Korea. *Energy and Buildings*, 78, 176–182.
- David, B. (2023). Empirical analysis of the 5-As of tourism and its impact on tourists' travel intentions. *International Journal of Management Studies and Social Science Research*, 5(5), 157–163. <https://doi.org/10.56293/ijmsssr.2022.4713>
- Ezziddine, M., Liltved, H., & Seljåsen, R. (2021). Hydroponic lettuce cultivation using organic nutrient solution from aerobic digested aquacultural sludge. *Agronomy*, 11(8), 1484.
- Fatmawati, I., & Olga, F. (2023). Investigating the determining factors of tourist revisit intention in a natural-based tourism destination. *E3S Web of Conferences*, 444, 01014. <https://doi.org/10.1051/e3sconf/202344401014>
- Galván-Mendoza, O., González-Rosales, V. M., Leyva-Hernández, S. N., Arango-Ramírez, P. M., & Velasco-Aulcy, L. (2022). Environmental knowledge perceived behavioral control, and employee green behavior in female employees of small and medium enterprises in Ensenada, Baja California. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.1082306>
- German, J. D., Anak Agung Ngurah Perwira Redi, Kester, A., & Liwanag, J. L. (2023). The impact of green innovation initiatives on competitiveness and financial performance of the land transport industry. *Heliyon*, e19130–e19130. <https://doi.org/10.1016/j.heliyon.2023.e19130>
- Ghanem, T. (2020). The inclusion of national and international sustainable development goals in the curricula of public education proposed vision: The tenth conference of the Faculty of Arts BeniSuef University towards building a strategy for sustainable development in Upper Egypt under the humanities.
- Guiamalon, T. (2022). Social and economic development: State universities and colleges (SUCs) contribution creativity skills of the students in recycling.
- Hafez, F. S., Sa'di, B., Safa-Gamal, M., Taufiq-Yap, Y. H., Alrifay, M., Seyedmahmoudian, M., Stojcevski, A., Horan, B., & Mekhilef, S. (2023). Energy efficiency in sustainable buildings: A systematic review with taxonomy, challenges, motivations, methodological aspects, recommendations, and pathways for future research. *Energy Strategy Reviews*, 45(101013), 101013. <https://doi.org/10.1016/j.esr.2022.101013>
- Hausheer, J. E. (2023). *Want to improve your outdoor recreation? Try birding*. Cool green science. <https://blog.nature.org/2023/03/27/want-to-improve-your-outdoor-recreation-try-birding/>
- Indrianto, A. T. L., Mitasari, R., & Hangga, F. P. (2021). *Educational tourism: What strategies needed to develop it? A Case Study of Baobab Safari Resort*. www.atlantis-Press.com; Atlantis Press. <https://doi.org/10.2991/aebmr.k.210510.003>
- Kabil, M., Abouelseoud, M., Alsubaie, F., Hassan, H. M., Varga, I., Csobán, K., & Dávid, L. D. (2022). Evolutionary relationship between tourism and real estate: Evidence and research trends. *Sustainability*, 14(16), 10177. <https://doi.org/10.3390/su141610177>
- Kadam, S. A., Kadam, P. S., & Mohite, D. D. (2024). Design and experimental analysis of a closed-loop autonomous rotary hydroponics system for revolutionizing fenugreek yield and enhancing food security. *Discover Sustainability*, 5(1). <https://doi.org/10.1007/s43621-024-00339-7>
- Kamdi, N., Hassan, N.A., & Jamal, S. A., (2016). A conceptual review of edutourism in Malaysia: Understanding the research trend.
- Li, Y., Li, M., Sang, P., Chen, P.-H., & Li, C. (2022). Stakeholder studies of green buildings: A literature review. *Journal of Building Engineering*, 54, 104667.
- Malolos, C., & Tullao, T. (2018). Role of the commission on Higher Education in promoting quality role of the Commission on Higher Education in promoting quality education. Part of the Higher Education Commons, and the International and Comparative Education Commons.

Marinho, M., Gonçalves, M. do S., & Kiperstok, A. (2014). Water conservation as a tool to support sustainable practices in a Brazilian public university. *Journal of Cleaner Production*, 62, 98–106.

Maurer, M., Koulouris, P., & Bogner, F. X. (2020). Green awareness in action: How energy conservation action forces on environmental knowledge, values and behaviour in adolescents' school life. *Sustainability*, 12(3), 955. <https://doi.org/10.3390/su12030955>

Molina, R. A., & Catan, I. (2021). Solid waste management awareness and practices among senior high school students in a state college in Zamboanga City, Philippines. *Aquademia*, 5(1), ep21001. <https://doi.org/10.21601/aquademia/9579>

Mosquera, L. J. A., & Ylagan, A. D. (2024). Resort attributes, brand equity and behavioral intention of resort guests in CALABARZON. *International Journal of Research Studies in Management*, 12(2). <https://doi.org/10.5861/ijrsm.2024.1018>

Olivero, A. (2023). Sustainability engagement: Importance and best practices. *AWorld*. <https://aworld.org/engagement/sustainability-engagement-importance-and-best-practices/>

Rada, E., Bresciani, C., Girelli, E., Ragazzi, M., Schiavon, M., & Torretta, V. (2016). Analysis and measures to improve waste management in schools. *Sustainability*, 8(9), 840.

Sujaritchai, S. & Artnarong, W. (2016). Assessment of tourism attraction potentials in 3 eastern borders provinces. *Interdisciplinary Research Review*, 11(6), 14-19.

Toledo, M. & Lingon, M. (2024). Environmental awareness and sustainable development practices of senior high school students. *International Journal of Advances in Education, Social Sciences and Innovation*, 3(1), 1–1. <https://ejournals.ph/article.php?id=24030>

Tomasi, S., Paviotti, G., & Cavicchi, A. (2020). Educational tourism and local development: The role of universities. *Sustainability*, 12(17), 6766. <https://doi.org/10.3390/su12176766>

UNWTO. (2024). *Glossary of tourism terms*. United Nations World Tourism Organization. <https://www.unwto.org/glossary-tourism-terms>

UNESCO. (2023). Accreditation and the global higher education market. <https://unesdoc.unesco.org/ark:/48223/pf0000163514>

Waring, T. M., Kline, M.A., Brooks, J., Goff, S., Gowdy, J., Jansen, M., Smaldino, P., & Jacquet, J. (2015). A multilevel evolutionary framework for sustainability analysis.

Yue, B., Sheng, G., She, S., & Xu, J. (2020). Impact of consumer environmental responsibility on green consumption behavior in China: The role of environmental concern and price sensitivity. *Sustainability*, 12(5), 2074. <https://doi.org/10.3390/su12052074>

Zheng, X., & Zhao, D. (2023). Evaluating the accessibility of public service facilities to tourists and residents in island destinations: Evidence from the Changhai County. *Frontiers in Public Health*, 10. <https://doi.org/10.3389/fpubh.2022.1090341>