

Impactful Learning: A Study on Student Activities in UiTM Cawangan Terengganu Aligned with Sustainable Development Goals

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ABSTRACT

The article presents research demonstrating how student activities through their club and society might expedite progress towards the Sustainable Development Goals (SDGs). These efforts might significantly propel the Sustainable Development Goals agenda forward through enhanced support, cooperation, and resources. The study supports an integrated approach that combines education, action, and social impact to prepare students to be catalysts for enduring and sustainable change. UiTM Cawangan Terengganu is already tackling urgent Sustainable Development Goals (SDG) challenges, contributing to a more sustainable future. The analysis confirms that organised student activities enhance awareness and directly influence SDG-related objectives. It shows that most Sustainable Development Goals (SDGs) will see a progressive improvement from 2021 to 2024. Students already make positive impacts on their communities by effectively developing and implementing Sustainable Development Goal (SDG) initiatives. This is achieved by utilising organised programmes and linking them with impactful outcomes.

Keywords: Sustainable development goals, higher learning institution, SDG matrix, student development

INTRODUCTION

Global sustainable development necessitates active involvement from all sectors, including higher education institutions. Student club and society activities at UiTM Cawangan Terengganu are becoming more in line with the Sustainable Development Goals (SDGs), yet obstacles remain. This article investigates the influence of these efforts in addressing the problem statement about SDG concerns. University students are well-suited to contribute to the Sustainable Development Goals (SDGs) due to their unique position, providing new viewpoints and enthusiastic support. Nevertheless, they frequently encounter challenges like lack of knowledge, inadequate incorporation into curricula, and restricted chances for significant involvement. UiTM Cawangan Terengganu has implemented measures to incorporate SDG concepts into student club and society activities, promoting a culture of sustainability and social responsibility. Despite these efforts, the persistent question is how the activities may not only increase awareness but also have concrete impacts on SDG-related concerns. The aim of this research article is to examine the impact of college student activities at Universiti Teknologi MARA Cawangan Terengganu on advancing the Sustainable Development Goals (SDGs). By analyzing the alignment between student activities and the SDGs, the study aims to determine how these organized programs can enhance awareness and directly influence SDG-related objectives. The findings will contribute to understanding the effectiveness of student-led initiatives in addressing SDG concerns and provide insights for improving engagement and support for sustainable development efforts in higher education institutions.

LITERATURE REVIEW

Structured programmes are crucial for efficiently implementing Sustainable Development Goal (SDG) activities among university students. These programmes should aim to equip students with the essential tools and knowledge required to actively participate in the Sustainable Development Goals (SDGs). Lee et al. (2023) highlights the significance of student-led initiatives in promoting practical learning and empowering students

as change agents in implementing SDGs. The study by Oltra-Badenes et al. (2022) emphasises the importance of evaluating students' understanding and consciousness of the Sustainable Development Goals (SDGs) to create suitable training methods and exercises that include the SDGs into higher education. Yuan et al. (2021) propose improving Education for Sustainable Development (ESD) by using formal and non-formal education, publicity, and curricular integration to advance learning related to Sustainable Development Goals (SDGs). It is essential for universities to involve students in practices linked to Sustainable Development Goals (SDGs) in order to effectively contribute to the SDGs paradigm, as emphasised by Mawonde and Togo (2021). Trott et al. (2018) emphasise the importance of higher education institutions in addressing structural obstacles to implementing SDGs through Participatory Action Research (PAR) experiences. Mueller et al. (2020) emphasise the capacity of interdisciplinary programmes, including those in engineering education, to link engineering principles with the Sustainable Development Goals (SDGs). Alvarez-Risco et al. (2021) stress the significance of including students in training programmes to fully understand the Sustainable Development Goals (SDGs). Chen et al. (2021) offers insights into the psychological traits of University students that are linked to their comprehension of the Sustainable Development Goals (SDGs), which can aid in enhancing sustainability teaching in Universities.

To cultivate a culture of sustainability and social responsibility among University students, it is essential to take proactive steps to integrate Sustainable Development Goal (SDG) principles into student activities. Educational institutions can employ various strategies to achieve this objective. Bertel, et al. [1] stress the importance of incorporating competencies like future thinking, critical thinking, and systemic thinking into curricula through interdisciplinary projects to educate for sustainable development. Furthermore, Ad [2] underscores the significance of implementing green practices, such as utilizing energy-efficient technologies and waste reduction, to align with SDGs. Norris [3] discusses the positive impact of proactive approaches, including effective communication strategies and student-led participation, on well-being in educational settings. By consistently integrating proactive practices, institutions can establish an environment conducive to sustainability and social responsibility. Additionally, Alm, et al. [4] explore an interdisciplinary pedagogical approach to enhance SDG competencies in higher education, focusing on mindset and creativity. Holmes, et al. [5] outline key strategies for integrating the SDGs into university frameworks, such as designing curricula, aligning graduate outcomes, and promoting institutional leadership towards sustainability goals. By aligning graduate outcomes with the SDGs and engaging in collaborative initiatives across institutions, universities can instill a culture of sustainability and social responsibility among students. Moreover, Hasanah, et al. [6] illustrates how supporting student activities and empowering students through initiatives like selecting Environmental Ambassadors can contribute to nurturing environmentally conscious leaders. By actively involving students in sustainability initiatives and providing platforms for engagement, universities can foster a sense of responsibility towards sustainable development. In conclusion, by implementing proactive measures such as advocating for green practices, promoting positive communication strategies, and supporting student-led initiatives, educational institutions can effectively embed SDG principles into student activities, thereby fostering a culture of sustainability and social responsibility.

METHODOLOGY

At Universiti Teknologi MARA (UiTM) Cawangan Terengganu, an approach has been adopted to ensure that student clubs' and societies' activities are aligned with the Sustainable Development Goals (SDGs). Each semester, student societies are required to submit proposals that are evaluated for their contribution to the SDGs. To effectively present this data, a mapping research methodology can be employed. This involves categorizing the activities based on the relevant SDG targets they address and quantifying their impact. The methodology would include:

1. Data Collection: Gathering all student society proposals and activities.
2. Categorization: Assigning each activity to one or more of the 17 SDGs based on the activity's objectives and outcomes.
3. Impact Analysis: Assessing the extent to which the activities contribute to the SDGs using a set of predefined metrics.
4. Visualization: Creating visual representations such as charts or graphs to depict the alignment and impact of

the activities on the SDGs.

5. Pattern Analysis: Identifying trends and patterns in the types of activities proposed and their SDG alignment.

This systematic approach not only showcases the commitment of UiTM Cawangan Terengganu to global sustainability but also encourages students to conceptualize projects that have a tangible impact on these goals. The resulting data visualization can serve as a powerful tool for communicating the university's contributions to the SDGs and for inspiring further sustainable initiatives.

RESULT AND DISCUSSION

A. Data Collection

In this research, Google Forms serve as an efficient tool for collecting data on student society proposals and activities spanning from 2021 to 2024. The customized forms, soliciting pertinent information from society leaders and members. These inquiries encompass proposal specifics, such as event descriptions, and submission timelines. Responses are automatically collated within a Google Sheets spreadsheet, ensuring systematic organization. Ethical considerations, such as informed consent and privacy, underscore the process.

Several programs have been proposed by student, society and clubs starting from 2021 up to Feb 2024. At the end of each program and activities, the number of students involved must be recorded by the event organizer and need to be reported. Table 1 summarize the activities proposed and number of students throughout the years. As been tabulated in the table, it can be concluded that for every program an average of 100 students are involved and this significantly show that, in term of channelling the information regarding on the SDG, the student activities are an effective platform. The student involvement also keeps increasing showing that, the slowly aware by joining a structured program organized by the student society, the can contribute to fulfil the SDGs objectives.

Table 1 The number of student activities held in UiTM Cawangan Terengganu

Year	Number of programs	Number of student involved
2021	175	17,793
2022	256	20,567
2023	273	31,844
2024	156	15, 416

B. Categorization and Impact Analysis

Assigning each activity reported in Table 1 to one of the 17 Sustainable Development Goals (SDGs) is a strategic and impactful practice Fleacă, et al. [7]. By linking activities to specific goals will embrace a holistic perspective. It ensures that the students efforts contribute to broader societal well-being rather than isolated outcomes. Table 2 highlights the relationship between SDGs with the impacts. As written in the Description column, the impact of the proposed activities will be measure and investigates by using amount, number, volume, count and weight to the respected SDGs.

Database for four (4) consecutive years is use as the raw data for this study. As tabulated in Table 3, for each SDG the value highlights the contribution gain from each activity type is be presented. For the year 2024, the data presented is only up to February 2024. Using the presented data, simple analysis using Microsoft Excel is done which is by showing is there any increment or decrement for each SDGs throughout the selected years.

C. Visualization and Pattern Analysis

The impact of the student activities is analysed and presented using graphical approach. Fig. 1 depicted whether the student activities give an impact to the selected SDGs. As seen in the figure, most of the selected SDGs have an incremental impact. As shown on the figure, the highest program and impactful SDG which student are able to achieve is SDG-3 which is Health and Well-being. The main reason SDG-3 is famous because usually student are always excited to joint programmes such as Fun Run, Orienteering and lot of face

to face and physical and health related activities. These programmes normally are conducted in group and participation of student and community is more than 50 peoples. Three SDGs which is 6, 10 and 16 do not so popular to be run by the student society. This indicates that the student still does not understand the main objectives of these SDGs and do not know how to create an impactful paperwork for these programs to meet these SDGs objectives. More engagement and workshop are required to be plan by the university to equip them to start experimenting with these three SDGs.

Table 2 Mapping the impacts of student activities with SDGs.

SDG	Activity Type	Impact Metric	Description
1 - No Poverty	Fundraising Event	Funds Raised	Amount of money collected to support poverty alleviation programs.
2 - Zero Hunger	Food Drive	Meals Provided	Number of meals distributed to those in need.
3 - Good Health and Well-being	Health Awareness Campaign	Participants Educated	Number of individuals who received health education.
4 - Quality Education	Tutoring Sessions	Students Assisted	Count of students who received tutoring support.
5 - Gender Equality	Workshop on Equality	Attendees	Number of attendees at workshops promoting gender equality.
6 - Clean Water and Sanitation	Clean Water Initiative	Liters of Water Cleaned	Volume of water cleaned or purified.
7 - Affordable and Clean Energy	Energy Conservation Campaign	Energy Saved	Amount of energy saved through conservation efforts (in kWh).
8 - Decent Work and Economic Growth	Career Fair	Job Opportunities Created	Number of job opportunities presented or secured.
9 - Industry, Innovation, and Infrastructure	Tech Innovation Contest	Innovations Proposed	Number of innovative solutions proposed.
10 - Reduced Inequalities	Inclusivity Seminar	Policies Proposed	Number of inclusivity policies proposed.
11 - Sustainable Cities and Communities	Urban Gardening Project	Green Spaces Created	Area of green space created or improved (in sq. meters).
12 - Responsible Consumption and Production	Recycling Drive	Waste Recycled	Weight of materials recycled (in kg).
13 - Climate Action	Tree Planting Event	Trees Planted	Number of trees planted.
14 - Life Below Water	Beach Cleanup	Trash Collected	Weight of trash collected from coastal areas (in kg).
15 - Life on Land	Wildlife Conservation Workshop	Participants Engaged	Number of participants engaged in conservation activities.
16 - Peace, Justice, and Strong Institutions	Legal Aid Clinic	Individuals Assisted	Count of individuals who received legal assistance.
17 - Partnerships for the Goals	Collaboration Event	Partnerships Formed	Number of partnerships formed between different societies.

Table 3: Summary of results from student activities.

SDG	Activity Type	2021	2022	2023	2024
1 - No Poverty	Fundraising Event (in RM 1k)	10	10	30	20
2 - Zero Hunger	Food Drive (per Program)	10	30	35	20
3 - Good Health and Well-being	Health Awareness Campaign (no of Students)	250	380	400	500
4 - Quality Education	Tutoring Sessions (no student)	100	80	250	280
5 - Gender Equality	Workshop on Equality (no of student)	30	60	55	80
6 - Clean Water and Sanitation	Clean Water Initiative	0	0	0	0
7 - Affordable and Clean Energy	Energy Conservation Campaign (in GWh)	1.08	2.06	2.1	0.457
8 - Decent Work and Economic Growth	Career Fair (in 1000 students)	4.578	2.241	2.485	0.006
9 - Industry, Innovation, and Infrastructure	Tech Innovation Contest (no of student)	150	150	198	198
10 - Reduced Inequalities	Inclusivity Seminar	0	0	0	0
11 - Sustainable Cities and Communities	Urban Gardening Project (in sq. meter)	56	80	50	26
12 - Responsible Consumption and Production	Recycling Drive (in kg)	50	65	78	41
13 - Climate Action	Tree Planting Event	20	30	35	20
14 - Life Below Water	Beach Cleanup	50	78	90	45
15 - Life on Land	Wildlife Conservation Workshop (no of student)	25	20	38	15
16 - Peace, Justice, and Strong Institutions	Legal Aid Clinic	0	0	0	0
17 - Partnerships for the Goals	Collaboration Event	20	28	30	14

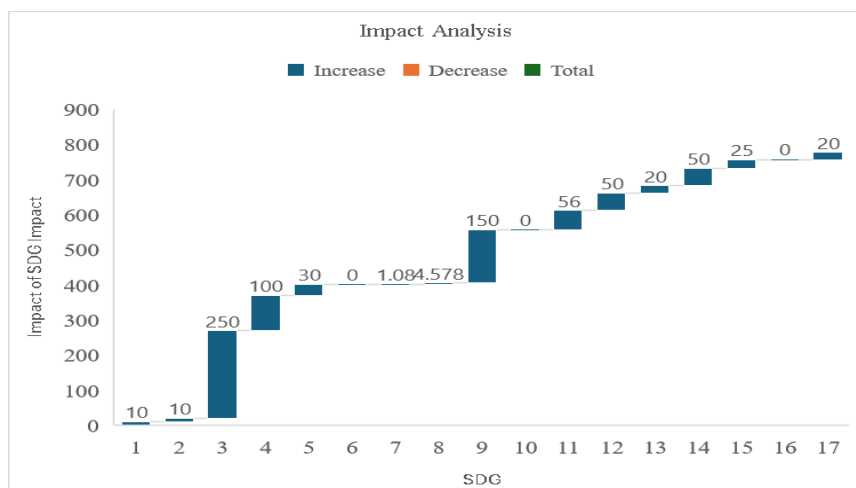


Fig. 1. The analysis of SDG Impact

CONCLUSION

The findings of this research give an indicator to the university that, with increased support, collaboration, and resources, student activities at UiTM Cawangan Terengganu can significantly advance the SDG agenda. The study has verified the needs for an integrated approach that combines education, action, and innovation, empowering students to be catalysts for sustainable change. Through this, the university is already addressing the pressing SDG issues and contribute to a more sustainable future. It has been shows in the study, gradually an increment for most of the SDGs from the year of 2021 to 2024. This data verify that the organized student activities have raise awareness and gives a tangible impact on SDG-related objective. Using the structured programs as reported in the earlier section and mapped with the impact merit, student can easily plan multiple SDG initiatives which can contributes more impact to the communities.

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