

Strategies to Increase Sustainability Awareness in Higher Education: Experiences from Abu Dhabi Women's College



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ABSTRACT

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Environmental sustainability remains an important challenge worldwide, and multiple studies highlight the need to increase individuals' knowledge of such issues. A number of researchers suggest that universities are in a unique position to increase awareness of environmental sustainability issues and effect change in young adults and surrounding communities. This paper chronicles one interdisciplinary team's attempt to increase sustainability awareness in a university setting within the United Arab Emirates. The research team collaborated over an 18-month period to plan and execute a series of strategic events aimed at increasing sustainability awareness among students, staff, and other university stakeholders. Having adapted a Participatory Action Research (PAR) approach, the researchers collected largely qualitative data from periodic meetings, survey results, observation, and reflection activities to evaluate the success of each event. The collected data was subsequently used to plan each succeeding strategy and increase the likelihood of its success. The PAR process encouraged team reflection and facilitated collective action throughout the campaign. As a result, the team observed heightened levels of participation as the sustainability campaign progressed. There was also a marked improvement in the attitudes of stakeholders towards the protection of the environment and sustainability practices. The study concludes with lessons learned and recommendations for best practices to manage environmental sustainability awareness campaigns. Recommendations include the employment of collaborative partnerships, effective marketing, and motivational practices. Such findings may be of practical value to Higher Education Institutions and other organizations seeking to promote sustainability awareness and create a structured awareness campaign.

1. INTRODUCTION

Sustainability is one of the most prevalent problems facing many countries today, especially developing nations. Statistics suggest that within the United Arab Emirates (UAE), waste generation per capita is about 2.1 kilograms a day. This figure is significantly high for a country of 10 million people, making it one of the world's highest sources of waste compared to other countries. Furthermore, approximately 77% of this waste ends up in landfills [1]. Figure 1 provides a comparison of the UAE's waste generation with other nations. There are a number of problems associated with trash landfills – physical, economic, environmental, ecological, societal, as well as moral. Each problem presents long-range impacts that may affect future generations [2]. Over the past few decades, many organizations have responded to the call to minimize landfill use by increasing awareness of the issues, including Higher Education Institutions (HEI). HEIs have a unique opportunity to effect change in achieving environmental sustainability not only on college campuses, but also within their respective communities [3, 4]. Researchers recognize the value of promoting sustainability and recycling at universities, and the literature is replete with studies examining sustainability approaches at institutions of

higher learning.

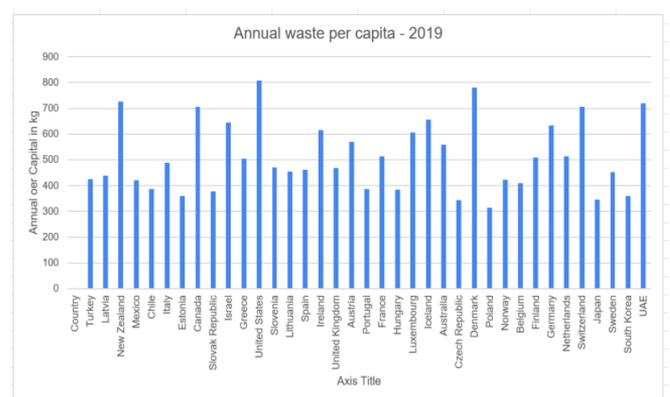


Figure 1. Annual waste per capita in 2019

Given the nature of their size and activities, universities often operate like small towns or cities [5], thereby producing a significant amount of waste. Previous studies suggest that more than 55% of college campus waste is recyclable, as it is often sourced from paper and food packaging [6, 7]. Consequently, many universities have longstanding onsite

recycling programs. University recycling efforts are not new and exist within most Western institutions. In fact, as of 1990, 78% of North American higher education institutions were reported to have recycling programs [8]. That number has since grown exponentially worldwide and university-recycling programs exist now in even developing countries. The issue today is not the existence of such programs - but how to measure their effectiveness, improve the recycling process, and ensure the awareness of campus stakeholders. The following narrative provides a review of relevant literature.

2. LITERATURE REVIEW

2.1 Studies on the effectiveness of university recycling programs

Worldwide, researchers have reported studies aimed at enhancing waste management practices on university campuses. In the US, as part of a senior level seminar class, a research team examined the existing recycling program to determine why recycling rates were not reaching an optimum level. Their research primarily focused on factors driving recycling behavior [9]. More recently, McCoy et al. [10] conducted a study to increase recycling compliance rates and reduce the proportion of recyclable materials placed in trash bins at Western State Colorado. In neighboring Canada, researchers explored the waste disposal habits, attitudes, and literacy of Dalhousie University students. The collected data was useful for the improvement of waste disposal and waste diversion across Dalhousie's campus [11]. Further south in the Caribbean, Bailey et al. [5] conducted an eight-month study at University of West Indies, Cave Hill Campus, Barbados, to acquire information about the perceptions, beliefs and attitudes of staff and students towards the existing waste management program and to gain insight into how waste is managed both at the university and national levels. Similar studies aimed at improving universities' recycling rates and practices have been conducted in the UK [12, 13] and beyond. A study in Thailand aimed at investigating important issues for sustainability implementation in higher education noted that waste remains a critical issue for HEIs [14].

In the Middle East, several studies have emerged from Saudi Arabia. Alshuwaikhat, et al. [15] assessed sustainability practices within different public sector universities in Saudi Arabia, and more recently Alsaati et al. [16] surveyed students' knowledge and practices of sustainability. However, it was noted that the literature contained fewer studies aimed at assessing the recycling programs of universities in the Middle East and North Africa (MENA) compared to Western nations. This observation supports Jahamani's [17] comments that developing countries such as Jordan and UAE are aware of environment protection issues, but few of these countries report their performance. Nevertheless, existing studies collectively demonstrate the worldwide interest in enhancing universities' recycling programs due to the common challenges they present.

2.2 Challenges to effective recycling programs on university campuses

Results from numerous studies suggest that university-recycling programs may operate at less than optimum levels without proper intervention. Several barriers to effective

recycling have been identified including lack of motivation, bin contamination, inconvenient recycling facilities, and lack of awareness about recycling practices. Liu et al. [18] found a positive correlation between an individual's attitude towards recycling and their awareness of recycling. Likewise, Rodríguez-Barreiro et al. [19] identified awareness as one of the critical factors influencing a person's attitude towards recycling. Even world governments recognize the potential impact of awareness on sustainability practices. A 2008 Waste Management Law in Indonesia acknowledges that one principle of waste management is awareness [20]. Regarding convenience, studies have found that when recycling facilities are available and easily accessible, individuals are more likely to recycle [21, 22]. Bin contamination is also a factor on many campuses, which occurs when improper materials are placed in the wrong bin, such as food products placed in a recycling bin for paper. An additional barrier outlined in the literature was poor communication between students, faculty, staff, and other stakeholders regarding sustainability practices. Such findings echo the words of Rene A. Henry of the US Environmental Protection Agency:

“Many universities teach environmental science courses, yet the professors do not interact with the facilities management people or provide them with needed technical and management support,” [23].

Achieving optimum campus sustainability requires the cooperation and partnership of multiple stakeholders including students, faculty and staff, university management, funding agencies, the community, and industry collaborates [15].

Overall, these studies highlight the continued interests and challenges of university recycling and sustainability programs. Several important themes for effective execution and management of such programs are cited including the need for continuous communication, partnership, and awareness.

2.3 Research context, motivation, and objective of the current study

Recycling takes place to varying degrees at Higher Colleges of Technology - Abu Dhabi Women's College (HCT/ADW) – the site for this study - and several sustainability initiatives have been implemented over the years. Stakeholders can see paper recycling bins near copier stations along with other waste stream bins available in various locations. Despite some successes, preliminary research conducted by the authors suggests opportunities to optimize ADW's existing recycling program. A small informal survey queried stakeholders about their knowledge of recycling at ADW, and the responses indicated a significant lack of awareness about both recycling procedures and facilities. The lack of awareness is commensurate with challenges cited in the literature. Another cited challenge is partnerships – or the lack thereof. Given the results of the informal survey coupled with findings from the literature, a group of multidisciplinary faculty joined forces to assess, enhance and optimize ADW's current recycling program and practices. The team identified several aims including the development of a promotional campaign to raise awareness about sustainability efforts at ADW.

This paper outlines the experiences of this multidisciplinary project team's efforts to increase sustainability and recycling awareness practices at Abu Dhabi Women's College in Abu Dhabi, UAE. The information presented describes the project team's development and implementation of awareness

activities, challenges, successes, and lessons learned with current outcomes.

3. METHODS

3.1 Team formation

In 2018, ADW faculty and students from three academic divisions joined together to form the “Paper, Plastics, and Cans (PPC) Recycling Process Improvement Project for Business Sustainability”. Members of the team came from the disciplines of Business, Computer Systems (CIS), and Applied Media totaling 10 faculty and alternating numbers of students. Additional partnerships were formed with three local industry and government entities: Al Dhafra Paper Manufacturing Company LLC, Borouge Plastics, and Abu Dhabi’s Environmental Agency. Key aims of the PPC project include conducting a comprehensive assessment and waste audit of the current recycling program, developing a marketing and promotional campaign to increase sustainability awareness, and modifying the recycling program by installing SMART waste bins fitted with sensor technology to help monitor recycling levels and coordinate logistical efforts for effective collection. Figure 2 summarizes the complete project. While the waste audit and SMART waste bin implementation are important aspects of the project, this paper focuses on the awareness campaign efforts only.



Figure 2. PPC project phases

3.2 Participatory action research

The project team adopted a Participatory Action Research (PAR) approach. Participatory Action Research (PAR) is “a systematic, participatory approach to inquiry that enables people to extend their understanding of problems or issues and to formulate actions directed toward the resolution of those problems or issues” [24]. PAR allows researchers to engage in cycles of critical reflection and respond with corrective actions to drive the next cycle. This method is an appropriate choice given the interdisciplinary nature of the research and its focus on implementing a series of sustainability events. Using PAR, the research team was able to work collaboratively with the college community and industry partners to design, implement, and evaluate each of the sustainability awareness activities. Several studies also support the use of action research for sustainability awareness research [25, 26].

In practice, the research team collected data from team meetings, brainstorming sessions, observations, survey results, and reflection activities to influence the success of each awareness strategy. Before and after each awareness event, the researchers invited the PPC team and other stakeholders to share their views and ideas about the event. After each activity took place, researchers conducted an impact analysis to identify the particular decisions that were essential to the success of each event. As this reflection took place, subsequent

events incorporated lessons learned to improve the probability of success in succeeding activities.

Participants were tasked with reflecting on each event and answering two questions: “What was good about the event?” “What should we do differently next time?”. The data outcomes from each session were used to inform decisions for the next event. The goal of each reflection cycle was to gather feedback useful for developing and implementing actions aimed at improving succeeding events. The implications of these reflection activities are discussed within each activity presented in the results section. Figure 3 summarizes the PAR process used by the project team.

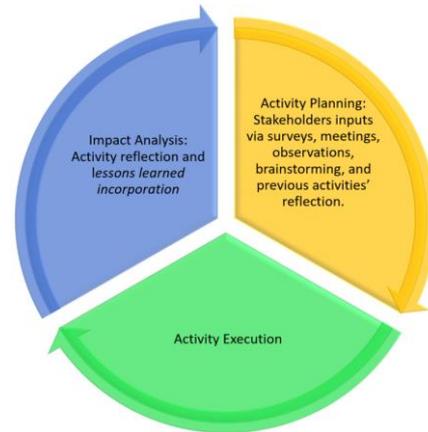


Figure 3. PPC project PAR process

4. RESULTS

4.1 Awareness strategies

The five activities outlined below took place from Fall 2018 to Spring 2020 with the purpose of increasing environmental sustainability awareness on campus.

4.1.1 Activity 1: Sustainability awareness symposium

The first event, a “Sustainability Awareness Symposium” was held campus wide during the latter part of the fall semester in 2018. This event featured seven speakers from the college community who focused on different areas of sustainability – students, facilities, information technology, and faculty members. The event was held in an auditorium with the capacity for a minimum of 100 people. However, the attendance was less than impressive with approximately 30 attendees. Reflecting on the event’s outcomes, the project team noted some problematic factors. One reason for the low attendance was the timing of the event. It took place before semester finals. The students were no longer attending classes and hence, there was not much incentive for students to be present on campus. Also noted from the team’s review and stakeholders’ solicited comments was the lack of campus awareness about the topic of sustainability and the researchers’ project itself.

4.1.2 Activity 2: “Survey of recycling practices at ADW”

In keeping with original project aims, the team developed and administered the “Survey of Recycling Practices” campus wide in spring 2019 semester. Targeted participants included students, faculty, and staff. This survey not only helped to increase participants’ awareness of sustainability and

recycling issues along with ADW practices and resources, but the data gathered also proved useful in planning upcoming sustainability events. Survey results revealed the limited knowledge of the ADW community regarding sustainability in general and current recycling provisions at ADW. In addition, the team gained insight on stakeholders' recycling practices on and off campus, pathways to promote sustainability events, and ideas to garner the attention of stakeholders. The team integrated information gained from the survey in planning the remaining activities.

4.1.3 Activity 3: Campus sustainability road show 1

The third activity, "Campus Sustainability Road Show", took place in spring 2019. For this event, the PPC team collaborated internally with faculty from the General Studies (GS) Department at ADW. These lecturers taught a recurring Sustainability course at the college. Based on the stakeholder's feedback from Activity 1, the team decided to schedule Activity 3 during regular class time hours. As a result, the attendance for this event included approximately 60 students enrolled in the Sustainability course plus additional students, faculty, and staff.

The researchers further enhanced Activity 3 by collaborating externally with the Environmentally Agency of Abu Dhabi (EAD) to feature a motivational speaker from the agency. The EAD's speaker provided students with a meaningful talk aimed at inspiring students to become more involved in local sustainability efforts. Moreover, the EAD provided student giveaways, which the PPC team distributed in jute bags featuring the newly created PPC project logo. PPC team members developed and designed the jute bags.

During the project team's reflection process, participants noted that several factors contributed to the success of Activity 3. Unlike Activity 1, this event took place early in the semester when students were still actively attending classes and not preparing for final exams. In addition, collaborating with the GS lecturers and the EAD ensured that there was a willing audience and exciting speaker for the occasion. Lastly, the PPC logo jute bags with giveaways provided a tangible token for participants to remember the event and the PPC project long after the conclusion of Activity 3.

4.1.4 Activity 4: Sustainability day

The project team organized a "Sustainability Day" in the fall of 2019. This preparation for this event began with the project team reviewing prior events and soliciting ideas from ADW students and staff to create a more enhanced event aimed at awareness and changing the behavior of the ADW community towards recycling practices. The team outlined a formal plan as shown in Figure 4. A major aim was to make this event interactive from start to finish beginning with the event invitation. The invitation featured a QR code that directed participants to a digital Padlet where they shared their ideas and personal experiences for creating a better environment. During the event, participants had access to an Augmented Reality (AR) system developed by Computer Information System (CIS) members of the PPC Project Team. The AR system highlighted the PPC project and different recycling activities related to paper, plastic and cans. Three guest speakers were featured to discuss local sustainability projects taking place in the UAE. Nine sustainability partners were recruited to participate and setup exhibition booths for visitors featuring displays, materials, and experts ready to discuss sustainability issues with visitors. Guest speakers and booth participants came from both outside and within the ADW community including some ADW students.

Four internal college partners joined the event to publicize areas that continuously work towards making ADW's campus more sustainable. The facilities department highlighted how the addition of light sensors in the classrooms and installation of water flow controllers in the bathrooms have improved sustainability. They also informed students of the campus waste management process and daily waste production figures. The IT department showed students efficient ways to use printers in order to reduce paper, electricity, and ink waste. A sustainability class and sustainability campus initiative lead by General Studies teachers managed a booth to share information about the importance of sustainability and the effects of human actions. A sustainability design class lead by Applied Media students displayed a prototype room featuring furniture made of recycled materials in order to showcase creativity and sustainability side by side.

Sustainability day	May-19					End Sem.	Aug-19											
	W1	W2	W3	W4	W5		W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	
Proposal of Sustainability Day to the management	■																	
Set date for the event and team kickoff meeting					■													
Send initial information to Industry Partners for the event					■													
Establish contact with possible speakers							■											
Involve ADW Facilities department and IT								■										
Organize preliminary agenda									■									
Prepare clearance for speakers										■								
Set plan for the interdisciplinary team (CIS, Applied Media, and Business)											■							
Execute planned activities												■						
Finalize agenda													■					
Send final invitation to the event sustainability partners														■				
Purchase give aways															■			
Invite Alumna creator of the Secret Garden																■		
Communicate site layout to participating partners																	■	
Wrap up meeting																	■	
Set venue (Assembly Hall)																		■
Sustainability Day																		■

Figure 4. Sustainability day 2019 planned activities

Table 1. Summary of sustainability awareness strategies

Activity	Strategy	Time Period	Outcome
Sustainability Awareness Symposium	Event in auditorium with 7 college speakers focusing on sustainability topics.	Fall 2018	Low attendance (~30%). Low awareness about Sustainability witnessed from the community.
Survey of Recycling Practices at ADW	Survey targeted students, faculty, and staff.	Spring 2019	Increased participants' awareness of sustainability and recycling issues in ADW. Results showed participants had limited knowledge in the area. Gathered data used for upcoming events planning.
Campus Sustainability Road Show	Event in auditorium with a motivational speaker from EAD.	Spring 2019	Moderate attendance (~65%). Event giveaways left lasting impression. Partnership with the Sustainability Lecturers harvested a willing audience.
Sustainability Day	Event in assembly hall featuring 3 speakers, 9 sustainability partner booths, and 2 technology platforms.	Fall 2019	High attendance (~90%). The multiple activities offered the audience a plethora of approaches to understanding/engaging/improving sustainability.
Campus Sustainability Road Show	Event in auditorium featuring 2 speakers from WWF.	Spring 2020	Over capacity attendance (100% +). Interactive and engaging session that introduced the UAE Ambassador of Nature initiative and App.

Five external sustainability partners joined the event with a display booth each where they could educate attendees on their contribution to the protection of the environment. Abu Dhabi Ports helped attendees understand how the port is contributing to the protection of the environment, especially marine life. Al Dhafra Paper Manufacturing Company demonstrated the process of recycling paper with a scale model of a paper-manufacturing mill. Borouge shared their activities and contribution to sustainability and society. The Secret Garden, a project founded by an ADW alumna, showcased its modified recycling bin, whereby a person throwing away a partially filled water bottle can donate their waste water to an attached waste water bin to water plants nearby instead of simply allowing the water to go to waste.

Finalizing the logistics of Activity 4 was immensely challenging. The planning of this event took 6 months to prepare the venue, invite guest speakers, invite the 9 sustainability partners (4 internal and 5 external), coordinate student volunteers and campus support service, prepare security clearances for external college visitors, and plan the event's agenda and activities. Figure 4 highlights the event timeline. Overall, observations and participant feedback indicated that Activity 4 was a success.

4.1.5 Activity 5: Campus sustainability road show 2

In spring 2020, the PPC Project team hosted once again a joint event with the Environmental Agency of Abu Dhabi (EAD) and with the World Wide Fund (WWF). Two speakers from the WWF engaged the audience with information about the UAE Ambassador of Nature initiative, which is a voluntary opportunity for youth to participate in sustainability projects across the UAE. These projects range from community cleanups to sustainability wild life projects. Participants were encouraged to become more active in sustainability issues through several programs affiliated with EAD including Youth Majlis. Youth Majlis is a program that brings together decision-makers and youth to debate, dialogue, and reflect on sustainability related issues. Throughout the event, speakers asked students about their opinions, experiences, and thoughts. Pictures and videos specific to the UAE were shared which really captured the attention of attendees, especially students. Speakers urged students to search their cellphones there and then and add an EAD app that allows users to explore the UAE. The speakers outlined specific ways for participants to

immediately get involved in sustainability and make an impact.

As observed by the PPC team, this final event was a success and a marked difference from Activity 1 where only 30 participants were present in the same location. This time the event was fully attended with every chair taken and many more people standing. Furthermore, the audience seemed genuinely engaged with the topics presented. Some students commented afterwards that they had signed up for some of the EAD programs and were ready to get actively involved in sustainability activities moving forward.

Table 1 displays a summary of all the activities and strategies used by the PPC Project to increase sustainability awareness at ADW from 2018 to 2020.

5. DISCUSSION

5.1 Project outcomes

Over the course of four academic semesters, the PPC project team organized a series of activities to increase sustainability awareness at Abu Dhabi Women's College. The initial response from stakeholders was minimal but over time with necessary adjustments, the team experienced a surge in participation, and several positive impacts have been observed. Anecdotal results include positive feedback from ADW students and staff about the PPC Project and sustainability in general. Conversations about sustainability have increased noticeably, and many stakeholders have expressed appreciation for the awareness events and reported how they are now more cognizant of sustainability and recycling opportunities in the UAE.

The research team also noted changes in students' behavior. For example, students started using marked segregated bins to properly dispose of recyclable trash instead of the standard bins. More students appeared to use reusable bottles instead of single use plastic bottles, and they also adopted this habit when purchasing coffee from the campus Starbucks. Overall, the research team has observed greater interest in sustainability and the PPC project from students, staff, and administrators.

An additional benefit has been the establishment of partnerships with professional organizations and internal units. The PPC Project team continues to collaborate with these entities for research purposes and future sustainability

activities.

5.2 Challenges and lessons learned

This project has not been without its challenges. An initial issue was generating enough support from the college community and keeping participants engaged for each event. The PPC team had to consider the best methods to attract the attention of the ADW community and create buy in. A closely related problem was the inconsistency of responsive communication and engagement within the project team. The team was composed of teaching faculty who still had to fulfill their core responsibilities each week. Therefore, it was not always easy to maintain team members' commitment to the project as they managed the regular semester load. Students' commitment to the project was also sporadic at times due to exam periods, class loads, and their mindset. Planning each activity was an additional workload for team members, as the college has specific security clearance and paperwork requirements that must be completed when inviting outside guests. All of these factors had an impact on the team and slowed the planning and execution process at times. The project team learned several valuable lessons during the reflective process for each event as outlined below:

Maintain team motivation and communication: It is important to keep all team members aware of progress and challenges during the planning of activities. This creates synergy and commitment as members work to resolve any obstacles. It is also essential to solicit administrative support and recognition. In addition to granting permission to hold events, administrators can endorse agreements that might encourage more participation. For example, students who participated in the PPC project were able to gain credit towards their volunteer hours. ADW requires students to accumulate a certain number of volunteer hours during matriculation. Faculty team members were able to use PPC project accomplishments towards their yearly performance evaluations.

Consider the timing and structure of events: To maximize attendance, it is important not to organize events during periods when students are not readily available. Be mindful of the teaching schedule and avoid scheduling events late in the semester or close to semester exam periods. Also, avoid having too many speakers featured in a single event. As the team observed, event attendees benefited from having engaging hands on activities. When planning awareness activities, the team should have enough lead-time to address multiple factors including securing guest speakers, promoting the event, finalizing logistical issues, and gaining any other necessary permits.

Keep the conversation about sustainability going/Leave a lasting impression: It is important to invite speakers that are both knowledgeable and exciting to not only capture participants' attention, but to expose them to opportunities to join sustainability activities. For example, during some events, students were invited to participate in local sustainability activities, and many signed up to join or receive future updates. In addition, most events featured environmentally friendly giveaways for participants to take home. Hopefully, these tactics stimulated students to continue the sustainability conversation in their homes with their families.

Partner with internal and external sustainability stakeholders: Awareness events should not be planned in isolation. It is important to develop long-term partnerships

with different sustainability stakeholders. Collaborating with internal and external entities generated synergy and improved the audience's experience greatly. The connections with Abu Dhabi's Environmental Agency, local industries, and other institutions were important to the success of the PPC Project's awareness activities. Environmental agencies represent the mission of the local government and policy makers, and engaging members from different universities enriches the dialogue between students.

Improve constituents' exposure to the project/event sponsor: It was important to publicize the PPC Project and keep it on the minds of ADW stakeholders. One technique the team found useful was distributing PPC branded paraphernalia at various events. As students paraded around campus with their PPC bags, it generated interest in the PPC Project. Furthermore, having students as project team members alongside faculty opened the door for students to publicize the project's aim, strategies, and achievements among their peers.

Generate interest with technology: PPC project team members (faculty and students) from the Computer Information Systems (CIS) discipline were instrumental in using technology to attract participants and capture their interest. As previously explained, the use of a QR code on event invitations, augmented reality (AR), and a digital Padlet all had positive impacts on attendees. Such tools get attendees involved and helps bring them into the conversation of sustainability.

Remember that seeing is believing: It is important to present participants with facts about sustainability relevant to their lives to capture and maintain their attention. Students in particular seemed more engaged when speakers featured actual sustainability issues and projects occurring in the UAE. For example, seeing the impact of waste on the habitat of dolphins, nearby desert areas, and other wildlife struck a chord with participants.

Maximize the benefits of a multidisciplinary team: Sustainability by its very nature is multidisciplinary, and the researchers noted a number of value added outcomes by involving students and faculty from different disciplines. For example, during Activity 4: "Sustainability Day", Applied Media students produced video recordings and infographics, CIS students implemented an Augmented Reality activity, and Business students coordinated activities among program participants and attendees.

6. CONCLUSIONS

HEIs have a unique opportunity to effect change in achieving environmental sustainability in the community. However, as highlighted in the literature, one critical component is creating awareness about sustainability and its importance, which is better achieved through effective partnerships. This study has shown how one multidisciplinary team effectively developed and implemented a series of strategies to increase their college community's knowledge and practices of sustainability. By forming partnerships with internal and external entities, the team was able to progressively widen its scope of engagement within ADW community during the sustainability campaign. Using a participatory action research approach, the team reflected upon each strategy and utilized lessons learned to enhance each subsequent strategy. As a result, the research team observed a marked improvement in the responsiveness of

stakeholders to sustainability issues and events.

This study does however have its limitations. The research takes place at one institution. Furthermore, many of the outcomes are based on observations and anecdotal data only. Data was collected primarily from within the project team. Future research studies should utilize a formalized data collection approach to explore participants' reactions after each sustainability event. This approach will allow researchers to investigate outcomes from the perspective of participants and gain additional insights about the effectiveness of sustainability campaign events. Future studies should also examine the impact of sustainability awareness efforts across multiple HEIs.

Overall, this research study illustrates how with dedicated team members, reflective practices, and effective partnerships HEIs can successfully promote sustainability and impress upon future generations the need for responsibility towards the environment. Insights from this study provide HEIs and other institutions practical strategies guidelines to advance sustainability awareness and create an effective sustainability campaign.

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