

CAMPUS SUSTAINABILITY: THE NEED FOR CHANGE

Norizah Hassan

*Department of English Language, Faculty of Languages and Linguistics,
University of Malaya, 50603 Kuala Lumpur, MALAYSIA.*

Email: norizah@um.edu.my

Muhamad Faisal Muhamad Noor

*Department of Science and Technology Studies, Faculty of Science, University of Malaya,
50603 Kuala Lumpur, MALAYSIA.*

Email: faisal@siswa.um.edu.my

ABSTRACT

Studies done on campus sustainability have received increased attention in recent years. According to Mostafa Nejati and Mehran Nejati (2012), "Given the growing global interest on the university's role towards promoting sustainability, an increasing number of universities are committing themselves to sustainability." However despite numerous efforts on campus sustainability initiatives, a whole sustainable campus is yet to be achieved. Findings from current research in the local context show that most students are aware about sustainability efforts and activities on campus but there is a gap between their awareness and action with regard to sustainability. A case study was done at University of Malaya (UM) to find the correlation between these two factors. A survey questionnaires and an interview were conducted in order to investigate the relationship between the students' awareness and engagement. This study acknowledged the role of student as change agent. However this responsibility should not be shouldered by the students alone. In order to lead the change, there need to be a team effort from both the students and the university. As suggested by Dunne and Zandstra (2011), there is a need to not only look at the students' action but also to listen to the student's voice towards achieving campus sustainability. This paper aims to not only see the actions taken by the students but also take into consideration the limitations they faced. Students can only do so much, but in the end success and change can only be achieved through a synergy approach. Based on the findings of the study, this paper attempts to come up with a proposal on what actions could be taken by the university to empower the students to lead the change for a sustainable campus and a better future.

Keywords: campus sustainability; awareness; engagement; change agent; student; synergy

1.0 INTRODUCTION

Sustainability practices the concept of preservation and conservation whereby, the main objective is to ensure a continuous supply of resources to the society for long-term and that the society has equal opportunity at acquiring these resources for their usage. In sustainability there should be a balance of social needs, economic development and environmental protection. However, the current world economic, social and environmental trends are not sustainable. Being a developing country, Malaysia is committed towards sustainability by aligning their policies and development with Agenda 21 in various sectors particularly in higher institute of education (HIE).

Universities are well known as an institution that are responsible for educating the professionals and future leaders, and also act as a foundation where new ideas and new innovations are being developed for the betterment of the society. "In the past, college campuses have often proven to be places of change, progressive think-tanks where ideas are born and tested" (Sadusky, 2014). However, in the 21st century, the role of universities has changed. Universities are no longer responsible in educating the future leaders only, universities are also responsible in conducting researches and innovating new methods, equipment, models and systems in producing a more sustainable future. The role of education in promoting sustainable development was stated explicitly in Agenda 21, the global action plan for the twenty-first century, whereby it is outlined that:

Education [...] should be recognized as a process by which human beings and societies can reach their fullest potential. Education is critical for promoting sustainable development and improving the capacity of the people to address the environment and development issues (Agenda 21, Chapter 36).

Campus sustainability has received wide attention throughout the whole world. Over the past decade, sustainability has become increasingly integrated in all areas of campus activity. Universities are considered as a small town where the students, academic staffs, administrators, and other stakeholders are the communities of the universities and the surroundings of the universities represent the environment of the society. Universities also act as living labs where students and other stakeholders are able to implement or experiment the knowledge they have gained from their classrooms, to the field, thus, proving whether their theories could be applied to the public or community in the real world. Furthermore, through the implementation of campus sustainability, the universities will also be able to produce ideal future leaders who could lead a brighter future and who not only possess professional and leadership skills but who are also ethical and responsible individuals.

2.0 LITERATURE REVIEW

Studies on campus sustainability have been conducted both locally and globally. Many HIEs have already recognized that they must play a role in creating a more sustainable future. "In Agenda 21, the declaration highlighted the increasing concerns towards environment and development that are occurring and that academia plays a pivotal role in realizing sustainability" (Zilahy and Huisingsh, 2009). These are shown not only through the universities' policies (Alshuwaikhat and Abubakar, 2008, McNamara, 2010 and Cotton et al., 2016), but also through the international treaties that are signed by the universities, stressing on the importance of implementing campus sustainability (Lozano et al., 2013). For example, The Talloires Declaration, (1990) is one of the first and most important motivation to obtain the commitment from universities in pursuing sustainable development in their organization. This is further supported by Emanuel and Adams (2011) who also mentioned in their studies that the number of universities which are involved with campus sustainability initiatives are increasing in numbers through the signing of international treaties that focuses on integrating sustainability into their management such as *The Bologna Charter*, *The Halifax Declaration* and *The Copernicus Charter for Sustainable Development*.

Besides signing treaties and implementing policies, universities are also making efforts by establishing Green offices in the universities. The establishment of Green offices in the universities also plays a huge role in championing the campus sustainability movement. Through these green offices campus sustainability goals could be further implemented and

achieved. These offices will act as an impetus for campus sustainability. *"UKM's efforts towards achieving sustainable development is further strengthened with the establishment of UKM Lestari Programme (Lestari is the Malay word for Sustainability) launched in June 21, 2007. The establishment of UKM Lestari Programme aims to coordinate research and implementation of sustainable development by the faculties, institutes and departments at the university."* (Fadzil, Hashim, Che-Ani, and Aziz, 2012). Being the pioneer in the field of sustainability, University of Science Malaysia (USM) also established the Center for Global Sustainability Studies (CGSS), to further drive their undertakings in the field of sustainability. Through the establishment of CGSS, USM has managed to further propel their research and education in the field of sustainability. In 2013, University of Malaysia Sabah (UMS) also introduced their initiative for campus sustainability through the idea of sustainable campus, EcoCampus together with the formation of EcoCampus Management Centre (Rosazman and Velan, 2015).

The role of education in ensuring a more sustainable future is inevitable. *"Some scholars consider knowledge of sustainability as fundamental to the successful implementation of sustainable practices on college campuses"* (Eagan and Orr, 1992; Earl et al., 2003; and Cosmann et al., 2006). Therefore, it is vital to integrate Education for Sustainable Development (ESD) into the universities' curriculum, enabling the students to grasp vital skills required to be the ideal graduates and in producing a sustainable future. Hutchison (2004), also supports the idea of education being the key in moving the society towards a sustainable future and with universities acting as a cradle for nurturing future leaders, there are no other institutions better to facilitate the process of transition towards sustainability. However, for universities students to understand and embrace sustainability, they must not only be taught in the classroom but instead they should engage knowledge outside of the classroom in order to see and understand what the real world is experiencing and what are the solutions needed to address these problems. McIntosh et al., (2001), highlighted in his study that a change in mind-set is important in educating the students in order to reach the sustainability goals. In order for students to understand how vital and important sustainability is for the future, the traditional approach of educating the students must be shifted into a more effective approach. Students should not only be exposed to the theoretical knowledge of sustainability but they must also be given the opportunity to apply that knowledge into action, thus, allowing them to gain important practical skills. According to Warburton, (2003) and Higher Education Funding Council for England (HEFCE, 2008), with both theoretical and practical knowledge being put into actions, higher education sector will be able to produce sustainable professionals and attain a sustainable future.

"Communities are the heart and hands" of all sustainability movement, regardless of its context" (Sarkissian et al., 2009). Without the involvement of the campus community, campus sustainability could not be achieved. One of the main key players is the students. Dunne and Zandstra (2011), identify that students play a pivotal role in reaching campus sustainability. Through students' voices and participations, universities will be able to improve their sustainability approach as they will be able to gain new and different perspectives from the students. Thus, proving the students as 'active collaborator' and 'co-producer' for positive transformation.

Daneri et al. (2015) identify students as change agent in a way that students must put the knowledge that they gain theoretically into action and through this approach, the students would not only be able to gain valuable experience, as well as to bring improvement to the issues being addressed whether it is the environment or social. He further emphasized through the Oberlin Project that, through students' involvement in campus sustainability projects, it would not only help improve the well-being of the society,

but it also benefits the students in a way as they being the driver of change and additionally imbuing their skills whether it is their management skills, communication skills and theoretical knowledge that they have gained from their classes, teamwork and social skills.

This study discusses the actions and the limitations faced by the students in leading the change for campus sustainability. From the study, this paper attempts to come up with a proposal on what actions could be taken by the university to empower the students to lead the change for a sustainable campus and a better future.

3.0 METHODOLOGY

A survey questionnaire was distributed randomly to 550 undergraduate students at the University of Malaya. This survey questionnaire was a spinoff from an earlier preliminary study conducted in 2015 with only 25 students. Out of 550 survey questionnaires distributed, only 454 responded to the survey questionnaires. The questionnaires were distributed to the undergraduate students from various faculties with different educational backgrounds. The questionnaire was adapted from Sadusky's study (2014) on college students' perception and behaviour towards sustainability. The questionnaire was adapted to suit local context. An additional component was added to the survey questionnaire to include the aspect of communication. Five major sections were identified which include the demographic profile of the participants, their engagement in sustainability activities, the medium of communication for disseminating information on sustainability, their knowledge on sustainability and finally their awareness of the sustainability concepts and offices.

An interview was conducted to further support and strengthen the findings from the survey questionnaires. 21 students from various faculties, representing different fields were interviewed on their involvement and engagement in sustainability activities on campus, best medium/channel of communication to disseminate and promote sustainability, the importance of education for sustainable development and also their suggestions on how to further improve campus sustainability initiatives at University of Malaya.

For this study, the focus of the discussion is on the two sections of the questionnaire which are on the students' awareness and engagement. The two sections were selected to find the correlation between these two factors – what is learnt and what is actually done. The data was tabulated manually and accordingly.

4.0 RESULTS AND FINDINGS

A total of 454 students participated in this study. From the total number, 303 were females and 151 were males. The participants were from the Science, Medical, Dentistry, Engineering, Business and Accountancy, Arts and Social Science, Education, Computer Science, Built Environment, Law and Languages and Linguistics faculties and also Academy of Malay Studies and Islamic Studies. The involvement of the students from various faculties and academies represent the main campus population.

The survey questionnaires were distributed to the students during their second semester of their studies to ensure that they are already aware and familiar with campus and college activities. Most of the students were briefed and exposed to the campus sustainable activities during their orientation week and college activities day.

The two sections of the questionnaire that were tabulated were the students' engagement in campus sustainability activities and their awareness of the concept and idea of what is sustainability.

Data Collection

454 undergraduate students were involved in this study, ranging from the 1st year students to the final year students. The students involved in the studies were students from various faculties and academies with different educational background. The ratio of male to female students involved in this study is 151:303 which is approximately 1:2. Majority of the students involved were 1st year students with 162 participants (35.68%), 117 students (25.77%) were from the 2nd year, 109 students (24.01%) from 3rd year, 24 students (5.29%) represented the 4th year students and another remaining 42 students (9.25%) represented the final year students from the total of 454 students.

1) Students' awareness towards the concept of sustainability

Students' awareness and understanding on the concept of sustainability was investigated. In this category, the students were asked to state whether they agree or disagree with the three pillars of sustainability (social, environment and economy) and the importance of sustainability to create a balanced world. The result obtained showed that in general, the students' were aware of the three pillars of sustainability and agreed with the importance of sustainability to build a balanced world for the society. The data was tabulated as in Figure 1.

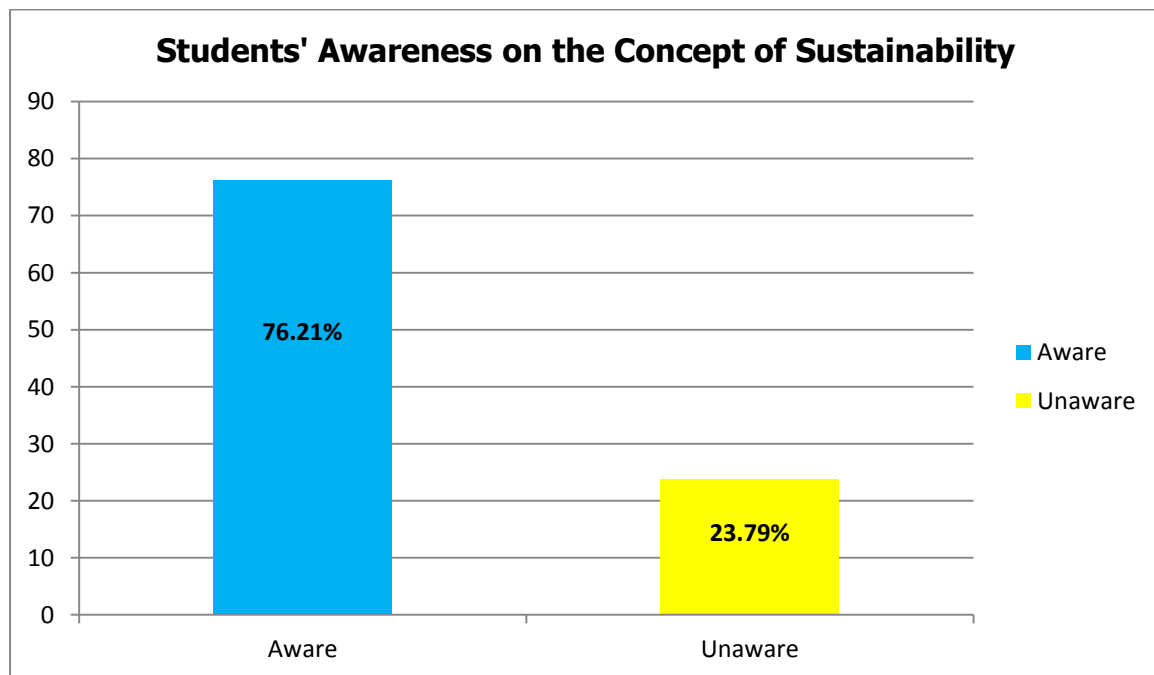


Figure 1: Students' Awareness on the Concept of Sustainability

From the data tabulated in Figure 1, it showed that, 76.21% or 346 out of 454 students were aware of the concept of sustainability while 23.79% or 108 students were not fully aware or have no idea of the concept of sustainability.

2) Students' engagement in campus sustainability activities

The second variable for this study is the students' engagement in campus sustainability activities. The students were asked to state their involvement in campus sustainability activities. Several sustainability activities that were conducted in the campus were listed out in the questionnaires to see whether the students participated or not. The responses from the students were tabulated in Figure 2.

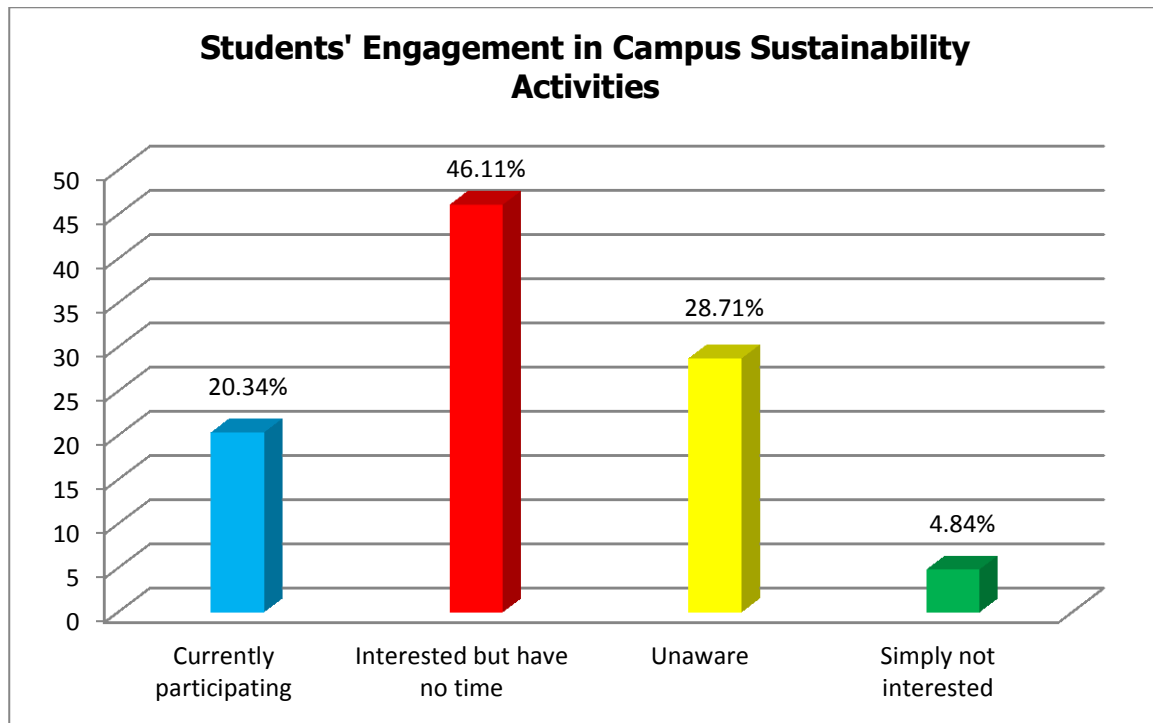


Figure 2: Students' Engagement in Campus Sustainability Activities

From the data shown in Figure 2, only 20.34% or 92 students were participating in campus sustainability activities in the university. Majority of the students, 46.11% or 209 students were interested with the sustainability activities but could not participate due to time constraints. 28.71% or 131 students were unaware of the sustainability activities hosted in the universities whereas 4.84% or 22 students were simply not interested with the sustainability activities in the campus. Among the activities listed were the Rimba Project, Water Warriors, Zero Waste Program, Earth Hour, Recycling and Saving Electricity and Water in the colleges. Saving Electricity and Water was the most popular activity among the students because it was the easiest, habitual and did not take the students' time and effort to carry it out.

3) The correlation of students' awareness towards the concept of sustainability and their engagement in campus sustainability activities

Based on the findings above, it is clear that awareness does not necessarily translate into action. Although students' claimed they are aware and concerned about sustainability,

the actual data reflects otherwise. This is illustrated in Figure 3. Figure 3 is a combination of Figure 1 and Figure 2 which highlights the correlation between awareness and engagement.

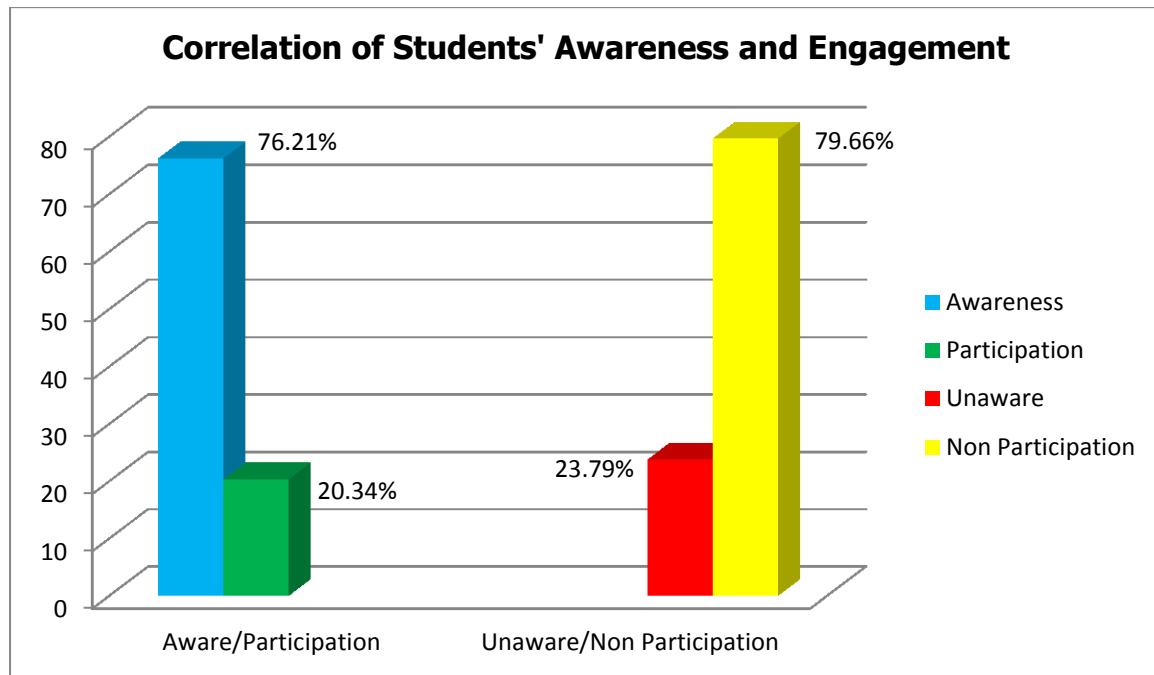


Figure 3: Correlation of Students' Awareness Towards the Concept of Sustainability and Their Engagement in Campus Sustainability Activities

5.0 DISCUSSION

Based on the findings, it can be said that awareness does not necessarily translate into action. The awareness level of the students is approximately at a ratio of 80:20. Unfortunately, the participating level is not the same, it is 20:80. Figure 2 highlights that, out of the 80% of the non-participating students, approximately 94% of the non-participation problems could be attributed to the university. The data further showed that majority of the students (46.11%) were interested but could not participate in the activities due to time constraints whereas 28.71% were unaware of the activities actually being conducted. These two categories of students is where the university need to be concerned, as they can be nurtured in becoming change agents for campus sustainability. Dunne and Zandstra (2011) highlighted in their study that both students' participation and voice are crucial in the pursuit for sustainability. Students should be made as the active collaborator and co-producer of the university in addressing the issues. Through the students' participation, the students will be able to act as the driver for the campus sustainability movement. Furthermore, the students' voices will help the university in providing new perspectives in solving the sustainability issues that is occurring within the university. Despite the benefits of involving students in the sustainability movement, the results showed that students' involvement were still hindered by time constraints. Assignments, classes, reports, projects and presentations limit their involvement in these activities. Being a university student, students prioritize their academics above all, believing that academic achievement is the key to a successful future. Timing is also important for the students. In order for the students to be involved, these activities must be properly planned and do not coincide with major faculty events or examinations. Therefore, university needs to structure

and realign their curriculum to enable and encourage students to be involved in campus sustainability activities. To lead the change, the university needs to empower the students. Communication is a vital aspect in getting the students' attention and participation. 28.71% of the students were not aware of the campus sustainability activities being conducted by the university, colleges and even faculties. Even though the university had sent out the messages throughout the campus community, it failed to get the desired responses from the students. Emails are no longer appealing to these potential change agents. From the interview, all the students hardly accessed their university emails for updates. The students believed that the current medium of communication is highly ineffective due to information overload and that the university must address this matter urgently. Peer to peer is the best and highly recommended choice by the students. A student who is interested and passionate about sustainability could attract another student to participate together in the campus sustainability cause. Therefore, the university must take the opportunity in capitalizing on these change agents to help the university in achieving the campus sustainability goals. Besides that, the university must move in tandem with technology. Publicities and campaigns must not only be effective in catching the students attention but also active in updating the students of current and upcoming events. Good communication can be achieved through the right social media.

Besides time constraints and ineffective communication, students also voiced out that, facilities were lacking within the vicinity of the university. The interview with the students revealed that, for certain faculties and colleges in the university, there were hardly any dustbins or recycling bins available for the students' usage. Without proper facilities, students lose interest to practice sustainability. Even if there were facilities, they were designated at inaccessible places and signage were not displayed. The intention and inclination to participate were discouraged.

6.0 CONCLUSION

University is a place where knowledge is shared, taught and transferred to the students. With knowledge comes awareness which will translate into actions. Understanding how vital sustainability is to our future is important for the planet viability. Sustainability cannot be learned within the four walls of the classrooms. Participation is crucial as it will enable the students to have a better view on the issues at hand and understanding the problems faced in attaining sustainability. Campus sustainability activities such as Water Warriors, Rimba Project and Zero Waste Program prove to be an effective platform for the students to learn sustainability and be their first step as agents of change.

In this study, the students' awareness and engagement were investigated. The findings presented makes a strong case for why students' voices are important and must be heard. It is a call for action for the university's management to incorporate students' voices and views into the university's agenda for campus sustainability. Students being the leaders of tomorrow are critical for the sustainability future we hope to achieve. Learning institutions now have a great responsibility, more than ever before, to integrate sustainable development into all their modules -- teaching, research, community engagement and campus operations to create a wholesome youth that is a functioning and responsible member of society. The university needs to make the change before it can lead the change.

We cannot always build the future for our youth. But we can build our youth for the future.
Franklin D. Roosevelt.

ACKNOWLEDGEMENTS

This research was supported and funded by University of Malaya under the research grant RP018A- 15HNE.

REFERENCES

Alshuwaikhat, H.M., & Abubakar, I., 2008. An integrated approach to achieving campus sustainability: assessment of the current campus environmental management practices. *Journal of Cleaner Production* 16, pp. 1777-1785.

Cosmann, N., Gray, M., Legge, T., Leous, J., Parry, N., and Valicenti, L., 2006. "Perceptions of campus environmental sustainability at Columbia University", 31 March, available at: www.columbia.edu/cu/mpaenvironment/pages/CampussustainabilityReport.pdf (accessed 3 January 2015).

Cotton, D., Shiel, C., and Paço, A., 2016. Energy saving on campus: a comparison of students' attitudes and reported behaviours in the UK and Portugal. *Journal of Cleaner Production* 129, pp. 586-595.

Daneri, D.R., Trencher, G., and Petersen J., 2015. Students as change agents in a town-wide sustainability transformation: the Oberlin Project at Oberlin College. *Current Opinion in Environmental Sustainability* 2015, 16:14–21.

Dunne, E and Zandstra, R., 2011. *Students as change agents - new ways of engaging with learning and teaching in higher education*. Bristol: A joint University of Exeter/ESCalate/Higher Education Academy Publication. <http://escalate.ac.uk/8064>

Eagan, D.J., and Orr, D., 1992. *The Campus Environmental Responsibility*. Jossey-Bass, San Francisco, CA.

Earl, C., Lawrence, A., Harris, N., and Stiller, S., 2003. "The campus community and the concept of sustainability: an assessment of college of Charleston student perceptions", *Chrestomathy: Annual Review of Undergraduate Research at the College of Charleston*, Vol. 2, pp. 85-102.

Emanuel, R., & Adams, J.N., 2011. College students' perceptions of campus sustainability. *International Journal of Sustainability in Higher Education*, Vol. 12, no.1, pp. 79-92.

Hutchison, D.C., 2004. *A Natural History of Place in Education* College Press.

Lozano, R., Lukman, R., Lozano, F.J., Huisingh, D., Lambrechts, W., 2013. Declarations for sustainability in higher education: becoming better leaders, through addressing the university system. *Journal of Cleaner Production* 48, pp. 10-19.

McNamara, K.H., 2010. "Fostering sustainability in higher education: a mixed-methods study of and change strategies", *Environmental Practice*, Vol. 12 No. 1, pp. 48-58.

McIntosh, M., Cacciola, K., Clermont, S. and Keniry, J., 2001. *State of the Campus Environment: A National Report Card on Environmental Performance and Sustainability in Higher Education*, National Wildlife Federation, Reston, VA, available at: www.nwf.org/Global-Warming/Campus-Solutions/Resources/Reports/State-of-the-Campus-

Environment- Report/Read-the-State-of-the-Campus-Environment-Report.aspx (accessed October 2016).

Nejati, M., & Nejati, M., 2013. Assessment of sustainable university factors from the perspective of university students. *Journal of Cleaner Production*, 48, pp. 101-107.

Rosazman, H., and Velan, K., 2015. Exploring strategies for sustainable 'ecocampus': The experience of Universiti Malaysia Sabah. *Malaysian Journal of Society and Space* 11 issue 3, pg. 84-96.

Sadusky, H., 2014. College Student Perception & Behavior Towards Sustainability: Results of A Campus Survey. *Honors Theses*. Paper 354.

Sarkissian, W., Hofer, N., Shore, Y., Vajda, S., and Wilkinson, C., 2009. *Kitchen Table Sustainability: Practical Recipes for Community Engagement with Sustainability*. Earthscan, London.

UNCED, 1992. UNCED Agenda 21. <http://www.un.org/esa/dsd/agenda21/> (retrieved on 29 January 2017).

Warburton, K., 2003. Deep learning and education for sustainability. *International Journal of Sustainability in Higher Education*, 4(1), 44–56.

Zilahy, G., Huisingh, D., 2009. The roles of academia in regional sustainability initiatives. *Journal of Cleaner Production* 17 (12), 1057-1066.