Sustainable campuses: Building self-efficacy among academic, staff, and students of Green Office Model

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Abstract. The goal of this study is to draw attention to the critical value of self-efficacy strategies, particularly the Green Office (GO) Model, which aims to improve collaboration among all stakeholders in higher education communities and serves as an example of what a campus sustainability office might entail. A two-step technique guides the research that is presented. To better understand the forces and obstacles preventing the institutionalization of GOs, first the features and similarities of currently existing GOs were examined. Based on this, a peer-to-peer digital training program was created and put to the test with the goal of giving students, employees, and academics the knowledge and abilities they need to start new sustainability offices and enhance the operations of those that already exist. The lack of adaptation of foreign experiences to different university environments, the absence of educational programs, and the scope of public relations were found to be the three key barriers to the spread of the GO model. The results demonstrate that GO offers a reproducible methodology that may be scaled internationally and modified for use in various university situations. The availability and capacity to obtain information from the actors at the sampled colleges outside of the immediate GO community have placed restrictions on this research.

1 Introduction

The potential of student design for the reform of universities toward sustainability is significant because it affects how future generations will approach the societal difficulties that lie ahead [1]. Higher education is essential to sustainable development [2, 3]. It emphasizes how these challenges go beyond education for creating future career profiles and claims that universities are required to impart not only the skills needed to advance successfully in a globalized world but also a positive attitude towards environmental issues and cultural diversity in their students, faculty, and staff [4].

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The success of the teaching and learning processes is a duty shared by both professors and students as part of university education for sustainable development. In addition, higher education for sustainable development benefits university participants while also having positive effects off campus [5]. It is crucial to inspire other university actors to collaborate for a better partnership on campus. This is illustrated by numerous examples in the field of service learning, a teaching and learning strategy developed in the United States that combines subject-specific study with social engagement and provides students with solutions to unsustainable developments in ecological and social life areas [6, 7].

Students are not to be seen solely as addressees but rather as contributors to effective educational activities, according to the principle of involvement in the knowledge of (education for) sustainable development [8, 9]. Students may, for instance, take on the following increasingly responsible roles as part of higher education change processes: 1) as evaluators of their own learning processes and university experience; 2) as participants in decision-making processes; 3) as partners, co-creators, and experts; and 4) as change operators [10].

As the interpersonal relationship between teachers is still frequently dominated by a traditional understanding of education, in which a hierarchical understanding of roles dominates, numerous studies have shown that in practice there is a strong participation gap between the four levels, from selective cooperation to genuine participation [11]. Accordingly, the amount of participation decreases steadily from the first to the fourth stage [12]. Student councils are even less common [13], and the role of sustainability organs in institutional governance typically declines to a sustainability office or advisory committee.

It is crucial to consider what levers within higher education may be used to give more space to student involvement because the majority of these projects are simply a few examples of the higher education landscape [14]. It is beneficial to take a systematic look at various roles that students can perform in universities and partnerships for such a strategic examination of student design potential. This framework is covered in a recent publication from the UK's Higher Education Academy (2014) in four overlapping areas: curriculum design, pedagogical planning, and consultancy, subject-based research and inquiry, and scholarship of teaching and learning (both within and across disciplines) (see Figure 1).

In light of this, student demands for cutting-edge educational approaches to sustainable development can only be seen as consistent [15–20]. especially when these demands are combined with those for rigorous effectiveness and efficiency tests. But in addition to the demands put forth by the student body, innovative concepts have also been effectively implemented at a number of colleges [21–24].

However, despite being hopeful and effective, all of these instances only make up a small portion of the higher education scene [25]. But what worries me the most is that these numerous individual success stories continue to be fragmented [26]. In other words, there is no strategic approach that would methodically assist motivated students in launching their own sustainability-oriented model by arming them with the essential information and useful tools [27]. Last but not least, the preservation of information is essential in light of student cohort turnover rates that typically last only a few years at universities [28].

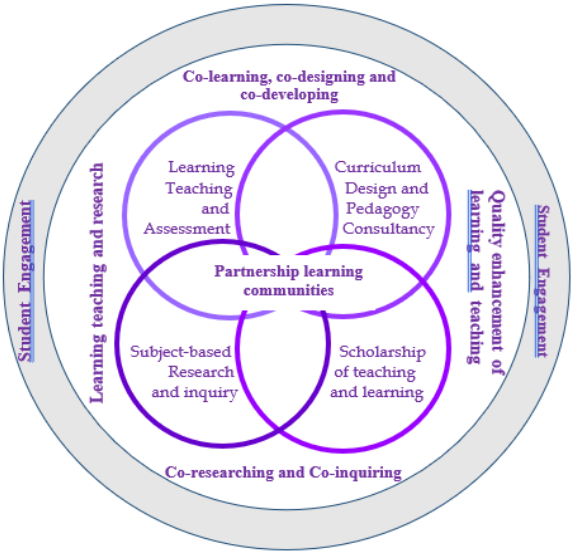

Fig. 1. Framework enabling students to be partners in learning and teaching in higher education

The Green Office (GO) Model, which is outlined in the following, offers a solution to these problems: It attempts to deliver general, practical information materials for a quick start (such as for the identification of strategic leverage points) while also providing essential adaptability to specific institutional framework conditions.

From an institutional perspective, it would be desirable to invite all stakeholder groups to contribute their specific expertise to achieve a joint vision of a sustainable university. However, the compartmentalisation of universities often makes it difficult for people to collaborate across departmental boundaries. This is a problem, as sustainability efforts remain constrained to small islands of activity. Platforms need to be established to create bridges across those islands and offer more opportunities for people to contribute.

A GO can be seen as such a platform, as it informs, connects and supports students and staff to act on sustainability [29]. At the same time, a GO develops its own ideas to better embed sustainability in education, research or operations. The first GO was established at Maastricht University in 2010. Since then, the model has been replicated by 35 universities across Europe, and won many awards, among them the UNESCO-Japan Prize on Education for Sustainable Development. The model is open-source to tailor-make it to individual institutional needs.

2 Methods

At the beginning of a two-year project, a closer analysis of 13 existing GOs revealed that the average GO consists of five student employees, who work 10 hours a week, and one staff member. Some GOs also engage students as volunteers. The average funding for a GO is $30,000 per year to pay for project expenditures and salaries. It is made visible through permanent office space and an online presence.

Additionally, according to the research, there are three different kinds of GOs. Universities without official sustainability personnel or working groups are most suited for the student-led sustainability office. Then, with staff interaction at the university, the GO is established as a department of the institution run entirely by students. This adaption offers

excellent student empowerment and grassroots engagement while being an economical solution to institutionalize sustainability initiatives and advance them. However, it should only be a temporary fix because the students do not have the institutional backing they require to achieve completely while having all the duties of a full-fledged sustainability department. Institutions with a professional sustainability coordinator or team but limited student involvement in the university's sustainability initiatives would benefit from having a student engagement unit. The GO was developed to encourage student engagement and staff-student collaboration. Students and one to three staff members make up the GO, which collaborates with the current sustainability team. As a result, staff can interact with more students, and students can contribute to the university's sustainability initiatives. The sustainability team can frequently put it up without a protracted and difficult lobbying effort. The roles of the GO as contrasted to the staff members run the risk of being confused or misinterpreted by both parties or outside parties. A student or employee who manages the GO and regularly participates in the sustainability team can combat this.

3 Results and Discussion

Students and faculty who want to start a GO, however, must address the crucial issues of knowledge transfer and capacity growth. Workshops, Skype calls, and downloadable resources were used to facilitate the transfer of prior knowledge. It constrained the scope of influence. The notion of expanding the GO approach by establishing an online course to draw in and support more students and university personnel arose.

Where there are numerous ongoing sustainability projects among students and staff that are poorly connected and undetectable, a central sustainability platform is a smart option. In a single GO, students and staff work together as a cohesive team. Through a single department, this strategy can effectively improve sustainability across the university by encouraging close collaboration between students and faculty. This method runs the risk of having staff members dominate the team and weakening student leadership.

Through financing, office space, and a mandate, the university offers institutional support for GOs. Students and employees who want to start a GO must enlist this institutional backing. Students and staff have similar obstacles to overcome even if every institution has its own unique processes. Recognize the GO Model and the organization's current sustainability initiatives. Organize a group of allies to advocate for their GO. Make compelling reasons for why the university ought to support a green office. develop a GO that is customized to their university using the GO model. Determine potential financial sources, create a funding application, and seek help.

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The failure to adapt the global experience surrounding the GO Model to different university environments, the absence of educational offers, and the narrow reach of public relations are the three key barriers to the spread of the GO model. In response, a two-year initiative supported by the Indonesia Environmental Foundation aims to promote this self-efficacy paradigm throughout Indonesia and beyond. It is being carried out by rootAbility and the Indonesia University of Education.

The idea that creating a GO is always a hands-on process serves as the foundation for the learning philosophy and approach. Therefore, lengthy lectures or theoretical talks are not very helpful. Previous research demonstrated that the most effective method involved the

autonomous production of specific tasks and questions, debate in small groups, and personalized feedback.

The following components make up the didactical layout: Online guides: Six online tutorials are completed by the participants. These seminars allow for plenty of discussion and questions and are interactive. Videos: In advance of each online tutorial, participants are emailed links to quick videos (between 5 and 7 minutes long) that introduce them to the topic. Prior to each online tutorial, participants must complete a job in addition to the videos. It takes 30 to 60 minutes, depending on how diligently they work. Individual feedback: On more significant preparation activities, such as the initial GO design, individual feedback is provided. Intermittent online instructional questions can be submitted to the teachers or posted in the project group on platform n, a social media site run by the German sustainability network netzwerk n. Website and e-books: There is a website dedicated to the GO Model (www.GreenOfficeMovement.org) as well as two e-books, one of which serves as an introduction to the GO Model and the other is devoted to the findings of 23 case studies examination.

The core of the learning support consisted of online tutorials. The participants engaged in six online tutorials in both English and German, including an introduction to the GO Model, building the GO Initiative, analyzing current sustainability initiatives, designing the goals and structure of the GO, identifying funding needs and options, and funding application.

An overview of the contact information for student organizations and university staff at 152 Indonesian universities and colleges with a focus on sustainability was produced to promote the Indonesia online course. Keyword searches on individual university websites were conducted for this purpose, and Hoch-N partner network participating universities' contact information was gathered. At least one person who received email notification of the start of the online course could be located for 79 percent of the universities. Several hundred emails were sent to various stakeholder groups to advertise the online Indonesia course. Additionally, 20 university groups that registered on the platform n and had a focus on sustainability were approached directly.

The first cycle of the course was taught in English and Indonesia between February and July 2022. 82 applications were received in total, and 73 of them were chosen to participate. 34 people participated in at least four of the six online courses. The 60-minute lessons were scheduled every two weeks. Zoom was employed for the implementation (a conference software). A Facebook group was utilized as an online forum for the online English language course, and platform-n from netzwerk-n was used for the online Indonesian language course, where the preparation assignments for each tutorial and the results were uploaded.

Participants evaluated the first cycle of the course through pre- and post-surveys as well as participant interviews. In order to determine the elements that enabled participants to effectively complete the course, interviews based on the Success Case Methodology were conducted. Participants were asked to rate the complexity of the main steps in the process of creating a GO in the pre- and post-surveys. The difficulty of the steps was rated as being 17 percent less challenging in the post-surveys.

On a scale from 1 to 10, participants were also asked how likely they were to suggest the course to others. Respondents gave an 8.2 on a scale of 10, with 10 being the average response. The participants identified two areas for improvement: better workload communication and paying more attention to the participants' various language proficiency levels (in the English course). Simplified texts and a workload estimate in the registration form will address these difficulties. The interaction between participants and the group as well as the individual feedback on more substantial assignments were both highly valued by the participants. Along with the participants' enthusiastic responses, the training has produced distinct, observable results. Eight new GOs have been founded since the project's inception, and 25 universities have started new GO-creation initiatives.

The online course's subsequent cycle will run from October 2022 to January 2023. To increase interaction and promote more independent study, the course materials will be relocated to an interactive platform created with Articulate Storyline. There will only be four calls for the group tutorials. After taking into account participant input, each participant or participating team will receive a regular individual call. The course will remain accessible after the project is finished for self-study on www.GreenOfficeMovement.org, with the option to ask questions and schedule support calls.

4 Conclusion

There are many different strategies to achieve sustainability, according to research on the topic of sustainability in higher education. While the creation of a strong institutional culture of sustainability can be considered as a crucial success element for the improvement of universities, just little attention is paid to these issues. Their findings are supported by those of Stephens and Graham (2010), whose investigation of Transition Management provided pertinent insights that enabled them to create an empirical study agenda on sustainability in higher education.

When considering students' roles and appropriate levers towards sustainability-oriented transformation, the following questions are suggested as the central discussion points against this backdrop of developments within higher education institutions.

What adds to the Green Office Model and how does it vary from existing sustainability governance approaches? The Green Office Model (GO) is a reproducible, international sustainability governance approach that can be scaled internationally and modified to suit various university situations. It offers a structured method for enhancing student leadership in university sustainability initiatives, collaborating with other student-driven initiatives or staff-led teams. However, undemocratic nations may hinder sustainable future development due to governance regimes, limiting students' voices.

The first round of the online course's results indicate that it is a scalable and efficient means to disseminate information about the GO Model establishment process to students and employees all around Europe—and perhaps beyond. Providing remote support to participants individually or traveling to each site and offering workshops and guidance at their institutions were two alternatives to the online course. The online course has several advantages over these options, including peer learning, a decrease in travel emissions, and the creation of learning resources that will be available after the second round of learning support is finished. In order to encourage other institutions to pursue the route towards sustainability, transferability and scalability are critical strategic and operational aspects. But the authors are adamant that the GO Model's peer-to-peer nature and adaptability make it a promising tool for reorienting higher education institutions toward sustainability.

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