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Reach out and touch: student training community projects for sustainability – a case study

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Abstract

Purpose – As one of the five concrete actions recommended for implementing sustainable development at universities (internal operations, institutional framework, research, education and capacity building), capacity building has received the least research attention. Although capacity building can be a tangible implementation of outreach that offers empowerment to universities, it is currently unclear how capacity building can be operationalised in concrete activities and which parties represent the university and the community. The purpose of this study is to provide the idea that capacity building can be organised through student training projects.

Design/methodology/approach – To provide support for our suggestion that student training projects can act as an implementation method for capacity building, an illustrative case study is presented. The case study concerns an academic consultancy training project for students in the domain of sustainable development.

Findings – The case study analysis reveals that, as an implementation method, student training projects can provide benefits for both universities and communities. It appears that student training projects do not depend on individual engagement, on individual university staff members or on research grants and that they provide community members with access to resources, expertise and experiences of academics. Moreover, student training projects overcome the major challenges of both power distance and continuity.

Originality/value – To summarise, student training projects may provide a new, promising avenue as an implementation method for capacity building that provides substantial benefits and overcomes the challenges of other methods mentioned in the existing literature.

Keywords Case study, Capacity building, Empowerment, Sustainability, Academic outreach, Student training projects

Paper type Case study

Introduction

Sustainable development at universities has recently received quite some attention. Recent research has recommended that implementing sustainable development at universities can result from concrete actions in five general domains, namely, internal operations, institutional framework, research, education and empowerment (Adams *et al.*, 2018; Leal Filho, 2011; Lozano *et al.*, 2015). The domains of internal operations and institutional framework refer to the sustainability of the university in business operations, management, vision and mission (Lozano *et al.*, 2015). As institutes for higher education are, in this

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respect, not different from any other company or organisation (Blanco-Portela *et al.*, 2017), these two domains of sustainability are extensively covered in the existing literature (Bellou *et al.*, 2017; Cohen *et al.*, 2018; Cruz, Barata, Ferreira, and Freire, 2017; Tangwanichagapong *et al.*, 2017; Washington-Ottombre *et al.*, 2018). The domains of research and education refer to the sustainability of the university in its core businesses of scientific research and education. These two domains are intertwined (Lambrechts and Van Petegem, 2016), and additional studies are being devoted on sustainable research and sustainable education in institutes for higher education (Lozano *et al.*, 2015; Velazquez *et al.*, 2005; Wals, 2010).

Unlike these four domains, the domain of empowerment has thus far received limited attention (Shiel *et al.*, 2016). Empowerment, also known as outreach and collaboration, community involvement or capacity building, has been defined in multiple different ways (Merino and De los Ríos Carmenado, 2012). In the context of sustainable development, academic capacity building and empowerment can be defined in terms of partnership in regional networks and cooperation with other stakeholders in local communities (Copernicus Alliance, 2011). The existence of varying partnerships between universities and communities has been extensively documented in the health literature, revealing that such partnerships are predominantly focused on capacity building and empowerment for social sustainability and well-being (Suarez-Balcazar *et al.*, 2015; Thompson and Hood, 2016).

Yet, it is currently unclear who actually represents the university and the community and which method can best be used to ensure sustainable development at universities through capacity building and empowerment. Universities are institutions represented by a colourful mix of professors, research and teaching staff; students at BSc, MSc and PhD level; and managers, administrators and supporting staff, who each set their own priorities with respect to sustainability and each have their own weaknesses in managing these priorities (Ferrero-Ferrero *et al.*, 2018). Similarly, "the community" can be represented by community members, community organisation leaders and other community-based stakeholders who each have their own priorities and expectations (Thompson and Hood, 2016). Consequently, joint efforts of academic institutions and communities to address social issues easily fail because of differences in academic and community priorities and because of imbalances in power and knowledge (Craig, 2007; Kindred and Petrescu, 2015; Nieusma and Riley, 2010; Thompson and Hood, 2016).

The present case study provides a potential new solution on how to organize sustainable capacity building and empowerment in higher education. In this note, it is suggested that student training projects can be a successful method. Student training projects form a recurring element in students' education that over time includes different professors, teaching staff, students and/or community members. Therefore, student training projects can provide continuity to university-community partnerships without the weaknesses that methods based on individual representatives carry. The current research presents some theoretical support from action-oriented learning and practice-based learning literature and from practical literature, as well as some preliminary empirical support from a case study of a student training project. Collectively, these findings provide a first support for the notion that student training projects may be a useful method for sustainable capacity building and empowerment in higher education, thereby providing new and essential insights that can advance both the sustainability literature and university-community partnerships.

Background

Capacity building and empowerment are multidimensional concepts that have been defined in various ways (Merino and De los Ríos Carmenado, 2012). Much like 'sustainable development', the appeal of these concepts might well be that the concepts can mean

different things to different people – be it as an integrating force or as an empty slogan (Cairncross, 1991; Lusthaus *et al.*, 1999; Van Dam and Apeldoorn, 1996). For example, capacity building has been defined as the process whereby 'individuals, groups, organizations, and societies enhance their capacities in terms of human, organizational, institutional, and social capital' (Lavergne and Saxby, 2001; Nair, 2003) or as '*the development of human resources (knowledge, skills, individual and group attitudes) for the purpose of developing and managing certain areas in society*' (Enemark and Ahene, 2003, p. 0). Most scholars agree that in the area of sustainable development at universities, capacity building and empowerment include one or more of the concepts of educating by providing tools and competences for social learning about, and through, systems behaviour. Therefore, this is used as a working definition of capacity building and empowerment for sustainable development at universities.

Next to learning and communication, capacity building and empowerment are seen as a major way to achieve sustainable development (Tassone and Wals, 2014). Since a conference in Stockholm in 1972 (UNEP, 1972), a host of academic partnerships, declarations and charters have been designed to foster environmental and sustainable development in education (Dillon, 2014; Leal Filho, 2011; Lozano *et al.*, 2013). Over the past few decades, these various university charters for sustainable development have propagated capacity building and empowerment by pointing out the universities' duty to enhance the relevant literacy and ethics in society (e.g. "The CRE-COPERNICUS University Charta," 1994; "Magna Charta Universitatum Europaeum," 1988; Wals, 2009). This has resulted in capacity building and empowerment at the regional level through regional research, educational relationships with firms and active collaboration with regional public and private actors (Caniëls and van den Bosch, 2011). Following the triple helix model of academy-industry-government relations (Etzkowitz and Leydesdorff, 2000), such collaborations can result in tight and mutually beneficial relationships between academia and industry within the region (Drucker and Goldstein, 2007). For example, community partners can benefit from access to university resources and expertise, enhanced capacity and legitimacy and improved rigour and quality (Suarez-Balcazar *et al.*, 2015; Thompson and Hood, 2016). Moreover, studies on the effectiveness of the plethora of capacity building initiatives appear to be lacking. Existing evaluations primarily focus on aims, activities and hurdles rather than outcomes (Shiel *et al.*, 2016). Therefore, it is important to determine ways in which acknowledged hurdles to successful outreach and capacity building can be avoided.

Sustainable development through capacity building and empowerment has several weaknesses. Universities comprise a varying group of actors who expect a wide array of benefits from university-community partnerships. For example, professors and research staff must balance community capacity building with gaining scholarly merit through research publications on university-community partnerships (Wilson, 2004). Students focus on receiving hands-on learning experiences and the opportunity to enhance their knowledge and skills in practical application (Marullo and Edwards, 2000; Thompson and Hood, 2016). Furthermore, these actors vary in the individual engagement, time and effort they put in partnerships (Leal Filho *et al.*, 2018). As professors and research staff often divide their time between numerous tasks for instance, their devotion to university-community partnerships is dependent on the funding or research grants related to the partnerships (Velazquez *et al.*, 2005; Wals, 2009). Other issues are a tendency of faculty taking control of, or conversely taking no interest in, the content of the partnerships – depending on whether the outcomes are deemed publishable or not – or the administrative bureaucracy of the university determining the process by imposing mandatory procedures (Martin *et al.*, 2005).

At the university level, weaknesses of existing methods are the lack of continuous university resources in terms of available time and allocated budget because of staff turnover and/or administrative policy (Suarez-Balcazar *et al.*, 2015; Velazquez *et al.*, 2005). Moreover, funding agencies have the tendency to focus on short-term sustainability projects and to approve or disapprove follow-up projects without regard to long-term commitment or partnership development (Mobjörk and Linnér, 2006). Finally, real or experienced power imbalances between faculty and community members tend to occur in university-community partnerships (Suarez-Balcazar *et al.*, 2015). This can result in perceived superiority of academics and inferiority of community members, and a lack of mutual respect. In sum, with the existing methods of capacity building and empowerment for sustainable development, it may be questioned when and how (members of) universities participate in university-community partnerships; how and why (members of) universities select the sustainability issues that they are willing to address and to what extent they recognize and value the interests of the community (Thompson and Hood, 2016).

Although involvement of student training projects might sound contra-intuitive at first glance as students and training projects are temporary or short-term, student training projects may actually provide a continuous base for capacity building and empowerment of sustainable development that cannot be provided by existing methods. Student training projects indicate that continuity does not depend on individual engagement because all parties should be aware that the next project will involve different students and may involve different teaching staff. In that sense, student training projects offer the possibility to bind continuity of university-community partnerships to roles rather than to individuals. When student training projects are integrated in the curriculum as practical training and experiential learning (Beynaghi *et al.*, 2016), a continuity can be guaranteed that is independent of staff turnover, funding or research grants and of university administration, i.e. the funding and continuity of student projects is more likely to be guaranteed by an educational program that is independent of individual staff members or research grants (Beringer and Adomßent, 2008).

Moreover, student training projects may cover topics that would be less attractive for academic staff because "scholarly merits through research publications" are unlikely to materialise (Nicotera *et al.*, 2011). Direct action for social change used to be the traditional prerogative of university students: at crucial moments in history, students have been at the forefront of social revolts for peace, civil rights, democratic reforms and environmental protection (Boren, 2013; Rhoads, 1998; Werenskjold, 2010). When students are provided with the freedom to examine potential university-community partnerships in student training projects, they can have an independence that is unique for commissioned research and they may focus on partnerships and sustainability topics that can make essential contributions to society (Warburton, 2003). Furthermore, the method of applying student training projects allows community members to reap all benefits from university involvement because students may provide easy access to the academic resources, including relevant professors and staff, which community members need (Suarez-Balcazar *et al.*, 2015; Thompson and Hood, 2016). Lastly, community members can see students, more easily than staff members, as people who need to and who are willing to learn (Sandy and Holland, 2006). This could reduce potential (perceived) power distances and increase enjoyment of the university-community partnership (Suarez-Balcazar *et al.*, 2015; Thompson and Hood, 2016).

There is some indirect support for the idea that student training projects can form a useful method for capacity building and empowerment of sustainable development in higher education. Literature on service learning, action-oriented learning, experiential learning and on practice-based learning suggests that active involvement of students in

community service or in community projects as an integrated part of their education can benefit students (Battersby, 2017; Billig and Furco, 2002; Celio *et al.*, 2011; Hodge *et al.*, 2014; Johnson and Spicer, 2006; Sachs and Clark, 2016; Wachholz and Merrill, 2012). It has been suggested that successful university-community partnerships requires that universities abandon the traditional positivist-reductionist and disciplinary approach to 'pure science' in favour of a critical-transformative and interdisciplinary approach to 'scholarship of engagement' (Marullo and Edwards, 2000). Such engaged and transformative university-community partnerships should allow the concrete system knowledge and social preferences of community stakeholders to feed and correct the abstract theoretical models of academic analysis (Willets *et al.*, 2009). This should benefit the university by contributing to more realistic models, which in turn should benefit society by more accurate understanding and prediction.

To provide some preliminary empirical and illustrative support for the idea that capacity building and empowerment in sustainable development can be reached through student training projects, a case study of a single academic consultancy training project for a regional association of municipalities in The Netherlands is discussed.

Method: an illustrative case study

As part of their education, all students from the Wageningen University were required to fulfil an academic consultancy training module. In the academic consultancy training module, interdisciplinary groups of five to six MSc students from varying educational backgrounds were requested to formulate potential solutions to real-life issues. Every study period, companies, NGOs, policy makers, and community groups hold discussions with the university. There, the related parties discuss issues that they encounter in their daily practices and that they would like to be dealt with in the academic consultancy training module. Students can then subscribe to the issues that they would like to address in their academic consultancy training, and the university combines interested students into interdisciplinary teams in such a way that their different programs cover the main elements of the issue.

During the academic consultancy training, every student team communicates multiple times with the community partner (the client(s)) about the contents of the issue and the team's progress towards a potential solution. Moreover, every team is intensively coached on teamwork and on self-reliance by a teaching staff member, as well as on the academic standards, on the applied methods and on the contents by an academic advisor (a professor or research staff member) from the university. The academic consultancy training module ends with a presentation session where the team presents their solutions to the issue to the community partners, the teaching staff member, the academic advisor and other students, and where the team receives feedback from the community partners. Finally, the team delivers a final report and the students are graded on their performance and collaboration during the training module, their presentation and on the final report by the teaching staff member, the academic advisor and the community partner(s). After the academic consultancy training module has ended, the university and the community partner(s) together decide whether indeed the issue is solved or whether a new student team needs to continue working on the issue.

For the present case study, one academic consultancy training project that concerned a sustainable development issue was selected. This project was selected because it combined several of the potential fail factors (Table I). It therefore allowed to assess the merits of community capacity building through student training projects. In the selected project, a regional association of municipalities aimed to facilitate the collaboration between several organic growers and a logistic partner and to enhance the commercial success of the organic

products resulting from the collaboration. More specifically, the student team was asked to provide recommendations on how organic fruit and vegetable growers jointly should present their produce to potential customers to develop a joint marketing strategy, and how to increase sales for organic products. Halfway through the project, the academic supervision role had to be shifted from one of the authors to the other because of external circumstances. Six students with backgrounds in agricultural economics and policy, communication science, consumer science and organic agriculture were selected to address this issue in their academic consultancy training. Because of their diverse background and training these students, both supervisors had different views regarding the goal of the project. After being invited and briefed by the associated municipalities, the student team conducted exploratory talks with the growers and with the logistics partner. It rapidly appeared that the suggested collaboration only included a signed letter of intent, and the student team autonomously decided to reformulate the issue under study as inventorying the attitudes of the growers and their logistics partner towards mutual collaboration and testing these attitudes against the success factors of collaboration. Literature suggests that effective collaboration depends on industry and commodity conditions as well as on individual motivational conditions (Dania *et al.*, 2018; Van Dam *et al.*, 2004). Therefore, the student team decided to focused on the motivational preconditions for successful collaboration (i.e. joint efforts, sharing activities, collaboration value, adaptation, trust, commitment, supportive power, continuous improvement, coordination and stability; Dania *et al.*, 2018).

In their search for empirical data, the student team interviewed members of a successful comparable association from a different region in the country. Moreover, the student team interviewed the participating growers and the logistic partner individually in semi-structured interviews. After comparing the results of the interviews with the growers and the logistics partner with the success factors of collaboration arising from existing literature and from the interviews with the members of the successful association, the student team wrote a critical report to the members of the (tentative) association and to the commissioning municipalities. Finally, the student team presented their research and their recommendations, and the community partners provided comments on the findings and indicated their experience with the academic consultancy project. The content of the project and the recommendations to the community members are beyond this case study. Instead, the results reflect the learning process and empowerment of the involved parties. These results were derived from discussions on intermediate reports between the students and their academic supervisor, from sections of the final report and from an informal discussion with the participants during a feedback session directly after the final presentation.

Fail factors	Source
Diverse university actors with disparate goals	(Marullo and Edwards, 2000; Thompson and Hood, 2016; Wilson, 2004)
Staff involvement dependent on short-term research grants	(Mobjörk and Linnér, 2006; Velazquez *et al.*, 2005; Wals, 2009)
Faculty either takes control or is disinterested	(Leal Filho *et al.*, 2018; Martin *et al.*, 2005)
Stifling university bureaucracy	(Martin *et al.*, 2005)
Power imbalance between university experts and community	(Suarez-Balcazar *et al.*, 2015)
Lack of continuity and staff turnover	(Suarez-Balcazar *et al.*, 2015)

Table I. Overview of potential fail factors in university-community collaboration

Results

The findings of this study are summarized in Table II. Firstly, it was suggested in the literature that student training projects can provide a continuous base for capacity building and empowerment of sustainable development because continuity is related to roles rather than to individuals. Indeed, in the feedback session, the community members did not mention having experienced the change in academic supervision. This is because throughout the project, the community members' only contact with university representatives was with and through the students. Community members also did mention considering a follow-up project, although they were well aware that this would involve other students and possibly different supervisors. This suggests that community members indeed see the continuity of their interaction with the university independent from the interaction with individual university actors.

Secondly, it was argued that student training projects can provide continuity guaranteed by an educational program that is independent of individual staff members or research grants. Though not evident from this single example, the academic consultancy training is heading towards its 20th year and has outlived its 1st coordinator and a sizeable portion of teaching staff with comparatively minor changes in design. This has guaranteed a continuous flow of short-term projects and allows follow-up projects on a long term timescale.

Thirdly, it was suggested that student training projects may empower students and stimulate independent thinking. Supporting this point, the community members clearly indicated that they mostly appreciated the independence of the students who bluntly refused to follow the originally defined issue and instead focused on what they perceived as being necessary. It was generally believed that contracted research partners would not have reformulated the issue and would merely have provided an answer without critical assessment of its relevance. This provides evidence for creative independence that is rare in most intramural courses.

Fourthly, it was suggested that student training projects would allow easy access to the academic resources that community members need. During the feedback session, the community members indicated that, throughout the project, they had benefitted from the resources and from the expertise that were accessed by and through the students. They also mentioned that they benefitted from receiving an analysis that they could not have conducted themselves and from a legitimate policy recommendation. This finding supports the suggestion.

Fifthly, it was suggested that student training projects may cover topics that would be less attractive for academic staff. Though not conclusively supported by this project, it seems unlikely that, without the existing structure of academic consultancy training, an adequate

Table II.
Overview of potential fail factor in university-community collaboration and student training response

Fail factors	Student training response
Diverse university actors with disparate goals	Collaboration as learning outcome
Staff involvement dependent on short-term research grants	Staff involved as educational coach
Faculty either takes control or is disinterested	Faculty is directly involved with the learning goals, and only indirectly with the project
Stifling university bureaucracy	Circumvented by educational contract
Power imbalance between university experts and community	Mutual learning by students and community members
Lack of continuity and staff turnover	Continuity of supervision is guaranteed by educational contract

multidisciplinary research team could have been formed for such a small-scale issue in such short notice. With 12-h supervision being paid from education budget, the project was feasible.

Sixthly, it was suggested in the literature that community collaboration requires abandoning positivist-reductionist and disciplinary frameworks in favour of a critical-transformative and interdisciplinary approach. This was partially supported as both the students and the community members acknowledged the benefits of a multidisciplinary team. This notwithstanding neither the students nor the community members showed any inclination to describe the interaction as non-reductionist, participatory or transformative. The rather distanced, analytical and positivist hypothesis testing approach was explicitly appreciated by the community members.

Lastly, student training projects would be able to reduce potential (perceived) power distances and to increase enjoyment of university-community partnerships. This is only supported by personal observations of the final presentation, a meeting in which community participants and students appeared totally at ease in discussing the results and the implications of the project as equals.

Discussion

Various sustainability declarations in higher education call for community collaboration by institutes for higher education (Copernicus Alliance, 2011). Thus far, literature has translated this as a need for direct personal involvement (Barnes and Phillips, 2000; Peterson, 2009). The present research provides a new suggestion on how capacity building can be organized: indirect involvement by academics through institutionalised student projects may be an alternative effective and efficient way to organize community collaboration. With a case study to illustrate its point, the present research reveals that curricular student training projects such as the academic consultancy training may be an effective way of community collaboration for sustainability. Such student training projects can have several advantages: they do not depend on individual academics and/or research grants, they may stimulate creative independence, they allow community members access to academic resources and they can create a power balance between the university and the community. Student training projects may thus be a tool to successfully develop sustainable university-community collaboration without the drawbacks that existing possibilities encounter.

The suggestions of the current research are in line with existing literature on service learning, action-oriented learning, experiential learning and on practice-based learning (Battersby, 2017; Billig and Furco, 2002; Celio *et al.*, 2011; Hodge *et al.*, 2014; Johnson and Spicer, 2006; Sachs and Clark, 2016; Wachholz and Merrill, 2012). Both present research and existing literature show that involvement of enthusiastic, empowered students who have applied and internalised the theories that they have previously learned can make a valuable contribution to collaborations between universities and communities. The present research extends these lines of existing literature by suggesting and illustrating with one case study that involvement of students through student training projects can also make a valuable contribution to higher education for sustainable development.

Interestingly, the current case study also illustrates that student training projects such as the academic consultancy training may be an efficient way of capacity building and empowerment. The presented case study requested 12 hours of supervision divided across eight weeks from an academic or research staff members. This suggests that a multitude of projects can be coached over the course of one year without infringing on academics' research time. Consequently, it may be possible for a university to develop and maintain an extensive number of university-community collaborations with a limited investment of time from its academics, but with all the benefits that universities and communities are looking for.

It is important to remark that the current research presented a case study only as an illustration to show the merits of student projects in community collaboration for capacity building and empowerment. Single case studies have multiple weaknesses (Corcoran *et al.*, 2004) because they focus on single projects in specific environments. Indeed, the presented case study is intended to form hypotheses for future research rather than testing hypotheses. Future research is poised to examine student training projects as an implementation method for sustainable capacity building and empowerment in higher education, e.g. with multiple case studies and comparative analyses.

Conclusion

Student training projects seem to be an interesting and potential future method to organize academic outreach. Such projects may overcome challenges that are related to academic research protocols and provide new opportunities for universities, students and community members. The results of this case study, summarised in Table II, suggest that student training projects in community sustainable development may overcome many issues that negatively affect staff-based projects. Hopefully, this spurs the interest of scholars to study the potentials and, if there are any, the weaknesses of student training projects as a promising method to integrate capacity building and empowerment in community sustainable development in higher education.

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