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ARTICLE

Empowering Students in Higher-Education to Teach and Learn

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Abstract We explored opportunities, advantages and barriers to enabling students to establish student-led learning events at a New Zealand university. We used an action-research approach to explore if students felt empowered to use the infrastructure of this university to realise something that they themselves set out to achieve. We discovered that, in achieving a series of open discussions about sustainability, students adopted a democratic, distributed form of decision-making, not unlike a typical academic model, with leaders taking temporary roles that included passing on responsibility to those who followed. Students were proud of the events they created and identified the discussion format as something different from their experience as undergraduate students in our institution. This article, co-authored by staff and students, considers whether higher education processes that do empower students do so adequately and the extent to which students are prepared by higher education to take on powerful roles after they graduate.

Keywords Students as partners · Empowered students · Students as teachers · Student-centred learning and teaching · Blurring of teaching and learning roles

Introduction and Review of the Literature

A conventional picture of higher education might include teachers teaching and students learning. A less-conventional picture might blur these boundaries to emphasise student-centred learning and teaching. Student-centred education is

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described as transformative, demanding new ways of understanding learning and teaching from the perspectives of both students and teachers (Blackie et al. 2010; Cook-Sather 2014). Increasingly, universities are exploring strategies through which students can achieve greater autonomy over their own learning (Bovill et al. 2011; Allin 2014). The project described here aimed to explore the opportunities, advantages and barriers to empowering our students to establish a student-led sustainability programme of learning events at one New Zealand university. We identify similarities between our conceptualisation of empowered students and descriptions of students as change agents and co-creators of learning and teaching (McCuddy et al. 2008; Larsen et al. 2009; Dunne and Zandstra 2011; Stoddard et al. 2012; Cook-Sather 2014; Felten et al. 2013; Allin 2014), where "students as change agents explicitly supports a view of the student as active collaborator and co-producer, with the potential for transformation" (Dunne and Zandstra 2011, p. 4). Creating opportunities for some degree of student-centeredness may have been broadly accepted by higher education (O'Neill and McMahon 2005), yet there are few studies and scant evidence about engaging students in the design and delivery of their education (Trowler and Trowler 2010; Zepke 2014). We intend to contribute to this emerging research field through our reflections on the processes undertaken to empower students to lead learning in sustainability beyond the boundaries of departmental curricula. We are encouraged that other academic groups have combined interests in undergraduate research and sustainability for a similar purpose (Pawlow and Retzlaff 2011) and we note strong links between our endeavours and explorations of engaged scholarship (Gelmon et al. 2013) incorporating discourses on community engagement and service learning for leadership, democracy, social justice and social change. We draw on notions of democracy in education, espoused by Dewey, of critical pedagogy described by Freire, and of academic leadership (Bryman 2007) to both situate our enquiry and to interpret our data.

One of the authors of this article visited Uppsala University, Sweden, and learned how that institution empowers students to teach sustainability through their Centre for Environment and Development Studies (CEMUS). In CEMUS, undergraduate and postgraduate students plan, run and evaluate credit-bearing courses that are multidisciplinary in content and ethos. The students collaborate in their work with a reference group comprising researchers, teachers and practitioners. This research was inspired by CEMUS. Our exploration initially considered the possible development of a not-for-credit continuing-education course on sustainability, relevant to university students, staff and members of the wider community; but our aspirations were substantially modified as the exploration proceeded. We focused eventually on creating a series of student-led learning events, styled as discussions, open to students, staff and to the wider community. Our research asked if students here were empowered to use facilities, personnel and infrastructure of the University to achieve something that they themselves set out to achieve, and what processes might help this institution learn from their exploration.

Methods

The project was initiated after the senior author invited several academic staff with known interests in sustainability-education and representatives from student sustainability-associations to attend a meeting discussing possible links to CEMUS. Particular features of the subsequent project and research process made an action research approach suitable for this study (Cohen et al. 2013).

Action Research and Data Collection

Student and staff members of the project and research groups aspired for collaboration and shared a commitment to explore student-led learning and teaching, whilst recognising the potential for unpredictability in the project's progress. Action research supports cyclical reflection, formative feedback and change (Altrichter et al. 2002). Project members became a self-critical community of decision-makers, social agents and participants (Altrichter et al. 2002), whose assumptions about empowerment, engagement and sustainability provided data for reflection, analysis and change.

Action research accepts a broad definition of what constitutes data (Cohen et al. 2013). Data gathered throughout this project included; meeting and interview notes, research reports, email conversations, Facebook and Google Group postings, notes from Skype calls and more general observations or personal reflections. Our research assistant (RA) interviewed students as they joined and left the project using a series of semi-structured individual or group interviews. The research group iteratively devised questions reflecting the project's context at any particular stage supporting a formative process of project progression; essentially contributing multiple cycles of researched-action (see Table 1). Questions generally addressed: motivation for being involved; initial and final perceptions of the nature of involvement; perceptions of learning and change; thoughts on the roles of higher education in the sustainability mission; and thoughts on what the project should do next. Throughout the project 12 students and eight staff members participated in interviews; six people were interviewed twice. All interview conversations were summarised as extensive notes and offered to interviewees for member checks; most accepted.

Three Discussions

As described in Table 1, the project eventually focussed on the creation, by students, of a series of three open discussions about sustainability (What is sustainability? What is the current state of sustainability? How can we change the world?). The student-led group decided to develop this programme (specifically rejecting more complex, longer-term possibilities), attended to the design of the framework for these discussions and invited discussants (including some academic staff and some external contributors including for one session, one councillor from our local district council). The agreed discussion format included procedural

Table 1 Cycles of action informing project progression

Cycle	Aim	Research activity	Project activity	Outcome
1		Submit research-grant application to the university's committee for the advancement of learning and teaching	Project applicants comprise 18 university teachers/support staff, and four undergraduate students	Partial funding awarded for a scoping study
2	Research design to investigate creation of a student-led community-engaged teaching activity	Submit ethics application to university's Human Ethics Committee		Approval granted emphasising informed consent by participants and anonymity of interviewees
3	Recruit additional student members to the project	Two undergraduate students, two senior university colleagues and research assistant (RA) form a project team; communications data collected; RA commences interviews with project team members	Project team discuss project management structure; plan two promotional events	No agreement reached on project management structure, arrangement left open. Two promotional events take place attracting six new student members and raising the project profile
4	Agree format of community-engaged sustainability teaching activity	Student-led group forms to develop learning activities. Student and staff research group forms (authors of this article) following an open invitation to all involved students and staff	Students take on roles allocated by the student-led group to produce successive discussions on agreed themes; staff take on logistical roles	Three student-led discussions on sustainability themes, open to all students, staff and the wider community
5	Delivery of three student-led discussions on sustainability	Observations made at each discussion; RA interviews student discussion participants and guest speakers	Student-led group evaluates after each discussion	Format of discussion maintained; some changes to student membership
6	Evaluation of discussions as an example of student-led teaching	Academic member of the research group observes and makes notes	Group reflection amongst students who had experienced various levels of involvement in the project	

objectives, notably repositioning conventional teacher-student relationships to place academics amongst the audience and within the conversation, but students specifically and deliberately did not identify learning objectives for those who attended the discussions. Individual students became responsible for inviting academic and community participants, for introducing the session and for continuity links within the sessions. Each session had multiple and shared leadership roles. The question of whether students became teachers, facilitators, leaders, learners or simple participants in these events then became part of our research, addressed though our analysis of students' initial and final perceptions of the nature of their involvement.

Data Analysis

Inductive analysis of this data acknowledges multiple stakeholders and their different experiences and perceptions of how the project progressed. To address this diversity of experience, role and viewpoint, two researchers independently analysed recorded data using a general inductive approach (Thomas 2006). Following in-depth reading of data, the two researchers identified and agreed upon key themes. In line with the university's ethical approval stressing the importance of participant anonymity, only one or both of these two researchers saw data before making it anonymous. The resulting text, with quotations, was released to all members of the research group for further discussion about project processes and research themes.

Results

Four themes emerged from and dominated the results in this research project. Three of these were apparent from early on and interwove across the multiple transactions that occurred within the project. The fourth arose later in our analysis.

- At an early stage a developing dichotomy arose relating to the extent to which university staff or 'empowered students' were driving the project. While the project was inspired by the ideal of a 'partnership of equals', participants in the project have indicated a range of experiences traversing a staff/student dichotomy.
- Closely associated with this theme was the nature of leadership in the student group, and how the concept of student leaders resonated with that of student empowerment in the project.
- The extent of student engagement, a third theme, emerged at an early stage and persisted within the project, interacting with the previous two themes. Student engagement for this project appears associated with the popularity of sustainability in student-led discourse and with barriers encountered by students managing multiple demands on their time.
- A fourth theme, project continuity beyond the constraints offered by a funded research project, emerged from the results and in project-discourse at later

stages. The matter was anticipated, although not adequately addressed in project planning.

We illustrate the four themes with quotations from transcripts and notes; role descriptions are added to provide context. We use the descriptors 'student participant' or 'staff participant'. In doing so we recognise the potential to reinforce a dichotomy of student/staff subjects. For a project intent on exploring opportunities for student empowerment, failing to differentiate student voice from staff voice could be problematic in terms of attending to differential power relations. Participants quoted are variously representative of attendees at a student-led discussion (both students and staff), students who took on a leadership role at some point in the project, students who took part in the research group, and staff researchers (university staff members, academics or support). Some individuals had multiple roles.

Different Perspectives of Empowerment

At the start of this project one staff participant suggested: "No hierarchy in this project. Students are colleagues… It is interesting to see if students can organise themselves to that extent." Participants were aware that this ethos was relatively novel and an opportunity to do things differently within a traditional academic staff-led power structure of higher education. For a number of staff members, being involved with the project offered an opportunity to reflect on the status quo of learning, teaching and curriculum: "I think we find ourselves on campus where we are largely prisoners of our own devices… There is really enough flexibility in the system, there are openings everywhere, we're just not seeing them as openings" (Staff participant).

The challenge for the project team was to generate a similar sense of opportunity for students. Initially the project struggled to recruit appreciable numbers of students, and resolve around the students' place in the project wavered. Staff researchers worried about pressure on the small group of students already involved, and in a Google Group forum project-applicants discussed the possible need to propose additional structure to overcome 'vagueness' in the project. If the project were better able to clarify its aims, would more students choose to become involved? Different perspectives became apparent.

> I think it can actually be disempowering to provide people with the absolute freedom to decide without providing the capacity, resources or focus to guide how to make these decisions. The options can be overwhelming resulting in few people turning out. (Staff participant)

The research group debated the dilemma of how much structure and guidance to offer. Those involved were aware that without some structure, or organisation, students might encounter only vague possibilities. At one stage, views amongst group members polarised: "For some in the project, vagueness has plagued our progress; for others, perhaps, vagueness is the essence of empowerment."

(Research-group communication). The matter of structure, imposed or otherwise, remained contested and debated throughout the project.

The promotional events generated a diverse range of suggestions for student-led activities including; making [residential] halls more sustainable, a bicycle library, graphic design and sustainability, volunteering with a sustainability youth group, public transport, field trips, university vegetable garden, mobile discussion table, student-chaired public discussions, CEMUS-style activities, and outreach to schools. After a planning meeting with a decision-making agenda, the student participants announced:

> One of the main things that we have picked up on is that students may require a framework and something less 'vague' in order to feel as though they want to commit… Our idea at this stage is to run a series of student-led discussions in Semester Two. Our vision is that students will have the opportunity to create all the elements of the discussion.

The proposed outcome of 'student-led discussions' became the blueprint for the project's output.

Disparate rationales enabled participants to take differing positions on the possible need for staff intervention in the 'structure versus vagueness' phase of the project. For one staff participant: "This project is about creating an opportunity to empower students to take leadership…" From this position, staff facilitation may be necessary to create the opportunity that kick-starts the process. A student participant suggested, however: "… uncertainty in the project is not unfamiliar compared to other project development and with study" and, in response to a question on what the project is about, suggested: "empowering students and offering opportunities to leadership." This student seemed unfazed by uncertainty and saw the project's uncertainty as an opportunity for leadership. A second student explained: "I liked the open-ended fluid nature of the project. It seemed a cool way of doing it… Everyone felt on the same level, a part of the process.". Staff and students were united in a wish to empower students, but staff lacked consensus on what empowerment meant and how to achieve it.

Whatever the rights and wrongs of maintaining a sense of imposed vagueness to enable students to make the important decisions themselves, there is no doubt that this indecision at an early phase in the project came with a cost. For staff members of the project team, at times the project felt very insecure. With so few students involved, staff raised concerns regarding the project's ethical duty of care for student participants who had already invested considerable time and energy. Nevertheless, once student participants began the process of developing the discussions, negotiation within the student-led group appeared to dominate planning, with several students contributing ideas to move the project along as they saw fit:

> My aim for organising the discussions was to attract a broad group of people and be as inclusive as possible. It would be good to have lots of people come and have a say… I thought it was important to explore other ways of doing things. (Student participant)

Emergent Student Leaders and Emerging Notions of Leadership

Our original application for research funding suggested multiple roles for students: project development, management, teaching, participation and research. A number of staff shared high hopes regarding what could be possible: "Students are perhaps not always taken as seriously as they should be; the project could enable students to push boundaries in ways other people [staff] cannot do at university" (Staff participant). The project team had considered various models of student participation, but resolved that a student-led group should evolve; equating to 'students as leaders'. After limited recruitment of students in its early phases, researchers reflected on their perceptions of how student leaders might mobilise their peers: "… what kind of student will get involved? [I am] concerned to recruit as broad a student-base as possible and not to go to an obvious audience of students already involved in the sustainability network" (Staff participant). Staff were aware of the challenge of reaching diverse audiences, but may also have drawn on fictional notions of leaders: "Perhaps we were expecting student leaders to arrive as knights in shining armour?" (Staff participant). Some questioned whether the university environment could adequately prepare students for vague or messy learning environments, and considered students' contextual and personal diversity:

> … if student experiences of education are not these rich opportunities, when we promote doing something differently how do students visualise what that can look like? It's too hard, it's almost like we actually have to do the work for them and once it's happened then people will begin to see the potential. (Staff participant)

Two students did step up as leaders in the earliest phase of the project and continued to remain members of a student-led group, spear-heading the question "what next?" Opportunities for leadership continued to act as a draw for additional student members and these students described diverse reasons for rising to the leadership challenge:

> If the project was just sustainability focused I might not have been involved, but the project process, the fact that it was student-led was what attracted me. (Student participant)

> It seemed, like, really student-run and it also seemed quite new. Sometimes it can feel daunting if an organisation has been going a long time. And then realising it's a fresh group, easy, and I'll be there when it's first starting! (Student participant)

The student-led group continued to evolve organically during the course of the three discussions. Some members joined for a given period or purpose, others remained engaged to grow the aims and objectives of the group. For some student leaders the project represented an unfamiliar context and differing conceptualisations of leadership in higher education emerged.

> The project was challenging because it was culturally different from what I'm used to in [country] where it's more about supporting leaders to take action,

rather than this project's focus on involvement and the democratic process. (Student participant)

Despite the challenges, student leaders organised, facilitated, and supported other students.

Student Engagement

Lack of student engagement with the project in terms of numbers of students was a worry to many in the project initially. The project Facebook page, by social networking standards, gained relatively few members. The students reflected on the difficulties that student engagement caused them:

> There was lots of talk at the start of the project about attracting students who weren't necessarily interested in sustainability. This was a bit of a hard ask and the project mainly ended up attracting sustainability-minded people (Student participant).

Some students involved in the project reflected on their own or their peers' motivation to be involved from alternative perspectives:

> There are of course many clubs and societies run by students, but as far as I know none of them have quite the same goal. I think [the project] fills a specific niche that is important to have. Especially with university backing. It's feasible to ignite a change in how people interact with the environment and how students can learn. (Student participant)

Some staff and students offered more pragmatic suggestions on students' capacity for engagement, in particular reflecting on time commitments. One staff member elaborated:

> We're still working with this conviction that students are just students full-time, when in fact they're not most of them and their time is valuable. And so if they're going to put time into a volunteering effort like sustainability, when they're doing part-time jobs and a full course load, then that's going to have an effect.

Yet to some extent, students involved in the project did appear to apportion blame to staff for limited student engagement. Some student perspectives of the project indicated staff actions were too directive: "We felt pressure from the research group not to fail and to make sure we produce the best results for the project" (Student participant); or insufficiently directive: "We felt charged with carrying out a task, but we were unsure of what this was" (Student participant). These contradictions offer insight to the sometimes turbulent or challenging nature of being charged with responsibility for mobilising one's peers. But student engagement working towards and within the discussions was excellent. One staff participant in a discussion reflected that;

> I could have made a number of suggestions but decided to sit on my hands. It's important to trust the students. I think they're very brave to take on a public

meeting. They have faith in themselves to manage and engage with a full range of views. You could see the students thinking through how [am I] going to respond to this… I really enjoyed being around that dynamic created by people of a younger age.

Attendance at the discussions was modest, ranging from 45 participants at the first event, 14 at the second and 23 at the third. Participants were mostly students, but some staff and some members of the wider community attended each discussion. Beyond numbers, the nature of student engagement was distinctive. Our data on students' experiences are revealing. One student described how the discussion-environment differed from regular experiences: "It was the first time I've seen that happen at the Uni. That sort of creative learning, I felt like we really achieved that." A second student reflected on personal growth: "I'm personally learning to be humble when it comes to sustainability." Another student emphasised the distinctly democratic nature of the engagement, commenting on "this project's focus on involvement and the democratic process". Indeed, ideas around democratic engagement and process were widespread and greatly overshadowed more conventional academic ideas about content, intended learning outcomes and whether there was a separation between teachers and learners, or between teaching and learning. Notes from the post-discussion reflection suggest that notions of democracy pervaded student perceptions about the project.

> I heard about the project early on. I had a vision of what I wanted the project to be about, but was aware of the democratic nature of the project so I waited to see what others wanted to do. (Student participant)

Project Continuity

The project's research proposal was not committed to any particular onward path for the project. Rather, it expressed a research interest in how the University would learn from and respond to what students achieved in the project, with a focus on educational and academic development. Some of the student participants involved in the project developed strong ideas around a future for student-led learning and teaching activities. While developing more discussions was a possible element of project continuity, for some students discussions were not the way forward: "Discussions don't change anything; sustainability needs to come from government policies." (Student participant). Some questioned the efficacy of discussions as a means to effecting change:

> Talking about issues is not empowering or engaging. Students need to ask what else can we do that is real and tangible and highly visible? Something that forces people to take action or rethink the way they do things. (Staff participant)

But others were positive about the potential of student-led activities to effect change:

> Trying to make changes on an individual level can feel meaningless in the face of the enormity of sustainability issues, but students might listen to other students and listen to their friends. Then community development can be manageable. (Student participant)

Irrespective of the number of students involved and the enormity of sustainability issues, the project may have provoked a possibility for change in student-led sustainability learning, and student expectations are understandably growing:

> I hope it will be able to carry on and grow and continue to be led by students, and evolve and change through the years, always with the goal of students learning how to promote themselves and learn about social changes and especially the environment and positive changes from people interacting with the environment. (Student participant)

Discussion

Universities are both a product of the world around us and contribute to the making of that world. Serving as critic and conscience of society, staff and students in our universities seek to advance knowledge and promote critical thinking to enhance understanding of global and local problems. This article discusses how we challenged a feature of higher education that is central to education for sustainability; the relationship between teacher and learner (Shephard 2010). Accordingly, our discussion deliberates on the possibility of a university where "A culture of learning and enquiry can replace a culture of expertise. In such a culture of learning, making mistakes, taking risks, unpredictability and failure are valued as necessary to learning" (Mann 2008, p. 137). We also situate our interest within the ethos of an education that must prepare students for creative encounters with the uncertainties of the present and future, as described by Pawson (2015). While it may be tempting to interpret our findings as limited with respect to our original aspirations, it is equally important to address our experiences as an exploration of the enabling forces of this university. We cherish the mistakes and failures alongside the more positive outcomes. One success is the feeling that everyone involved has learned something useful although it would be challenging to interpret this with respect to conventional course design. From the student perspective: "Everyone was learning and growing together" (Student participant). And from the staff perspective: "This activity and similar illustrate what can happen by allowing students to have initiative, and accept teaching staff do not have to be in charge all the time" (Staff participant). Such affirmation strengthens the resolve of the researchers to look at the project's findings from self-critical angles and in a way that might support other institutions choosing to embark on an exploration of student empowerment.

On the nature of student empowerment, embedded within our early conversations was a shared ethos of an inverted academic hierarchy represented by the label 'student-led'. While the nature of support was debated, most staff involved accepted the need to be in a support-role for the students who would lead the development of

the project. But this aspect of our project does emphasise the difficulty of power-sharing in our own higher education context and the definition of what, exactly, students are empowered to do, and by whom. Bovill et al. (2011) describe the process of staff relinquishing control over pedagogical planning as a challenge. Similar concerns were expressed by Allin (2014), who questioned if true collaboration between staff and students could ever be achieved in higher education, due to the power relations that do exist. In our deliberations these difficulties and tensions focused on the inbuilt vagueness of the project and its possible role in empowerment. The key issue for this research is whether the protracted period of doubt and deliberation prior to the announcement of student-led sustainability discussions was important for the project. If the project had been designed by staff, up-front, with a clear set of events and learning as outcomes, might we have avoided these difficult times? Alternatively, were these difficult times valuable to the ethos of the empowered student? Difficulties, doubt and vagueness can provide anti-foundational aspects of learning on which reflection can occur, for students and for staff. Dewey (1910) emphasised that thoughtful deliberation required situations where learners had to "endure suspense and to undergo the trouble of searching…to sustain and protract [a] state of doubt'' (p. 16). The student who was "learning to be humble when it comes to sustainability" illustrates a validation of Dewey's approach. This sentiment, however, was not universally felt within the wider project and even the most ardent enthusiast for the 'intended learning outcome' might struggle to encapsulate 'becoming humble' as an intended outcome within a planned programme. Our outcomes, in this respect, were more along the lines of Freire's (1995) dialogue and one person working with another, rather than one person acting on another. In situating this discourse within the dichotomy of student-or teacher-centred education, the open, and relatively unplanned by teachers, nature of learning that occurred clearly opens possibilities for students as learners, but also creates challenges for higher education accountability.

On the nature of student leadership, some students felt that staff anticipation of what might develop in the project was overly ambitious. In hindsight, members of the research group had differing views on the nature of student leadership required by the project. Some staff members had aspirations for grass-root leaders (Kezar and Lester 2011) who would inspire diverse forms of student-participation, including students not previously involved in sustainability-related activities (also discussed in a general sense by Bovill et al. 2011). Others were willing to welcome and support all offers of student involvement, irrespective of the nature of student participation and without particular regard to the likely consequences. Perhaps this difference is particularly poignant within the university system that has historically struggled to situate leadership within its mode of operation. In a wide-ranging review of academic leadership Bryman (2007) suggested that;

> … leadership in the traditional sense (i.e. associated with much of the leadership theory and research) may only be of partial relevance in the higher education context because academics' professionalism and the intrinsic

satisfaction that many of them glean from their work could mitigate the kind of leadership they need. (p. 17)

Bryman does discuss the place in academia of different forms of leadership, such as transformational leadership, but not in particularly positive terms, and certainly not at levels below that of institutional president. Students would likely recognise collegial styles of leadership within the institution where they study and might emulate this style; perhaps staff should have anticipated this. Those students who did rise to the challenge of leadership within the project had diverse reasons for doing so, differing abilities to cope with the challenges that ensued, and differing conceptualisations about the role of leaders in higher education.

Discussion *on the nature of student engagement* within this project is key to our exploration. Were the students who devised and facilitated these discussions 'teachers', 'teaching' in these discussions? Or does the fact that they deliberately chose not to identify intended learning-outcomes for participants in these discussions disbar them from that recognition? What, in an institution populated by empowered learners, is teaching? We suspect that all present were learning, and that some of these students were adopting roles appropriate for student-centred teaching (O'Neill and McMahon 2005). There are, of course, many aspects of higher education where the lines between teacher and learner blur, often only sharpening when assessment of learning becomes necessary. The broad area of community-engaged learning and teaching (CELT) in particular provides examples where it is difficult for teachers to pre-determine learning situations and outcomes and where sometimes the best teachers are community members, rather than university teachers. In this context, Millican and Bourner (2011), for example, describe accelerating expectations of higher education to develop socially responsible graduates who will be able to solve the complex problems of the world, and the significant role of CELT in achieving this.

Discussion *on project continuity* inevitably relates to notions of project success. In some senses, successfully running three events and having a group of students involved in researching the project, and interested in continuing, exemplify success; but relatively small numbers of participants are also concerning. It is interesting that students' perception of what represents failure or success, and from a research perspective what is worth publishing, is not that different from many academic researchers. Researchers find publishing negative results more difficult than positive results (see for example, Shipman 2013), but reflecting on all outcomes is an essential element of action research. The difficulties and successes are equally intrinsic to this project, affording an important message to convey to the student researchers in this project and to future students who may become involved. Lack of student engagement in similar projects was explored by Felten et al. (2013). These authors considered why certain students tend to be excluded and highlight strategies for expanding student-engagement by encouraging a diversity of student voices. It is notable that the students involved in our project adopted 'democratic' discussion as the medium within which to explore student-led sustainability; in essence a student-centred approach. The students who organised the discussions transferred this democratic ideal to their own roles within the discussions, in particular blurring the

distinction between teacher and learner. In a student-led context, however, Bovill et al. (2011) note the challenges that academics face when expected to critically engage with student activity or voice in democratic pedagogical-planning processes, and these challenges appear inevitable in all situations where what the students plan is something other than what the institution expects, or condones. Zepke (2014) also considered whether higher education processes that do empower students do so adequately and, in our context, we must ask if empowerment sufficiently situates students as change agents, to have the confidence and capacity to tackle problem-based issues, and what might in future motivate this level of engagement. We are collectively encouraged that one student collaborator and co-author of this article has subsequently visited CEMUS and has returned to our institution fully engaged in multi-institutional discussions about change.

Concluding remarks; as a research project, we aimed to explore the opportunities, advantages and barriers to empowering students to establish a student-led program within our institution. This article confirms that indeed an opportunity was available and was seized, and that key to this was the juxtaposition of a group of university teachers with an interest in exploring change in the broad area of sustainability-education, educational researchers able to act in collaboration with colleagues in many departments, and university students open to the possibility of a different kind of university education. In a real sense, our students felt empowered to use, albeit with assistance and limitations, the facilities, personnel and infrastructure of the University to achieve something that they themselves set out to achieve. But whether or not students in our institution would be similarly empowered to do the same again, or to go on to develop a more comprehensive programme of learning, is in doubt. Our doubt relates to whether or not our institution has the mechanisms in place whereby it could learn from the processes described here; and to what impact this learning would have on us, individually and as an institution. Institutionally, are we interested enough in what happened here? And for those involved, those who clearly are interested, how have these experiences changed us? University teachers and researchers in this project may be less clear now than before about how our students fit within our own institution. Are they partners, clients, customers or are these labels unhelpful in a world where higher-education institutions are struggling to identify their own role in society? Do we listen to our students or explore the world alongside them? The university teachers involved in the project are unified in wanting a higher education that empowers students and convinced that a higher education that does not empower students to be responsible for their own learning is inadequately preparing them for life after university; but we are collectively overawed by the enormity of the changes that may be involved.

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