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IJSaP is a journal about learning and teaching together in higher education. *IJSaP* explores new perspectives, practices, and policies regarding how students and staff (used here and subsequently to refer to academic staff/faculty, professional staff, and other stakeholders) are working in partnership to enhance learning and teaching in higher education. Shared responsibility for teaching and learning is the underlying premise of students as partners, and IJSaP is produced using a student-staff partnership approach.

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EDITORIAL

Inclusivity, Hierarchies, and Culture: Two Neophytes Reflect on the Fourth International Students as Partners Institute

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The fourth International Students as Partners Institute (ISaPI) was hosted by the University of Adelaide, Australia from July 10-12, 2019. The institute, previously hosted by McMaster University in Canada, aimed to promote the practice of Students as Partners (SaP) in learning and teaching in higher education. Attendees took part in either a workshop or a change institute to build understanding and develop SaP initiatives.

The institute was our first participation in a SaP event and we participated in the workshop element. We are newcomers to the editorial team of *IJSaP* as part of the goal of expanding and enriching the cultural diversity of the journal beyond the mainstream English-speaking nations. We have been working together as co-researchers in conducting higher education research, and our recent project investigated feedback practice and feedback cultures in different disciplines. We collaborated in different stages of the research process and observed how staff-student collaboration strengthened the credibility and quality of the research through bringing together different perspectives and expertise.

The aim of this editorial is to use our experiences of participation in the workshop to reflect on some current SaP debates in relation to inclusivity, hierarchy, and culture. In this undertaking, we are revisiting partnership challenges identified in the literature and continuing the path of previous reflections on ISaPI. Acai, Kirby, and Shammas (2017) described their experiences as student facilitators in the inaugural ISaPI event in 2016 and highlighted the role of a culture of trust in encouraging student partners to share their insights in a spirit of open collaboration. Marquis, Black, and Healey (2017) used qualitative data from the same event to illuminate some of the potential benefits and challenges of partnership work, and called for more attention to be given to the different cultural contexts in which participants work. This is largely because power distance, namely the strength of social hierarchies and how power is distributed, may accentuate the challenges of developing fruitful partnerships. Marquis et al. (2019) extended this previous work by interviewing ten participants nine months after the Institute, and found that navigating power dynamics, equity, and inclusion remained prominent in participants' minds well after the event.

The organisation of the rest of the editorial presents our own individual reflections on inclusivity, hierarachy and the role of culture. So that both of our voices can be expressed roughly equally, we use an organisational device of prefacing comments by our Christian names, Connie or David.

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INCLUSIVITY

Connie: There was an interesting discussion during the workshop on who should be involved in the partnership process in higher education. The majority of us shared the view that a true partnership has to be inclusive, although there were some subtle differences in our perspectives. Some might understand inclusive partnership as including students and staff from as many backgrounds as possible in partnership initiatives. Yet, I conceptualise inclusive partnership as developing an institutional culture that embraces diversity. A truly inclusive partnership might be enhanced by the cultivation of inclusive mindsets within the institutional community.

David: Thinking about inclusivity in the context of the workshop issue enabled me to problematize my current practice. In selecting student partners for my research projects, I have simply been identifying and inviting students who came to my attention due to good performance or recommendations from colleagues. Participation in ISaPI helped me to realize that this was an opportunistic and exclusionary form of selection bias. Yet for an academic, time is precious and user-friendly approaches are attractive. If I am looking for a small number of students to participate in research projects, is it reasonable to reach out primarily to those who I encounter? Would a more inclusionary approach through a general invitation still be practical and cost-effective? Or should I actively seek out diversity?

HIERARCHY

Connie: The success of a partnership, by and large, depends on the level of collaboration between the partners. Working collaboratively is not necessarily new to staff or students, but staff-student partnership is often perceived as challenging. Why do students often enjoy critiquing and debating ideas with peers but not with staff? Institutional hierarchies probably play a major part. Hierarchical difference provides unequal ground for collaboration between staff and students, which subsequently creates constraints on authentic partnership. In this case, shall we acknowledge this as an inherent limitation of staff-student partnership or break down hierarchy to promote genuine partnership? Breaking down existing hierarchies is a major feature of SaP (see e.g., Matthews, 2017).

David: The hierarchy issue also prompted me to reflect on my own practice in relation to our co-research into feedback for student learning. To what extent am I dominating the collaborative research process and downplaying the voices of co-researchers? Or since I am an experienced professor, is it natural and beneficial that I should exhibit research leadership, where appropriate, whilst also acting as a mentor? Should there be more sustained communication between the co-researchers? Yet how feasible is that within our own busy timetables and the challenges of identifying mutually convenient meeting times? Participation in the workshop prompted my reflections on these kinds of issues without, of course, offering any easy solutions.

THE ROLE OF CULTURE

The third issue that we would like to air at somewhat greater length is that of potential cultural or cross-cultural barriers accentuating challenges of embedding SaP initiatives. It might be the case that in contexts where there is more distance between teachers and students, SaP may be especially hard to implement. Some ISaPI delegates seemed to feel that cultural issues of hierarchy and power might represent a significant challenge for partnership approaches, whereas others felt that these challenges are present in all contexts and are just a perennial barrier to be tackled. Given that an aim of staff-student partnership is to break down some of the hierarchies and barriers to genuine collaboration, to what extent are the power differentials often found, for example, in Southeast Asian societies, a major challenge? This issue is highly pertinent to us because we are based in Hong Kong where power distance is relatively high, and hierarchical relationships between teachers and students may impede the development of SaP. At the same time, close relationships between teachers and students are often developed, and beneath the surface lies Confucian respect for different forms of educational collaboration.

Even a cursory glance at the literature reveals plentiful evidence of SaP work in Southeast Asia, although significantly less than in Anglo-American contexts. Pounder, Ho, and Groves (2016) adopted an ambitious plan deploying student consultants in a scheme involving peer observation of teaching at Lingnan University in Hong Kong. An interesting, but not altogether surprising, finding was that the scheme was more popular with students than staff. Ben Moorhouse and Melanie Oh (2019, this issue) extended partnership in a pre-service teacher education programme at the University of Hong Kong into Melanie's first year of teaching in a primary school in Ningbo, China. In a Malaysian case study, teachers partnered successfully with postgraduate students in designing and delivering classroom instruction (Kaur, Awang-Hashim, & Kaur, 2019). There is also plentiful SaP activity at Nottingham-Ningbo University (see e.g., Sturman et al., 2018), which is an interesting cross-cultural context in that most students are Chinese while most staff are not.

Connie: I discussed above how hierarchy affects authentic partnership. A lot of people might then automatically think of the cultural issue: does hierarchy affect the East more than the West? If we look at institutional hierarchical structures, there are actually more similarities than differences among globalised higher education institutions. And if we look at people's behaviours, there are always staff or students who have greater or lesser enthusiasm about SaP regardless of the culture or context. With such diversity within academic communities, could we really identify consistent patterns of cultural influence on SaP developments?

David: I don't believe that national cultures are an insuperable challenge for SaP practices. It may well be the case that different forms of SaP are more suitable for different contexts. What is needed are more examples of partnership developments from areas that are currently under-represented in the literature and more discussion of cross-cultural implementation of SaP. Leaders and others in the SaP movement may continue to reach out to contexts where SaP is under-reported or not yet flourishing. The inclusivity strand of SaP encourages the further expansion of partnership ideas.

To sum up, the cultural and cross-cultural aspects of SaP seem ripe for further investigation. Wendy Green's (2019) reflections on cross-cultural elements of partnership hint at some ongoing possibilities and challenges: "My experience in these partnerships has seemed much like any other cross-cultural encounter, replete with opportunities for misunderstanding as well as for new ways of seeing" (p. 86).

CONCLUSION

We treasured our participation in the ISaPI institute for the opportunity it afforded us to reflect on issues of inclusivity, hierarchy, and culture. We also appreciate the uniqueness of *IJSaP* in promoting scholarly publication through the partnership format. Our ongoing contributions are coloured by the competing work priorities that others may also be experiencing. Having completed her undergraduate degree, Connie is beginning her teaching career before later embarking on postgraduate study. As a professor in a research-intensive university, David needs to procure competitive research funding and publish his research on feedback for student learning in higher education (Carless, 2019, in press; Winstone & Carless, 2019). Whatever our futures bring, the collegiality and passion of the ISaPI institute and its participants will remain an enduring memory.

NOTES ON CONTRIBUTORS

David Carless *is a Professor in the Faculty of Education, University of Hong Kong where he specialises in feedback research in higher education.*

Connie Yuen-Ying Kwan *is a graduate from the Faculty of Education, University of Hong Kong with research interest in educational innovation*.

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OPINION PIECE

T’aats’iigang: Stuffing a jar full

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Jah! X̲aaydaga ‘las! Yahlnaaw han.nuu dii kiiG̲a ga. HlG̲aagilda X̲aayda Gwaii sda.uu hll iigiing. La̲x Kxeen sda.uu hll na.uu dii gun. Way.yad.uu ‘Nizdeh Nekeyoh Hohudel'eh Baiyoh’, Lheidli T’enneh guu.uu hll naa.uu dii ga. T’aawgiiwat han.nuu Naanga kiiG̲a ga. Jaask̲waan han.nuu dii awG̲a kiiG̲a ga. Bruce han.nuu dii G̲ng.G̲a kiiG̲a ga. GiidahlG̲uuhl.aay han.nuu dii dawG̲anas kiiG̲a ga.

Hey! Wonderful people! My name is Yahlnaaw. I am an Indigenous person from Skidegate, Haida Gwaii. I was born and raised in Prince Rupert on Ts’msyen territory. I am attending post-secondary school at the University of Northern British Columbia (UNBC) in Prince George, British Columbia, Canada, on Lheidli T’enneh territory. I am a member of the Raven clan and my family has many crests as we are from a Chief’s family. My Grandmother’s name is T’aawgiiwat, my Mother’s name is Jaask̲waan, my Father’s name is Bruce, and my younger Sister’s name is GiidahlG̲uhl.aay.

Firstly, I find it necessary for you to have a brief introduction to who I am and where I come from. Those unfamiliar with prominent Indigenous academic protocols may have questions revolving around the need for one to situate themselves in their work. Academic work is supposed to be distanced and unbiased—why does it matter who I am? Is it not what I have to tell you that is important?

Opaskwayak Cree author Shawn Wilson (2008) says that situating oneself in one’s work is crucial in building relationships with one’s readers. But why is this relationship important? Am I not just stuffing you full of information?

I am using my experiences within the Students as Partners (SaP) community to think about these questions—questions of subjectivity and relationships. In the spring of 2018, I had the privilege of being elected a student representative for the International Society for the Scholarship of Teaching and Learning (ISSoTL) with some not-so-gentle pushes to stand for election from my friend and colleague, Dr. Heather Smith (UNBC). ISSoTL was established in 2004 to bring together scholars committed to teaching and learning as scholarly practice in higher education with a clear commitment to engaging with students as partners in recent years. As one of two student representatives on the ISSoTL Board comprised of 17 people, I attended the annual conference in Bergen, Norway in October 2018. I was then submersed (yes, submersed) in what it meant to be a Board Member within such a prestigious organization. I had been told that my voice as an Indigenous person would contribute greatly in

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regard to (re)structuring how we view and interpret Indigenous pedagogies within the institution. Unfortunately, these duties slowly grew into not what I was told I would be doing as a member of ISSoTL.

Shortly after my election, Dr. Heather Smith and I, alongside Conan Veitch (UNBC) and Roselynn Verword (University of Victoria), put together a paper and presentation focusing on the power hierarchies embedded within the practice of Students as Partners within the academy. Soon after beginning this research, I began to draw correlations between what other students engaged in SaP experienced and what I was experiencing as a student on the ISSoTL committee. Many students addressed their fear of speaking against an authority figure within the institution and the fear of not having their authentic voice heard due to, for example, a lack of cultural understanding. Many also expressed that the importance they were originally told their voice would have in the project was not as depicted.

I personally believe that SaP, at this point of growth within academia, is often purely tokenistic but fostered by good intentions. Allin (2014) speaks to the complexities of efficiently engaging with students. Allin states, “I critically reflect on the nature of student involvement throughout the project [their research on collaboration occurring in SoTL] and question whether true collaboration between staff and students can ever be achieved due to the power relations that exist within the current higher education system” (p. 95). As I filter through Allin’s article, I find that it revolved around the instructor’s point of view. There was a complete and total lack of the student voice present in Allin’s paper which I found confusing because I thought the premise of Allin’s work was to advocate the incorporation of the authentic student voice. I believe that the actual incorporation of the student voice is fundamental in what those involved in SaP are trying to do; however, our messy realities are not always perfect reflections of how we articulate our journeys and practices. I find this observation to be of importance because how can we address this power hierarchy when students are not being represented and engaged in dialogue with instructors in work such as Allin’s?

Reflecting on my short experience within the ISSoTL Board, I did not want to speak against those who were not students, and I stepped down as a student representative. I felt that my voice was irrelevant as a student and as an Indigenous person—I was simply there to fulfill the diversity requirement. While I was told by other board members to bring an Indigenous perspective—an Indigenous lens, an Indigenous worldview—to ISSoTL, the dominance of colonial knowledges and pedagogical practices left me feeling I had little room to share my knowledge.

In another ISSoTL interaction, I was invited to collaborate in a session. In the planning process, my approach to research was labelled “alternative” because I do not believe in data collection in the Western tradition. Indigenous knowledges were present long before colonial knowledges; therefore, if anything is to be labelled alternative, it is colonial knowledges because they came after. At first, this left my colleagues with blank stares which soon transitioned into what appeared to be pure shock, realization, and understanding of what I was trying to articulate to them.

My experiences as a student partner in my university, as an ISSoTL student representative, and as an Indigenous person have left me wondering: *How does the taken-for-granted dominance of colonial ways of knowing and being in the ISSoTL community—that* *determine what counts as SoTL and how learners and teachers form relationships—create space for Indigenous people, either students or faculty, to be partners in learning and teaching?*

Within the academy, colonial knowledges and teachings promote the preservation of concrete and scientific knowledge. Dr. Kathy Absolon (2011), an Anishinaabekwe scholar from Flying Post First Nation, in her work, *Kaandossiwin: How We Come to Know*, explains that colonial research is often just for the sake of collecting knowledge. Drawing on my experiences to date, I fear that engaging with students as partners in learning and teaching is heading in this direction—stuffing a jar full of knowledge.

I want to engage in partnerships where I can bring myself and be myself. What ISSoTL is missing—and SoTL for that matter—is the fact that we are all humans and our research and knowledge comes from a place that is personal, biased, and full of confounding factors. In a recent discussion with my friend and colleague, Dr. Kelly Matthews (University of Queensland and ISSoTL Board Member from 2016-2019) stated that “it is hard to form relationships or connect with the ISSoTL Board members reliant on monthly online meetings. Within ISSoTL, we are so busy talking about things and doing things that we forget that we are all human beings” (personal communication, August, 13, 2019). Academic work, as mentioned above, is often founded on the premise of objectivity and lack of bias. If we view our research and work as distanced from ourselves and therefore objective, how can we effectively engage in partnerships that are messy and relational?

I always tell people that I am my work because my work would not exist without me. I did not wake up one day and decide on a research topic and carry on to my Master’s to fulfill a random topic. My experiences that I brought to the table of my research and work shape who I am and therefore shape my work because they are the same thing. My work is biased and personal—and it is beautiful. As much as you want to believe that your work is objective and free from bias, you need to reconsider your own biases because the experiences that shape who you are directly influence your work. Your work would not exist without you and your experiences.

If we want to engage meaningfully in the growing SaP agenda in higher education, then we need to remember that we are all human and humans crave relationships with those around us. If our work revolves around the divorce of self from our own research, how are we supposed to avoid seeing and working with our students through the same lens you view your research—objective and distanced? I believe that this very process is the foundation of tokenism which is rampant within the Students as Partners work that I have experienced. Power hierarchies are erected, work and research are distanced, and therefore relationships between students and instructors crumble because students become a subject of research—something that is supposed to be objective and distanced—which, as discussed, is impossible research.

Research is not just about stuffing a jar full of knowledge for the sake of keeping it on a shelf in your basement; research is about putting yourself and your relationships into your work because they are your work. SaP and ISSoTL should not be about the simple tokenistic incorporation of students in governance, research, SoTL, or as the topic of research. The relationships you form through partnership practices are what bias your research or SoTL in a positive way. This can only be achieved when we decolonize how we view, conduct, and interpret research and understand that divorcing yourself from your work and those encompassed within it makes your work impuissant.

ACKNOWLEDGEMENTS

I would like to say Haawa (thank you) to Dr. Kelly Matthews (University of Queensland) and Dr. Jennifer Fraser (University of Westminster) for their valuable contributions to this opinion piece. Our review process strayed from the colonial blind peer review process, and I believe this greatly benefited all of us. My Elders have told me that when we put a group of people together with a similar purpose and goal, something beautiful will happen—and I believe we have done just that.

Haawa. Kil ‘laa dluu gam gina k̲uuya G̲ang han.nuu dii ChinG̲a dii gii suu gang giini (Thank you. My Grandfather used to tell me there is nothing more precious than thank you).

NOTE ON THE REVIEW PROCESS

To honour the subjective and relational commitment of this work, we co-created a dialogic review process that enabled real-time and open conversations about the piece between the editor, reviewer, and author. This is an approach that stretches the typical IJSaP model for reviewing opinion pieces (done within the editorial team with a development stance). Kelly Matthews (as an IJSaP editor) proposed the approach and potential reviewer with Yahlnaaw (author) who preferred it to the traditional model. Dr. Jennifer Fraser was invited to act as an open reviewer given Jennifer's expertise in partnership and critical pedagogies. Through open dialogue, the piece was discussed and refined over a two-week period via email and a collaborative online platform that allowed direct comments and replies on the text. The three of us decided together that it was ready for publication.

NOTE ON CONTRIBUTOR

Yahlnaaw / Aaron Grant *is currently a Master's student studying First Nations Studies at the University of Northern British Columbia on Lheidli T'enneh territory in Canada and holds a Bachelor's Degree in First Nations Studies with a minor in Psychology. Yahlnaaw has been a student partner and researcher in a variety of areas. Yahlnaaw's current research revolves around Indigenous language revitalization through Traditional Storytelling fostered by community collaboration and sharing. Yahlnaaw's language learning journey guided by her Nanaay (Grandmother) has inspired the work that she does.*

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RESEARCH ARTICLE

Students as Contested: Exploring Issues of Student Identity and Identification in Educational Spaces

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ABSTRACT

This article explores issues of student identity and identification through a third-space theory lens. In addition, it positions this use of third-space theory as contributory to Students-as-Partners (SaP) approaches to teaching and learning. Naturally, this research was constructed as a SaP project, and research was undertaken as a collaboration between two undergraduate students and their lecturer. The literature review and student interviews presented here were conducted by the student co-researchers and interviews involved their BSc Cyber Security Management peers. These interviews unpacked constructions of student identity, student-lecturer relationships, and professional experiences. Thematic analysis of these interviews is presented reflectively with reference to student and lecturer perspectives. Finally, this article argues that for SaP to be successful it is necessary to critically examine the "student" identifier.

KEYWORDS

students-as-partners, cybersecurity, identity, education, third space

There is a shared belief among the authors that a Students-as-Partners (SaP) approach is beneficial to educational practices. Here we draw on third-space theory to articulate implications of the multiple student identities and identification processes that a SaP approach intersects with. In the study discussed here, a student co-researcher undertook interviews with second- and third-year undergraduate students to ascertain perspectives on their experiences of a BSc Cyber Security Management course. We identify a disconnect between the desires of participants to have their experiences across higher education (HE) and external to HE recognised, and a sense of resistance to the identification as a student.

Before we present our literature review, we first wish to address the way in which we have approached writing this paper. In assimilating our voices into a single first-person plurality,

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individual voices are lost. Crucially, given the need to conform to expected academic writing styles, the use of the first-person plural pronoun would perhaps result in the students' voices being more adversely dismissed than the lecturer's. To mediate this, we include frequent endnote-interruptions. In which we / they / I pull away from the plurality and pointedly include our / their / my reflections on the topic being discussed.

LITERATURE REVIEW

To begin, we discuss third-space theory, paying particularly attention to Bhabha's conceptualisation of identity formation as an externally influenced (Bhabha, 1994), if not externally led, process. Following this, we then address different ways that student identity is currently framed, with reference to broader notions of students-as-customers and employability. We then move on to discuss SaP, focusing initially on its conceptual definitions as a policy-backed ethos rather than discrete student-academic projects.[1,2] In concluding this literature review, we identify the 'student' as a contested nexus of various identification and individual strategies of selfhood (Bhabha, 1994). Third-space theory, especially the work of Bhabha, becomes especially useful here in its framing of the student as a "hybrid" construction that is a potential source of tension.

Identity construction in the Third Space

> We proposed the idea of a Third Space where teacher and student scripts—the formal and informal, the official and unofficial spaces of the learning environment—intersect. (Gutiérrez, 2008, p. 158)

Third-space theory has been applied to the understanding, or re-understanding, of educational spaces as intersectional. That is, the "classroom" is a nexus of different systems of meaning. As posited by Gutiérrez, student and teacher identity therefore becomes a multi-dimensional construct informed by various spaces including the "official" space of the classroom and the "unofficial" space of the home. To draw on the rhizomatic metaphor of Deleuze and Guattari (1987), as discussed by Bensen (2010), just as rhizomes grow from multiple points simultaneously, so too are there multiple significations of identity. Each signifier to an extent represents a "point of power" (Benson, 2010, p. 565).

Third-space theory then is a useful lens in SaP for two reasons. First it allows for the unpacking and problematising of student-teacher identity and relationships—a significant consideration given the necessity of equality and reciprocity in SaP projects (Cook-Sather, Bovill, & Felten, 2014; Healy, Flint, & Harrington, 2014; Mercer-mapstone et al., 2017). Second, it challenges the demarcation and stratification of educational spaces from other spaces, especially with regards to what is considered "legitimate' knowledge or expertise" (McDougall & Potter, 2015, 2017). In combination, these two reasons extend the rhizomatic metaphor[3] to refer to simultaneous, multi-directional growth, not necessarily limited to a single plant pot.

The fluidity of identity, and its influence by overlapping systems of meaning, is of relevance for this research. As first posited by Bhabha, third-space theory referred to the reconstruction of collective identities by oppressed people that resisted previous definitions of race, class, or other identity signifiers (Bhabha, 1994). That is, third-space theory refers to sites of contestation, populated with existential enactments of political resistance through which imposed identities are examined, challenged, and if not replaced, come to co-exist with new identities. In applying this third-space theory to educational settings, there is a consistent teleology of challenging previous, or inherited, identities, relationships, and broader constructions of society. For instance, Moje et al. (2004) argue that third-space theory should be "introduced in ways that challenge, destabilise, and, ultimately, expand the literacy practices that are typically valued in school and in the everyday world" (p. 44).

Indeed, there is a consistent application of third-space theory that refers to existing, or inevitable, conflicts with "schooled identity and the power dynamics of education" (McDougall & Potter, 2017, p. 98). Given the importance of flattened hierarchies in SaP, Bhabha's[4] framing of identity as a response to external pressure is of significance. The term "student" as identification creates a potential existential imposition that overwrites other identifications. Or as Bhabha (1994) writes: "The question of identification is never the affirmation of a pre-given identity, never a self-fulfilling prophecy—it is always the production of an image of identity and the transformation of the subject in assuming that image" (p. 45).

Further, there is an implication of resistance here as students must interrogate this identification and reconcile it through their "strategies of selfhood" (Bhabha, 1994, p. 1) that are influenced by engagement with external systems of meaning. That is, the extent to which the "student" identification is contested is potentially informed through individual experiences of contexts external to higher education.[5] As previously discussed, the permeability of educational spaces and practices is a focus of the application of third-space theory to educational practices. Primarily, this focusses on advocating for empowering the student through legitimating their learning, literacy practices, and expertise developed in "unofficial spaces" (Gutiérrez, 2008; McDougall & Potter, 2017).

In our use of third-space theory here, we use it as a means of articulating the multi-variate ways in which the "student" identity may be constructed or influenced. This will be explored through the rest of the literature, focusing initially on the construction of student-as-customer, in doing so providing some context of HE more broadly.

Student as customer

> The concept of "listening to the student voice"—implicitly if not deliberately—supports the perspective of student as "consumer," whereas "students as change agents" explicitly supports a view of the student as "active collaborator" and "co-producer," with the potential for transformation. (Dunne & Owen, 2013, p. 4)

The characterisation of students-as-customers has been somewhat galvanised, if not outright codified, through increasing legislative oversight. HE providers in the UK are governed by the Consumer Rights Act 2015, and other consumer rights laws, such that student-university relationships are framed as a service-oriented transaction (Competition and Markets Authority, 2016). Though the student adoption of a consumerist attitude is *"largely anecdotal"* (Bunce, Baird, & Jones, 2017, p. 1960), according to a survey of 1,000 students undertaken by Universities United Kingdom (UUK), 47% of students identify themselves as customers of their university (Universities UK, 2017).

What is worth considering here, however, is that students *may* be identifying themselves and may be identified as customers, but not at the exclusion of other identities.[6] Indeed, there is an apparent conflict in the framing of students as customers as it potentially undermines traditional student-academic relationships (Williams, 2012; Woodall et al., 2014; Brown, 2015; Bunce et al., 2017). According to the UUK report (2017), "students want a more personal relationship with their university than the type of engagement they appear to associate with being a 'customer'" (p. 6).

Accordingly, the framing of students as customers[7] as somewhat oppositional to, or at least in tension with, academic identities captures a broader anxiety about the disruption to the "ethos of relationship between student and university" (Universities UK, 2017, p. 2). Interestingly, if we were to temporarily ignore this student-as-customer identification, the notion of the student is still a site of tension.

Student as *proto-*

> The imperative of "doing education"—as a keen, enthusiastic proto-academic seeking to attain a good final degree classification—often seems to be overridden by the imperative of "doing being a student"—as an average and/or indifferent student who does not stand out whilst interacting with other students.
> (Attenborough 2011, p. 101)

In addition to the potential conflict between 'doing education' and 'doing being a student', the introduction of the student-as-customer framing invites, if not justifies, the framing of the student as something akin to the proto-professional—or "pre-professional" (Jackson, 2016). Part of the transactional value of HE in a marketised context is increased employability outcomes or industry readiness. Indeed, discussion of student identity in HE has become somewhat instrumentalist and viewed as a developmental necessity for industry readiness (Ashton, 2009, 2010; Daniels & Brooker, 2014; Jackson, 2016). To an extent, this parallels the similar professional-academic identity amalgamation, or contestation, discussed by Celia Whitchurch (2008).

Of course, it is not possible to homogenise the student population. For instance, recent research has demonstrated a correlation between student-as-customer orientation and their identification as learners, the degrees they are studying, and whether they are responsible for paying tuition fees (Bunce et al., 2017). Further, it is beyond the scope of this article to outline all of the various identification processes given the contextual and ontological complexity. However, the purpose of this article is to illustrate that student identities are indeed complex. Unpacking student identity is an exercise in untying a Gordian knot (Latour, 1993)

Third-space theory elucidates this complexity by highlighting the intersection of multiple systems of meaning (e.g., governmental policy and markets, professional environments, and academic institutes) and the subsequent "hybridity" of identity (Gutiérrez, Baquedano-López, & Tejeda, 1999; Gutiérrez, 2008). As we move on to discuss SaP as a pedagogic approach and ethos, the contribution of third-space theory we develop here is the treatment of the student identity as a site of potential resistance. As such, with the development of SaP projects it is necessary to be mindful that the nominal "student" is not a fixed notion.

Students as (well as) partners

> Each time the encounter with identity occurs at the point at which something exceeds the frame of the image, it eludes the eye, evacuates the self as site of identity and autonomy and—most important—leaves a resistant trace, a stain of the subject, a sign of resistance. (Bhabha, 1994 p. 45)

The foundational model put forward by Healy et al. (2014) loosely demarcates four categories of Student-as-Partners approach. These approaches are distinguished between students' engagement with teaching, learning, research, and the enhancement of such (Healy et al., 2014; Matthews, Cook-Sather, & Healey, 2018). Further, they situate these approaches as dependent on a central process of cultivating a partnership learning-community and student participation within these communities. Within SaP literature, there are themes that are paralleled in third-space theory.

Values of authenticity, inclusivity, empowerment, and reciprocity as put forward by Healy et al. (2014) and others (Wenstone, 2013; Marie, 2018) in SaP are reflected in justifications for third-space educational practices (Gutiérrez, 2008; McDougall & Potter, 2017). Additionally, this values-based approach to partnership is constructed as an active, integrative, and ongoing process, rather than demarcated activity (Mercer-mapstone et al., 2017). Further, the permeability of different systems of meaning leading to notions of "porous expertise" (McDougall & Potter, 2015, 2017), resonates with the curation of "blended professionalism" in which student identity is drawn from academic, professional, and personal experiences (Healy et al., 2014).

As posited by Healy et al "partnership places students and staff in different roles and challenges the traditional hierarchical structure of learning and working relationships." (Healy et al., 2014, p. 28). As such, enactment of SaP and third-space theory as a pedagogic ethos is met with resistance as the curation of such requires "some challenging of the inherent power structures and assumptions, the habitus of the social actors of the space" (McDougall & Potter, 2017, p. 43). Now, the distinction between SaP and third-space theory, and the contribution we believe third-space theory can make here, is the framing of identity as a site of resistance.

Though SaP does indeed discuss identity formation in comparable terms of intercontextual hybridity, its focus on identity formation is, relatively, unproblematised. That is, there is limited discussion about the ontological frictions that emerge as students move through and engage with different roles across multiple communities. Pedagogically, this formation of identity at the intersection of communities is valuable given SaP's framing of learning as "not just what the learner knows (which would be simply 'epistemological') but also who the learner is" (Wortham, 2004, p. 3). Critically however, identity formation according to Bhabha (1994) is an inherently reactive process. Identities are not formed pre-emptively, never a "self-fulfilling prophecy" (Bhabha, 1994, p. 45), nor a purely ontological consideration, but instead, "identification becomes, primarily, a response to questions of signification and desire, culture and politics" (Bhabha, 1994, p. 50)

There is of course consideration for the role of identity in SaP framed primarily as an "ontological act of being" (Bhabha, 1994, p. 50) with reference to a situated community of practice. Or as presented by Sfard, quoted in Cook-Sather (2010), "the identity of an individual, like an identity of a living organ, is a function of his or her being (or becoming) a part of a greater entity” (p. 6). Further, there is also discussion of the issues of inherent power dynamics at play in any SaP initiative, and a need to reflect on “the usefulness of current labels like ‘staff’ or ‘students’” (Healy et al., 2014, p. 35). This research then extends this discussion, by using third-space theory, to not just question the usefulness of certain labels, but also their nominative power.

METHODOLOGY

As discussed, this research was conceived as a student-as-partners project undertaking the scholarship of teaching and learning (SoTL). Typically, students-as-partners SoTL projects are one-off projects that are academic-led, at least initially (Healy et al., 2014; Matthews et al., 2018; Mercer-Mapstone et al., 2017). This research is also reflective of this typical approach and is therefore subject to the same methodological and ethical quandaries. Though interesting and needed in the broader inquiry into the tensions of students-as-partners research, the discussion here is primarily methodological, although we do, perhaps inevitably, touch upon the role of third-space theory in conceptualising this research.

Participatory research methodologies typically provide a taxonomy of levels of participation (Fielding, 2001; Hart, 2008; Hunleth, 2011). Here, we undertook this research with two presuppositions, rather than fitting ourselves within a stratified “level” of participation. First, there is a dynamism to the degree of participation as the authors assigned responsibilities and defered to different perspectives, rationales, and experiences.[8] Second, there are inherent relational expectations and power structures that may lead to “unwitting manipulation” of the student by the lecturer (Fielding, 2001, p. 123), so the shifting between different degrees of (un)equal collaboration may happen without us realizing it.

The two presuppositions presented here are informed by our understanding of third spaces and negotiated relationships and fluid identities. Throughout the article, both the students and lecturer co-authors openly reflect on this research, our methodological decisions, and our findings. Of course, this is not to absolve this project of any power-dynamic-related methodological issue, as to do so would be insincere. Rather, here we promote reflective acknowledgement of the positionality of the researchers that is necessitated in qualitative research generally. As Stephen Ball (1993) argues: “To write the researcher out of the report is to deny the dependency of the data on the researcher's presence” (p. 46)

Further to this methodological necessity, here we also encouraged reflective endnotes from all co-researchers as “there is a fluidity about the research stance which should be embraced for the richness of insights it offers”(Le Gallais, 2008, p. 153). To revisit a participatory taxonomy then, according to Fielding the authors here are both “data-sources” and “co-researchers” (Fielding, 2001). There is a final methodological consideration here that also speaks to the notion of third spaces, as there is a pre-existing relationship of mutual respect populated with reflective discussions of teaching and learning. Indeed, this research article isn’t the first collective discussion of teaching and learning practices the authors have shared, though it is indeed the most formalised.

Research design

To encourage shared reflection on participants' teaching and learning perceptions and experiences, we undertook student-led semi-structured interviews (Brinkmann, 2014; Bryman, 2015). This was also to ensure that the participants would, hopefully, feel more comfortable in sharing their honest experiences of the Cyber Security Management degree. Interviews were designed, conducted, and transcribed (including anonymisation) by a student co-author.[9] Here we drew on Rubin and Rubin's (2005) framing of interviews as "conversations in which a researcher gently guides a conversational partner in an extended discussion" (p. 5).

As such, interviews adopted a purposefully conversational tone and the student interviewer drew on the work of Kvale (2008) in the formation of interview questions and in conducting the interview.[10] To facilitate ethics in our research, our participants' names have been replaced with different names to preserve their anonymity (Opdenakker, 2006). A further consideration was over-rapport as the interviewer was familiar with the interviewees. Despite the risk that over-rapport runs of forming "a situation where the interviewee seeks to provide information that is thought to be expected or wanted by the researcher" (Ryan & Dundon, 2008, p. 444), upon reflection this was not a significant issue.

Interviews followed a semi-structured format of open-ended exploratory questions (Merton, Fiske, & Kendall, 1990) aimed towards encouraging reflections of their current experiences of HE and desirable experiences in reference to relationships with lecturers, with the duration of interviews ranging from 25 minutes and up to 60 minutes. In total, seven current Bournemouth University BSc Cyber Security Management students participated in this research, five of whom were in their final year (having returned from a placement), and two of whom had just entered their third (placement) year, ranging from ages between 20 and 25.

Thematic analysis

The thematic coding process followed the phased approach outlined by Braun and Clarke (2006). Initial codes were generated through a semantic analysis of participant responses in combination with topics identified in the literature review. This included identity construction, relationships, internal-external comparisons, and pedagogic agency. In the initial stage, codes were stripped of presumptive values identified in the literature review such that they did not "narrow our analytical field of vision" (Braun & Clarke, 2006, p.16). From this deductive, top-down starting point to identify codes, initial themes were generated through semantic analysis (Patton, 1990) of participant's framing of these topics.

All co-researchers in this study independently undertook an initial phase of thematic coding.[11] Following the initial round of coding, we then collectively analysed these codes to come to a consensus. From this, we then analysed to draw out underlying presumptions and values that informed participant framing (Gee & Handford, 2012) such that these themes could be related back to converged constructions of Students as Partners and third-spaces. This thematic coding was repeated to further "refine and define" the final findings (Braun & Clarke, 2006).

DISCUSSION AND FINDINGS

In undertaking this research, the authors identified that students exist within a nexus of social systems[12,13]. It is our intention here to present an honest discussion of students' perceptions and in doing so highlight the complexity of overlapping, and at times seemingly contradictory, systems of meaning. In addition, our intention here is to explicitly draw out the challenges to enacting collaborative SaP pedagogic practices. To begin, we first address an apparent experiential compartmentalisation in the form of decontextualised perspectives of student engagement. Interestingly, from a SaP and third-space perspective, this compartmentalisation is both external (i.e., between HE and professional experiences) and internal (i.e., across the modular structure of a degree).

From this perspective, participants also discussed a sense of de-individualisation as a result of typical pedagogic practices that are didactic by nature. Interestingly, the participants in this study viewed these pedagogic practices as not desirable, but a pragmatic necessity in HE.[14] We then discuss a pervasive sense of hierarchy when participants discuss their relationships with their lecturers, which loops back to the initial discussion of the internal/external differentiation of HE and professional work. When discussing their relationships with lecturers, participants communicated in a professional-orientated rhetoric as a means of describing existing or desired relationships— though these relationships were still hierarchically framed. Further, for the participants who had returned from their placement year, they carried a professional identity that was not valued, or at least not acknowledged, when returning to HE.

Decompartmentalised experience

> It was kind of like a factory in a way, "talk to one student and 'you get that way', talk to one student and 'they get that way.'" (Clare, 2nd Year)

Here, Clare discusses her dissatisfaction over the functional, didactic pedagogic experience with some higher education staff. As she articulates it, some lecturers would focus on efficient, managed interactions with students such that it was a case of lecturers explaining as quickly as possible in order to "move onto the next student" (Clare, 2nd Year).[15,16] This feeling was shared by other participants, though they were somewhat sympathetic of this approach as a necessity due to student numbers. There is an interesting and repeated sense of compartmentalisation, or disinterest, in engaging with students beyond the confines of the immediate pedagogic activity.

According to participants, this compartmentalisation occurred on multiple levels. To begin, and this may be more symptomatic of the interdisciplinary nature and general administration of the degree itself, participants appeared to identify a lack of continuity across the degree's modular structure. Interestingly this was, again, something participants expressed resignation about, citing the limitations of large class sizes: "You look and you're like oh alright she has no idea where we are or what we've done or studied before.... you can't really expect that, right? You know, it's just a lot of people" (Arthur, 3rd Year).

In addition, there was a perceived compartmentalising of the student-lecturer dynamic within the lecture. The rigidity of the lecture, or as Clare (2nd Year) puts it, the "sterilised academic environment where there's just a lecturer talking," limits the capacity to form reciprocal relationships (Cook-Sather et al., 2014; Healy, 2014). Further, there was a frustration and juxtaposing of the apparent delineation of the lecture and non-lecture spaces: "Because right now what we think about lecturers is basically they are here and they give us lectures, then they can [disappear] and do their stuff. What do you do every day, read journals and the internet?" (Martin, 2nd Year).

Brian (3rd Year) writes "[lecturers are] all very friendly. They don't appear [so] from lectures and how they treat their lectures somehow." Indeed, part of the issue participants saw was the furtherance of perceived "power dynamics [that] can play out particularly strongly in classrooms" (Mercer-Mapstone et al., 2017, p. 17). That is, there was a reinforcement of lecturers as inaccessible or "some kind of mythical thing" (Arthur, 3rd Year), and, as an unfortunate consequence, the implicit positioning of the participants. That is, according to Clare (2nd Year) "the lecturer didn't say 'I'm going to talk down to you, I am better,' it just kind of happened." In countering this, there was a suggestion from participants for lecturers to share more of their personal histories.

Indeed, the dropping of formalities is representative of moving away from the rigidity of the previous student-academic relationship. In addition, the notion of humanising through sharing experiences speaks to a students' awareness of the lecture theatre as "having multiple, layered, and conflicting activity systems with various interconnections" (Guittiérrez, 2008, p. 151). As one participant writes:

> The best lectures are the ones with Billy and with Bob and Joe, where everyone's just sort of chatting to one each other, right? They'll explain a topic like "this is a security thing, what do you think about it?" And everyone's like I like that and he's like "Oh I really like this, let me tell you of a time I used this." (Arthur, 3rd Year)

Students as colleagues

> Like they are all different humans, well they are humans anyway not machines. (Martin, 2nd Year)

The desire from students for lecturers to share personal anecdotes, stories, and professional experiences can be viewed as a means of transcending, or permeating, the identifications of the lecture theatre. Indeed, the sharing of these anecdotes and research interests became an effective means of encouraging engagement. As one participant describes it, the lecture is "suddenly a conversation that [is] kind of like an interesting adventure through their history" (Brian, 3rd Year). This call for more "human" lecturers is interesting here. In part, this is related to a frequent reference to the desire to drop formalities and be friendly with lecturing staff, though this does not necessarily mean to be friends: "I'm not there to be friends with my supervisor. I want him to hate me and for me to hate him because he's making me work, which I think is the best way to be" (Martin, 2nd Year).

In addition, in their discussion of lecturers, there was a repeated desire for something akin to "humanising," or for lecturers to present themselves as "hybrids" and to make a virtue of "their existing complex identities" (Cook-Sather et al., 2014, p. 201), particularly with reference to external experiences. As discussed, this overlaps with students' desire for a decompartmentalised experience to offer different ways for students to relate and reciprocate.

Further, there is an interesting parallel here, if not projection, in students' desire to have their external professional experiences acknowledged: "Maybe as well from the lecturer's point of view, they can understand [students] spent a year in industry. . . . I would hope that it's one step closer to being on their level" (Clare, 2nd Year).

It is worth acknowledging that Clare here is referring to professional experiences developed through professional placements—an option in this particular degree. It is interesting that "becoming" in this community—moving from the periphery to full members (Lave & Wenger, 2007)—is legitimated through professional experiences. Further of importance to this research, these professional experiences hold greater currency in this community than academic experiences.

Students as not 'just' students

> I mean in fourth year, they've started to realise we're adults now. I think some of the lecturers have done that now, because we've come back from placement and not because we've now been at uni for three years. (Brian, 3rd Year)

The community students are participating in then is complex and intersectional, and they appear to be developing a "'blended professionalism' where identity is drawn from academic, employment, and professional environments" (Gough et al. quoted in Healey et al., 2014, p. 35). However, not all influencers of identity are weighted equally. It is here that we return to our initial discussion of Bhabha's framing of identity antagonisms at the intersection of different spaces. For instance, there is a comparative dismissal or stratification of experiences, activities, and legitimated knowledge from these different spaces, especially for students who have "been working in industry for a year and you know, you work like a real person" (Arthur, 3rd Year).

Additionally, there is the issue of prioritising one system of meaning over another. For instance, Brian shared his frustration over the current assessment approaches, stating that "I'm an IT geek that wants to expand my understanding of cybersecurity and implement it from a manager's point of view. I don't want to sit there writing an essay" (Brian, 3rd Year).

It is worth noting, of course, that this prioritisation of subject-specific and professional identities is perhaps just reflective of suggestions that students are more "career-focused than before"[17] (Bunce et al., 2017, p. 1960; Universities UK 2017b), especially students in STEM degrees who are more likely to position themselves in relation to their professional identity.[18] However, there is an additional issue here, as notions of professionalism were presented by participants as somewhat incompatible with the priorities of academia: "like the university is just assuming that every single person that comes into university is going to become an academic, stay in university, and go on to research" (Brian, 3rd Year).

As one participant suggested, if "you treat students as students you're not going to get very much out of them" (Brian, 3rd Year). It is worth considering the tensions and frustrations reported by participants in this study as they reflect on being confronted with external identifications that no longer resonate with their personal histories or strategies of self-hood. As is perhaps expected, there is a resistance to the framing of the "student" in as much as it diminutively positions students according to academic hierarchy, or at least a perceived academic hiearchy. For instance, as described by Clare (2nd Year), "a lot of the time I felt like I was being talked down to because 'I'm a student.'"

CONCLUSION AND RECOMMENDATIONS

> I'm spending nine grand a year to have the privilege of being in a room with some of, I will happily admit, some of the smartest people I'll probably ever get to meet, and I don't want to be spoken down to as a 5-year-old child. I want to have a proper adult conversation. (Brian, 3rd Year)

Within this quote, there is a neat representation of the complexities of student identification. There is self-positioning that is is framed with reference to broader notions of being a customer, and the entitlements that brings, whilst negotiating this with a reverence to the academics themselves. Further, drawing on a customer identity is itself an act of resistance to perceived identifications of immaturity, or not being seen as a "proper adult." The student identity is not immutable, nor is it possible to delineate it from identifications in situated communities and broader social contexts.

Now, given SaP's focus on elevating student voice through affording meaningful participation in a partnership learning-community, any potential resistance to the systems of meaning in this community must be considered. McDougall and Potter (2017) argue that "if none of the parties in communicative acts admits negotiation or complexity as preconditions of the production of meaning, then there is no room for maneuver which produces agency, action, or even, change in an educational setting" (p. 41).

Within the SaP community of educational practitioner-researchers, it is necessary to consider ourselves as one of these parties, even if our participation is very much on the periphery, taking the form of advocacy for different educational approaches. Therefore, in SaP, the use of "student" as a nominative term of reference is complex and a potential site of resistance that necessitates negotiation. Further, the framing of students becoming and being a member of a partnership learning-community is also a potential source of friction.

Our final point here is that this positioning of students at an intersection of professional and academic domains can itself be viewed as a third space that academics are, typically, unaware of. Further, there is value in this position as students participate in both spaces, whilst maintaining a degree of critical abstraction from both. Again, as Bhabha (1994) writes: "The transformational value of [third space] lies in the rearticulation, or translation, of elements that are neither the One... nor the Other... but something else besides, which contests the terms and territories of both" (p. 28).

It is fitting to end with the critique of students which reflects academic discussions of potential resistance by institutionalised systems of meaning to negotiable, hybrid identities and practices (Cook-Sather, 2010; McDougall & Potter, 2018). Or as one participant suggests, enacting pedagogic changes requires "the galactic empire . . . to sign off on it and that takes 20 years" (Brian, 3rd Year). In addition, throughout participants' responses there is a locating of the "lecture" as a reinforcement of "fixed" identities and relationships, perceived or otherwise. Indeed, the authors share a similar, somewhat pragmatic, perspective suggested by the participants here. Despite the suggested importance and relational affordances of interacting with lecturers in non-formal settings, students identified the lecture theatre itself as being a necessary focus.

> But the conclusion is it has to happen within the lecture or seminar. You can't change anything external. As either there's too many factors or it just won't impact enough. (Brian, 3rd Year)

Given the potential weight that formal teaching environments have in mediating identities and relational expectations, there is a need to focus on developing an open, negotiable position in the lecture theatre[19] that validates the different "accounts [of] the interacting activity systems of people's everyday lives" (Gutiérrez, 1998, p. 151).

All research is presented here following approval from Bournemouth University's research ethics committee.

NOTES

1. Lecturer: For full disclosure, this research study was initiated by myself as a means of, perhaps narcissistically, exploring my attempts at adopting a third-space teaching style to promote educational engagement and participation.
2. Student: As a student I am subject to a range of teaching practices, some of which have been successful and others not so much, and so I was curious to see if this paper about third-space teaching styles could assist in identifying a solution for more engaging teaching styles and appease my curiosity to see if other students had similar experiences as I have had.
3. Lecturer: To the point of breaking perhaps.
4. Lecturer: Here, we do not wish to draw on the same critical, post-colonial framing of Bhabha as we are reluctant to frame students as "oppressed" in the same way post-colonial groups are. At the same time, we do not want to be dismissive of this work through our "selective" use of Bhabha's discussion.
5. Student: This "student" identification is immediately challenged after exposure to external business/professional environments. This is apparent later in the findings, which show that all the participants interviewed were either currently in or had come from industrial placements.
6. Student: With increasing tuition fees, many students (including myself) reflect upon our degrees as investments, whereby we pay universities a tuition fee to provide us a service in obtaining a degree.
7. Lecturer: Whenever a student has referred to themselves as a customer, or adopted that position, it always reads as an attempt to leverage whatever "power" they have in the situation. It is easy, and I have heard this frequently from colleagues, to dismiss this as a growing entitlement, rather than engaging with it as an expression of dissatisfaction through, perhaps the only, frame of reference students see as giving them agency.
8. Student: This may not have been achieved in the research discussions had they been led by a lecturer, rather than a student.
9. Student: At the beginning of each interview the student participants were ensured that only the co-author interviewing the participants would listen to their recording of the interview and

would be the one to transcribe the recording, to ensure that no lecturer could identify them. This, I believe, led to more honest feedback about current and preferred teaching styles and learning experiences.

[10.] Student: I feel that due to knowing all the student participants in this study, led to an informal and relaxed interview environment, which was apparent with moments of humor. This informal environment contributed to the reduced possibility of demand characteristics.

[11.] Student: This allowed for impartial perspectives of themes to be identified at the initial stage then challenged, thus reducing potential bias of the identification of thematic codes.

[12.] Student: This made trying to contextualise separate core themes difficult, as there would be many connected themes, which if separated didn't capture the main themes that we wished to expand upon in this paper.

[13.] Lecturer: This, to me, mirrors some of the findings we draw later. The need to provide a linear structure in presenting this research is a little reductive of the complex overlap of themes, just as the linear structuring of educational processes is reductive of different systems of meaning.

[14.] Student: These pedagogic practices are not just consistent throughout HE but through all stages of institutional education.

[15.] Student: I myself have faced experiences where some interactions between myself and lecturers have been efficiently managed but have felt rushed and systematic, rather than humanised.

[16.] Lecturer: This is certainly something I feel as a lecturer—being forced into more functional or tokenistic engagements that sometimes feel like a regrettable inevitability.

[17.] Lecturer: Frequently, I find myself attempting to legitimise what I am teaching with reference to "this is was what employers want" or the CV-centered currency of a given theory, topic, or technique.

[18.] Student: With participants (and I included) who are now on or have just finished their placement year, the focus of professionalism is now more prevalent than the first two years at university.

[19.] Student: I agree that the lecture theatre is a necessary focus, as any relationship with your lecturer, be that positive or negative, is first established within this lecture theatre environment, as that is where the initial main contact with your lecturer begins.

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RESEARCH ARTICLE

Quality with Integrity: Working in Partnership to Conduct a Program Review

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ABSTRACT

Quality assurance processes often include reductive quantitative metrics that view higher education through a neoliberal lens. This paper reports on a student-faculty partnership that conducted a quality review of an undergraduate program at a large research university and shows that working in partnership brings integrity and constructive complexity to the quality assurance process. The partnership laid the groundwork for realistic enhancements in the undergraduate program by weaving multiple, authentic perspectives from student and faculty stakeholders into the review. The authors also experienced profound growth in their sense of connection to each other and to the university community. These outcomes suggest that conducting quality assurance in partnership can destabilize traditional power structures and disrupt a transactional understanding of faculty-student relationships, while also satisfying regulatory requirements.

KEYWORDS

quality assurance processes, program review, SoTL, neoliberalization, emotions

The need for institutions to be accountable to stakeholders is a powerful force shaping public higher education. Quality assessment processes can be a locus for complex conflict among stakeholders' competing goals, and quality metrics can reinforce a market-driven understanding of education. We propose that completing a quality review in partnership among students, faculty, and staff brings integrity to the process, fulfilling regulatory requirements while also honouring the experiences of those most directly engaged in undergraduate education—the students and faculty. In this paper, which documents a quality assurance (QA) partnership at a Canadian university, we show how partnership adds valuable

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complexity to QA in a way that echoes the complexity of undergraduate education and potentially disrupts the neoliberalization of the university. Furthermore, the non-traditional structure of this paper surfaces the important affective outcomes of the partnership for both authors.

It seems uncontroversial that a publicly funded institution should provide evidence of its performance, but what counts as performance? QA processes reveal which performance measures are deemed valuable by those who take the measurement (Stensaker & Harvey, 2011). If one considers whose interests are served by university QA processes, as Wall, Hursh, and Rodgers (2014) urge, several stakeholders with distinct interests are immediately obvious. Administrators must ensure that the institution meets regulatory requirements and is appropriately funded, and faculty aim for students to learn a subject. Students seek to develop skills and master a discipline, while they and their parents want to be assured of future employment (Kezar, 2005). Furthermore, taxpayers (via government agencies) want value for their tax dollars, and employers prefer to hire graduates who require little additional training. The interests of such disparate stakeholders are not all aligned. What, then, should a quality review measure? What values are revealed by performance metrics?

One way to escape the tangle of stakeholder needs is to consider the university's overall mission. Collini (2012) and Kezar, Chambers, and Burkhardt (2005) make the case that the public university has a responsibility to serve the public good. Indeed, the final sentence of our university's mission statement asserts, "We serve the social, cultural, and economic needs of our community and our society" (McMaster University, 2003). Wall et al. (2014) argue, "If the goal of higher education is to serve the public good . . ., assessment can be framed as an ethical, valuing social practice" (p. 13). From this point of view, QA can go beyond quantitative metrics to tell a story about an institution's values. A quality review provides the opportunity to illustrate the contributions that students, staff, and faculty make to the public good. And yet, Kezar (2005) documents a "mission shift" in higher education in the United States (p. 35). She argues that the academy's values have turned away from serving the public good towards the interests of the marketplace, such that Americans no longer perceive higher education to be a public benefit, but rather a means for individuals to attain employment success. In Ontario, Canada, the tension between these values is present today: public universities have committed to "preparing every student with the skills they need for the workforce . . ., helping enhance the quality of life for Ontarians . . ., [and] helping our economy grow" (Council of Ontario Universities, 2017, p. 4). We note that the commitment to the public good is sandwiched between two market-driven goals.

In Ontario, the interests of taxpayers, employers, students, faculty, and administrators are entangled through funding mechanisms. A sizeable proportion of each public university's operating budget comes from a provincial grant governed by the Strategic Mandate Agreement (SMA) that it negotiates with the province. These SMAs "encourage institutions to work with the government to help *build a highly skilled workforce* and . . . focus on each institution's strengths to *enhance quality and outcomes*." (Province of Ontario, 2018, emphasis ours). Each SMA includes performance metrics that influence the operating grant for subsequent years. The degree to which the taxpayer funds the institution is thus directly tied to metrics that are explicitly linked to an understanding of the university as the training ground for workers in the capitalist marketplace.

In such a funding environment, faculty and staff have a material interest in providing evidence of the institution's quality, because operating budgets may depend directly on that evidence. The QA process therefore has the potential to reinforce or exacerbate existing power structures, as each academic unit strives to retain resources from an ever-shrinking pool. The stakes are high for students, whose academic experience relies on their program's quality, yet students rarely have a role in the decisions that influence quality. It is therefore crucial that QA processes consider students' needs.

The last decade has seen increasing attention paid to student involvement in quality assessments. For example, the revised UK Quality Code for Higher Education lists as a Core Practice that institutions "actively engage students, individually and collectively, in the quality of their educational experience" (Quality Assurance Agency [QAA], 2018, p. 3). Setting an even stronger expectation, the Quality Enhancement Framework for Scotland includes Student Engagement as one of its five pillars (QAA Scotland, n.d.) and offers a forty-page guide (Varwell, 2016) for engaging students in quality reviews. In a research study of student engagement in quality processes in the UK, about half of respondents reported that their quality review panels included student members (van der Velden, Naidoo, Lowe, Bótas, & Pool, 2013). But in many cases these student members have observer status with little role in decision-making (Rauhvargers, Deane, & Pauwels, 2009; Lizzio & Wilson, 2009), while in other jurisdictions like Australia, the role of students is limited to that of data source (Shah, Hartman, & Hastings, 2014; Weller & Mahbubul, 2019). The EU's Standards and Guidelines for Quality Assurance (2015) specify that external quality panels should include student members and recommend that institutions' internal processes should involve students. In Ontario, the Quality Assurance Framework recommends that students be actively involved in analyzing program data and preparing a unit's self-evaluation report (Ontario Universities Council on Quality Assurance, 2010). This brief review suggests that while quality agencies are beginning to recognize the importance of involving students in QA, the nature of student involvement varies considerably across institutions.

Researchers in the Scholarship of Teaching and Learning (SoTL) (Bernstein, 2013; Gordon, 2010; Miller-Young et al., 2017; Openo et al., 2017; Poole & Simmons, 2013) have argued that SoTL can serve as a bridge to an ethical practice of quality assessment "through which higher education can be accountable to those it directly serves" (Hutchings et al., 2013, p. 40). The work of SoTL is, after all, the work of providing evidence about learning. Not only is SoTL a means of demonstrating quality; it also can be "a subversive activity . . . that invites critical questions about education's purposes, practices, and underlying assumptions" (Boose & Hutchings, 2016). SoTL thus offers an opportunity to engage in a QA process that can attend to complex questions about mission and values. Furthermore, good practice in SoTL "requires that inquiry into learning be conducted in partnership with students" (Felten, 2013, p. 123). In the first place, partnership is a matter of ethics: it would be unethical to exclude students from a scholarly investigation of a program's quality since they are the primary experiencers of that quality. Secondly, because student-faculty partnership is collaborative and reciprocal (Cook-Sather, Bovill, & Felten, 2014), it has the potential to disrupt two common views of the relationship between students and faculty—on the one hand, the marketized view that students are consumers and faculty members the service providers, and on the other hand, the paternalistic view that faculty members are experts who know what's best for students. Challenging these traditional power relationships is troublesome (Marquis et al., 2016; Marquis, Black, & Healey, 2017), and the relationship among partners is complicated (Bovill, Cook-Sather, Felten, Millard, & Moore-Cherry, 2016), but these are not reasons to shy away from partnership. Rather, the difficult, multi-faceted process of partnership parallels the messy, complex nature of undergraduate education. The very complexity of partnership allows scholars to examine questions that cannot be captured by quantitative metrics. Engaging in a quality process in partnership can thereby "provide a conceptual space in which to reflect on the nature and aims of higher education" (Healey, Flint, & Harrington, 2014, p. 10). For QA processes to be conducted ethically, and for the process to promote justice and not simply satisfy a regulatory checklist, clearly SoTL conducted in partnership among students, faculty, and staff is vital.

The following section describes the goals of our QA project, its tasks and timeline, and the roles that each partner played. The subsequent section presents the outcomes of the project for the undergraduate programs and considers the professional outcomes that the student partners realized. The paper then takes an unconventional turn, exploring the emotional experiences of the two authors throughout the partnership. We have deliberately chosen this personal reflective style as a means of disrupting standard "objective" ways of talking about quality assessment.

OUR PARTNERSHIP

The partnership reported here took place over 18 months, involving two undergraduate student partners, one educational developer, and one faculty member. The seeds of partnership were sown when Catherine Anderson, a Teaching Professor in the Department of Linguistics and Languages at McMaster University in Hamilton, Ontario, Canada, sought support from Erin Aspenlieder, an educational developer with McMaster's Paul R. MacPherson Institute for Leadership, Innovation and Excellence in Teaching (henceforth the MacPherson Institute), for an upcoming QA review of undergraduate programs. Erin recommended that Catherine join the first cohort of scholars to complete the quality process through MacPherson's Student Partners Program. Catherine was familiar with the principles of partnership but had not worked with student partners before. Through the program, she hired Paige McKenny and Julia Varanese. Paige is a first-generation university student of non-traditional age. Having completed college-level education, she decided at age 22 to return for her Bachelor of Arts. When the partnership began, Paige was a second-year student in the Linguistics program. Julia, a traditional-aged student, was in her fourth year of the Cognitive Science of Language program. Paige and Julia had been students in Catherine's courses in the past but were not during the partnership. Their work was paid at an hourly rate by the MacPherson Institute.

The partners entered the partnership with complementary goals. Paige and Julia expressed their desire to advocate for their peers in enhancing the program and to provide an authentic view of the student perspective. They were also interested in learning about SoTL and about undergraduate education. Catherine likewise wanted the QA process to represent students' voices with integrity and hoped to lay the groundwork for meaningful enhancements to the undergraduate programs in Linguistics. More prosaically, she wanted to divide the labour of a daunting project.

Timeline of the quality assurance process

Our tasks and timeline were shaped by state and institutional requirements. In Ontario, every university program must undertake a quality review every eight years. The structure of the Institutional Quality Assurance Process (IQAP) is defined by the Quality Assurance Framework of the Ontario Universities Council on Quality Assurance (2010). While the details vary across universities, all IQAPs include key elements: the department prepares a self-study, external reviewers from peer institutions visit, and the university administration responds to the department's and reviewers' reports. While the process is defined at the provincial level, the responsibility for providing evidence that the program meets standards rests with the faculty and staff who design and deliver the program.

Table 1. Project timeline

November 2016	Catherine and Erin receive funding to hire two student partners.
January 2017	The team begins its work. Paige and Julia decide to conduct interviews with faculty and focus groups with students. Catherine begins emergency medical leave.
February-March 2017	Erin supports Paige and Julia in designing and running focus groups and interviews.
April 2017	Paige and Julia complete data collection. Catherine returns from medical leave.
May-July 2017	Paige and Julia transcribe and code qualitative data. Paige and Julia analyze quantitative data provided by institution. Erin begins parental leave.
August 2017	Paige, Julia, and Catherine present interim findings to department. Paige and Julia draft self-study report. Julia moves away to begin graduate study.
Fall 2017	Paige and Catherine complete self-study. Paige and Catherine facilitate a conference workshop (McKenny, Varanese, & Anderson, 2017).
March 2018	External reviewers meet with staff, faculty, and students, including Paige and Catherine.
May 2018	Paige and Catherine contribute to department's response to reviewers' report.
August 2018	Instructors and student representatives, including Catherine and Paige, incorporate recommendations into courses and curriculum.

Student roles in the IQAP partnership

The literature provides many examples of student participation in decision-making, some of which rank participation on a linear scale. For example, Bovill and Bulley (2011) offer a "ladder of active student participation" (p. 5); on higher rungs, students and faculty negotiate curriculum decisions together as partners. Likewise, McKinney, Jarvis, Creasey, and Herrmann (2010) propose a continuum of roles on which the role of "collaborator/partner" has high autonomy and complexity (p. 84). We entered the partnership with aspirations for Paige and Julia to have highly autonomous roles, and the account that follows illustrates that they climbed quite high on the ladder of autonomy.

The team decided early to gather qualitative data from program students and faculty members. Because of Catherine's medical leave, Paige and Julia developed scripts for these interviews and focus groups with support from Erin. They were guided by three foundational questions: (a) "What does the program intend for our students to learn?", (b) "What and how are students learning?", and (c), "How can the faculty enhance students' experience?". With those guiding questions in mind, they crafted specific questions to ask of students and instructors. They facilitated three focus groups with undergraduates, which they audio-recorded and transcribed. They also conducted interviews with 12 faculty members, which they documented by taking extensive notes.

Once data-gathering was complete, the team proposed an initial set of codes for the transcribed data, which Paige and Julia enriched by constant comparison (Parry, 2011). In addition to coding the qualitative data, Paige and Julia also summarized findings from the university's quantitative dataset. With Catherine, they presented interim findings to the department, so that instructors could begin to address some of the student concerns that had emerged. Following the presentation, Paige and Julia collaborated in writing substantial portions of the department's self-study report. Julia wrote about accessibility in classes and about experiential learning opportunities. Paige and Julia together wrote the section evaluating how course offerings compare with the program's stated learning outcomes. Paige also wrote the section describing how students' performance is assessed. Their writing drew on their interpretations of the data they had gathered in the interviews and focus groups.

PROJECT OUTCOMES

While we initiated this project with goals related to the undergraduate programs, we also realized outcomes beyond the program, namely, professional development of the student partners and effects on the emotional state of all the partners. In the following sections, we present data from the student focus groups and instructor interviews, for which we obtained informed consent using a protocol approved by the McMaster Research Ethics Board. We also present data from ourselves, which we gathered through written reflections and a lengthy conversation. The written reflections used prompts from Marquis et al. (2016) and the conversation was guided by questions from MacPherson Institute staff.

Outcomes for the department: Investigating the linguistics programs with integrity

A primary goal of completing the IQAP in partnership was to obtain authentic data. We hoped that with student partners as facilitators, data would emerge that would not have been available to a faculty interviewer. One observation that suggests that the focus group participants perceived the student researchers as their peers is simply that they answered questions by including Paige and Julia, for example, "one of *our* program's strengths" and, "there can be a disconnect between *us* and TAs and profs" (Focus Group Participants, emphasis ours). While it is impossible to know what participants would have said to different facilitators, the transcripts reveal that students and faculty alike were quite candid with the student researchers. Expressing frustration about the nature of the feedback they receive, one student participant pulled no punches:

> Why aren't you giving it (the midterm test) back to us? We might show it to next year's students? Well, then, make a new midterm! It shouldn't be on us to not be able to get back our midterms because they are too lazy to make a new midterm next year. (Undergraduate Focus Group)

Likewise, in considering the program's intended learning outcomes, a senior student was quite blunt:

> Facilitator: Do you think that, if we knew from the start what was actually expected of us from our degree, how would that affect your experience in the program if you knew about them (the Program Learning Outcomes) from the start?
>
> Participant 3: You'd probably be disappointed at the end of your degree, 'cause they wouldn't follow through with what you've learned. Like you're going in there expecting to learn all of these; you would be a little disappointed that you didn't do this. You weren't able to. (Undergraduate Focus Group)

These frank comments suggest that we achieved our goal of eliciting authentic data from students. Furthermore, we found that having the student researchers interview instructors kept the focus of the interview on the student experience and led faculty to reflect in ways that might not have occurred in a context that included their colleagues. For example, in response to the question, "How does our department support faculty in considering program learning outcomes in course design and delivery?", a faculty member who was new to teaching described feeling unsupported in developing courses. They consulted colleagues for advice but were reluctant to bother people. The instructor would have liked a mentor, "some authority, someone responsible to use as a first line of approach" to support them in developing their teaching practice (Faculty Interview). Similarly, several instructors admitted to the student interviewers that the faculty collectively do not talk enough about the ways that different courses connect to each other, nor about how writing is taught and assessed.

These findings, which highlight some shortcomings of the program, might not have emerged from conventional data-gathering instruments like written surveys. The student partners played a crucial role in uncovering areas for improvement.

Although we initially encountered some resistance from faculty members about the project, in the end we discovered that our work had transformative effects among instructors. When we presented our initial findings to the department in August 2017, we focused on current students' experience of the program, highlighting strengths and suggesting potential changes to improve the student experience. At the end of that meeting, one instructor commented, "That wasn't as bad as I had feared!", revealing that they had perhaps dreaded hearing a list of complaints. One year later, every faculty member participated in an exercise to link the program's learning outcomes to outcomes for individual courses. The change in attitude from resistance to full participation suggests that the process by which we conducted the quality review succeeded in honouring faculty members' experiences and that instructors saw the value of engaging in ongoing quality enhancement.

These outcomes make us confident in concluding that we achieved our goals of gathering authentic data from student and faculty stakeholders and of setting the stage for meaningful enhancements to the Linguistics programs.

Outcomes for partnership: Developing professional skills in partnership

At the outset of the project, Paige and Julia expressed their goal of advocating for their peers. The manner in which they did so grew and changed throughout the project as they gained experience and confidence. Bovill (2017) offers a participation matrix as "a way to be transparent about the different roles of different actors at different stages of a SaP project" (p. 3). In this project, the student partners' roles were more complex than that of researcher—they also took on the roles of consultants and representatives (Bovill et al., 2016). They found that instructors wanted to discuss their teaching methods, consulting the student partners for feedback about their courses. Paige and Julia were also natural representatives of the student voice in two ways: while they offered their individual voices at every stage, they also represented the collective voice because they had gathered and analyzed the data from their fellow students (cf. Little & Williams, 2010; Crawford, Horsley, & Parkin, 2019).

It is clear that the student partners' roles involved a high degree of time and effort, placing their contributions on the high rungs of Elassy's (2013) model of student involvement in QA, where the topmost contributions include meeting external reviewers and sharing in the writing process. Their contributions to the self-study (described above) demonstrate that Paige and Julia grew into their roles of co-researchers, not just gathering and reporting data as a research assistant might do, but interpreting it and drawing sophisticated conclusions about enhancements to student learning. Their conclusions were informed not only by their individual experiences as students, but by their understanding of the literature and by their deep familiarity with their data.

In reflecting on their own professional development, both student partners remarked on how the project had influenced their identities as scholars:

> I've always been really interested in seeing how people learn, and in all of my grad school applications I've been able to say I want to work with pedagogy. So this project has really solidified something that I feel like I can do and I can do well because there's such a big importance for it. (Reflective Conversation, Julia)

> Before I was on this project I never thought that there was something I was more interested in than Linguistics and that was my plan for grad school, but now I'm like—pedagogical research grad school—I'm obsessed about it. (Reflective Conversation, Paige)

Paige and Julia's multi-faceted roles in this project brought immense value to the QA process, and also contributed to their growth in research skills, confidence, and their openness to SoTL research in the future.

REFLECTING ON AFFECTIVE OUTCOMES

Besides the benefits to the Linguistics programs, we found that our partnership had profound emotional effects on each of us. While it is rare for academic papers to acknowledge the authors' emotional state, we do so in response to Felten's (2017) urging that "focusing on the emotional dimensions of partnerships will shine new light on the dynamic processes and the powerful outcomes of this work" (p. 3). Therefore, in this section of the paper, we move from an objective reporting of our findings to a subjective account that mingles primary data from structured reflections with interpretation shaped by our experience. We follow Cates, Madigan, and Reitenauer (2018) by writing in the first-person singular to acknowledge that our experiences differed because of our roles and status. We are also mindful that the SaP literature tends to be biased towards reporting positive outcomes (Mercer-Mapstone et al., 2017; Marquis et al., 2017). In our discussion we have striven to be honest about both the challenges and the rewards of partnership.

Paige's experience as a student partner

The experience of working in partnership for program review was one full of growth and change. At the outset, my responses to reflective prompts expressed apprehension mixed with enthusiasm to be involved in the project:

> I am nervous that I will not produce adequate work. I think this is simply due to the fact that I have never done anything like this before. . . . I feel very much responsible for the outcome of the work I will be asked to produce. (Written Reflection)

Additionally, coming into this project as a student new to both the university environment and to McMaster was a challenge. I had doubts that I could be an adequate member of the team given my limited knowledge of the program at the time. I struggled with feeling like I could assert myself and my ideas because, as a student, being in a position where my input was sought after was jarring and unfamiliar. Negotiating the dynamic of being on the same level as a respected faculty member and still needing that person's assistance at times was also difficult. Initially, I felt that working in partnership implied an expectation of some pre-existing knowledge on my part of the tasks that I needed to complete, and I was reluctant to ask for help. When I sought advice, however, Catherine assured me that needing assistance is OK and even expected. It took time and practice bringing forward ideas and having them validated and included for me to "buy-in" and feel like an equal partner, but relinquishing the idea that I was expected to have everything figured out was immensely transformative for me.

Over time, my concerns about the quality of my work and meaningfulness of my contributions all but vanished. Good communication and weekly meetings meant that we could check in often and candidly about issues or concerns. Given Catherine's absence, Julia and I were required to step up to the plate in a radical way. This radical independence garnered us the chance to be in charge and left no room for doubt that our contributions to the project were meaningful. During her absence, I wrote:

> The primary challenge in the beginning of the term was the absence of our supervisor. I feel that with her direction things may have felt like they were going more smoothly. In reality, things were very smooth . . . and our main challenges have been very minimal. (Written Reflection)

Seeing that our contributions were so important to the project overall was at once validating and motivating. The more we accomplished the more confident we became.

As a student at a large university, it is easy to feel as though you could never make a difference. Being part of the partnership greatly enriched my sense of belonging in the program community and, by extension, how much I felt I could make an impact. My written reflection from that time shows how I became aware of this enrichment: "It's really helped me integrate myself into the McMaster community. I know so many more of my peers now which is amazing and the faculty as well which is an invaluable resource" (Written Reflection). Christie, Tett, Cree, Hounsell, and McCune (2008) show that the transition to university is an inherently jarring emotional experience, especially for students from equity-seeking backgrounds. I found that with my improved sense of belonging to and understanding of the university community came empowerment about my role in my education. I was able to feel that I, as a student, had a valuable perspective that was worth being included when considering the quality of the program and that, by advocating for that perspective, I could have an impact on my own experience and that of my peers.

Moving through my self-doubt in the context of working in partnership was an important process in my experience of the partnership. To go from lacking confidence in my role to feeling valued, not only by my fellow team members but by the faculty at large, was a vital and transformative milestone. Akin to the findings of Cates et al.(2018), during and after my involvement in the project, I felt more enmeshed in my university experience than I ever expected. Between finding a mentor, colleague, and friend in Catherine and becoming more closely acquainted with my peers, I began to feel a sense of real connection where previously I had felt isolated and unsure of myself. After my experience on the project, I felt at ease within the department and with faculty. Collaborating with students, staff, and faculty to reach a common and mutually beneficial goal made way for my own reconceptualization of the university environment as one that is rich with opportunity for connection.

Catherine's experience as a faculty partner

A recurring theme in the literature is that a functional partnership requires a sizeable investment of time (Acai et al., 2017; Bovill, Morss, & Bulley, 2009; Curran, 2017; Marquis et al., 2017). To be honest, my first impetus for hiring through the Student Partners Program was to reduce the amount of time I would spend on the IQAP. As it turns out, because of my illness, I did indeed spend less time than I expected, because I was simply unable to work for about three months. Paige writes above about how my absence affected the students' experience. When I returned to work, one of my challenges was to align my schedule with the rest of the partners. The week that I returned to work, I wrote:

> My original role was as the one who was in charge of the project. Now my role seems to be more of a cheerleader from the sidelines—the student partners have seized the reins and I'm just nudging here and there. (Written Reflection)

I am usually a solo practitioner, but for the partnership to proceed, I had to meet regularly with the team and complete my tasks according to the team's schedule. This challenge is not unique to partnership—it is inherent to any work conducted in teams—but I occasionally felt frustrated by the loss of autonomy.

A second challenge that arose repeatedly for me was negotiating the boundaries of professionalism in our conversations about the Linguistics programs. The QA process necessarily involved critique, as the team identified areas for improvement. When the student partners reported issues that their peers had pointed out, I struggled to suppress my personal response and to respond as a researcher instead. In some cases, when Paige and Julia described a student complaint, I felt defensive and wanted to explain why faculty did things that way. At other times, I wanted to join the students in griping about a course or even about a colleague. Neither reaction is fair to the student partners—since they were both still enrolled in the program we were researching, they had to continue their own relationships with their professors and peers, and my comments could have made that more difficult for them.

In struggling to reconcile my partner and professor roles, I experienced humbling reminders that it is not always necessary for me to make all the decisions. At one point, I asserted without much thought that a standard questionnaire would suffice for surveying alumni. But Paige suggested that we add specific questions about the program learning outcomes. At the time I wrote: "I overlooked something important to the project, and it was the student partner's question that brought me back on course" (Written Reflection).

On another occasion, Paige and I were preparing a conference abstract. Wanting to finish the task in our scheduled time, I rushed us through drafting an adequate abstract and gave it a utilitarian title. Paige invested more time and added creativity and energy to both the abstract and the title (see McKenny et al., 2017). These interactions reminded me of Cook-Sather, Bovill, and Felten's (2014) words: partnership "means following where students lead, perhaps to places we may not have imagined or been to before" (p. 8).

Although discerning the ways that my roles as partner and professor differed was sometimes challenging, I also discovered that working in partnership brought profound emotional rewards. The following excerpt illustrates one such reward:

> There are some components of a faculty member's job labeled as service to the university: most of those jobs are not that much fun. Often they're boring grunt work. So to have fun with you guys and get valuable data . . . to be able to address these questions with integrity, to have an alignment within myself between doing my job with integrity to my values and being fair and authentic to students and to have fun doing it? I just think that's the luckiest altogether. (Reflective Conversation)

Within the space of about eight months, my attitude towards the IQAP had shifted from dread to enjoyment, thanks to the energy and good cheer of the student partners.

Being able to complete an onerous service task in good spirits is remarkable enough, but the emotional value of the partnership extended farther still. Pointing out that "learning, teaching, and working in institutions of higher education can be compartmentalized, demoralizing, and alienating experiences," Cates et al. (2018) show how working in partnership can create caring relationships, alleviate loneliness, and bring meaning to academic work (p. 34). Our partnership began with feelings of affinity—Paige and Julia had taken my courses, and we knew that we liked each other—but the affective outcomes that Cates et al. (2018) describe take a substantial investment of time and energy. After the Summer 2017 semester, the nature of our partnership shifted when Julia graduated and Erin began a one-year leave. The tasks of gathering and analyzing data were done, and what remained was to write. Paige and I met weekly to write together, and this quiet time naturally led to more personal conversations. In one of these conversations we came out to each other as queer women, crossing another threshold between being colleagues and being friends. The ensuing conversations, while retaining some typical professor-student mentoring, also included mutual support through shared experiences of isolation in the university. In my 2018 promotion dossier, I wrote: "in a career that can often be thankless and overwhelming, my experience has been that interacting with students as a partner in their learning, and valuing the fullness of their experience in this learning community, has brought genuine joy to my work."

AN INVITATION FOR FUTURE PRACTICE

Our account of completing a QA review in partnership reveals themes of identity, community, authenticity, and integrity—themes that are not typical of quality assurance processes. Paige's reflection draws our attention to the effects of the partnership on her identity as a university student. As a first-generation student, when Paige first began her studies, she felt like an outsider in the university. Her reflection eloquently shows how working as a partner enabled her to come into her own as a member of the university community, both in developing concrete research and collaboration skills, and in her growing confidence in the value of her work. Her experience echoes those described by Cook-Sather's (2018) participants: student partners who were members of equity-seeking groups reported experiencing an affective change in how they related to faculty and to their fellow students and an evolution in their awareness of their agency in learning. Previous studies have found that faculty partners tend to report the ways that partnership has benefited their projects, rather than its effects on themselves personally (Marquis et al., 2016). Countering that tendency, Catherine's reflection emphasizes the personal and emotional consequences of the partnership. Specifically, she found that partnering with students enriched her sense of the university as a community and lessened her feelings of isolation. And although this paper has not explored Julia's reflections on the partnership, a quote from our final conversation before she left the project shows that she also perceived her role as richly entwined with the community:

> I was able to really reflect on the last four years and how much this program has shaped me. . . . It honestly means the world to me, so to be able to make that even better for [future students], it just warms my heart. I love it. (Reflective Conversation)

The fact that this partnership created a stronger sense of community for each of us offers evidence for Wijaya Mulya's (2018) argument that the collegiality and mutuality of partnership offer a mode of resistance to the neoliberalization of the university.

In addition to the powerful sense of community that grew among the partners, we have shown that partnership is effective in identifying areas for enhancement in undergraduate programs. We incorporated students' accounts of their learning experiences in complex ways that extended beyond numerical satisfaction scores. The students' comments were not always pleasant, but we discovered that faculty members were willing to take them seriously, perhaps because of the authentic way they themselves had participated in the process. Furthermore, having student partners collect the qualitative data avoided an ethical conflict—if faculty members had invited students to focus groups, it is possible that students would have felt obliged to participate and to provide positively-biased data. And Paige and Julia's substantial contributions to writing the self-study ensured that the report incorporated multiple perspectives (Cook-Sather, 2014).

This paper opened by considering the ways that QA processes can reinforce a neoliberal understanding of the university by relying on reductive quantitative metrics. Initially, we had concerns about the tension between regulatory compliance and our desire for authenticity. While we cannot conclude that our IQAP partnership resolved that tension completely, we can perhaps offer hope that the tension can be relaxed. We can say with confidence that we completed the QA process in a way that met our standards of integrity, while satisfying provincial and university regulations. By partnering to gather data, write the self-study, meet with reviewers, and respond to their report, we told a complex, authentic story that honoured the experiences of students and faculty and challenged the consumerist view of post-secondary education. We encourage others to strive for the same by engaging in student-faculty partnership for quality assurance.

All participants gave informed consent to participate using a protocol reviewed and approved by the McMaster Research Ethics Board.

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RESEARCH ARTICLE

The Access Network: Supporting the Construction of Social Justice Physics Identities Through Student Partnerships

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ABSTRACT

This paper explores the intersections of Students as Partners (SaP) and identity development. While identity and sense of belonging are known to be key factors for predicting success and persistence in STEM, less is known about how student partnerships can provide space for students to develop their identities. To explore this space, we focus on the Access Network, a coalition funded by the National Science Foundation (NSF) of student-run programs that aims to improve equity in the physical sciences. Qualitative interviews with six student participants showed how SaP created opportunities for students to develop social justice physics identities, which allowed them to bridge traditional notions of what it means to be a physicist with their own social justice commitments. This paper contributes to the rapidly growing SaP literature by studying student partnerships at the scale of a national network of institutions, which contrasts studies that focus on more localized contexts, such as teaching and learning in a single classroom.

KEYWORDS

culture, identity, physics education, social justice, STEM

Participation in the physical sciences is disproportionately white and male: bachelor-degree attainment remains disproportionately low for students of color and white women (National Science Foundation [NSF], 2018). In the United States, these inequities are perpetuated by a variety of systemic factors, including: institutional racism (Harper, 2012; McGee & Bentley, 2017), ideologies (Shah, 2017; Traweek, 1988), and interpersonal harassment (Kelsky, 2017). Thus, it is an exclusionary culture (Behrman, 2018; Ong, 2005)—not deficits in students themselves—that denies students access to identity development that is

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crucial for persistence in science, technology, engineering, and mathematics (STEM) fields (Hand & Gresalfi, 2015; Stets, Brenner, Burke, & Serpe, 2017).

Like others before us (Martin, 2009; Rosa & Mensah, 2016), we categorically reject deficit-based perspectives of students. Instead, we adopt an anti-deficit stance, and seek to understand the role of building meaningful partnerships with students from historically marginalized groups. Through partnerships, students can improve their own education and change the system itself (Dunne & Zandstra, 2011; Healey, 2016). This paper explores student partnerships in the Access Network, a coalition of programs that promote equity in the physical sciences.

Although prior research describes student partnerships within individual Access programs (e.g., Dounas-Frazer, Hyater-Adams, & Reinholz, 2017; Sabella, Van Duzor, & Davenport, 2016; Zaniewski & Reinholz, 2016), this is the first paper describing partnerships at the network level. In particular, we focus on how Access supported students to develop a social justice physics identity, which integrates commitments to social justice and a traditional physics disciplinary identity. Through active engagement in anti-oppression work, social justice physicists attend to equity issues in the discipline and in society more broadly. To explore the impact of the network on identity development, we conducted qualitative interviews with six student fellows who had taken on leadership roles in the network. We address the following research question: *how do student partnerships in the Access Network support students to develop social justice physics identities?*

This manuscript makes a number of important contributions to the SaP literature (cf. Mercer-Mapstone et al., 2017). First, it addresses the identified need for more research on inter-institutional partnerships. Second, it addresses multiple types of student partnerships in a single context (i.e., among students, postdocs, and faculty). Third, our focus on identity development highlights the potential for partnerships to improve equity in the physical sciences.

BACKGROUND

Identity

Given the close relationship between learning and identity development (Hand & Gresalfi, 2015; Nasir, 2002), learning physics requires opportunities for students to construct identities as physicists. Without such opportunities, students may fall victim to negative stereotypes that reduce belonging and inhibit persistence (Good, Rattan, & Dweck, 2012; Master, Cheryan, & Meltzoff, 2016). In contrast, positive identities increase motivation and persistence (Fraser & Ward, 2009; Stets et al., 2017; Woodcock, Hernandez, & Schultz, 2016). In addition, identity is an important construct that has been taken up in the SaP literature (see Matthews et al., 2019).

Identities are dynamic, context-dependent, and individually and socially constructed (Eccles, 2009; Holland & Cole, 1995; La Guardia, 2009; Oyserman, Bybee, & Terry, 2006). Through social interactions, one is able to try out a particular identity and receive feedback that can validate or invalidate that identity (Pasupathi, Stallworth, & Murdoch, 1998; Tice, 1992). While students do have individual agency in developing their own identities, they do so in the chilly climate in STEM (Cech & Waidzunas, 2018; Seymour & Hewitt, 1997).

To operationalize identity, we draw from a recently published framework on race and physics identity (Hyater-Adams, Fracchiolla, Finkelstein, & Hinko, 2018), which consists of six constructs of interest drawn from two other frameworks (Hazari, Sonnert, Sadler, & Shanahan, 2010; Nasir, 2011). This framework highlights that there is not a singular "physics identity" but rather a multitude of possible physics identities that individuals construct in ways that are consistent with their other identities (e.g., racial identities, gender identities). In this paper, we focus on how students integrate their multitude of identities to develop as social justice physicists. The six constructs are now described, and examples are given below in Table 2 of the methods section.

Competence relates to whether or not a student believes that they can perform and understand required tasks. *Interest* focuses on reasons or experiences that contribute to a student becoming passionate about physics. *Recognition* relates to how and whether or not a student is seen as a scientist by others (e.g., peers, mentors). These constructs center on the individual, focusing on what students think about themselves, or how they are seen by others. The other three constructs focus on the resources an environment provides that may support or inhibit identity development. *Relational resources* are relationships with others that impact a student's connection to physics. *Ideational resources* are aspects of an idea (e.g., narrative, self-perception, value judgement) that connect a student to physics and what it means to be a physicist. Finally, *material resources* are material things (e.g., a student program) that provide access to physics.

These six constructs are distinct but overlapping. For example, a relationship with a particular social justice physicist that provides mentorship and support (i.e., a relational resource) could also serve as an ideational resource, because it validates a non-traditional physics identity. Similarly, a single experience could support identity development along multiple constructs. For example, an early research experience could support both interest and recognition in physics (Laursen, Hunter, Seymour, Thiry, & Melton, 2010).

Students as Partners

We define a student partnership as "a joint endeavor to shape and influence university teaching and learning" (Matthews, 2016, p. 3). In Access, students partner with other students (undergraduate and graduate), postdoctoral researchers, faculty, and staff. Student partnerships at Access sites create opportunities for students to meaningfully engage the discipline of physics through innovative courses, research opportunities, and community building (see, e.g., Albanna, Corbo, Dounas-Frazer, Little, & Zaniewski, 2013). The goal of network-level partnerships is to enhance these activities at individual sites, and also to build student community and leadership across sites.

Student partnerships provide fertile ground for students to engage in the complex, socially negotiated process of identity development. They provide opportunities for students to authentically be a part of a physics community and to receive social validation from that community. Because Access explicitly integrates physics and social justice, it provides a space for students to build identities that honor their own social justice commitments. These partnerships are organized around core values, including: authenticity, inclusivity, reciprocity, empowerment, trust, challenge, and community (Healey, Flint, & Harrington, 2014; Healey et al., 2014).

These partnerships also involve a genuine effort for power sharing (Matthews, 2017). This is achieved by engaging students through a variety of clearly defined roles (Bovill, 2017) and by paying students for their work (Mercer-Mapstone et al., 2017). In Access, student partners (called "fellows") and faculty receive comparable stipends ($500 per semester for fellows; $1000 or $2000 per year for faculty). These comparable stipends signal that students and faculty are equally valued. This paper focuses specifically on students; the impact on Access leaders is beyond the scope of this study.

The Access Network

The oldest Access site is the nationally-recognized Berkeley Compass Project (American Physical Society, 2012; Heron & McNeil, 2016), which served as a model program for the network. Compass was founded in 2006 and is led by graduate and undergraduate students at the University of California Berkeley. Compass has provided a variety of services including: a summer program, inquiry-based courses for students, mentorship opportunities, and student research opportunities (see, e.g., Albanna et al., 2013; Berggren, Gandhi, Livezey, & Olf, 2018; Dounas-Frazer, Lynn, Zaniewski, & Roth, 2012). When Access was formed with NSF funding in 2015, it consisted of six programs that were inspired by Compass. These programs are also organized around student leadership, and the details of individual programs are described in a variety of publications (Cammarata & Owens, 2017; e.g., Marks & Dawod, 2016; Rainey, Dounas-Frazer, & Huynh, 2016; Reinholz & Dounas-Frazer, 2017; Sabella, Mardis, Sanders, & Little, 2017).

Access programs create opportunities for authentic engagement with physics while simultaneously meeting the needs of their local populations. All sites intentionally recruit and serve student populations with significantly higher fractions of women and/or students of color than typical physical science departments nationally. Sites support other forms of diversity, too (e.g., IMPRESS has a significant population of Deaf and hard-of-hearing students, 70% of Sundial students were in the bottom 30% of their entering freshmen class for academic preparation, and Chi-Sci Scholars is located at a Predominantly Black Institution with many commuter students). While some of these programs have faculty leaders, many are completely student-run.

The network has four main activities: (a) the Access Assembly, (b) network communication, (c) documentation of models, and (d) dissemination. The Access Network leadership team is comprised of current and former leaders from member programs (typically early-career faculty members and postdoctoral researchers, called "core organizers"). Each network activity is also supported by student members of the network (fellows), who receive honoraria for their work. This paper focuses on the Access Assembly and network communication.

The annual Access Assembly is a three-day meeting that supports community building and the sharing of best practices across sites. It also supports all members to deepen their understanding of social justice. The Assembly is planned by approximately six student assembly fellows in partnership with two network core organizers. The fellows help with planning, ranging from logistics to designing sessions. They also help run the Assembly and incorporate feedback from participants in an ongoing fashion as the assembly commences (e.g., through daily debriefs). They are also involved in conflict resolution. For instance, after the inaugural Assembly at Arizona State University, a core organizer and a team of about five students from various sites formed a task force to address a conflict and make recommendations—many of which were taken up—to the network leadership. These types of authentic partnerships are hugely important for student ownership of the Assembly and also for building trust between leaders and members.

Network communication is supported by network fellows who help connect local programs to the network as a whole. These fellows support bi-lateral communication through regular virtual meetings. Over the three funded years of Access, the role of these students has evolved, to focus on other efforts such as sharing engagement with Access through blog posts, updating the Access website, coordinating a winter workshop between Assemblies, and coordinating student travel to other conferences like the Annual meeting of the Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS). These fellows also partner with two core organizers, who collaborate with a group of approximately nine fellows at a time. Many network fellows also attend the assembly, and it is also common for fellows to transition between the roles of assembly fellow and network fellow in subsequent years.

METHOD

Researcher positionality

The three-member research team was led by an Access Network founder and core organizer who is not currently associated with a local program. This organizer identifies as a white man, and is familiar with the day-to-day operations of programs, through interaction with three programs. The other two team members were graduate students who were not affiliated with Access. The graduate student who conducted interviews identifies as a Latinx woman, and she had personal experiences engaging in student-faculty research partnerships as an undergraduate student. The third team member identifies as a Black woman.

Participants

An email was sent to leaders at local Access sites to recruit past and present fellows. Of the approximately 40 past and present fellows in the network, six agreed to participate without receiving any compensation. Participants' self-reported demographics are given in Table 1.

Table 1. Participant demographics

Name	Race	Gender	Fellow Role
Alex	N/A*	N/A*	Network
Haley	Black	Woman	Assembly
Michael	Latinx/Mexican	Man	Network
Peter	Asian/Caucasian	Man	Network
Taylor	Hispanic	Woman	Assembly
Tommy	African American/Black	Man	Network

*Alex did not answer the questions related to race or gender.

Data sources

This paper analyzes transcripts of interviews with student fellows. Interviews were conducted virtually using Zoom conferencing software, and the interview protocol was organized around Hyater-Adams et al.'s physics identity framework (2018). The 45-minute interviews had five parts: (a) introductory information, (b) physics goals, (c) physics identity, (d) personal identity and intersections with physics identity, and (e) closing and summary. Sample questions include: "To what extent do you see yourself as a physicist?" and "Is there any aspect of what it means to you to be a physicist, that you think is particularly important but may not align with your perception of a stereotypical physicist?" The study received Institutional Review Board approval before any data were collected.

Analytic methods

Our unit of analysis was a single interview question, including all follow-up questions (with 20 questions total). Each unit was coded to indicate the presence or absence of the six constructs listed in Table 2 (cf. Hyater-Adams et al., 2018).

Table 2. Codes used for the present study

Code	Description	Example
Recognition	Being recognized as a physicist or physics person.	"The fact that I spent more years in my life studying physics in college has stamped that identity onto me, and others do perceive me as that."
Competence	Belief in one's ability to understand and perform tasks in physics.	"I would say overall I'm a pretty good physics student."
Interest	General interest in the physics field.	"I've always been interested in understanding how we can use materials for other electronic devices."
Relational resources	How relationships with others impact one's connection to physics.	"I felt welcomed in physics, where everyone's just happy to be there."
Ideational resources	Ideas about physicists. This includes personality traits, perceptions, and values, and one's own position.	"I guess when I think of a typical physicist I think of somebody working at a blackboard or something, trying to solve problems or work out math problems."
Material resources	Material things such as programs, communities, organizations, funding.	"[I] wouldn't have flourished, so to speak, without all the support that I had with [Local Program] and Access Network."

STUDENTS *ARE* PARTNERS

Although students were not asked explicitly if they felt like partners, it emerged organically during the interviews when students described their roles. For instance, Alex described their experiences working as a network fellow: "it's supposed to be like nobody's the president or something like that, so nobody has more power than anybody else. Even our mentors. . . ultimately let us make the decisions." Here Alex describes a feeling that students and mentors have equal decision-making power. Similarly, other network fellows such as Michael mentioned that he was "in charge of Access and site communication," and Tommy said he helped "make decisions for the Access Network." Their language indicates that students felt like they had the authority to make meaningful decisions. Another fellow, Taylor, described her experiences as an assembly fellow:

> Meeting every week and talking on video conferences with other people at other sites, planning the Assembly with all of them, working together to get things accomplished, especially working from distant locations. . . it was really good experience just working with other people.

Here Taylor describes a variety of interactions with other fellows that resulted in the planning of the Assembly. The experience Taylor describes was a genuine collaboration, working with students to plan the assembly and "get things accomplished." It was not merely a tokenized experience for the students. Haley also described herself as an "Assembly coordinator," which meant that she was "one of the planners" for the meeting. These examples showcase student ownership of their work in Access. We now turn to how partnerships supported students to develop their identities.

SOCIAL JUSTICE PHYSICS IDENTITY DEVELOPMENT

Summary of codes

Table 3 summarizes the frequency of codes across categories. While all of the categories were present in the interviews, we note that ideational resources were the most commonly coded. This is due to the relatively broad way that these resources are defined, which means that they were often coded at the same time as other identity constructs.

Table 3. Frequency of codes

Participant	Recognition	Competence	Interest	Relational	Ideational	Material
Alex	3	2	3	2	9	7
Haley	3	1	5	3	12	11
Michael	5	2	3	2	15	9
Peter	4	2	2	2	9	3
Taylor	2	3	2	6	9	6
Tommy	4	3	2	2	12	10
Total	**21**	**13**	**17**	**17**	**65**	**46**

The results of coding are split into six sections, one for each identity construct. In contrast to studies that tell narrative stories of identity development (e.g., Hyater-Adams et al., 2018), we focus on the role of Access more generally on identity development. Thus, we do not make strong claims about the identity of any individual participant, but rather the capacity of these inter-institutional student partnerships to support identity development more broadly.

Material resources

Access provides students with a variety of material resources. This happens through local programs, and also through network-level interactions. Haley described a variety of these benefits:

> I would've had no idea how to do science without the Access Network. I wouldn't have known that I should've gone out and gotten research positions in my undergrad. I wouldn't have had a publication under my belt in undergrad. I wouldn't have gone to conferences and presented as an undergrad, and gotten so many different skills under my belt. I wouldn't have learned programming. I would have had none of this without [Local Program] and the Access Network. I would've just gone to school, gone to class, gotten my degree. Because now I have a full resume because of that, you know? I can go and say look at all these things I did. I got published, I was a TA, I did research. . . . I'm so grateful that I've had the Access Network and [Local Program] interject in the middle of my undergrad. It was the best thing that could have happened.

Haley refers to having published a paper as an undergraduate, which was a result of the research experiences she participated in as a part of her local program. She further describes how her participation in Access helped reveal the implicit yet critical aspects of being a physics student (Jackson, 1968). This is a key aspect of equity, because some groups of students may be much less likely to have access to this implicit knowledge, due to their cultural and social backgrounds (see, e.g., Harrell & Forney, 2003). By providing material resources to help Haley succeed, Access supported the development of her physics identity. As Haley's quotes describe, we can see the ways that her partnership in a community of physicists provided her with opportunities to draw on material resources (e.g., research experiences, presenting at conferences, learning programming).

The existence of the network itself can also be seen as a valuable material resource. Access itself provides a community and a space for students to integrate a commitment to social justice with their engagement with physics. It provides a venue in which social justice is a core commitment. For example, Michael reflected on his experiences at the Assembly:

> They did give me a lot of good advice in terms of keeping the passion for diversity alive. It's easy at the Access Assembly to get really pumped about doing all these things, [and Access members] gave me some advice about how to go back to my local site and just keep it going, I suppose, keep the energy up, and draw it out so that the program doesn't fizzle out.

Here Michael describes how it was "easy" to get excited about social justice at the Assembly, but also that it is easy for the energy to dissipate when he returns home where social justice is not a primary focus. This draws attention to the value of Access in creating inter-institutional partnerships, because it allowed Michael to work with others who were also committed to social justice. In addition, Michael stated that he felt "like physicists play a huge part" in outreach and promoting diversity at his own institution, which indicates that his connection to the social justice physics identity extends beyond his time at the Assembly. In this way, the Assembly serves as an environment for cultivating a community focused on physics and social justice both as a material and ideational resource, as we describe below.

Ideational resources

Ideational resources help define what it means to be a physicist and what is valued in physics. For example, Tommy described how his partnership allows him to engage with a version of physics that's not just about doing research, but where social justice is valued too:

> I feel like a lot of the physicists that I work with. . . the ones who are not really part of [the local program], I feel like everyone is very much into their research, into their work, and aren't very open to talking about some of these other issues that come up. I kind of had a feeling that these other kinds of physicists exist, but going to the Access [Assembly] and seeing other people who, some of them do research and also are part of the Access Network, or they have other roles on their campus and are still core organizers of the Access Network, I think that changed my view a little bit. It kind of showed me that it is possible to still focus on your research and be invested in your research and still be involved in these more social justice type things I guess.

In this way, the existence of the network provides a space that supports a different notion of what it means to be a physicist, because the Access leaders are recognized as physicists, and they do not necessarily conform to the traditional idea of what it means to be a physicist.

Another student, Taylor, described how her participation in Access helped her adjust her expectations about what it meant to belong in physics:

> I think I struggled a lot at the beginning with feeling like I wasn't good enough to be in physics. But after attending the Access Assembly and listening to talks about imposter syndrome and stuff like that, and also just realizing that it's okay if you feel super aware that you don't fit into the group of people in your class and stuff like that, it doesn't mean that you're not good enough or you don't fit in, it's just a product of physics being not diverse and not inclusive. I think since learning those things it's really helped me to push those ideas out of my head and just work through them.

Here Taylor describes self-doubt associated with her struggles as a physics student. In this case, her partnership within Access provided another lens ("that physics is not diverse and not inclusive") through which she could view those experiences. This helped normalize self-doubt as a consequence of a non-inclusive physics culture, instead of as a signal that she does not belong.

Relational resources

Access also provides relational resources through community building. For example, Taylor described having role models "who have also faced diversity" and who are still "actually physicists." This indicates that Access helped her build relationships with people that she more closely identified with, which is a valuable support for her own identity development, which she explained in the following excerpt:

> I'd say the majority of people in Access are actually physicists, so during the Assembly I talked to a lot of them about their paths to where they are now. Because a lot of the organizers are professors or postdocs currently, so talking to them about how they got to where they are, what kind of physics they did, stuff like that. It's super helpful to have mentors as well. That's another big thing that I think Access has provided, other people who also have faced adversity and issues within physics and are succeeding. It's really helpful to see role models.

Taylor describes these personal connections—opportunities to see the struggles of others—as meaningful resources that motivate her to succeed. Alex also noted the importance of mentors: "I mean [network fellow leader] has helped me. . . he's definitely helped me out, talking me through stuff, advice and stuff." Similarly, Peter described receiving mentorship from one of the core organizers, and said that he "still consider[s] [the core organizer] to be one of my mentors. He teaches me how to effectively lead and how to run a program like Compass." As these quotes highlight, participation in the network provided students with opportunities to receive meaningful mentorship. Most of the current leaders in Access got involved earlier in their careers when they were still students. As they progressed in their careers, they have provided mentorship to network leaders in Access, while leaders at local sites also mentored students who were just beginning their studies (Zaniewski & Reinholz, 2016). In this way, the network and local sites aim to build relationships and provide mentoring at many levels.

Recognition

STEM fields are known to often be unwelcoming, and students may not receive much positive encouragement or recognition from their professors (Seymour & Hewitt, 1997). As Taylor described above, the fellows generally did see members of Access as physicists, so when they receive positive recognition from members of Access, it provides an opportunity to validate their identities from a member "in the group of physicists." Consider the following statement made by Alex when asked if they received recognition from professors or superiors: "Not really. I guess most of the positive recognition I get would be from Access people." While some students mentioned receiving support from friends and family, many students noted a lack of recognition from both professors and peer groups. For example, Tommy talked about his experiences sharing his career aspirations with strangers: "I've definitely had those Uber, Lyft rides where you have the small talk, 'oh, what do you do?', 'I'm a grad student in physics,' 'What? You do physics?! That's so hard! Are you serious?'" Although it is not explicitly stated, the undertone of the Uber driver's response is that as a Black man, Tommy may not belong in physics. Tommy makes this more explicit when he describes his own "imposter syndrome" and feeling "left out" as "one of two black students" in his entire department. Ultimately, Tommy rejects these stereotypes, by stating that he does not "really care" how "other people see him," because he is "doing this for [himself]." Tommy's awareness of and rejection of stereotypes is consistent with research showing how students navigate problematic stereotypes in mathematics (Shah, 2017). Connecting to Tommy's description above about the Access Assembly, we find some evidence that Access provides a place where students can challenge and reject such stereotypes.

Competence

Partnerships can also support students to see themselves as competent physicists. For instance, Taylor described her struggles with transitioning to physics, and not feeling like she knew what was needed to succeed:

> I think I struggled a lot my freshman year, coming from a small school to a big university. I often felt like I didn't know how to study, or the way that I thought was studying wasn't working out the way like I was hoping it would. . . . I think [that after attending the Assembly] I feel a lot more comfortable as a physics major just because I know that this is what I'm interested in and I'm willing to work for it, and I'm not so much worried about if I'm inherently smart enough to be a physics major anymore.

Taylor described her attendance at the Assembly, and has mentioned previously, understanding the imposter syndrome as a byproduct of the non-inclusive culture of physics helped her doubt her competence less and work towards her goals as a physicist. Normalizing and empathizing with struggle is a cultural value in some Access programs (see, e.g., Reinholz & Dounas-Frazer, 2017), which can be shared across sites in the Assembly.

Similarly, Alex described doubt that they could "pull off" what physics required:

> Before I got involved with [Access program] I didn't really have any idea what it took to be a physicist, I just kind of thought it would be cool, but I had a lot of doubts if I could pull that off or not. But then talking to all the people who have done it and just seeing that it's very do-able.

As Alex describes, their connections and partnerships with others helped them readjust their own doubts, and instead recognize that they was competent enough to be a physicist. In this way, we see that part of students developing their own confidence as physicists was their feeling of connection to a like-minded group of social justice-oriented physicists.

Interest

Most students interviewed were interested in physics before they got involved with Access. Nevertheless, Access provided opportunities for students to incorporate their other interests (e.g., social justice commitments) with their interest in physics. This helped them see opportunities to get involved in other potential careers with physics. Haley described how her interactions got her interested in teaching:

> I kind of got more interested in teaching with more of the outreach that I was doing with [Access Program] and Access Network, because I saw how much it affected the

> people when we were doing outreach. I'm going to do this [teaching] for a few years, and then hopefully I'll be able to go back and do my PhD later.

The fact that Haley views teaching and outreach as an important part of being a physicist speaks to the socially conscious physics identity that Access helped students develop. Haley elaborated further, talking about how it was important for her work to impact other girls in STEM so that they could pursue their own interests: "I have to stand up for the other little girls in the world who maybe are being told they can't do what it is that they're interested in, or that they shouldn't." Here, Haley is able to use her success to help create opportunities for other women to be successful. Similarly, Tommy described his desire to help others who are interested in physics to persist and achieve their goals:

> I've been involved with a lot of STEM diversity type work. . . . I feel like growing up I was around a lot of people who found this kind of stuff interesting, but a lot of people that I knew, at least where I went to school growing up, didn't actually go into those fields. Some didn't really go to college at all. And I feel like there are a lot of students who are interested in getting into this kind of stuff but don't have the same opportunities as other students.

In both of these situations, Access normalized the identity of a social justice physicist, which created space for students to develop their identities. The fact that students were able to identify as physicists in this way broadened the notion of what it meant to know and do physics in a way that was more inclusive and had the potential for greater social impact.

Intersecting identities

Although the above six constructs are presented separately, they are all interrelated. For example, the material resource of the Access Assembly provides an important site for students to be recognized by leaders in the community, which can further spark their interest and feelings of competence. The constructs also intersect with racial and gender identities, which was a finding that emerged during data analysis. For example, Taylor described how she "didn't fit the stereotype for who physics majors were," because some people perceive that "minorities aren't as good at science or aren't as good at math." She continued to describe her intersecting identity as a woman, which "made it a little more difficult" to succeed in physics. For this reason, it is important to look at identity development holistically and understand how a given program (like Access) may or may not support aspects of identity development. In Access, the explicit focus on social justice normalized conversations about race and gender that provided more space for students to bring these identities to their work as physicists.

Race also impacts cultural practices. For example, Tommy noted in that in his family they "speak with a lot of slang," and this was something that he struggled with when trying to communicate in formal academic language as a new physics student. Here Tommy describes a conflict between the English used in the Black household he grew up in and white academic culture. We found evidence in the interviews quoted above that Access provided a different type of space for Tommy to negotiate these two sometimes conflicting identities.

Fellows also articulated ways that their identities could privilege them above other students. For example, Peter noted that his own identities likely benefited him, because "the majority of physicists are white and male." Similarly, Tommy mentioned that he felt he was "treated with more respect than female students." In particular, he found that when his friends who identified as women shared "things that they've experienced," it helped him see the "bigger picture." As we have seen, intersecting identities informed students' development of social justice physics identities in Access.

DISCUSSION

The Access Network provides an important example of how student partnerships can be formed in an inter-institutional network. In contrast to short-lived partnerships that may end after a semester or year, many participants involved in local Access sites and at the network level may engage for many years. The longer that students engage, the more they are able to take on increasingly complex leadership roles. This provides an opportunity for ongoing mentoring and development through partnership. We view this as a truly authentic form of student partnership (Matthews, 2016), in which students have meaningful power sharing with faculty and postdoctoral researchers (Matthews, 2017).

Students benefited from partnerships with other students, postdoctoral researchers, and faculty. Because Access supports inter-institutional collaboration, it provides students opportunities to meet peers across the country that have similar aspirations, backgrounds, and social justice commitments. This is crucial, because students may be more isolated at their home institutions. In addition, the student-faculty partnerships support meaningful mentoring for the students. Thus, Access provided ample social feedback that could help validate students' identities (Pasupathi et al., 1998). Although it is not the focus of this article, these partnerships have the potential to enhance the capacity of the faculty partners to enact their goals of equitable improvement to physics. This is a potential area for future inquiry.

All of the participants noted how Access supported their identity development. The racialized identity framework and its six constructs were useful for capturing the various ways in which students had meaningful connections to Access. Fellows highlighted the valuable resources they received, in terms of material support, close connections to mentors and peers, and the importance of a social-justice focused community. Fellows also described how Access helped provide recognition and supported beliefs of their own competence. When it came to interest, fellows mostly used Access as a space and motivation to support the interest of others as they came into their program with some interest in science.

A limitation of this study is that only six students were interviewed. The perceptions of students were largely positive. It is likely that students do not have uniformly positive reactions to Access, but those who may have had some issues would be less likely to participate in the interviews. Moreover, it was not always possible to disentangle the impact of partnerships within the network as compared to partnerships that exist within the local programs. For this reason, we cannot make strong claims about the specific benefits of leadership roles in the Access Network as separate from participation in local programs. Nevertheless, we do find evidence that the combination of the network and local programs was valuable for students.

Despite these limitations, this paper highlights the potential of involving students as partners in a large national network. As partners in the network, students developed identities as social justice physicists. Thus, it is noteworthy that Access did not just support students to develop their identities, but to do so in a way that connected with their own backgrounds and intersecting identities. This careful attention to the development of physics identities is an important contribution for pushing the field forward towards equity in physics (cf. Hyater-Adams et al., 2018). This analysis contributes to the literature on Students as Partners by showing how genuine partnerships can support student identity development in a way that is aligned with the needs and background of students. Because identity development is central to learning and persistence, this highlights another important aspect of student partnerships. In this way, we contribute to the growing body of research on identity development through partnerships (cf. Matthews et al., 2019).

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RESEARCH ARTICLE

Partnership Through Co-creation: Lessons Learnt at the University of Adelaide

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ABSTRACT

This paper describes three exemplars of practice inspired by emerging evidence that student-staff partnerships have the potential to significantly enhance many areas of higher education. Students and academics at the University of Adelaide have successfully implemented this collaborative approach across a range of learning and teaching contexts. The Design Thinking Framework, developed by the Hasso Plattner Institute of Design at Stanford University, was utilised at a faculty, program, and course level to frame each of the exemplars, due to its implicit approach to creativity, collaborative development, and achievement of solutions. The iterative nature of the framework facilitated a review cycle for continuous improvement in each Students-as-Partners' initiative. Analysing the outcomes of each exemplar has identified common hallmarks of successful partnership, and these indicators have the potential to contribute to the growing body of evidence that defines best practice in this pedagogy.

KEYWORDS

Students as Partners, student-staff partnership, co-creation, higher education, design thinking

Contemporary research shows growing evidence that when students and teachers work together in an authentic partnership, there are tangible benefits for all (Mercer-Mapstone et al., 2017; Curran, 2017; Cook-Sather, Bovill, & Felten, 2014). These benefits include positive impacts on student engagement, increased motivation for the learning process by students and staff, as well as enhanced inclusiveness in teaching practices. Healey, Flint, and Harrington (2014) present a series of case studies in the Higher Education Academy's seminal publication

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"Engagement through partnership: Students as partners in learning and teaching in higher education" that demonstrate the multi-disciplinary and expansive context where Students-as-Partners (SaP) projects have flourished. Inspired by this work in the co-creation space within a Students-as-Partners framework, academics and students at the University of Adelaide have trialled this collaborative approach across a range of learning and teaching contexts. The university has acknowledged the need for a greater emphasis on student partnerships, but in particular is embracing the co-creation aspect as a strategic direction in learning and teaching activities.

The three exemplars of practice described in this paper demonstrate authentic approaches to co-creation and were chosen due to their diverse partnership settings (Healey, 2014). In each exemplar, curriculum development activities were viewed through the lens of each partner—the student and the teacher—to develop a shared vision to cater to the needs of all participants. This paper reflects on the lessons learnt from each of these co-creation activities and considers the implications for future practice at the University of Adelaide.

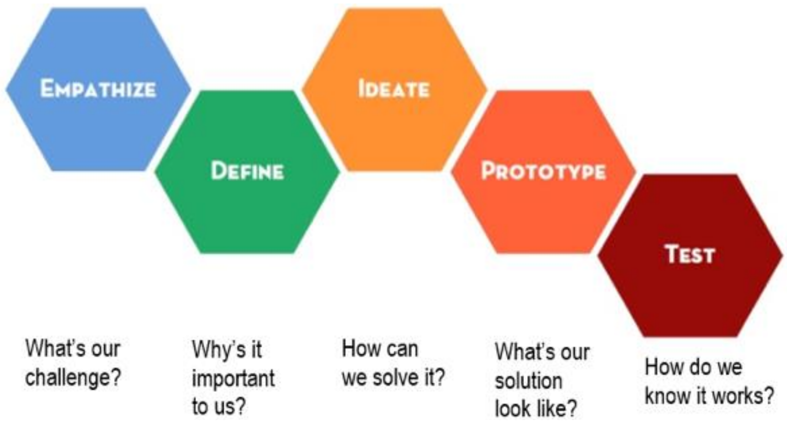
The Design Thinking Framework (DTF), developed by the Hasso Plattner Institute of Design at Stanford University (Plattner, Meinel, & Leifer, 2015), provided a scaffold that underpinned each exemplar. Originally devised by designers, this solution-based, rather than problem-based process, has been successfully applied across a wide variety of disciplines including education (Razzouk & Shute, 2012). The DTF was chosen due to its human-centred process which challenges participants' beliefs and assumptions and nurtures an empathetic approach to designing solutions with the end-user in mind. In addition, Razzouk and Shute (2012) identified the importance of students learning to creatively solve problems through design thinking as ideal preparation for real-work practice. These characteristics make it well aligned with the philosophy of the Students-as-Partners pedagogy as it is critical to involve the end users at tall stages of any project. "Co-creation and design thinking often goes hand in hand since design thinking needs stakeholders to test the prototypes and co-creation involves them in early stages of the process" (Ghent University, n.d.). Using this scalable methodology allowed a meaningful comparison of the structure and outcomes of each co-created exemplar. The DTF has five distinct stages:

- Empathise: developing a shared understanding of the problem from both a student and teacher perspective;
- Define: defining the shared purpose to a core problem;
- Ideate: finding and exploring possible solutions to the core problem born from diverse standpoints;
- Prototype: developing a first draft of what the co-created solution might look like, sharing with others and refining based on their feedback; and
- Test: end-users testing the co-created solution in an authentic context and providing feedback on whether the core problem has been solved or managed.

These non-linear stages facilitate a collaborative approach to solving complex issues and generating shared outcomes for effective results. Each stage is grounded in critical reflection, allowing collaborators the agility to review, evaluate, and revise progressive outcomes. More importantly, the DTF provides opportunity for students to be "directly engaged in information gathering, knowledge generation, communication and presentation" (Harvard University Teaching and Learning Lab, n.d.).

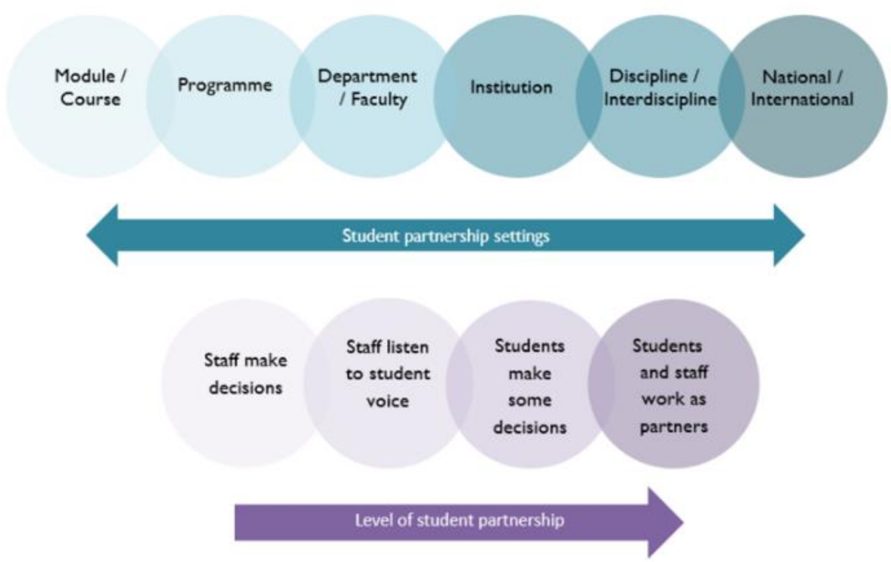
A guiding question was embedded at each stage of the planning to clarify each DTF stage, drive the collaborative activities, and help design the co-created exemplars (Fig. 1).

Figure 1. Guiding questions for each stage of Design Thinking Framework adapted from https://dschool.stanford.edu/



Working within the context of a SaP model (Healey et al., 2014) and employing the DTF, students and staff collaborated in three distinct pilot studies, described in this paper as exemplars 1, 2, and 3. Healey (2014) also described partnership as being possible at different organisational and operational levels from co-creation of learning activities to planning strategic organisational directions (Fig. 2).

Figure 2. Setting and levels of student partnership (Healey, 2014)



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Exemplar 1 correlates with the department/faculty level, whilst exemplars 2 and 3 are situated within the module/course setting. This SaP model also specifies that the level of student involvement should be considered as part of a continuum ranging from “simple” consultation (staff decision-making) to a “sophisticated” level of partnership (where students and staff work as partners). Exploring the nature of a genuine partnership facilitates an understanding of how true co-creation activities flourish. True partnerships have been succinctly defined by Matthews (2017) as “respectful, mutually beneficial learning partnerships where students and staff work together on all aspects of educational endeavours” (p. 1). Being willing to provide and receive candid feedback in the joint planning process and having an open sensitivity to one another’s needs formed a crucial part of the trusting environment that characterises each of the co-creation exemplars.

EXEMPLARS OF PRACTICE

Exemplar 1: A workshop to co-create principles for inquiry-based learning

Exemplar 1 (E1) is a co-created faculty-wide initiative to develop good practice principles for inquiry-based learning. The Small Group Discovery Experience (SGDE), a mandated pedagogical initiative at the University of Adelaide established in 2014, is an inquiry-based learning approach that involves students discovering new knowledge under expert guidance. It was regarded as a way to strengthen links between teaching and research and to foster an inquiry-based learning culture; however, it was implemented with minimal capacity building or staff development. By 2016, there was a wide level of dissatisfaction from students (evidenced by formal course evaluations), as well as teachers (evidenced by an annual staff survey), with how the pedagogy was being implemented across the university. A Faculty of Health Science Learning and Teaching Advancement Grant brought a project team together that included academics from each of the five schools within the faculty. Each academic personally invited students and staff from their area who had been identified as being engaged or disengaged in inquiry-based learning projects. There was a healthy response that culminated in 32 health science students and 16 staff selected to collaborate in a -analysis workshop. All participants were informed that the collective outcomes would contribute to a strategic approach to remedy dissatisfaction with SGDE across the university. In the workshop, groups of two students and one teacher compiled collective lists of their positive and negative experiences of SGDE in the first phase of the DTF, the empathy phase, which involves asking, “What’s our challenge?” What became evident at this point was the importance of allowing time for both students and staff to become comfortable working in what was for many an unfamiliar (and potentially disconcerting) equitable partnership. It also became clear that it was important for students to outnumber teachers in each group in order to counter the perceived power imbalance. Some teachers initially felt that they would be compelled to defend any expected criticism, whilst students needed to be empowered to share their opinions in a safe environment. Each member of the groups were first asked to share an example of an SGDE experience. This was a non-threatening and straightforward task to which all students and teachers could equally contribute. From these discussions, it was identified that SGDE was being implemented across the university with varying degrees of success and with little evidence of core principles. Once this was established, the groups undertook a real-time online

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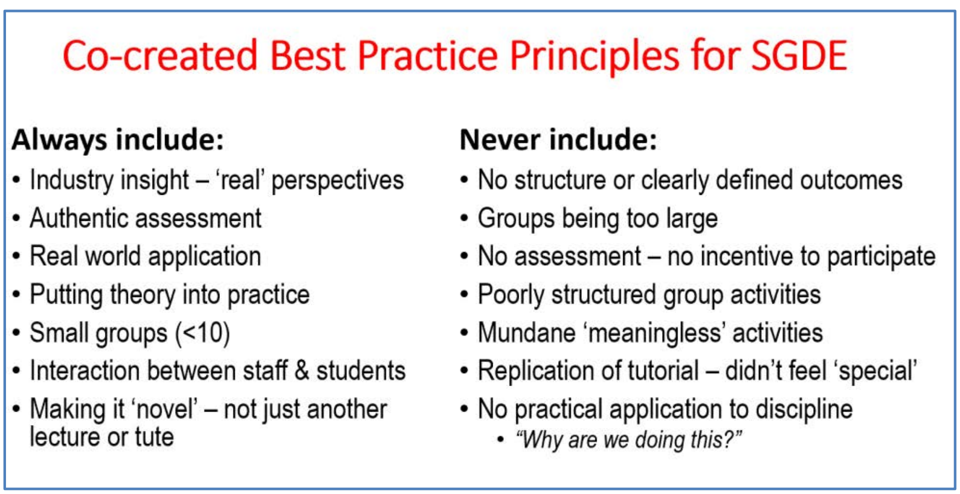
activity to formulate a common purpose as part of the second phase of DTF, the define phase, where participants work to answer, “Why is this project important to us?” Students were required to undertake an SGDE as part of their studies, and staff were required to run these activities, but the collective definition became that “it’s important for students and staff to agree on the value and structure of SGDE activities, so everyone benefits from the experience.”

The next stage of the co-creation process was the ideation stage, where participants collaborate to answer, “How can we solve it?” Each group brainstormed a list of “good practice” SGDE principles and then agreed on their top four, mindful that the DTF process is focussed on solutions that benefit the end-user. In the case of SGDE, it could be argued that the end-users are not only students, but also staff who design and implement the activities. The value of using the DTF approach was evident at this point as it became necessary to revisit the definition and purpose of the challenge several times to ensure the ideations were appropriate. Eventually, the top four ideas from each group were uploaded onto an online repository. These data were collated during a meal break (catering appears to be critical to co-creation success) and then presented to all 48 participants to analyse their aggregated responses to draft “best SGDE practice principles,” which comprised the prototyping phase guided by the question, “What’s our solution look like?” After several revisions to the prototype, based on group feedback, these co-created principles (see Figure 3) were ready for the final phase of the DTF: the test phase, which asks, “How do we know it works?”

Fig 3: Prototype of Exemplar 1’s Best Practice Principles for SGDE (Snelling, 2016)



These best practice principles were peer-reviewed by the university’s Small Group Discovery Experience Community of Practice before workshops were run for designers and facilitators of SGDE initiatives across the faculty. Positive feedback from workshop participants in the formal evaluation included comments such as “it was good to know that the recommendations and guidelines that were being given had come from both students and other teaching colleagues.”

Lessons learnt by staff

Academics who attended the training analysis workshop reported that once they overcame their initial concerns about dealing with criticism about their teaching, they found the co-creation experience to be very positive. They also found that working with students from other courses was an effective way to receive feedback about SGDE design in a more objective context. They enjoyed receiving a range of good ideas to incorporate into their own classes in an informal and collegial atmosphere. Many of the staff at the workshop reported that they were impressed and motivated by the authentic "buy-in" by students to contribute to the quality of their learning experiences, with one teacher commenting: "it's far better to work directly with students on course design, than to try and predict what I think will be effective," and another saying that "it was great to look at SGDE through a different lens, it was very refreshing."

Lessons learnt by students

In a post-workshop focus group (run by students), students strongly indicated that they found the co-creation experience a lot less intimidating than they initially imagined. Having more students than staff in each group and being assigned to specific groups were important factors. Several students had concerns before the workshop that they would be working with teachers from their own courses and felt uncertain they could give honest opinions and feedback. So, collaborating with teachers from different courses helped them to give more candid views on their SGDE experiences. Several students commented how positive it was seeing first-hand how teachers were committed to enhancing course design, and how their contributions were actively sought and valued by staff. Formally recognising student input by providing a certificate of participation for their CVs was extremely well received—in fact, staff requested a similar acknowledgement.

Exemplar 2: A workshop to co-design assessment tasks

In Exemplar 2 (E2), undergraduate students and academics partnered to design assessment tasks for a new course in a science program. The co-creation workshop involved second- and third-year students and academic staff from plant science-related degrees within the Faculty of Sciences. The ratio of students to staff was greater (4:1), an important characteristic of successful co-creation, as was demonstrated in E1. Before participants arrived at the workshop, all participants completed an online survey which gave everyone an opportunity to formulate ideas regarding their opinions and experiences with learning and teaching in anticipation of the task ahead. This information was used to create an environment where all participant contribution was valued and where participants could collectively empathise and determine "what's our challenge?" Critical issues including "pros" and "cons" of assessment design, timing, and assessment type were discussed by participants in groups comprising one academic staff member and four students to define the problem and determine "why is it important to us?" Once the problem to be solved was established, the groups proceeded to ideate by designing assessment tasks that met the needs of both staff and students while achieving the learning outcomes in order to answer "how can we solve it?" After each smaller group had outlined their thoughts for the assessment task, these were then discussed as a larger group and synthesised to create the required assessment tasks, thus determining a prototype**.** A key outcome at this stage was that students and staff agreed that providing a diverse range of different assessment types would be beneficial to students and could be offered in a way as to not increase teacher workload. The assessment task choices developed were online quizzes, developing instructional videos for peers, traditional scientific reports, or oral presentations. The new course ran for the first time in 2017, and the enrolled students were aware that the assessment tasks had been designed by a process of co-creation. The inaugural student cohort were enthusiastic to complete the assessment for the first time in an authentic context, which represented the testing phase of DTFFeedback from the first students enrolled in the course indicated that the co-creation workshop had resulted in student-centred assessment tasks that successfully addressed the learning outcomes. For example, on students commented: "the assignments are great and informative. The practical component was good!" (University of Adelaide 2017 Semester 2 Course Evaluation). The non-linear nature of the DTF was utilized to revise the assessment task from 2017 to 2018. Students enrolled in the course in 2018 participated informally in refining the assessment task by giving feedback and making suggestions for improvement (test phase of DTF). This iterative approach to improving the co-created assessment was reflected in improvements to scores in response to the formal course evaluation question: "This course uses methods of assessment that help achieve its learning outcomes," which scored 6.8 out of 7 in 2017, increasing to 7 out of 7 in 2018.

Lessons learnt by staff

The pre-workshop survey provided a non-threatening forum for all participants to be involved in discussion. It was clear to staff that students were empathetic towards the impact that some assessment styles would have on staff, particularly with respect to time-intensive marking. Staff felt that students developed an understanding for the challenges associated with assessment design. Staff observed that it was important to provide guidelines or boundaries, otherwise there was a risk of the task becoming overwhelming. Staff felt that engaging with students in this way had the potential to improve assessment design. The potential challenges of using this approach for curriculum development are not necessarily linked to the use of the DTF, but an inherent problem in many Students-as-Partners initiatives: that already-engaged students volunteer to participate. This may skew the outcomes due to these highly-motivated students designing assessment tasks that appeal only to similar types of students (Alsford, 2012).

Lessons learnt by students

There were two important collective realisations in this workshop. Firstly, students were highly motivated about having input into the type of assessment tasks developed during the workshop. The responses to the pre-workshop survey were important to ensure all students started discussions on the same page. The potential impact of different assessment styles on teachers was also explored by the students. Over the course of the workshop, they developed a deep understanding of the factors that must be considered for curriculum and assessment to work for both students and teachers. The students felt that their input into curriculum design was highly valued, and there was also a strong sense of the degree of care and consideration practiced by teachers with the aim of improving the student experience. For example, a student participant remarked that “it was endearing to know that as students, we had a voice in the future of the course, and that the teachers involved cared about the ideas and opinions that we put forward.” Similar experiences have been reported by Deeley and Bovill (2017) in a study of a student and staff partnership in assessment literacy.

Exemplar 3: A co-creation team to address poor performance in a course topic

Exemplar 3 (E3) focuses on the co-creation of flipped classroom resources for a subject in the Bachelor of Oral Health program with a consistent failure rate of >20%. In 2016, students who had just completed the second-level subject were invited to provide the course coordinator with feedback on the challenges that they had faced when learning the troublesome topic of periodontology. A call for interested students was posted on the class Facebook page. All students who registered an interest were invited to attend a “coffee get together” to discuss the issues and the potential of being involved in a co-creation project team to improve the subject outcomes. E3 was guided by the outcomes of E1 and E2, promoting a greater student-to-teacher ratio in a co-creation team.

Of the seven students who attended the first meeting, five students volunteered their time over the summer break to work on this co-creation project with the aim of improving the learning outcomes of the periodontology topic. Consequently, three of the five students made this co-creation activity the focus of their final-year capstone project.

The project began with three informal coffee meetings between the subject teacher and the five student volunteers. The environment for these meetings was purposefully structured to be informal, creating a friendly, trusting, and supportive environment to foster empathy and encourage participants to consider “what’s our challenge?” The timing of these meetings was strategically scheduled for the post-assessment period, which provided students with the freedom to raise their issues without any stress or anxiety associated with exam time. The team clearly described the challenges that students faced, which primarily was the need to integrate knowledge of very complex concepts into clinical applications. Students openly discussed the need to have these concepts broken down into “bite-sized” chunks of information that could be easily digested before they could link them together and subsequently apply them to real-world contexts. The co-creation team were now in the position to clearly define why this topic was important to them; for example; if they wanted to provide evidence-based care to their patients they needed to feel confident that they understood the core concepts of Periodontology.

Ideas were shared, and collaborative discussions resulted in a strategy for the future delivery of this topic. The students decided that this content-heavy subject was best delivered using a flipped classroom approach, and they took on the responsibility of designing the pre-class activities that would help to simplify the content. The teacher’s role was to further develop these key concepts from the pre-class activities through application to real-word problem-solving scenarios in face-to-face class time. Students decided that short interactive videos were likely to be the most engaging pre-class activities. They proceeded to design storyboards for each of the three pre-class activities, which were then reviewed by the teacher for content accuracy.

The first prototype was developed as an “explain everything” video to cover the introductory topic. Students used this first video to provide a review of underpinning concepts before introducing the more complex concepts using Light Board technology. A Light Board video expert was invited to provide guidance on how to use this tool in a pedagogically sound way. The videos formed the next two pre-class activity prototypes, refined by the experience of producing the first video in a peer-to-peer instruction format. This new approach proved to be extremely effective during the testing phase. For the first time in eight years, the failure rate was less than 5%. What was even more striking was that almost 60% of the students’ performance fell well within the distinction to high distinction range. Focus-group discussions highlighted the fact that students felt that their peers were able to explain complex concepts better than experts. For example, one student commented: “Sometimes teachers know the content so well that it is hard for them to relay it to a student in an easy-to-understand way” (2017, focus group comment). Another focus-participant shared the following: “The third years have done a great job! It's so good to give future/current students help in this course from a student perspective. . . . at times it feels like there are quite some hurdles in the way!” (2017, focus group comment).

Lessons learnt by staff

Although the staff involved with this project were acknowledged for their long-standing student-centred approach in their teaching, the learning issues highlighted by students in initial project meetings were remarkably enlightening. No formal course survey would have been able to articulate the problems with this topic in such a succinct and authentic manner. It was crucial during the initial phases that the teacher nurtured a genuinely collaborative environment through the social coffee meetings that proved instrumental in removing any power issues. It was also critical that the teacher was an active listener who was able to objectively consider the issues and support the ideas raised by the students. It is doubtful that the learning resources that resulted would have been of such high quality if the teacher or students worked independently of each other. Furthermore, evaluation of these resources from student cohort using them as part of the periodontology topic far exceeded the expectations of co-creators in the project team. The was evident in a range of feedback mechanisms, but most significantly through comments in formal course evaluations and the strong interest from students keen to be involved in future co-creation projects. The teacher observed high-level knowledge and skill development in the student members of the project team, surpassing the standard expected of a final-year undergraduate Bachelor of Oral Health student.

Co-created initiatives like E3 require a considerable time commitment from teachers and students alike at all stages of the project. In this particular case, this included building the students’ capacity to storyboard a video script as well as to constructively align learning activities to learning outcomes. Finding suitable times to meet for planning, capacity-building, and resource development was often difficult due to student rosters. An unexpected challenge was the students being self-conscious during video recording sessions when the teacher was present. This was alleviated by students being on their own during most of the recording times.

The teacher then reviewed the video, leading to an increase in time required for feedback and post-production. On balance this time investment was validated by the positive outcomes for student learning.

Perhaps the most difficult challenge in E3 was the perception of other academics that these student-produced learning resources did not come from experts in the field and therefore should not be considered as a reliable learning resource. Cook-Sather and colleagues (2014) acknowledged this commonly held view when stating that "student-faculty partnerships in pedagogical explorations is troublesome because it is at once counterintuitive for many faculty and contradictory to norms in higher education" (p. 89). To counter this negative view, the co-creation team invited a specialist in the field of periodontology to review the student-generated learning resources, which further increased the amount of feedback and validation. Despite this, resistance from some academics remained. This factor may always be a challenge in any Students-as-Partners initiative.

Lessons learnt by students

Exemplar 3 reflected how difficult it is for teachers to articulate complex concepts about a topic that students find genuinely challenging. This partnership model allowed students the opportunity to define the learning issues about a difficult topic, then design learning resources to address these specific problems. These concepts formed the key components of the co-created video content. The supportive nature of this partnership allowed filming to take place with a measured amount of guidance from the teacher but with enough space for the students to create in a relaxed environment. The student content was verified by the teacher, which validated the student contribution and helped to build their confidence. Although students working on the videos were aware of the project being a learning resource for their peers, the appreciation and outstanding improvements in the performance of their peers exceeded expectations. Having a diverse student production team meant that everyone contributed their strengths in different areas (e.g., content design, video editing, professionalism, illustration), which allowed the video creation process to flow.

DISCUSSION

Based on the collective outcomes of the three exemplars, building empathy in the co-creation teams is a key factor for success. Healey, Flint, and Harrington (2016) found that developing a sense of belonging increases chances of student success and state that "developing partnership learning communities among faculty and students can strengthen and sustain engagement" (p. 6). Each exemplar had an initial team-building activity to nurture partnership and a shared sense of purpose. Characteristically, each was a low-stakes, non-threatening exercise where participants could all make an equal contribution, based on their personal experiences—in other words, there were no "right answers" that could create a sense of inequity between students and teachers.

Building on the initial activities was important for the co-creation teams in each exemplar to define the purpose of the projects and why a positive outcome would benefit both students and teachers. Torres and Schaffer (2000) describe the importance of "equal voice; shared responsibilities; shared vision" (p. 102) in Students-as-Partners initiatives. Embedding

Snelling, C.A., Loveys, B.R., Karanicolas, S, Schofield, N.J, Carlson-Jones, W, Weissgerber, J, Edmonds, R., & Ngu, J. (2019). Partnership through co-creation: lessons learnt at the University of Adelaide, *International Journal for Students as Partners, 3*(2). https://doi.org/10.15173/ijsap.v3i2.3799

these principles in the exemplars led to a shared understanding of purpose by all members of the team. It is evident in each exemplar that this occurred by agreement on a set of best-practice approaches to inquiry-based learning (E1), identifying the critical aspects of assessment (E2), and determining learning issues for a "troublesome" course (E3). By defining the key intention (or core problem) of each co-created project, participants could proceed with a shared vision.

The ideation stage of the DTF could be considered the most innovative for both staff and students. This is where ideas can develop and grow and the perspectives of both students and teachers can be synthesised to create a shared outcome. This stage is often where teachers have to reconsider their traditional role as gatekeepers of curricula (Bovill, 2013). In the three exemplars, students were active participants in developing ideas and finding solutions for enhanced course design (E1), assessment tasks (E2), and learning resources (E3). Bovill and colleagues (2016) see this as a key factor in successful co-creation. Ideation requires creativity, confidence, and trust in teacher and student partnerships. Co-creation of ideas and concepts becomes authentic when the motivation and diverse experience each person brings to the table is valued and applied (Bovill, 2013). Having said this, it remains a challenge for teachers to seemingly divest some of their control to students, whilst students are often reluctant to assert their ideas. This necessary cultural shift in the SaP approach is well documented in the literature (Mercer-Mapstone et al., 2017; Matthews, 2016; Healey et al., 2014). All three exemplars strove to address this challenge through careful attention to the first two stages of the DTF.

The prototype stage involves developing solutions to core problems or issues that can be tested. The identified challenge and purpose in each exemplar led to the development of prototypes to solve these problems. For example, E1 developed good practice principles for SGDE course design from both a student and teacher perspective. In E2, co-creation explored critical issues including "pros" and "cons" of assessment design, timing, and assessment type that contributed to a more student-centred assessment strategy. The team in E3 co-developed a solution to address the problem of why is there such a high failure rate for this topic?

The Design Thinking Educators Toolkit (2014) explains that "building prototypes means making ideas tangible, learning while building them and sharing them with other people. . . . you can receive a direct response and learn how to further improve and refine an idea" (p. 57). This is an important aspect of the prototypes developed in each co-created exemplar, where each group had deeper conversations to refine their prototypes before the testing could begin.

Testing the co-created prototype is a critical step in the DTF process as it determines whether the prototype solved the problem defined in stage two. The three exemplars presented in this paper span various organisational levels but are all grounded in the learning and teaching space rather than institutional policy. A useful approach to testing the value of co-created products has been proposed by Dollinger, Lodge, and Coates (2018), where the products are viewed through a "value co-creation" lens, allowing evaluation of which type of co-creation activities provide the greatest benefit to both students and teachers. Value co-creation has its roots in consumer-driven market research, so this approach may seem to be in conflict within an educational paradigm. Matthews, Dwyer, Hine, and Turner (2018) considered this approach as potentially problematic for both students and teachers "because [the consumer model] reduced the learning and teaching experience to a transactional relationship" (p. 5). However, 21st century students are often referred to as consumers (Bunce, Baird, & Jones, 2017), and it seems relevant that value co-creation theory would provide an appropriate analysis instrument. The testing of the prototypes in each exemplar took more than one form. It was underpinned by the consumer model approach as well as by identifying evidence of the student voice as described in Bovill and Bulley's (2011) ladder of participation. This combined approach provided a more holistic evaluation of the effectiveness of each prototype in a fitness-for-purpose co-created context. The best-practice principles (E1) underpinned a professional development workshop that was favourably evaluated as a fitness-for-purpose" model. A cohort of students enrolled in the new science course, the focus of E2, tested the co-created assessment task as part of the course requirement. Students performed well in the assessment tasks, with the class average being 80%. The learning resources generated in E3 were tested by the second-year student cohort, and their positive feedback and improved exam results verified the effectiveness of the co-created resources.

IMPLICATIONS FOR FUTURE PRACTICE

What has become clear from the outcomes of the three exemplars of co-created practice is an underpinning pedagogy of care (Hoffmann & Stake, 1998). This begins from the empathy stage of the DTF. These student-staff partnerships nurtured collaborative and productive work environments through a genuinely caring approach and an authentic culture of equality. Contemporary educational research is recognising the importance of this factor for effective learning and collaboration. *"Caring pedagogical work and caring subjectivities are nurtured and nurture attentiveness to creating time-spaces which foster dialogical co-creation of knowledges."* (Motta & Bennett, 2018, p. 636.)

Any co-creation initiative requires considerable skill to generate the right setting for the realisation of a shared outcome. The environment needs to foster fruitful discussion that is informal enough to establish empathy and trust, but with enough structure to harness the group's collective purpose. The DTF was an ideal scaffold due to its non-linear, iterative nature fostering regular reflection, review, and revision. Each exemplar had clear and shared objectives and was an authentic partnership in terms of equitable contribution and ownership. Students and teachers in each exemplar experienced a sense of achievement when they recognised how their individual contribution led to a positive outcome. This finding is echoed by a model of co-creation described by Bovill (2013), where active student participation led to "enhanced student responsibility for their learning, enhanced student performance and teachers' satisfaction" (pp. 23-24). Continuing to develop co-created projects and participating in national and international conferences such as the Australian National Students as Partners Roundtable (Enright, Matthews, Russell, & Sherwood, 2018) and the International Students as Partners Institute (Marquis, Black, & Healey, 2017) are important steps towards developing a broader conceptual framework.

CONCLUSION

The ever-increasing momentum for the Students-as-Partners paradigm to be considered an intrinsic part of higher education has been internationally acknowledged (Curran & Millard, 2016; Moore-Cherry, Healey, Nicholson, & Andrews, 2016). At the same time, local initiatives where students and teachers have worked in authentic partnership have flourished (Loveys, McGrice, & Snelling, 2018; Mars, 2009). This paper has demonstrated how three exemplars of what Mars (2009) calls grassroots practice using the Design Thinking Framework have generated successful and valuable outcomes at the faculty, program, and course level at the University of Adelaide. Based on this ethos of practice, other educators are encouraged to use the DTF model to frame their own co-creation initiatives to further assess its application in Students-as-Partners pedagogy.

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RESEARCH ARTICLE

Closing the Loop: An Evaluation of Student-Led Module Feedback at one UK Higher Education Institution

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ABSTRACT

This article describes how a Student-Led Module Feedback (SLMF) scheme was initiated at one UK University to enhance staff-student relationships and to improve student outcomes. The scheme was developed by academics in partnership with the Students Union (SU) and students. The SLMF aimed to enhance the student experience at a granular level in "real time" during 30 week-long teaching modules. The article defines the SLMF within the research context of the Scholarship of Teaching and Learning and describes how the theme of student-staff partnership runs across the scheme, including during the project management and evaluation phases. It critically reflects on how the scheme has been instrumental in making inroads to improving the experience of students and staff across the university. It analyses the way in which the SLMF is being used by staff and students to co-create action plans to initiate pedagogical changes and thus close the loop of the feedback cycle.

KEYWORDS

survey, student experience, student-staff partnership, learning and teaching enhancement, staff experience

In response to attempts by the UK government to define universities as service providers and students as consumers with rights (Department for Business, Innovation and Skills, 2011, p. 37), institutions have developed a wide range of Students-as-Partners (SaP) initiatives. Healey, Flint, and Harrington (2014) describe partnership as "a relationship in which all participants are actively engaged in and stand to gain from the process of learning and working together" (p. 7).

Cook-Sather, Bovill, and Felten (2014) acknowledge that partnership can take different forms and scales, illustrating the flexibility of partnership models in different contexts to reflect the aims, commitments, and needs of an individual institution.

The Programme for the Improvement of Student Outcomes (PISO) was introduced at one UK University in 2015 to enhance the student experience and student outcomes (as

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measured by retention, progression, attainment, and reported metrics). The PISO board, supported by the university academic board, identified the Student-Led Module Feedback scheme as a key project. The SLMF process incorporated a student survey that aimed to enhance the student experience in "real time" during the teaching delivery of 30 week-long modules. A pilot was established in partnership with the Students' Union (SU) to build a trusting community of learning between staff and students. Ramsden (2008) highlights the importance of student involvement in quality processes based on the idea of building learning communities so that they can take ownership of quality enhancement and engage with staff in dialogue about improving teaching delivery.

The pilot phase, designed and devised with students and staff, involved surveying 3,157 level-6 students (levels 3, 4, 5, and 6 correspond to years 0, 1, 2, and 3 of undergraduate study) at the university. It aimed at evaluating the scheme's impact on the learning experience, reviewing the process, and improving the delivery of the scheme. Recommendations to improve further iterations presented at the academic board were approved.

On the surface, the SLMF is a traditional student-experience survey. However, through its innovative implementation process, based on dialogue between staff and students and co-action planning, its objectives are clearly focused on initiating cultural change in learning, teaching, and assessment, thus echoing the thoughts of Healey et al. (2014) that "partnership is essentially a process of engagement, not a product. It is a way of doing things, rather than an outcome in itself. All partnership is student engagement, but not all student engagement is partnership" (p. 7).

To achieve a cultural change in student-staff relations across the institution, a working group consisting of academic staff and students identified objectives that would lead to improvements in the learning experience. It was critical that both staff and students had ownership of the process and could see benefits from that partnership. The definition of roles in the process of the SLMF was a key step in ensuring the success of such an initiative. Dunne and Zandstra (2011), for example, offer a model for students as change agents in the learning and teaching context. They recognise that student engagement can take many forms, including students as evaluators of their experience; students as participants in the decision-making process; students as partners, co-creators, and experts; and, finally, students as agents for change. The SMLF's objectives included engaging all the actors in the teaching and learning process through reflection, dialogue, and change. The scheme's ultimate aim was to sow the seeds for an equal and meaningful partnership between academic staff and students.

It was significant that the senior leadership team of the university fully supported the SLMF and the former Vice-Chancellor recognised the impact of the initiative: "We gave students significant leadership responsibilities in each of the PISO programme strands, and we invited students to run our SLMF (Student-Led Module Feedback), which became a significant factor driving course improvements" (Raftery, 2018).

Some long-established ways of monitoring quality enhancement can lead to staff's reluctance to engage in change. Reviewing past evaluation data, rather than actively engaging with and listening to the views of current students, is a common occurrence in the UK quality enhancement cycle. The SLMF was developed specifically to address this issue, to challenge existing practices, and to enable change for students and staff. According to Healey et al. (2014), when an institution goes beyond collating data on the student voice and engages students in pedagogic consultancy, it sees significant benefits for both staff and students. There is the potential for institutional transformation and change, but as Cook-Sather et al. (2014) note, “while the benefits are real, neither partnership nor programme level work is a panacea” (p. 89).

BACKGROUND

Different types of student partnerships can reflect the aims, commitments, and needs of a particular institution. The institution under discussion here is one of the most socially inclusive universities in the UK, where two thirds of students come from the top two quintiles of Indices of Multiple Deprivation which is the official measure of relative deprivation for small areas in England. Nearly two thirds of students, or 60.1%, are from a Black or Minority Ethnic (BME) background, 51.1% are aged 25 or older, 12.9% have a known disability, and 97.2% are from state-funded schools.

Historically, student satisfaction at the university has been surveyed at the end of a module, and changes have been put in place for subsequent cohorts. There were a number of issues with this process. Students who made suggestions for changes never benefitted from the outcomes, incoming students were not aware that changes had been made, and changes identified by one cohort were not necessarily applicable to the next. Crucially, there was no real-time dialogue between staff and students about the learning and teaching quality. Furthermore, only staff saw individual comments from students, and only they could report on these comments. In essence, there was no authentic partnership between staff and students in co-owning and co-creating plans and aspirations for module change.

LITERATURE REVIEW

Much has been published about the many ways to engage students as partners (Dunne & Owen, 2013; Cook-Sather et al., 2014; Healey et al., 2014), and we refer to theoretical and conceptual models that have proven successful across the sector and that best fit with the SLMF. The 2011 white paper, *Higher Education: Students at the Heart of the System,* states that the higher education (HE) sector should be more accountable to students. The white paper created an opportunity for providers to empower students to be “equally invested in the common goal of learning” (Cook-Sather et al., 2014; p. 11). Providers were also encouraged to make students feel more at ease at university through “supportive peer relations, meaningful interaction between staff and students, developing knowledge, confidence and successful HE learners, a HE experience relevant to students’ interests and future goals” (Thomas, 2012, p. 7).

In their report, *Engagement Through Partnership: Students as Partners in Learning and Teaching in Higher Education*, Healey et al. (2014) present a pedagogical case for partnership and propose a conceptual model that maps the different levels of partnership. Cook-Sather et al. (2014) propose that there are three foundations of any student-staff partnership, namely respect, reciprocity, and responsibility, which “includes making collaborative and transparent decisions about changing our practices in some instances and not in others” (p. 8).

Challenging the dominant model of student as consumer in an age of the commodification of higher education, McCulloch (2009) states that rather than the terms “client” or “consumer,” “co-producer” is a more appropriate term for students. The student-as-consumer metaphor distances the student from the educational process, encourages passivity, does not encourage deep learning, and implies a level of knowledge and information that the student might not have.

Dunne and Owen (2013) acknowledge that there are many definitions of student engagement that lead to success. Engagement can include student participation, teamwork, and community as well as partnership, co-creation, and collaboration. Engagement can also relate to different aspects of the curriculum involving teaching, learning, assessment, and the engagement of students in these processes. Thomas (2012) suggests that to achieve successful student engagement, "activities should proactively seek to engage students and develop their capacity to do so, rather than waiting for a crisis to occur, or the more confident students to take up opportunities" (p. 9).

Student engagement also relates to other areas such as student satisfaction, student experience, and the student voice. The UK government's white paper, *Higher Education: Success as a Knowledge Economy*, advocates a focus on student feedback, stating: "we consider the publication and effective use of student surveys and other evaluations to be at the heart of a continuous process of improving teacher quality" (Department for Business, Innovation & Skills, 2011, p. 34).

Surveys, however, tend to focus on student satisfaction. While the student voice in surveys is both important and powerful for universities to understand what they need to develop and change, it is not the same as students taking the initiative for institutional or individual progress. In fact, in such circumstances it is not the student voice itself that is heard but rather other interpretations of what the students are saying. Van der Velden (2013) discusses staff perception of student engagement against a policy background of strengthening the student voice, which is an area that is lacking in the literature. The findings indicate a staff preference for collegial engagement, but there are obstacles to achieving this. Van der Velden (2013) suggests a different conceptual paradigm that involves both educational as well as organisational aspects of the learning experience, which are referred to as transactional and transformational aspects of the education process. Referring to feedback on assessment, for example, Lizzio and Wilson (2009) explain that "the transformational aspects remain firmly embedded within the academic realm such as the classroom or the tutorial where staff and students continue to engage in academic matters without the interference of a potentially adversarial climate of differing transactional interests" (p. 89).

Fluckiger et al. (2010) describe how to engage students as partners by providing timely formative feedback so that students can revise their work and improve their learning. They do this by providing more frequent formative feedback, including engaging students in peer feedback using quizzes, midterm student conferencing, shared revision of student-generated questions, and collaborative assignment blogs.

Cook-Sather et al. (2014) define the student-staff partnership as a collaborative and reciprocal process which allows everybody to add value to the curriculum, make decisions about pedagogy, and evaluate and analyse initiatives. This supports the view that partnership in such projects must be continually renegotiated.

In their systematic literature review, Mercer-Mapstone et al. (2017) propose nine implications to guide future research and practices when working with students as partners, including that of scaling up such initiatives with a view to create more sustainable practices. They, too, report that Students as Partners is "as complex, nuanced, and multifaceted as the educational institutions within which partnerships unfold" (19).

The SLMF aims at encouraging staff and students to work together, engaging the students as partners in enhancing the quality of their module. This approach is not dissimilar to the student-led action research initiative engaging "students as change agents" at

University of Exeter, which brought students and staff together to improve experiences of HE (Dunne & Zandstra, 2011). Ratcliffe and Dimmock (2013) discuss the student engagement strategy at the University of Exeter, which focused on student initiatives and activities that occur outside the classroom. They argue that "student motivation to engage rests on a combination of cultural expectation, temptation, self-interest, and altruism" (p. 59).

Ratcliffe and Dimmock (2013) also note that "involving students with the running, organisation, and development of their own university empowers and stretches them. It offers a valuable experience and supports the development of a more active skill set that will allow them to succeed as graduates" (pp. 74-5).

DESCRIPTION OF THE INITIATIVE

The objectives of the SMLF included improving the student experience and university metrics and also extending a sense of pride among tutors and students. The institution's Student Academic Representatives (StARs) identified the project as a way to increase their visibility and to improve their skills in making representations to staff in committees and reports.

Early discussions identified that students and staff sometimes felt excluded from decisions and implementation processes due to speed of change, lack of ownership, and weak communication. Therefore, the nominated project lead (one of the authors of this paper) consulted with key stakeholders to identify the best structure for the SLMF to address these concerns. For the 2015/16 pilot phase, a brainstorming session took place between staff and student representatives (StARs) about improving the feedback loop and the student voice. Staff and students shared their thoughts on issues to understand where they stemmed from, considered who may be suitable facilitators, and attempted to identify what could be done practically to move the project forward.

A broad, real-time feedback scheme was consequently agreed upon with the aim of achieving key objectives. These included improving the learning experience through an ongoing dialogue between students and staff in order to create a transparent and open feedback loop, which would increase confidence in initiating change. As Cook-Sather et al. (2014) state,

> students have essential perspectives, that when brought into dialogue with teachers' perspectives, can raise awareness, deepen engagement, improve teaching and learning for all involved, and foster a culture on campus that embraces more open communication about, and shared responsibility for education. (p. xiii)

A wide range of people were invited to join the initial meeting to discuss membership and roles. This led to all parties identifying their strengths, capacities, and priorities. It was agreed that the project management would be shared among the following parties: the project lead, the Student Union (SU), a representative from each academic school/area and one from internal communications, and a quality office representative and software administrator. The group decided to use Google Drive, a tool accessible anywhere, anytime, which would allow all participants to contribute. Editors had access to a live document, which included a Gantt chart with live updates on the progress of the project, a communication plan with pre-drafted emails, a reflective space entitled "Ideas" to record reflections and thoughts as the project evolved, and a "Questions and Answers" tab.

Members were alerted to changes through the "Update" feature on Google Drive. This allowed all participants to own the way in which the project was run, to record concerns, to make useful suggestions and acted as a repository for future iterations of the scheme. More importantly, the platform allowed members to capture the entirety and complexity of the project in one place and to access it live and on the go.

Approach to the study and implementation

Cook-Sather et al. (2014) recommend that all partnership projects need to start small because "there will be surprises, good and bad, and because collaboration is more complex and demanding than solitary endeavours" (p. 139).

Following the pilot, the project team agreed that a survey would be used to gather information from a large number of students. A questionnaire (designed by staff and students) was used to measure five aspects of student life: student satisfaction, teaching quality, module organisation, sense of belonging, and quality and promptness of feedback. The SMLF group decided that the formulation of the statements should replicate the UK National Student Survey (NSS) questions so that respondents would become familiar with them. The project team used EvaSys, a survey automation software that allowed dual delivery (i.e., paper and online surveys). The survey was anonymous and included five quantitative questions and two open-ended questions. Module coding enabled identification of students by level of study and course.

Students were requested to respond to one of five statements using a Likert scale ranging from strongly disagree to strongly agree. The five statements were:

1. Staff are good at explaining and making the subject interesting
2. The module is well organised and I am informed about practical changes
3. I feel part of a community of staff and students
4. I have received good individual support and feedback about my progress in a timely manner
5. I am satisfied with my module so far

Respondents were asked two open-ended questions: "name three things you enjoyed about the module" and "name three things that could be improved." The use of EvaSys facilitated the implementation of the large-scale survey and offered the possibility of integration into a Virtual Learning Environment (VLE).

All 8,264 undergraduate students in the university were invited to respond to the survey across the four levels of undergraduate study. Each student was sent one questionnaire per module that they studied. The maximum number of questionnaires sent was six for a full-time student. A total of 31,592 questionnaires were issued.

The SLMF was advertised to students and staff through university internal communications including social media, posters, and computer monitors before the questionnaires were emailed to students. StARs attended lectures and seminars to present the scheme among their subject cohorts during the week the questionnaires were distributed. The StARs emphasised the benefits of the dialogue that would take place between staff and students and encouraged students to be constructive and honest in their comments. The StARs were supported and briefed by the SU in order to ensure consistency of message and approach.

Implementation

Once the survey period was closed, the EvaSys administrator programmed a number of data reports, as agreed to by the project group. The quantitative reports and the qualitative comments were emailed to module leaders, StARs, and SMLF leads in each school/area in Week 9 of a 30-week long teaching period. This was followed by a conversation between staff and students involved in the SMLF in Week 10 where both parties agreed on an action plan together (see Figure 1, below). The action plans were made available to all via the university VLE. Finally, the feedback loop was closed when staff and students discussed the progress of the action plans in Weeks 12 and 13, still in real time, within the lifetime of the module. (See Figure 2, below).

Figure 1. SMLF module timeline

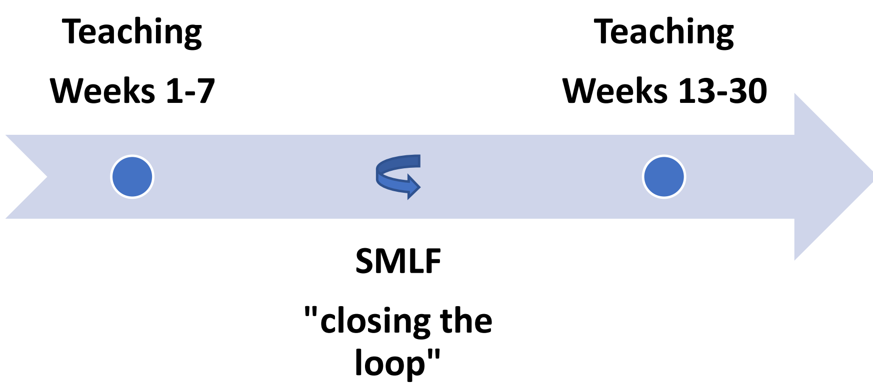

Figure 2. SMLF timeline loop

The project team produced guidelines on how to conduct the conversation between staff and students. This document was key in ensuring that the dialogue between staff and students was more important than the statistics or isolated comments.

Of the 31,592 online questionnaires issued, 7,154 were completed by students in a period of two weeks, resulting in a 23% response rate. EvaSys allowed the administrator to programme reminders to non-respondents. In total, respondents were sent two reminders during the two-week period. The individual module survey reports, produced by the EvaSys, were emailed by the administrator to the teaching staff and StARs in Week 9. As agreed by the group, and in line with the NSS practice, the administrator removed all names of staff in the qualitative part of the reports.

In total, students provided over 20,000 free-text comments across the 794 modules. These were coded using a system of discourse analysis looking for similar words and phrases identified by the SMLF school/area representative to identify issues at a strategic level. To increase ownership of the scheme, staff and students were encouraged (through the guidelines) to challenge or embrace the results and to agree on what was relevant to discuss or not for their action plan.

The qualitative and quantitative results of the survey were discussed at the module level to initiate a conversation between staff and students and were translated into action plans. The project team collaboratively produced a guide for staff to initiate and manage the conversation and to co-produce a plan with students. The guide suggested a list of steps to engage in the conversation about the survey results, including how to respond to statistical data and how to value all comments made. The guide also provided examples of effective communication tools in order to promote meaningful engagement through active listening. There were also sample action plans cross-referencing common pedagogical concerns.

Action plans

The two qualitative questions were included primarily to engage staff and students in a live conversation. The action plans, collected in a shared Google document, were created after the dialogue between staff and students and were varied in their presentation and content (see Table 1 for examples of action plans).

Table 1. Examples of action plans

Action Plan: Example 1
• Ensure that seminar rooms are warmer • Ensure each seminar group has parity of experience (recognising that staff have an individual teaching style!) (e.g., too much reading or group work in sessions to support the individual needs of each group) • Each seminar tutor to discuss with the group what would work best for them (e.g., peer feedback, group work, readings during sessions, and so on)
Action Plan: Example 2
• The lecturers guarantee to leave a break of sufficient length when both the lecture and the tutorial take place in the same room • Additional reading material will be provided to supplement the lecture notes • Students to arrive on time • A mock exam to be carried out after the first semester material and another one to cover the second semester material will be prepared • More past exam papers will be published on the VLE as a preparation for the exam

While the majority were focused and solution-oriented, a very small minority were drafted in a defensive style, possibly indicating that students may not have taken an equal role in the drafting of the action plans.

DISCUSSION

The scheme's outcomes and the action plans were reported to the academic board. It was noted that the themes discussed during the staff-student conversations and the points in the co-created action plans were similar to the themes collected through the National Student Survey at the institution over the years. This highlighted that one of the benefits of the scheme (i.e., being able to identify successes and to address areas of improvement on a course two months before the National Student Survey started) was achieved.

Feeling part of a community of staff and students is challenging for an inner city, non-campus university, where many students are local and live in the family home. It is, however, a crucial ingredient in the recipe for a positive student experience. The co-created action plans made some useful suggestions to encourage a sense of community amongst students such as increased induction activities. This information has been used by academic leads to develop, amongst other initiatives, a "transition to HE" online interactive package of activities to reinforce the feeling of belonging.

The schools/areas reported a number of useful trends which were identified in the action plans, the most resounding one being that students have a clear understanding of what is needed to improve their experience and are offering realistic solutions. Students are also clearly aware of their rights and educational needs. This could be partly due to the attention paid to metrics in early compulsory education which has led staff to "train" pupils/students from the outset to set their own objectives and goals, to conduct self-evaluations, and to identify the support and tools they need to pass examinations they undertake. In addition, the introduction of student fees to the HE sector could also explain the large number of comments related to lack of feedback and lack of preparation for exams.

Impact of the SLMF on the teaching and learning experience

To measure the impact of the SLMF, a questionnaire was sent to staff involved in the scheme. Its purpose was to evaluate the effectiveness of the scheme, and to solicit staff suggestions for improving it.

Methods and design

The staff evaluation used quantitative and qualitative methods. A questionnaire (designed by one of the authors of this paper) was used to measure the success and impact of the scheme on teaching and learning. There were seven questions and four open-ended questions. This paper reports an initial summary of the findings of the staff survey, which will be the subject of a future study. The survey was conducted using Google Forms and was sent to 232 module leaders who completed at least one SMLF action plan with their students. A total of 101 module leaders responded to the survey, equating to a 44% participation rate. In addition, there were just under 200 free-text comments. Staff were asked seven questions about promotion of the survey by the StARs and about student involvement in devising the action plans. They were invited to respond to free-text questions, in which they were encouraged to reflect on their teaching practice, their relationship with students, and the extent to which the SLMF enhanced student engagement in their modules.

Analysis and discussion

Google Forms created simple graphs to illustrate the yes/no questions and collated the free-text comments in sections. These were then analysed through a coding system using simple discourse analysis, which identified the main themes.

Staff reported that StARs attended 53% of lectures to promote the scheme, which demonstrated the impact and engagement of the SU in the scheme. Another indication of their commitment was providing training for StARs and organising the classroom visits. StARs were also involved in advertising the scheme to their peers via emails, social events, and social media.

The SMLF focused on encouraging students and staff working in partnership to enhance the teaching and learning experience and were thus "equally invested in the common goal of learning" (Cook-Sather et al., 2014, p. 11)

Sixty-three percent of staff indicated that students were actively involved in devising the action plans, and 59% of staff recognised that the action plans will have an impact on their future practice. Staff welcomed student suggestions; for example, to reduce the length of presentations, to increase task-based learning, to review the workload of assessment, to edit and reorganise the content of the VLE, to be more aware of the diverse needs of students, and to spend time giving individual feedback. Seventy-seven percent of staff stated that the scheme guidelines were helpful. Forty-three percent reported that they had learned something new about their teaching practice. When staff were probed about what they had learned about their teaching practice, the answers included implementing new ideas for improving feedback to students, reflecting on their teaching, improving communication between staff teams, working closer with students, and improving content of the VLE. Thirty-seven percent of staff thought that the scheme had a positive impact on their own relationship with their students. Another 37% were unsure, while 27% stated that the scheme did not have a positive impact. In this latter case, a small number of staff questioned the representativeness of the data in relation to low participation, while others felt challenged by the student voice.

The SLMF is a major cultural shift, and it will take time for some to accept it as a valid conduit for the student voice and as a platform to challenge notions of power as opposed to notions of partnership. As Cook-Sather et al. (2014) confirm, some staff may be uncomfortable with the changes in power relations that a more collaborative approach requires and will not willingly embrace a partnership model.

There are many reasons why students do or do not engage with their studies, and this scheme was one of the interventions put in place to promote student engagement. The findings indicated that 39% of staff thought that the scheme had enhanced student engagement with their module, and it was perceived as being an effective mechanism for students to give feedback and as an opportunity for staff to reflect on teaching practice and see immediate changes in the module. Some staff said that the anonymity of the SLMF enabled the "quieter voices" to be heard, and others felt that the scheme promoted a positive impression of the university by allowing students to identify strengths and by encouraging feedback. Staff said that the scheme facilitated meaningful interaction and dialogue between staff and students.

A number of suggestions for future improvements to the SMLF were made. While current student participation was positive, it was felt that we needed to consider ways in which participation could be increased. Finally, a very small minority of staff reported feeling "humiliated" by the outcomes and stated that, rather than enhancing the staff-student relationships, the scheme had encouraged students to complain and be critical. Allin (2014) acknowledges that to forge successful partnerships with students, we need to critically reflect on the power relations that exist between staff and students, and we need to consciously empower students. Power sharing can be uncomfortable for some staff, both in principle and in learning and teaching practice, and this has been made more challenging in the current HE sector where the student voice is becoming louder. This discomfort is an inevitable consequence of the shift in power relations, and it is hoped that those feelings will fade as the scheme becomes more established. In their work, Healey and Healey (2018) argue that Student-as-Partners practices "involve a radical rethink of the power relationships between staff and students which encourages them to co-create knowledge, co-design the curriculum, and learn together" (p. 6).

Implications of the SLMF for partnerships

Student engagement with course evaluation and feedback can support the development of a more positive learning environment, the sharing of good practice, and students being active participants in their own learning, rather than being passive recipients. The SLMF offers a new conceptual model for working in partnership with students through course feedback. The scheme can create a sense of belonging among students through the development of partnership learning communities. An initiative such as the SLMF is also a way of engaging higher numbers of students in partnership work than is usual in the UK higher education sector. Furthermore, it is an approach that offers a whole-system model of partnership that can contribute ways of developing institutional policy in the area of quality enhancement.

The project offers an inter-disciplinary model that may guide and support enhanced and improved practice. This enables the development of a specific ethos for institutional partnerships, resulting from critical reflection of the process, such as the exploration of power relationships, issues of inclusivity and university structures through consideration of shared values, behaviours and attitudes. By encouraging students and staff to have open discussions about their experience in real time, the SLMF is a cultural shift in the institution because, for the first time, it has allowed students and staff to acknowledge each other's feelings and behaviours for the common purpose of enhancing the learning experience. Curran (2017) and Felten (2017) both highlight the importance and the role of emotions in Students-as-Partners projects. Curran (2017) argues that recognising how staff and students are feeling can act as a catalyst for change in thinking and behaviours.

Such an approach reinforces that "partnership is essentially a process of engagement, not a product" (Healey et al., 2014, p. 7). This process approach provides the mechanism for institutions to identify tensions and challenges that can emerge from the development of partnerships and can offer some approaches to address these and enable change to take place.

CONCLUSION

The few challenges encountered and reported, such as the tight timelines of the project, poor engagement from StARs in some courses, and a small minority of staff challenged by the openness of the scheme, did not overshadow the successes of the SLMF as a well-designed and co-managed project. It offered a measurable, positive impact on the student experience and a transparent approach to enhancing learning and teaching. The SLMF is "the survey that wasn't a survey" Tschirhart (2017). It is a tool to engage students and staff together in a process of reflection, conversation, and construction. It is about building a mature, honest relationship together, with students having the confidence to praise where necessary and the skills to raise issues constructively. It is also about staff responding to critique in a positive and reflective way.

Now in its fourth iteration, the SLMF is an established partnership. Successes are still being celebrated, and, more importantly, lessons are still being learnt by the university community. One could argue that it is a positive sign as the scheme can be adapted to new settings. In a rapidly changing UK higher education context, agility is a key to sustainability.

The research was successfully reviewed according to the institution's research ethics committee guidelines and given approval.

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CASE STUDY

A Co-creation of Learning and Teaching Typology: What Kind of Co-creation are you Planning or Doing?

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ABSTRACT

In higher education discourse, reference to co-creation, partnership, and student engagement (to name but a few of the commonly used terms), covers a very wide range of different research and practice. This variety can often be confusing. In response, I present a co-creation of learning and teaching typology, which is a practical resource intended to support students and staff to reflect on, and discuss, their planned and current practice and to be able to identify what particular kind of co-creation they are planning or doing. The typology can be used individually, in small groups or at an institutional level. It has been designed to be adaptable and includes space for additional co-creation variables and responses to be added. Informal feedback from using the typology suggests it has the potential to be (a) a planning tool, (b) a reflective tool, and (c) a mapping tool.

KEYWORDS

Co-creation, Students as Partners, student-staff partnership, typology, higher education

Over the last five to ten years, we have witnessed a rise in student-staff collaborative research and practice in higher education (Cook-Sather, Bovill, & Felten, 2014; Healey, Flint, & Harrington, 2014). There is also growing evidence of many positive outcomes from partnership in, and co-creation of, learning and teaching, including enhanced engagement, motivation, meta-cognitive understanding, and identity formation (Cook-Sather et al., 2014). Yet at times, the literature is confusing due to the variation in terminology used for collaboration (Dunne, 2016) such as Students as Partners, co-creation, students as change agents, and students as producers. Terms are often used interchangeably, and practices categorised within each definition vary. I use the term co-creation of learning and teaching in this paper, as it tends to imply a deeper level of student agency than is often implied by "student engagement," which is sometimes used to refer to a student turning up for class but does not necessarily imply the level of equality that is often emphasised in definitions of "partnership." According to Bovill, Cook-Sather, Felten, Millard, & Moore-Cherry, (2016, p. 196) "co-creation of learning and teaching occurs when staff and students work collaboratively with one another to create components of curricula and/or pedagogical approaches".

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In an attempt to help people make sense of the variation in co-creation practice, I introduce in this paper a Co-creation of Learning and Teaching typology. I have developed the typology as a means of discussing co-creation with different groups of students and staff. I explain how the typology was created, and then present and explain the typology. I then present some of the informal reactions I have received from students and staff to using the typology, and finally I outline some suggestions of how it might be used in different contexts.

MAKING SENSE OF CURRENT CO-CREATION OF LEARNING & TEACHING PRACTICE

My intention in developing the Co-creation of Learning and Teaching typology was to create a tool to support students and staff to discuss, reflect upon, and plan co-creation work. In my own practice and conversations with students and staff, I have found that people often describe their work as co-creation but their work differs from others also describing their work as co-creation. For example, one colleague's co-creation might refer to how she employed a small group of six medical students to design videos about physical activity for use in a flipped classroom approach to a course (Harden & Fawkner, 2019), while another colleague might be using the term co-creation to refer to how he enabled students in his Classics class to design their own essay title (Cook-Sather et al., 2014). Each of these examples comes within the earlier definition of co-creation of learning and teaching, but involves different numbers of students (six for the former and approximately 30 for the latter), students at different levels of study (one student from each year group for the former and all students in a second-year class for the latter), and different rewards for students (pay for the former and course credit for the latter).

A growing number of frameworks for co-creation, partnership, and student engagement have been proposed to help categorise collaborative research and practice (e.g., Bovill, 2014; Bovill, 2017; Bovill, 2019; Bovill, et al., 2016; Bovill & Woolmer, 2018; Bryson, Furlonger, & Rinaldo-Langridge, 2015; Healey et al., 2014; Könings, Bovill, & Woolner, 2017; Mercer-Mapstone et al., 2017). I have taken elements from these frameworks along with my own ideas, which have emerged from academic development conversations about co-creation with student and staff colleagues, and I have brought these together in the one-page Co-creation of Learning and Teaching typology (see Table 1).

My aim was to create a practical tool for use with students and staff, which would enable colleagues to articulate the different approaches they take to co-creation and why. The questions were informed by my own practice, which led me to suggest some additional co-creation variables missing from the existing published frameworks. The typology includes a list of co-creation variables, presented in the form of questions in the first column of the table, followed by different responses to these questions in the rows, which illustrate the different possible types of co-creation. I will now explain each of the questions within the typology in turn.

Who initiates the co-creation?

Most teaching and curriculum-related work is initiated by staff, who are often considered to be gatekeepers of the curriculum and responsible for teaching (Bourner, 2004; Bovill, 2014). Student-led initiatives are perhaps more likely where an environment of shared trust, respect, and responsibility has been established and students feel more confident to propose collaborative work, either within or outside the curriculum.

Table 1. Co-creation of Learning and Teaching Typology

QUESTION	POSSIBLE RESPONSES						
Who initiates the co-creation?	Staff-led	Student-led	Staff and students				Other
What is the focus of the co-creation? *(see Bovill & Woolmer, 2018; Healey et al., 2014)*	Entire curriculum (co-creation *of* the curriculum)	Learning & teaching (co-creation *in* the curriculum)	Educational research & evaluation	Disciplinary research	Wider student experience		Other
What is the context for the co-creation? *(see Bovill & Woolmer, 2018; Mercer-Mapstone et al., 2017)*	Curricular	Extra-curricular	University-wide				Other
How many students are involved? *(see Mercer-Mapstone et al., 2017)*	1-5	6-10	11-20	21-30	31-100	101-500	Other
Have you selected students from a larger group or are you involving a whole class? (*See Bovill, 2019; Bryson et al., 2015)*	Selected	Whole class/group					Other
Which students are involved? (*See Bovill, 2014)*	Retrospective	Current	Future				Other
What year of study are the students in?	Year 1 (UG)	Year 2 (UG)	Year 3 (UG)	Year 4 (UG)	Masters	PhD	Other
What is the scale of the co-creation?	1 class	Several classes	1 project	Several projects	Faculty/School-wide	Institution-wide	Other
How long does the co-creation last?	Days	Months	Years				Other
What is the role of the student? (*See Bovill et al., 2016*)	Representative	Consultant	Co-researcher	Pedagogical co-designer			Other
What is the nature of student involvement? (*See Bovill, 2017; Könings et al., 2017)*	Informed	Consulted	Involved	Partners	Leading		Other
What is the nature of reward or recompense given to students?	Payment in money	Payment in vouchers	Course credit	No payment	Refreshments		Other
Why are you co-creating?	To improve my course	To enhance student engagement	Aiming for a socially just higher education	Impressed by benefits	Want student perspectives	To enhance student's skills	Other
Other question							Other
Other question							Other

What is the focus of the co-creation?

Healey et al., (2014) distinguish between partnership work focused on curriculum design, learning teaching and assessment, subject-based research, and scholarship of teaching and learning. They also acknowledge some overlap between these four areas. The typology also distinguishes between "co-creation *of* the curriculum (co-design of a programme or course, usually before the programme or course takes place) and co-creation *in* the curriculum (co-design of learning and teaching within a course or programme usually during the course or programme)" (Bovill & Woolmer, 2018, p. 3). I have also added "wider student experience" because many co-creation projects focus on broad university enhancement, such as campus culture and wellbeing (Johinke et al., 2018).

What is the context for the co-creation?

The context may be influenced by the perspectives of those engaging in co-creation. For example, a curriculum design team with students and staff co-designing the curriculum might be considered curricular by staff (as it pertains to the curriculum), but extra-curricular by students (who do not usually receive course credit for this co-creation). Other co-creation activity might take place across a university.

How many students are involved?

Co-creation activities sometimes involve one student, small groups of students, or a whole class of students (a small or large class). Clearly one staff member working with one student will lead to very different co-creation processes and experiences than one staff member working with a whole class of, say, 100 students.

Have you selected students from a larger group or are you involving a whole class?

Related to the last variable about the numbers of students, some co-creation projects involve selecting students from a larger group to work with staff. In contrast, co-creation can take place in the classroom or online teaching spaces between the teacher and the whole class, overcoming the challenges of a selection process.

Which students are involved?

Drawing on a categorisation from Bovill (2014), which relates to students' programme of study, co-creation can involve students from previous years (retrospective), from the current cohort (current), or from those who are going to be studying a course (future students).

What year of study are the students in?

I have chosen to represent four years of an undergraduate degree, which is based on my experience in the Scottish higher education system. This can be easily adapted for different higher education systems or specialist degrees.

What is the scale of the co-creation?

Co-creation can take place in one classroom, initiated by one teacher, or it can be a single project. Co-creation in classrooms can appear to be small-scale examples of co-creation but they may involve many students. Similarly, institutional-level co-creation and partnership schemes are often considered large-scale. Despite involving multiple projects and co-ordination occurring at an institutional level, the number of students involved in these schemes can sometimes be modest (Mercer-Mapstone & Bovill, 2019).

How long does the co-creation last?

Co-creation initiatives can last for just a few days right through to several years for some work. This will also depend greatly on other variables such as the focus and context of co-creation.

What is the role of the student?

Drawing on the work of Bovill et al. (2016), four roles are outlined for students: representative (an elected role), consultant (often selected students paid or rewarded in other ways to offer feedback on teaching), co-researcher (students working with staff to investigate subject-based research or research into teaching), and pedagogical co-designer (students co-creating learning, teaching, and curriculum).

What is the nature of student involvement?

Students can be involved in co-creation in different ways at different stages of co-creation, for example they might be: informed, consulted, involved, partners, or leading work (Bovill, 2017; Könings et al., 2017).

What is the nature of reward or recompense given to students?

In general where co-creation takes place *in* the curriculum, as part of a programme of study, students tend not to be paid, but usually receive course credit. In contrast, extra-curricular co-creation often attracts payment. If co-creation takes place outside of a programme of study, some students may be disadvantaged and excluded from participating if payment is not offered (Mercer-Mapstone & Bovill, 2019).

Why are you co-creating?

This question encourages participants to reflect on their underpinning motivations for co-creating learning and teaching, as our intentions can have a strong influence on how we approach co-creation and the choices we make. There are many different reasons for students and staff to collaborate and a small selection of rationales are included.

Other

There are two additional rows where colleagues are invited to add other questions that might enable further distinctions in co-creation practice. All of the rows also have an "other" option, in recognition that there may be alternative versions of co-creation that are not captured in the suggested responses. Including the option to add "other" rows and columns was a conscious decision, reflecting my understanding that this is not a perfect, comprehensive, nor static version of co-creation categorisation. I encourage you to adapt and augment the typology to suit your needs.

INFORMAL FEEDBACK FROM USING THE TYPOLOGY

Co-creation of learning and teaching is not a neat, easily defined concept. I developed the typology in reaction to colleagues' confusion about defining co-creation. The typology is intended to help people to articulate their intentions and make sense of what they are doing. I report here on some informal feedback I have received from students and staff in three different settings.

I introduced the typology to approximately 30 “Co-creation Ambassadors” at a “Masterclass in Co-creation” at University College of Northern Denmark (UCN) in Aalborg. The Ambassadors came from different disciplines across the university, and I asked them to tick or colour in the boxes that illustrated the type of co-creation they were currently engaged in. This enabled us to gather a relatively rough snapshot of co-creation practice across the institution. We were able to highlight some predominant practices at UCN: most co-creation focuses on whole-class approaches, and the most common form of reward for students is providing refreshments. Responses to other variables suggested that a wide range of different approaches to co-creation were being used. The typology enabled us to gather an overview of practice, which helped to stimulate some useful discussions about shared practices and areas where UCN might want to develop future co-creation.

In a workshop on co-creation of learning and teaching with a group of 23 students and staff from different disciplines across the University of Edinburgh, I introduced the typology. Many of these colleagues were new to co-creation, although some were more experienced. I asked participants to tick or colour in the boxes of the typology that best represented a current co-creation initiative or one they were planning. Anecdotal feedback from participants included one comment that the typology helped to introduce the complex topic of co-creation to a mixed audience. Another colleague reported finding the typology affirming as it suggested some of her existing practice would be considered to be co-creation, and she hadn’t previously thought about her teaching approach as co-creation.

I used the typology at a meeting of the Scottish Higher Educational Developer’s Network with 24 academic developers in a short session on co-creation of learning and teaching and the development of graduate attributes. Once again colleagues were asked to plot their current or planned co-creation activity on the typology. Several participants anecdotally shared positive feedback about how helpful they found the typology for thinking about and discussing their practice with others.

Feedback from these three groups highlights that the typology can be used as: (a) a planning tool to consider what kind of co-creation might be the best approach in a particular setting and to think of key questions in the early stages of planning, (b) a reflective tool with questions that help students and staff consider what they are doing in their practice and why they are choosing to co-create in a particular way, and (c) a mapping tool to provide an overview of co-creation practices in a specific context and to find similarities and differences between approaches being used. So far I have not received any negative feedback, nor faced any challenges in using the typology, although I have made some changes since the first version of the typology as colleagues have made useful suggestions, such as adding refreshments as a common form of reward for co-creation after discussions with colleagues at University College Northern Denmark.

The typology enables colleagues to consider a wide range of co-creation variables on one succinct page. It makes it possible to see more clearly that there might be patterns in co-creation practice. The typology also enables conversations to take place about potential benefits or disadvantages of making particular choices in any co-creation practice. The typology may also enable colleagues to present their co-creation work to others more clearly in the future.

CONCLUSIONS

The typology is a practical tool intended to prompt conversations about co-creation and engender deeper understanding of the range of co-creation practices that are possible. The typology also offers a language with which to speak about co-creation. My intention is for it to act as an heuristic that can be discussed, critiqued, augmented, and improved upon. I look forward to conversations about the typology as we continue to consider the possibilities of co-creation of learning and teaching.

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NOTE ON CONTRIBUTOR

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CASE STUDY

Developing a Collaborative Book Project on Higher Education Pedagogy: The Institutional, Organizational, and Community Identity Dimensions of Student-Staff Partnerships

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ABSTRACT

This case study presents an ambitious student-staff partnership project at University College London (UCL) to publish a collaborative book on higher education pedagogy. Over two-and-a-half years, a total of 86 students and staff contributed to the project, which sought to provide educators with a new type of scholarly material under the unifying theme of connecting research and teaching. Multiple layers of student-staff partnership were interwoven throughout the project; this case study contextualizes these layers against three dimensions: institutional, organizational, and community identity. Central to the project was our distinctive approach to engaging with Graduate Teaching Assistants (GTAs) and their crucial role in bringing the three dimensions together. As such, the project represents a model of enhanced student-staff partnership that has the capacity to empower students and break down educational silos to form new, multi-specialty learning communities.

KEYWORDS

pedagogical innovation, research-based education, consortium, graduate teaching assistants, interdisciplinarity

Books on higher education pedagogy abound (e.g., Harland, 2012; Fry, Ketteridge, & Marshall, 2014; Hunt & Chalmers, 2013; Weller, 2016), but the student voice is markedly absent within this field. And yet, students are increasingly influencing pedagogy: within the discourse of Students as Partners, their contribution through engagement with the

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Scholarship of Teaching and Learning (SoTL) is recognized as a distinct category of partnership activity (Healey, Flint, & Harrington, 2014). Typically, this has been through one-off scholarly projects, such as the co-authorship of journal articles (e.g., Ntem & Cook-Sather, 2018; Brost, Lauture, Smith, & Kersten, 2018), or the co-creation of curricula or learning resources within their disciplines (e.g., Bovill, Cook-Sather, & Felten, 2011; Carey, 2013).

Given the many common challenges that exist across higher education and given that students are recognized as experts in the student experience (Cook-Sather, Bovill, & Felten, 2014), there is a strong case for students to work collaboratively and to exert a collective influence by writing scholarly materials from the student perspective about learning and teaching beyond their classrooms, departments, disciplines, and institutions to inspire pedagogical innovation in others. Our "R=T" (Research=Teaching) book project at University College London (UCL) was designed to push the frontiers of pedagogical scholarship through partnership with a wide and diverse group of students. We set ourselves the challenge of addressing the following questions: "Can students, like professional educationalists, shape higher education pedagogy? Can they put forward their ideas about the method and practice of teaching in the form of scholarly writing for a wide audience?" (Tong, Standen, & Sotiriou, 2018, p. 3).

This case study offers an analysis of the design and implementation of this project, which culminated in the publication of *Shaping Higher Education with Students: Ways to Connect Research and Teaching* in March 2018 (Tong et al., 2018).[1] We aimed to create a collaborative volume, broad in scope, that discussed higher education from a range of student-staff partnership perspectives. The book is a collection of critical reflection essays, editorial commentaries, and contextual materials that explore connections between research and teaching. It provides educators with ideas on how to embed research-based education in different disciplines, contexts, and academic communities. UCL's strategic vision is the closer alignment of research and education (UCL, n.d.). Scholarly work over the last couple of years has demonstrated how students at UCL are experiencing this research-based approach to teaching (Fung, 2017; Carnell & Fung, 2017; Davies & Pachler, 2018). Our book was an opportunity for UCL students not only to give their views on being students in this research-rich environment, but also for them to propose innovative ways for academics to connect their own teaching and research roles.

A group of Graduate Teaching Assistants (GTAs) at UCL played a central role in the project. They brought their unique position as students-researchers-teachers occupying—possibly more than any other group—the meeting place between the research and teaching environments. From this liminal space (Compton & Tran, 2017), we recognized that the GTAs were able to challenge educational silos—both between disciplines and between research and education. For us, it was both a moral and pedagogical imperative to offer GTAs the opportunity to move beyond their typical "bounded responsibilities" (Park & Ramos, 2002, p. 52) and play a more active part in the development and implementation of educational enhancement and change (Winstone & Moore, 2017).

The student voice has become increasingly embedded in institutional ways of working, and opportunities are widely provided to listen to students in higher education. However, the "listening and being responsive" rationale has been recognized as taking precedence over an emphasis on student engagement as central to creating learning communities (Little, Locke, Scesa, & Williams, 2009, p.13). Engaging students in authentic co-creation with staff is a way to challenge the current neoliberal trend in higher education, which positions students as consumers whose voices are heard for the sake of student satisfaction.

It has been argued that collaboration between staff and students could become more mainstream (Bovill, Cook-Sather, Felten, Millard, & Moore-Cherry, 2016). Drawing on their own experience and existing research, Bovill et al. (2016) identified four roles that students take on as partners with staff: consultant, co-researcher, pedagogical co-designer, and representative. They position these roles against Arnstein's (1969) ladder of participation, a model of citizen participation in community planning that has been used widely in a variety of disciplines and was first used in relation to higher education by Bovill & Bulley (2011).

The project took a highly collaborative approach with multiple layers of student-staff partnership seeking to address institutional priorities that are also in line with current trends in the wider higher education sector. We here present an analysis of student-staff partnership in the project through institutional, organizational, and community-identity dimensions. These dimensions emerged as we reflected on the project; they represent its drivers, the processes by which we carried out the project, and also what we can now identify as some of the key impacts the project had on those involved.

THE INSTITUTIONAL DIMENSION: CREATING INNOVATIVE SYNERGIES BETWEEN INSTITUTION-WIDE INITIATIVES

In recent years, UCL has renewed its approach to education and the student experience (Fung, 2017). Its ambitious 20-year strategy commits the university to becoming a world-leader in the integration of research and education, which is underpinned by an inspirational student experience (UCL, n.d.). In the shorter term, two institution-wide initiatives have been developed to help work towards that goal. The first is UCL Connected Curriculum, a framework for curriculum design which places a connected, research-based education at the core of student learning (Fung, 2017). The second is UCL ChangeMakers, which recognizes the institution as a community of scholars, all at different stages in their understanding of scholarship, research, and the application of knowledge, and which aims to support students and staff to work in partnership to enhance learning (Marie, 2018).

Our book project provided a significant contribution to these two institution-wide initiatives. It aimed to enhance Connected Curriculum and ChangeMakers simultaneously and expand their scope in synergistic ways. The Connected Curriculum framework (Fung, 2017), with its underpinning practice of learning through research and enquiry, was the starting point for our student authors to interrogate research-based education and bring their perspectives to bear upon it. ChangeMakers provided us with the framework for partnership working, including both practical support through training and development opportunities for our student partners, and a wider conceptual ethos of collaboration, innovation, trust, equality, and mutual gain.

In practice, this meant our student authors worked in partnership with UCL and non-UCL academics as well as their peers from other departments and faculties. The project pushed the established frontiers of student-staff partnership in ChangeMakers (and other similar institutional student-staff partnership initiatives) through the scale of collaboration and its resulting sphere of influence. By publishing their scholarly work, our student partners not only disseminated their perspectives on higher education, but also actively

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contributed to shaping it beyond their local contexts. Agathe, one of this article's co-authors, comments:

> My involvement in the book project meant putting my experience as a GTA into perspective and sharing it with more experienced members of staff and professors for the very first time. This was all the more novel—and even bold—for me as I come from an educational and academic background where the student voice is not necessarily sought nor valued to craft the higher education agenda.

THE ORGANIZATIONAL DIMENSION: EMBEDDING MULTIPLE LAYERS OF STUDENT-STAFF PARTNERSHIPS IN A CONSORTIUM SETTING

A consortium approach is commonly used to organize complex, large-scale research efforts (Braun, 2003; Lepori, 2011; Wardenaar, de Jong, & Hessels, 2014). Here we analyse the organizational dimension of our collaborative project with its complex interlinked student-staff partnerships as a consortium, which establishes and strengthens relationships among the coordinated activities in a network with the aim of improving their common effectiveness (Hessels & Deuten, 2013; Wardenaar et al., 2014). Eighty-six contributors were involved in our project, all providing original contributions. The contributors can be broken down into five groups:

- Student authors and editors: 26 students from across UCL (i.e., undergraduate, postgraduate taught students, and GTAs);
- Partner professors: Five UCL and five non-UCL research professors with distinguished track records (e.g., national or institutional education prize winners);
- Staff-student teams: Eight groups of staff and students from across UCL who had previously worked on research-based education projects;
- Student-staff partnership experts: One UCL and three non-UCL leading academics in student-staff partnerships; and a
- Project team: Three UCL academics who coordinated the project and edited the book.

The consortium approach allowed us to group the book project into different stages of work over its two-and-half-year duration. First, 15 student authors hosted discussion events at UCL in partnership with their partner professors. The events looked at research-based education through a variety of lenses and approaches, including novel technologies, peer-assisted learning, interdisciplinarity, and the value of making mistakes to the learning process. The events were based on the staff partner's area of expertise but were hosted and facilitated by the student partners. The students took the themes of these events as a starting point for development into their book chapters; their chapters took the form of either reports on focus group findings or reflective essays. The students received feedback from their partner professors and the project team along the way as a way of supporting their development as scholars in pedagogy. A pertinent example of collaboration and interaction between the team was the student authors then peer-reviewing each other's work. Not only did this improve the chapters, but it allowed students to experience the academic peer-review process. Scaffolded peer-to-peer mentoring (e.g., Grant-Vallone & Ensher, 2000), in which the students not only gave each other feedback, but also supported one another's burgeoning understanding of research-based education and shared ideas and interpretations, was thus fully embedded in our consortium. The approach also meant that

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all the students gained a more holistic understanding of the book's content and development.

As a second step, 11 new students worked as editors responsible for developing together an editorial framework on research-based education through student-staff partnership. Each student editor then drew on their contrasting disciplinary backgrounds and the collaborative framework to write a commentary on one of the critical reflection chapters. The result was a set of essays and commentaries written by students from diverse disciplinary backgrounds and levels of study. This stage was important in highlighting the key contributions of each student's chapter through the lens of another student partner with a different perspective. It also allowed the book's ideas to be more readily applicable to different contexts and institutions.

In the final stage of the book project, international scholars of student-staff partnership and the project team wrote contextual materials. A further eight student-staff teams showcased real examples of student-staff partnerships at UCL, jointly authoring case studies of practice for the book. Finally, the project team and chief student editor (and co-author of this paper) developed the signposting chapters and epilogue.

Student-staff partnership was the cornerstone of the book project, allowing for the creation of collaborative scholarship from a consortium approach, as Agathe highlights:

> The project allowed me to liberate my thought from the conventional hierarchy within higher education, where students and professors belong to two separate groups, and created a fresh basis for creative inter- and even transdisciplinary discussions inspired by peers, both students or professors.

THE COMMUNITY-IDENTITY DIMENSION: ENABLING STUDENT-STAFF PARTNERSHIPS IN A COMPLEX COLLABORATIVE PROJECT

Throughout the project, different aspects of student-staff partnership were experienced. We began the project with a shared purpose, but it evolved through ongoing discussions between the project team and student partners about the scope and direction of the project. Through collaborative work, students were inducted into the academic environment and invited to join a community of practice (Lave & Wenger, 1991). Collaboration across levels of study and across disciplinary divides encouraged exposure to different perspectives and approaches in other departments and faculties, but also allowed students and staff to represent their own discipline(s) within the consortium–highlighting the idea that communities of practice do not just exist within formal disciplinary boundaries (Morton, 2012). Through both the initial discussion events and the resulting book materials, the whole project modelled common student-staff partnership values which were fundamental to the success of the project: trust, respect, reciprocity, responsibility, and openness (Bovill et al., 2016 and references therein).

In a bold and novel approach, students and staff switched roles throughout the project. Students hosted events, carried out focus groups, and authored and edited chapters, while staff often took a backseat, which challenged power dynamics that might be typical in student-staff collaboration. Instead of the staff member being considered the expert, students at varying levels were the ones writing the majority of the book chapters, taking ideas from partner academics in new and often surprising directions. Our approach therefore clearly demonstrates a high degree of citizen power in Arnstein's (1964) ladder of participation. As one partner professor wrote in her preface to her partner GTA's chapter:

> Coming from a research-intensive and non-reflective tradition of "see one, do one, teach one," it is a thought-provoking pleasure to read and ponder Jawiria's [the partner GTA] reflections on the opportunities and challenges of incorporating research into teaching to better prepare students in Higher Education for jobs in all walks of life. I also find it very humbling but also comforting that pedagogic techniques, which I thought I had developed carefully and creatively over 30-plus years of interacting with students around research-intensive learning, are part of Jawiria's established "toolkit" as an early-career teacher and researcher! (Tong et al., 2018, p. 224).

This challenge to traditional power dynamics is central to student-staff partnerships. Although it can be daunting for both partners, it can also lead to creative solutions, more confident students, and better learning outcomes (Cook-Sather, 2014). Engaging students in the project from the beginning meant that student input was incorporated at all phases.

Sharing power with students was not just accomplished in individual projects but through the very writing of the book—something unique, yet congruent with the principles of student-staff partnership that were being explored and developed. This approach can be empowering for students and staff alike, repositioning students as knowledge producers rather than mere knowledge consumers, thus fundamentally challenging and restructuring how staff and students work and learn together in higher education.

The consortium style of our project meant that each contributor had something unique to bring to both the book and the functioning of the group itself. Everyone played an active role in shaping the project and thus contributed to a more authentic partnership experience and to the development of a sense of belonging (Thomas, 2012). The consortium approach used in our book project is in line with developing what Morton (2012) identifies as "higher education settings as multiple, overlapping, more or less formal communities (of practice) that students and instructors are simultaneously involved in" (p. 101). Comments from Lauren, one of our co-authors, highlight how the student-centred and collaborative aspects helped her develop a sense of belonging to the academic community:

> Working on the project made me feel more confident as a researcher and writer, but also showed me how I could bring my interests into a project and connect it with my research. Working on the book with colleagues from various departments and disciplines made me feel not only that I was part of a scholarly community, but that I was capable of contributing to that community–in terms of influencing pedagogy and practice as well as being an ambassador for student-staff partnership.

CONCLUSIONS

The institutional dimension represented an important context for our book project, allowing us to bring two strategically significant UCL initiatives together. The organizational dimension played a crucial part in coordinating and embedding multiple layers of student-staff partnerships. However, it was the community-identity dimension that went beyond the contextual and technical aspects of our collaborative project to enable all who took part to make sense of the different forms of partnership and advance research-teaching synergies collaboratively.

Arguably, this was most evident through the impact GTAs exerted on the project and how the project impacted upon them. This group was integral to the project, contributing at all stages and to all its constituent parts. Commonly cited as lacking in autonomy or shouldering a heavy burden (Park & Ramos, 2002; Muzaka, 2009), the GTAs were instead granted a privileged position in our project: they were active partners for change as staff, students, researchers, and educators all at once. One of our co-authors, Joe, writes:

> As a GTA, I have found partnership to be the most effective method of improving the teaching experience in higher education. Without it, I didn't have the authority, confidence, or experience to articulate my ideas about teaching and pedagogy. Working in partnership with staff provides those three things. It was the perfect preparation for a future academic career and undoubtedly helped me secure my first academic position.

Of course, while the benefits to our group of GTAs may be more tangible and their role in the project more substantive, we hoped for all of our student partners to benefit from our collaborative approach to advancing the research-teaching nexus. An undergraduate student from our team wrote in her original application to the project: "There is an understanding that even researchers and senior academics are still learning, and thus bringing together research and teaching continues in this strong tradition of community."

At the project outset we sought to explore the extent to which students could shape higher education pedagogies beyond their local contexts through student-staff partnership. We wanted students to be recognized as experts in the integration of research and teaching. These were ambitious objectives, and the project was operationally complex and not without challenges. For the three project leads (who are also co-authors of this paper), this meant maintaining the students' motivation, supporting them as they negotiated their individual competing priorities, being willing to hand over the power to students, and, crucially, accepting that things might fail. For the students, this meant overcoming some, at times, firmly-held perceptions about conventional academic hierarchies and having the confidence to speak up and challenge the status quo of their discipline and their very understanding of the function of higher education.

Our co-created open-access book has already had a global reach (as reflected by download statistics),[2] and its sphere of influence continues to grow through further projects with partner institutions worldwide. Beyond our desire for educators and researchers to read the book and implement the ideas co-created by students and staff, our hope for the project is that it will inspire others to work in partnership with students to co-construct knowledge, break down silos, and challenge power dynamics—forging new academic communities to shape higher education pedagogy together.

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NOTES

1. The book is free to download at https://www.uclpress.co.uk/products/95121.

2. 26,846 downloads from 165 countries and territories as of August 2019 (https://www.uclpress.co.uk/pages/statistics).

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Agathe Ribéreau-Gayon *holds a PhD from UCL and is currently a UCL Honorary Research Fellow. Her research and teaching concern biological anthropology, bioarchaeology, and forensic science. She advocates interdisciplinary research and teaching, and is an Associate Fellow of the Higher Education Academy. Agathe was a student partner on the R=T project, participating as one of the 11 initial student authors during her time as PhD researcher and Teaching Assistant.*

Mina Sotiriou *is a Senior Teaching Fellow at UCL. Her area of specialism is in the pedagogies of e-learning, and she works closely with colleagues to develop blended and online short courses and programmes. Mina co-led the R=T initiative and she is currently leading another student-staff partnership project in UCL focusing on the educational use of blogs*.

Alex Standen *is Associate Director in UCL's Arena Centre for Research-Based Education, where she has oversight of all of the Centre's activity around the professional development of early career academic staff and research supervisors. She was staff partner on the R=T project and co-edited the book.*

Joe Thorogood *is an Assistant Lecturer in geography at Coventry University. He was a PhD researcher and Teaching Assistant at UCL and worked on the R=T project and many other student-staff partnership projects with the Arena Centre. He is currently working on a book proposal on postgraduate pedagogy and writes about teaching and student engagement on his blog (http://slowstudents.com).*

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CASE STUDY

A Faculty Member Learning with and from an Undergraduate Teaching Assistant: Critical Reflection in Higher Education

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ABSTRACT

This case study describes a student-faculty partnership between an undergraduate teacher education student and a faculty member of teacher education. This faculty-centric partnership aimed to enhance the faculty member's critical reflection on his pedagogy in an introduction to teacher education course. In this jointly-written article, we offer student and faculty insights about the process we employed, the outcomes of our teaching and learning together, and the complexities of student-faculty working relationships stemming from power dynamics. We also provide recommendations for faculty and students looking to engage in collaborations. These recommendations center on defining partner roles, using video recordings, and addressing power dynamics between students and faculty within higher education. Drawing from our experience, we suggest that student-faculty partnerships are one fruitful avenue for improving the quality of instruction in higher education. They require minimum financial resources and can enhance faculty pedagogy, which will benefit current and future students.

KEYWORDS

students as partners, critical reflection, pedagogy, power dynamics, professional development

Quality of instruction in higher education strongly and directly impacts undergraduate learning (Commission on the Future of Undergraduate Education, 2017), yet despite the importance of high-quality teaching, limited attention is typically given to facilitating it. According to the Commission, "Faculty are rarely trained, selected, and assessed as teachers, and their effectiveness as instructors is rarely recognized or rewarded" (p. 12). When institutions do assess quality of instruction, it is primarily measured using student course evaluations. However, the validity and reliability of these evaluations have been widely criticized for a number of reasons, including low response rates (Goos & Salomons, 2017; Spooren, Brockx, & Mortelmans, 2013). While these findings are troubling, they are especially

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alarming within the context of teacher education. Teacher education programs must model best instructional practices, as teacher candidates look to our pedagogy to inform their future practice (Loughran, 2006). Therefore, teacher education faculty must employ high-quality instruction and continually assess their practice, a process that should exceed course evaluations, given the limitations of these instruments.

Despite the importance of improving teaching in teacher education programs, minimal information exists about their faculty's professional development (Swennen, Jones, & Volman, 2010). For this reason, Phuong, Cole, and Zarestky (2018) recommend that teacher education faculty conduct rigorous self-study research about their own teaching. They go on to assert that "the better faculty understand their own learning, teaching and research process, the better they are able to impact students' learning and performance" (p. 384).

This case study centers on a faculty member examining his teaching practices and describes the student-faculty partnership the authors formed, as a faculty member of teacher education (Frank) and an undergraduate teacher education student (Caroline). Our partnership had a faculty-centric focus, and aimed to support Frank's critical reflection on his teaching practices in an introductory teacher education course. Our faculty-centric focus is different from most partnerships in that most are student-centric, focusing more on student outcomes than faculty outcomes. This suggests a "deficit mindset. . . which implies that engagement, and by extension partnershipis something 'done to' rather than 'done with' students" (Mercer-Mapstone et al., 2017, p. 15). Our partnership embraces a value-added mindset, in which we are equal participants in this endeavor.

In this article, we describe our process, highlight instructional benefits, and discuss the characteristics of our working relationship. While our results are limited due to the context-specific nature of this work (see Healey & Healey, 2018), we share our experiences of our partnership and its outcomes in order to highlight a way through which faculty and students can work together to improve instruction in higher education, especially in teacher education programs.

CONTEXT

This student-faculty partnership involved an education undergraduate student and a teacher education faculty member at Lesley University. The institution was founded in 1909 as an institution for training kindergarten teachers and continues to have a strong commitment to PreK-12 teacher preparation. Caroline, the student in our partnership and the second author, was a teaching assistant (TA) who had completed the introductory teacher education course in the semester prior to our collaboration. The course met once a week for two-and-a-half hours. Frank, the faculty member in the partnership and the first author, had taught this class numerous times. Given our focus on Frank's course instruction, we discussed, analyzed, and critiqued Frank's pedagogy as reflective practitioners. A reflective practitioner is someone who

> examines, frames, and attempts to solve the dilemmas of classroom practice; is aware of and questions the assumptions and values he or she brings to teaching;

is attentive to the institutional and cultural contexts in which he or she teaches. . . (Zeichner & Liston, 1996, p. 6)

LEARNINGS

To support our work, Caroline took weekly video of Frank's teaching, which we individually reviewed. We each crafted individual reflections highlighting key observations from our review, such as strengths, next steps, and further areas to explore, and met weekly to share our observations. We have organized our learning into process, teaching and learning, and relationship. Additionally, within these areas, we discuss our shared learnings and, at times, use individual first person narratives. This enables us to highlight our unique lived experiences within the partnership.

Process

Shared Thoughts

At the beginning of the partnership, we established our roles and responsibilities. Caroline's roles and responsibilities involved attending each class, recording Frank's teaching, occasionally co-teaching, watching and writing reflections on the weekly videos of Frank's teaching, attending weekly meetings with Frank to discuss his teaching, and taking notes during these meetings. These roles spanned the spheres of student engagement indicated by Healey, Flint, and Harrington (2014) and included learner, assessor, pedagogical consultant, and scholar. Similarly, Frank's roles and responsibilities included preparing and teaching each class, supporting Caroline's work as a TA, reviewing the weekly videos, writing reflections about his teaching, and discussing his pedagogy with Caroline during weekly meetings.

Caroline's Thoughts

As a freshman, I enrolled in an introductory education course taught by Frank. This course gave me the opportunity to learn about teaching theories, inequalities in education, and diverse educational systems. After completing this course, Frank asked if I would be his TA for the following fall semester. In addition to my position as a TA, Frank asked if I would participate in a partnership that aimed to improve his teaching pedagogy with the help of my perspective as an undergraduate student.

I was thrilled to be offered this opportunity to participate in a unique form of professional development. Additionally, we would engage in conversations that I found invaluable as I got to have one-on-one time with an expert in the field. Frank also discussed the possibility of writing a paper for publication on our partnership and shared experience. This factor played a significant role in my affirmative decision, as I had not had a similar opportunity presented to me before, and was extremely curious to engage in the world of academia through research. It is worth noting that I had thoroughly enjoyed being in Frank's class, and I related to his enthusiasm and dedication to the field. After I considered what this role of a TA and student-partner might mean for my present and future self, I committed and our partnership was formed.

Frank's Thoughts

Prior to becoming a faculty member, I was an elementary school teacher. When I was a first and second grade teacher, my classroom teaching was routinely observed by administrators. This led to numerous stakeholders providing me feedback about my instruction. While these observations were intimidating at the time, they were valuable and useful to enhance my pedagogical practices.

In comparison, as a faculty member, I am observed infrequently by my peers or administrators. When these observations are scheduled, I am often left wondering if my practice during these observations reflects how I typically teach. Course evaluations function as the main source for teaching feedback. However, despite my evaluations being positive overall, student feedback often lacks adequate detail to inform specific changes to teaching practice. In addition, while faculty professional development reviews important topics such as LGBTQ+ inclusivity, I find these sessions focus minimally on classroom pedagogy.

I desired a form of professional development centered on my teaching and learning in the classroom. This desire to embellish my instruction prompted the partnership with Caroline, an exceptional student. She is passionate about education and seeks out learning opportunities. I thought Caroline's perspectives would be invaluable. Despite my commitment to make my pedagogy better, I was nervous going into this partnership. It is challenging being critical of one's own practice, especially when the intended audience (undergraduate students) is a part of the critical reflection process. While I was intimidated by this endeavor, I also believed that the process could positively impact my instruction, as well as my thinking about faculty professional development in higher education.

Shared Thoughts

The videos provided us with the data necessary to ground specific comments in evidence. The process for reviewing the weekly videos and reporting findings was unstructured. Rich conversations occurred over time, as these depended on the evolving relationship between us, and Caroline's comfort with analyzing Frank's practice.

Teaching and Learning

Caroline's Thoughts

My perspectives as a current student and a future educator evolved through observing Frank's instruction. As a student, I learned how to further engage in research and work with university faculty. Through discussions with Frank, I was more aware of the requirements and time commitments that university faculty have outside of their classrooms. As a result, I gained a deeper appreciation for the time that teachers commit to their classrooms, considering their outside obligations. Observing and interacting with Frank reinforced the idea that educators and faculty members are not all-knowing beings. Rather, they are experts who, like myself as a teacher candidate, possess doubts and insecurities about their pedagogic practices.

I appreciated that Frank expressed his position of vulnerability by letting an undergraduate student provide commentary and perspective on his practice. This partnership, inquiry, and professional development was not initiated because of a Lesley University mandate or requirement, but because Frank wanted to improve his practice in his own time. As a student, it is extremely encouraging to know that certain educators always want to improve themselves in order to become better teachers, and not just because they are required to engage in professional development.

More importantly, my perspective as an aspiring educator was influenced through working with an expert in the academic field, which I am passionate about. As a future educator, I further realize that one's pedagogy never stops changing, and each experience promotes learning. The importance of critical self-reflection within education was reinforced through my background research for our partnership, along with witnessing Frank engage in critical self-reflection firsthand. Early on in our meetings, Frank discussed that critical self-reflection is taught in undergraduate education programs as a way to improve instructional practices. However, he believes that faculty members seldom use self-reflection to critically examine their own pedagogy.

Frank's Thoughts

My perspectives about my practice changed. Viewing the weekly videos assisted with my critical reflections about my teaching. Specifically, I identified areas of strength as well as aspects to develop. Caroline's insight contributed to my thinking about my practice. While redundancy in knowledge between Caroline and me aided with confirming some findings, having diversity of knowledge during the reflection process assisted me with realizing new knowledge about instruction. For example, I noticed that I was responsive to students' posed questions without inhibiting the flow of the class. While Caroline recognized this too, she suggested that I pose the asked questions to the whole class before giving the student a response. In doing so, I could more effectively capitalize on students' expertise. While this change may seem minor, it subtly changed the dynamic of the class. Students are positioned as experts or individuals with valuable knowledge. They are not merely passive receivers of content, but rather active participants who possess information that can inform the class' learning. This example is one way that Caroline's insight helped me to improve my practice.

My critical reflection and Caroline's feedback contributed to substantial changes to my teaching. Some of these changes included providing students additional opportunities to discuss field placements in unstructured ways, and making additional explicit connections between theory and practice.

Relationship

The effectiveness of our student-faculty partnership relied primarily on the quality of our working relationship. We had to feel comfortable with one another. Often emotions are absent from student-faculty partnership literature (Felten, 2017); however, successful collaborations involve participants feeling comfortable with one another. For us, this is easy to discuss but was challenging to enact in an authentic manner. Uneasiness in partnerships is not only isolated to student partners. For example, Ntem and Cook-Sather discuss how faculty in partnerships with students are often "cautious about entering into conversations with their student partners regarding personal insecurities, worries, or moments of joy in the classroom" (2018, p. 82). These concerns can manifest in resistance. In order to minimize emotional challenges, we extensively discussed power dynamics and their influence on our partnership. In addition, we openly shared our uneasiness about the process. The discomfort centered on Frank having his practice critiqued by Caroline, and Caroline critically analyzing Frank's teaching. This process significantly changes the traditional power dynamic between a student and a faculty member. While this social hierarchy existed in our partnership, we minimized the power imbalance by respecting the process and openly sharing our discomfort. We have decided to share Caroline's lived experiences in this section because, arguably, the existing power dynamic for her, as a student working with a faculty member, was more challenging to overcome in order for this partnership to be successful. Here are Caroline's insights:

> I was able to be truthful and comfortable within the partnership as a result of Frank's use of positive reinforcement, both through implementing my ideas for his practice and verbally encouraging my writing and opinions. Frank consistently used collective terminology for our partnership, such as "our study" and "we" instead of something along the lines of "my study." He also made it a point to talk about what I, as the student-partner, was hoping to get out of our shared experience. I wanted to know more about effective teaching practices, student-faculty communication, and the process of developing research. Frank's interest in, and positive reinforcement of, my opinions aided my ability to bring up topics of my own interest.

We noticed that establishing a productive working relationship took time. During our first meetings, the conversations mostly centered on our partnership work. However, as the semester progressed, we began learning more about one another and a common question that we started our meetings with was, "What have you been up to?" While this seems very basic, it captures the essence of our developing relationship. We discussed current political topics, our families, and educational matters. While often not related specifically to our partnership work, these conversations functioned to develop our professional working relationship, as Caroline discusses:

> Honest and genuine conversation led me to be more comfortable and sincere in our professional relationship, especially when it came to voicing my recommendations and thoughts on Frank's practice. As time went on, I trusted his opinion and was inspired by his energy and dedication to the field of education. It felt great to have someone who respected my opinion and gave me valuable insight in return. Because I was able to know Frank on a more personal level, it helped me understand his thought process during the conducting and planning of class lessons. Therefore, the level of trust between faculty-partner and student-partner increases with the more time (short-term and long-term) that each member is willing to commit.

RECOMMENDATIONS

Teacher education faculty must find ways to advance their pedagogical practices. One such way is through student-faculty partnerships. These partnerships require minimal financial resources, which make them a viable option for faculty members seeking to improve their pedagogy. In our case, Lesley University does not pay undergraduate teaching assistances, so Caroline was not paid for her involvement in our partnership.

Collaboration in the reflection process is necessary in order to challenge assumptions, expand interpretations, and check for inconsistencies (Vanassche & Kelchtermans, 2015). Given the demands placed on many faculty at institutions of higher education, it is often unrealistic for colleagues to consistently observe and review teaching. Student-faculty partnerships are another way for faculty to receive critical feedback about instruction.

This case study exemplifies how a teaching assistant, who is already assigned to a course, can partner with a faculty member to improve his or her course instruction. While challenges such as time constraints exist with these types of partnerships (see Curran, 2017), they can enhance learning for those who participate in them. For example, student partners can enhance their understanding of professional development and further their own classroom instruction in the future. We provide three recommendations for those engaging in these collaborations as well as those looking to conduct research on these partnerships.

Our first recommendation is to record faculty teaching. Video in our partnership served to support our findings about the course instruction and helped facilitate conversations about instruction. We also believe that, for partnerships existing over the course of multiple years, video could be used to better assess changes to the faculty partner's curriculum and instruction.

Our second recommendation is for faculty and students to establish roles at the onset of collaborations. Having well-defined roles facilitates partnership work, supports accountability, and may minimize faculty and student trepidations, anxiety, and vulnerability about their pedagogy. For instance, faculty who are having misgivings or feeling too vulnerable may become resistant to partnership work. According to Ntem and Cook-Sather, faculty resistances in pedagogical partnerships "include resistance to being openly vulnerable about their work with their student partners, resistance to trying new pedagogical strategies, and resistance to simply asking for their student partners' perspectives on classroom practice" (2018, p. 82-83). In addition, we advocate for those engaged in future student-faculty partnership research to describe processes, which consist of partnership roles, responsibilities, and power dynamics. Cook-Sather and Luz state, "The traditional divisions of knowledge and authority in relation to teaching and learning make it hard for [students and faculty] to change roles, responsibilities and sense of self" (2015, p. 1101). More reporting on partnership processes in the literature will better support development of successful student-faculty partnerships.

Our third and final recommendation is for faculty and students engaged in partnership to confront the power dynamics that exist between them. Thoughtful discussions must happen within these collaborations in order to reconcile power relations (Delphish et al., 2010; Hutchings, Bartholomew, & Reilly, 2013). While each context is unique, these collaborations redefine traditional academic roles between faculty and students. We encourage partners to share their uneasiness with one another. Student-faculty partnerships will only be successful if participants feel truly comfortable sharing their thoughts and feelings. As we have already mentioned, partnership literature often ignores emotional elements of human collaborations (see Felten, 2017); however, student-faculty partnerships are emotional endeavors as much as academic endeavors. Participants need to recognize that it takes time to establish authentic and trusting working relationships. Through these partnerships, students and faculty can learn together, and faculty can enhance their instructional practices, which will thus benefit all current and future students.

NOTE ON CONTRIBUTORS

Frank Daniello *is an Associate Professor of Elementary Education in the College of Liberal Arts and Sciences at Lesley University, Massachusetts, United States. Frank's research focuses on teachers' use of systemic functional linguistics (SFL) to inform writing pedagogy, school-university partnerships, teacher professionalism, and school reform.*

Caroline Acquaviva *is an undergraduate student studying English and Secondary Education at Lesley University with a concentration in multicultural education. Caroline hopes to further research best practices for teachers serving in diverse classrooms and communities.*

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CASE STUDY

Promoting Botanical Literacy with a Mobile Application - CampusFlora - Using an Interdisciplinary, Students-as-Partners Approach

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ABSTRACT

In this article, we describe our students-as-partners process for bringing undergraduate and academic staff together to develop a mobile application (app) - CampusFlora - for use across our campuses. Our project at the University of Sydney, Australia, was conceived as a way to improve the botanical literacy of biology students by engaging undergraduates to develop online maps of plant locations coupled with information relevant to biology curriculum. Through continuous improvements to the CampusFlora app system, we have expanded the user-base well beyond the life science student cohorts and now offer content that embraces cultural competence and organisational health initiatives. We offer reflections from student and staff partners on the project that highlight the value of the students-as-partners approach, and the potential value of establishing student partnerships across disciplines, across institutions, and into the community at large.

KEYWORDS

Students as Partners, CampusFlora, mobile applications, higher education, botanical literacy, plant blindness

The Students as Partners (SaP) model has continued to increase in popularity, fostering learning relationships between academic staff and students through the acquisition of valuable enquiry-led research experiences (Healey, Flint, & Harrington, 2016; Pauli, Raymond-Barker, & Worrell, 2016). Engaging student learning through research experience is an influential approach to understanding the teaching and practice of science (Healey et al., 2016; Hunter, Laursen, & Seymour, 2007). The experiences students gain through the collaboration process of effective project partnership can be as important as the final research product (Cook-Sather, Bovill, & Felten, 2014; Crawford, Horsley, Hagyard, & Derricott, 2015). The SaP model affords opportunities for students to develop research practices and acquire valuable hands-on experience, ultimately creating authentic research outputs at curricular, pedagogical, or experimental design and analysis levels (Cook-Sather et al., 2014; Hunter et al., 2007).

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Recent students-as-partners projects have involved student collaborations at all levels of education, primary through tertiary (e.g., Davies, Measey, du Plessis, & Richardson, 2016; Hemingway, Dahl, Haufler, & Stuess, 2011; LeBard, Hibbert, & Quinnell, 2017). Our focus is on the tertiary education sector, where undergraduates who conduct research with academic partners benefit intellectually, personally, and professionally (Hunter et al., 2007). The respective levels of responsibility that can be adopted by students and staff within a project has been identified as a limitation of student-staff collaborations (Bergmark & Westman, 2016; Mercer-Mapstone et al., 2017). A more equitable balance of responsibility is more likely achieved when both academics and students start at the same level of expertise. In the case study we present in this article, student and academic researchers were considered equally technically literate, i.e., at a novice level with respect to mobile app development. This opened the possibility of students taking higher levels of shared responsibility for project development than they might otherwise have been able to if the staff members had already been experts (LeBard et al., 2017).

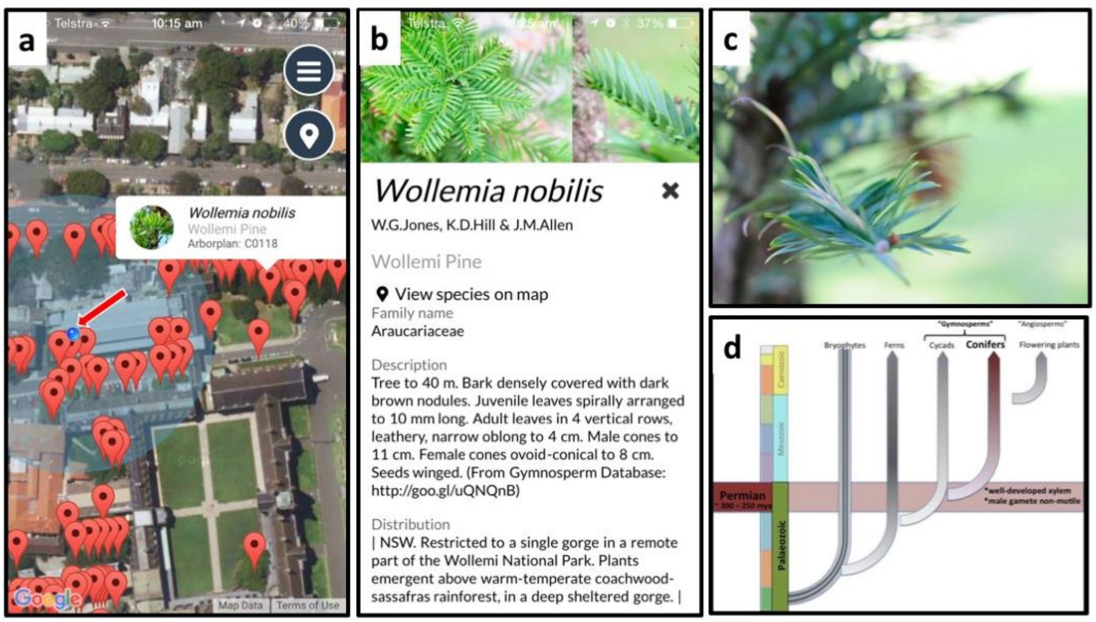
The SaP framework outlined by Healey et al. can be applied to interdisciplinary projects and "facilitate co-development of shared values" (2016, p3). According to Healey and colleagues, many student partnerships involve projects outside of the institutional curriculum, offering opportunities to enhance and develop skills within a transdisciplinary environment. Such collaborative approaches introduce academic mobility and networking for students (Mercer-Mapstone et al., 2017), providing rare and valuable learning experiences that are often difficult to offer within the university curriculum. Interdisciplinary partnerships provide unique perspectives for developing new and engaging educational products. In our experience, the development of our mobile biology learning tool has enabled interdisciplinary students-as-partners collaborations between computer science and non-computer-based scientific disciplines, offering novel pedagogical practices.
Enhancing student-faculty dialogue has been the focus of many students-as-partners approaches (Cook-Sather et al., 2014); however, few student-staff collaborations have been described within the biological sciences. Recent students-as-partners initiatives within biology have involved students collaborating to design and recreate teaching strategies for curricular activities, e.g., updating pedagogy strategies to laboratory classes (Andrews et al. 2017; Border, 2017). The remit for the partnership described here was to offer learning opportunities beyond the constraints of the formal curriculum. This project is focused on the discipline of botany, where, due to decreases in the amount of time dedicated to teaching and learning about plants in the curriculum, botanical literacy is declining and, in turn, this is impacting communication and outreach in the botany and ecology (Kramer & Havens, 2015). New and contemporary approaches are necessary to address the issue of "plant blindness" (Lewis-Jones, 2016; Wandersee & Schussler, 2001) evident in both the scientific community and the general public. As defined by Wandersee and Schussler, plant blindness is the inability to notice plants and plant diversity in our environment, and this has led to a retractions of subjects such as Botany; less time spent studying plants exacerbates plant blindness.

Here we provide a case study for our students-as-partners initiative by showcasing the development process of our botanical mobile learning app, CampusFlora. We highlight the benefits, challenges, and future directions associated with its development. We also discuss incorporating student partnerships and mobile learning technology to enhance pedagogical practices at a university level.

DESCRIPTION OF CAMPUSFLORA

The CampusFlora project was designed to reconnect the University of Sydney community to their natural environment by making knowledge about the plants on campus accessible. Users can access this knowledge via an app available on multiple platforms i.e. via any web browser, an iOS app available from the Apple App Store, or an android app available from the Google Play Store. All versions of the app employ interactive maps to deliver content (see Figure 1). Tertiary students can use CampusFlora to develop their scientific observational skills and reinforce key concepts in biology. Plant classification comes alive as users can follow what morphological features comprise a fern compared to a flowering plant and how the evolution of these groups aligns to geological periods. Dedicated trails in CampusFlora improve the way students can tackle difficult or abstract concepts as offered in the curriculum, such as how climate change is altering the timing of flowering and fruiting of species. The CampusFlora project page (https://campusflora.wordpress.com/) includes links to the apps and the source code, which are made available under OpenSource (GPLv3) licence agreements.

Figure 1: Screenshots from the CampusFlora iOS application



a) Homepage showing the user's location, indicated by a blue dot, and a tree location pin that, when selected as shown, displays image information, scientific and common name, and tree inventory number.
b) A plant information page, offered for each species, includes the scientific name, the formal plant description, and distribution.
c) An image of the plant (the bulk of the which were contributed by students) that visually supports the written morphological descriptions (e.g., that the leaves of the Wollemi Pine are distinctively arranged in four vertical rows.
d) A graphic that offers geological timelines and key evolutionarily derived characteristics of non-flowering plants: ferns and gymnosperms.

CAMPUSFLORA: A CASE STUDY

The CampusFlora app was designed to enhance learning and teaching in botany, but has quickly extended beyond this remit. Since the development of the app prototype (Lachlan, who is a co-author here and who was an undergraduate Botany student in 2013), the project has become an effective network of students, academic staff, professional staff, and volunteers. Combined, the students-as-partners process and the software, offered under a Creative Commons licence, has proved a novel and appealing way to integrate botanical, ecological and cultural information.

The CampusFlora project has fostered student collaboration and has strong alignment with the SaP framework (Healey, Flint, & Harrington, 2014). We emphasise how the project engages students as co-researchers partnering on scholarly enquiry and as learning resource co-designers. This collaborative approach achieves quality enhancements to student learning experiences with a focus on interdisciplinary learning spaces. The various student partnerships associated with CampusFlora cover all major aspects of a SaP model as described by Healey et al. (2016). These include student engagement in learning, teaching, and research, as well as incorporating students as change agents.

Co-researching and co-enquiry

Connecting students with scholarly literature was critical from the outset of this project and we used project frameworks from science education, specifically those formally and informally addressing botanical literacy (e.g., Hemingway et al., 2011; Mathes, 1983; Wandersee & Schussler, 2001), the use of emerging technologies in teaching focused on mobile learning (Traxler, 2010), and the SaP literature. The primary aim of the CampusFlora project was to develop mobile learning resources that support biology students in engaging with the plants they see around them every day, and to engage with informal learning outside of formal classes (Halliday-Wynes & Beddie, 2009). We achieved this aim by fostering a practice of informal learning for Life Science students through exploiting our reliance on mobile technology (Afreen, 2014). Students-as-partners approaches position students and teachers in a shared educational space for adopting new technologies in learning and teaching, and in our project, students and staff brought to the project diverse and valuable perspectives. The project has highlighted the extensive living plant collection available for study across all of the University of Sydney campuses. Therefore, the living botanical learning space available for students, for the campus community, and for visitors has vastly expanded and improved botanical awareness (Cheung, Wardle, & Quinnell, 2015).

Key outcomes for CampusFlora student partners have been the opportunity to co-author academic publications and to co-present the project. Ten undergraduate students have either co-authored articles or presented talks about CampusFlora, both within the institution and at national and international conferences. Their presentations have included fora relating to: science and engineering education, higher education more generally, and to groups of visiting scholars.

Co-designing and co-developing learning resources

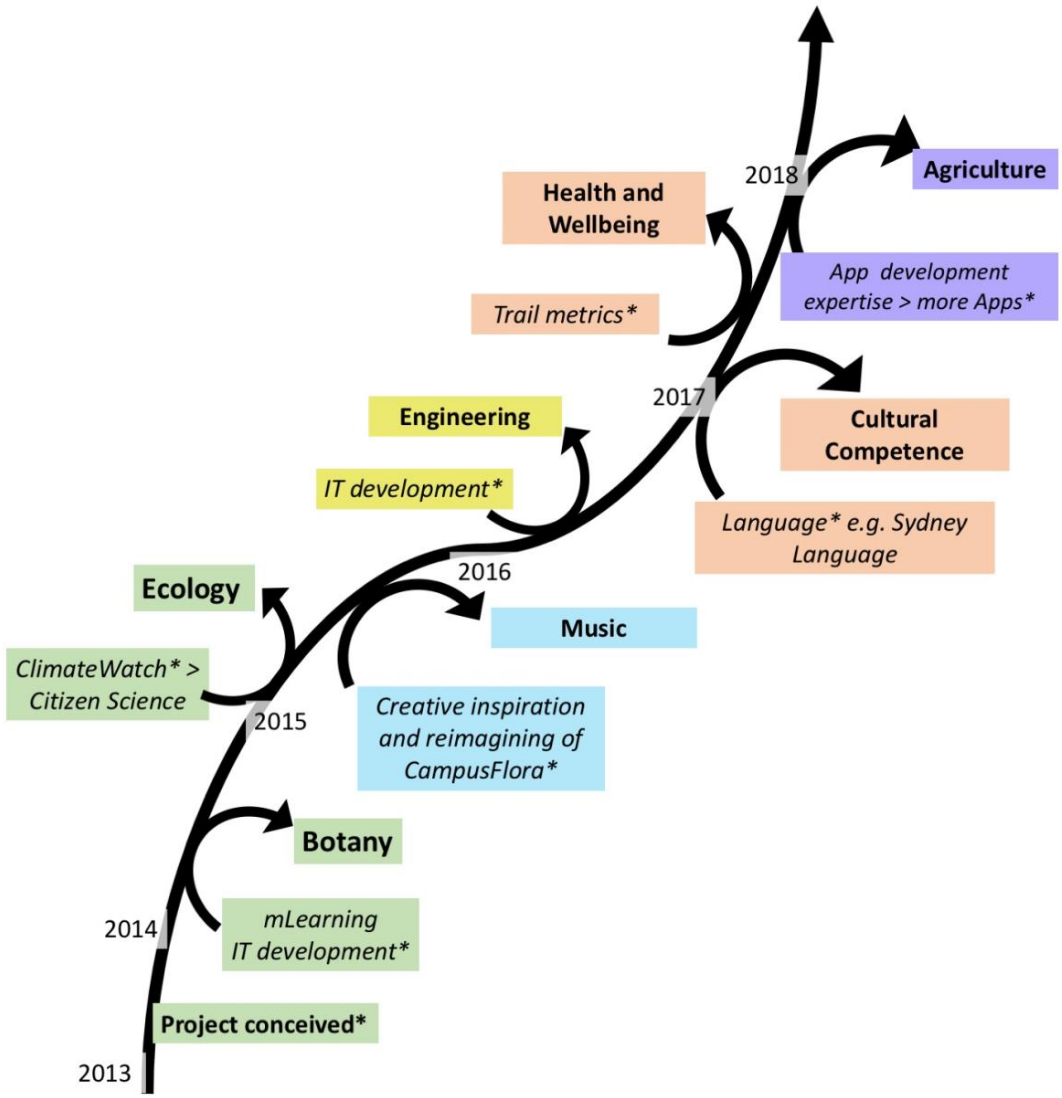
Developing the app put both students and staff on technical and creative learning curves in terms of structuring the database and user interface. The CampusFlora project has been in place for five years, and over this time undergraduate students from a range of disciplines have partnered at various stages of design, development, and deployment. Student partners from Botany, Ecology, and Engineering contributed key developmental inputs. A handful of students approached Rosanne (academic staff) to volunteer on this project; others' contributions have been part of students' assessable work (e.g., advanced Faculty of Science program and the Summer Scholars program, both aimed at encouraging our 'best and brightest'). As students have moved towards graduation and their careers, the composition of the project team has changed. Regardless, all team members become familiar with the literature on the impact of new and emerging technologies in learning and teaching (e.g., Rifkin, Longnecker, Leach, & Davis, 2011).

Biology student partners have acquired professional skills through photography, database maintenance, and the research, design, and implementation of botanical walking trails. These students became experts in the applied botanical content, as well as educational design. This is evident through specially designed CampusFlora trails that provide easy access to observe and study living plant material around our campus.

The combination of students' technological expertise (e.g., our collaboration with engineering students) with pedagogical practices creates a successful framework for partnership between faculty and students, overcoming limitations between interdisciplinary education and connectivity (Spector, 2015; Zhu & Baylen, 2005). Students in the Faculty of Engineering enthusiastically developed the Android version of CampusFlora indicating the project's interdisciplinary appeal for students. These seven Engineering students and Caroline, presented their work at a University of Sydney educational showcase.

Additional project developments have expanded into disciplinary areas outside of Western science, i.e., the arts and music, cultural competence, and organisational health initiatives (see Figure 2). A serendipitous offshoot of the CampusFlora project was in the discipline of music composition, where elements of the CampusFlora app like images and text-based descriptions were rendered as soundscapes (Frame, 2016). Co-development by Healthy Sydney University's "Move More, Sit Less" group resulted in the creation of "walking meeting" trails in CampusFlora to encourage members of our university community to adopt healthier practices and to engage with our botanical resources. With support from the Deputy Vice-Chancellor, Indigenous Services and Strategy portfolio, the app now provides ethnobotanical aboriginal teachings by providing names of selected trees in appropriate Aboriginal languages (Quinnell, Troy, & Poll, 2018; Troy, 1994). Expertise from CampusFlora is being applied in other students-as-partners development projects in the Faculty of Agriculture (e.g., Henson et al., 2017).

Figure 2: CampusFlora app development pathway over five years



App development included undergraduate partners (indicated by asterisks) from **Botany, Ecology,** and **Engineering**. CampusFlora content aligned to the undergraduate Life Science curriculum in **Botany** and **Ecology** (2014-current). Botanical content has inspired **Music Composition**; and, further enhancements (2017-2018) have made CampusFlora a useful **Cultural Competence** and **Health and Wellbeing** engagement tool for the campus community. A students-as-partners approach is being used in **Agriculture** to develop apps for farmers. Graphic: R. Quinnell.

Reflections on CampusFlora student-staff partnerships

The enthusiasm and unique interests of undergraduate student partners have driven the CampusFlora project. Three of the primary student partners collaborating on this project, who are also co-authors of this article, offered reflective statements regarding the impacts of working in partnership to develop CampusFlora. These students acknowledged the overall benefits of being allowed to operate outside of the confines of the curriculum, unlike in a typical classroom learning environment.

Caroline was a student partner on the CampusFlora project during her summer scholarship in 2015 and continued to work on the project during the remainder of her undergraduate studies. She reflected:

> As a student partner and collaborator on the CampusFlora project, I was able to engage in meaningful learning experiences through authentic self-learning outside of the confines of the curriculum. Working in interdisciplinary teams helped me develop not only industry-relevant skills, both specific and technical, such as mapping and plant identification, but also more broadly transferable skills, e.g., networking, cultural competencies, and communication skills, from firsthand experience.

There were striking similarities in students' statements that highlighted the uniqueness of this project for "building new skills in research and science communication", as co-author and student partner Lachlan commented, including gaining experience in publishing. There was strong consensus that this project provided opportunities to develop authentic, industry-ready skills in collaboration and networking by being able to take interdisciplinary and culturally-competent approaches.

Lachlan worked on CampusFlora during a second-year Advanced Botany project in 2013 and during his summer scholarship in 2014. He commented:

> CampusFlora provided a fantastic platform for developing collaborations and building new skills in research and science communication. It was a unique experience for me as a botany student to help develop a tool that aims to improve botanical literacy. It continues to be exciting seeing the growth and evolution of CampusFlora as new collaborations take the project down unexpected paths.

The involvement and support of the University community at large has been crucial for the success of the CampusFlora Project. As a case in point, the support of the Healthy Sydney University network enabled us to offer something of value to our campus community by encouraging participation in healthier lifestyle choices. This was coupled with a unique opportunity for an undergraduate student partner to collaborate with professional staff.

Richard was an undergraduate botany student who worked on the Healthy Sydney University project in 2017 to expand the remit of the CampusFlora app for the "Move More, Sit Less" group:

> Working with CampusFlora has allowed me to collaborate with many university staff and students, providing valuable networking and communication skills across multiple disciplines. Participating in such a diverse project has allowed me to gain firsthand experience of the benefits provided by student-staff partnerships. The unique opportunity to enhance my skills in scientific research and publication is incomparable to the typical classroom learning experience.

At the outset, we were completely new to app development, but we had a shared optimism and excitement about making a botanical teaching application. Extending the partnership to include students from the Faculty of Engineering resulted in improved processes for upkeep of the CampusFlora database. That we (the student partners and Rosanne, the faculty partner in biology) were all at the same level of digital literacy and expertise prior to the start of the project arguably made the adoption of the SaP model less problematic. The influences of biology students have manifested at all stages of planning, communication, and maintenance of the CampusFlora project. In having equivalent expertise, there was no novice-expert barrier, and the confidence of the biology student partners allowed them to assume leadership roles, liberating Rosanne to participate as an authentic member of the project team.

The reflective statement provided by Rosanne, the fourth author and academic staff lead on this project, complements the commentary from students and highlights the positive effect student-driven initiatives had on this project:

> I have learnt that by reframing my role with students as a collaborator, rather than a teacher, great things can happen. Largely this project has operated outside of the curriculum which, on the one hand, freed us from the strictures of formal assessment and the constraints of the semester timeline, but on the other hand, impacted on resources (primarily time) available to commit to this project. That I have been able to co-create a botanical app with my students that has appealed to the campus community (at large) is up there as one of my greatest achievements as an educator.

Quality enhancement of learning and research

That the CampusFlora initiative is a mobile one places opportunities to learn about plants literally at users' fingertips and shifts teaching beyond the constrained classroom timetable. The impact and influence of the CampusFlora app innovation has grown beyond our original vision. To date, there have been close to 6000 CampusFlora users, comprising 2200+ Web users, 3550+ iOS downloads, and 350+ Google Play Store downloads. This exceeds by a factor of about 20 the roughly 100 students enrolled in Intermediate Botany each year for the last three years and indicates that our reach is well beyond the original target audience. In particular, we wish to note that many users are located outside of Australia. CampusFlora has been incorporated into student-driven projects that investigate phenology (flowering and fruiting) and upload their observations into the ClimateWatch citizen-science network (Earthwatch Australia, 2010). CampusFlora has supported more robust participation in citizen science for ecology students by improving the accuracy of identification of plants and their morphological characteristics (Cheung et al., 2015). PhD students are adapting CampusFlora for use in their own research in new and exciting ways, e.g., to locate colonies of social insects that reside on specific host plants; and undergraduate students have utilised CampusFlora to locate trees as the start-point for their research investigations.

FUTURE DIRECTION AND PARTNERSHIPS

Students-as-partners approaches challenge student-teacher and novice-expert binaries. Without the traditional power strictures that come with these binaries (Cook-Sather & Felten, 2017), students have room to grow their confidence and more readily offer ideas into the project space. The end goal of our project is to enable other students-as-partners projects to create blended botanical-social narratives using the CampusFlora system, and we are in a position to offer advice and guidance on how others may craft and share their own experiences.

Passion and commitment for this project has taken us a long way. However, as with all educational innovations, particularly technology-focused projects, sustainability is a concern.

Certainly, as a model for students-as-partners projects, co-creating mobile apps energises and focuses all partners. There is potential for expansion; however, institutional commitment to secure longevity of technologically-innovative projects is essential.

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NOTE ON CONTRIBUTORS

Richard Dimon *worked on this project in 2017/2018 and in addition to adding distance metrics to trails, he mapped the plants at our field-station, Pearl Beach, NSW and he designed the health promotion trails. Richard is currently working as a research assistant in the Orchid Conservation Project at the Royal Botanic Gardens Victoria.*

Lachlan Pettit *worked on this project as an undergraduate student in the Advanced Botany unit of study in 2013 and a Summer Scholar in 2014. Lachlan co-designed the user interfaces for the three app platforms of CampusFlora. Lachlan contributed many of the photographs in CampusFlora. He is currently undertaking a PhD in ecology in the School of Life and Environmental Sciences at the University of Sydney.*

Caroline Cheung *worked on this project as Summer Scholar in 2015 and was a student participant during CSIRO's ONPrime mentoring program in 2017. Caroline co-designed the user interfaces for the three app platforms the CampusFlora and crafted the ClimateWatch trail. She continues to be a passionate science educator and communicator and is currently working as a Visitor Experience Officer at the Australian Museum and also as an Education Officer for Sydney Water.*

Rosanne Quinnell *is an Associate Professor in the School of Life and Environmental sciences. She is committed to best practice in the use of new and emerging learning technologies, and champions botanical literacy.* #iamabotanist

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CASE STUDY

Research Assistant as Partner: Collective Leadership to Facilitate Co-production

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ABSTRACT

In this article, we chronicle our experience of student-faculty partnership within a Scholarship of Teaching and Learning design-based research study. We present our experience of partnership in relation to the student-faculty partnership, collective leadership, adult learning and knowledge building literatures. Key characteristics of our student-faculty partnership are recognizing and using intellectual and experiential resources; practicing principles of knowledge building; and differentiating top-down and lateral decision making. We find the affordances of our partnership to be increased productivity, learning from each other and diversity of ideas and perspectives and limitations to be substantial time commitment, underlying beliefs about students' capabilities and student-faculty ratio to limitations. We conclude by exploring the impact of our partnership on students, faculty and the university.

KEYWORDS

student-faculty partnership, Students as Partners, design-based research, collective leadership, Scholarship of Teaching and Learning

The prevailing conceptualization of the role of the student in higher education is that of student as consumer in a marketplace, a conceptualization that de-emphasizes the student's role in the process of learning (McCulloch, 2009). Students as Partners (SaP), that positions faculty and students as partners in teaching and learning, has emerged as an alternative conceptualization (Cliffe et al., 2017). Research in this field is gaining prominence and recent studies have demonstrated the beneficial outcomes of faculty engaging with students in partnership; therefore, we need to continue to build on this foundation and explore new directions to enrich teaching and learning in higher education (Mercer-Mapstone et al., 2017). Yet despite this promise and momentum, the "customs and culture of higher education often make it difficult for both students and staff to take on new roles and perspectives" (Mercer-Mapstone et al., 2017, p. 2).

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In this article, we describe our experiences of fostering a student faculty partnership within the context of a design-based research study in which we investigated instructional design to support group work. Our research team culture was characterized by "respect, responsibility, and reciprocity" (Cook-Sather, Bovill, & Felten, 2014, p. 6) and this allowed us to reframe the role of the student from that of student as consumer to student as co-producer of knowledge (McCulloch, 2009; Neary & Winn, 2009). In the forthcoming sections we outline the context for our partnership, chronicle how we practiced principles of collective leadership within a design-based research approach, analyze the affordances and potential challenges associated with our implementation of a student-faculty partnership, consider the impacts of our partnership on the members of our team and the broader university community, and look ahead to future questions for inquiry.

CONTEXT OF OUR PARTNERSHIP

The context of our partnership was a design-based research (DBR) study in which Dr. Brown was the principal investigator, Dr. Thomas a co-investigator, and PhD student Joshua Hill was a research assistant. Our research team also included another faculty member and an undergraduate research assistant. The study was supported by a Scholarship of Teaching and Learning (SoTL) grant and was focused on improving student learning in group work assignments through iterative improvements to instructional design. Our research was situated within a larger team of instructors who taught 16 sections of over 500 pre-service teachers in the Interdisciplinary Learning course in the Bachelor of Education program. In this required course, undergraduate students work in groups ranging in size from three to six members to develop an interdisciplinary unit plan. Instructors support group work throughout the course by using a variety of strategies that include offering time during class for student collaboration and providing access to instructor expertise.

Design-based research activities

Our SoTL study focused on improving group work through iterative cycles of redesigning the course outline and assessment criteria. In the first year of our two-year study, we investigated the ways in which instructional strategies such as scaffolding, assessment tools, and participatory technologies supported group work. We collected data from students and instructors using surveys and interviews and analyzed these using two cycles of iterative thematic coding (Miles, Huberman, & Saldana, 2014). In the first cycle, three members of the research team individually coded the open-ended responses from the survey data. They reviewed each response and assigned a descriptive code as a label. During this first cycle, we also reviewed the codes, sharpened definitions, and reconciled differences together, as a team.

Each researcher reviewed their first cycle codes and grouped descriptive codes into a smaller number of categories for the second cycle of coding. The categories listed as one-word or short phrases provided as summary of the emerging themes. We also listed a detailed explanation or definition for each category. This process of defining each of the categories allowed each researcher to conduct a second round of coding with the same dataset, but using a smaller number of categories. Next, we worked together to review categories, sharing commonalities and reassigning codes as needed. We then generated themes and illustrated them in infographics representing the findings.

We shared these infographics with the instructor team in the context of a professional learning workshop. During the workshop, we employed a design thinking process that helped instructors glean insights from the data and collaboratively generate ways to respond, both in the design of the course outline and in their own instructional practices. The ideas generated in this discussion resulted in changes to the assignment requirements and assessment criteria in the course outline that were implemented in the subsequent academic year.

Co-production activities

As a research team we engaged in co-production of knowledge (McCulloch, 2009) to move our research study forward. Our co-production activities included developing infographics to share our findings with the instructor team, developing and leading a design thinking professional learning process to build instructional design capacity and developing changes to the course outline and assessment criteria, sharing our research with conference participants, and sharing with a broader audience through publication (Hill, Thomas, & Brown, 2018; Brown, Thomas, Hill, & Alonzo-Yanez, 2019; Thomas, Brown, & Hill, 2019).

Unique characteristics of DBR that contributed to our partnership

Design-based research (DBR) is "a systematic but flexible methodology aimed to improve educational practices through iterative analysis, design, development, and implementation, based on collaboration among researchers and practitioners in real-world settings, and leading to contextually-sensitive design principles and theories" (Wang & Hannafin, 2005, p. 6). DBR offered a unique context for our partnership because it is collaborative, innovative, and emergent in nature (Barab & Squire, 2004; McKenney & Reeves, 2012). Within a DBR approach, researchers adjust course based on emerging insights and data (McKenney & Reeves, 2012). The emergent nature of DBR required our team to be innovative and make decisions in response to the data to determine the next research steps. Each of the members of our team took leadership in different tasks of our project, informed by our expertise, experience, and learning goals (a theme that we will later explore in detail). It is important to note that a research approach with a more rigid and predefined research design may not have offered the same opportunities for the collective leadership that characterized our partnership.

CHARACTERISTICS OF OUR PARTNERSHIP

We did not explicitly draw on the collective leadership literature to design our work together; however, it offers a useful theoretical frame to explain the practice that sponsored the conditions for a partnership characterized by "respect, responsibility, and reciprocity" (Cook-Sather, Bovill, & Felten, 2014, p. 6). Collective leadership challenges traditional notions of hierarchy and power imbalance, creating the conditions for collective agency (Harris & Muijs, 2004). Kennedy, Deuel, Nelson and Slavit (2011) describe three attributes of collective leadership that were relevant to our experience: recognizing and using intellectual and experiential resources, building culture through dialogue and inquiry, and differentiating top-down and lateral decision making. In the following sections, we will chronicle our experiences of practicing collective leadership organized around these three attributes.

Recognizing and using intellectual and experiential resources

Each member of our research team brought forward and drew on our strengths and previous experiences. For example, Josh, our graduate research assistant, was able to draw on previous professional experience to initiate, design, and lead the design thinking professional learning session for our instructor team. Dr. Thomas, our co-investigator, drew on her experience employing mixed methods to lead the data analysis process (Thomas, 2016), and principal investigator Dr. Brown's research experiences employing mixed methods and research-practice partnerships guided how we shaped our partnership with our instructor team (Brown, Hartwell, & Thomas, 2018; Brown & Jacobsen, 2016.) Kennedy et al. (2011) suggest that establishing routines is important to facilitate collective leadership. In our experience, having regular team meetings was a key routine that moved our research work forward. In these meetings, we collaboratively designed the meeting agendas, each contributing openly, made decisions through seeking consensus and established action item lists. We used Google Drive and Outlook Calendar as collaborative tools to facilitate the organization and documentation of our team meetings.

Practicing principles of knowledge building.

Central to our team meetings was a culture of dialogue and inquiry. Our team's collaborative practices closely aligned with Scardamalia and Bereiter's (2006) principles of knowledge building. Important to our culture was treating all ideas as improvable, communally taking responsibility for the advancement of ideas, seeking to identify and address problems and gaps, and pursuing diversity of ideas. These practices aligned closely with our design-based research approach which, as we have previously described, called for iterations within the course of the research study and required us to constantly make sense of our emerging data to determine next steps.

Differentiating top-down and lateral decision making

As primary investigator, Dr. Brown held what could be considered a formal leadership position on our team. Collective leadership does not mean that no one is ultimately responsible within an organization but "rather, the job of those in formal leadership positions is primarily to hold the pieces of the organization together in a productive relationship" (Harris & Muijs, 2004, p. 28). Dr. Brown created the conditions for recognizing and using intellectual and experiential resources and practicing dialogue and inquiry. She primarily did this through leading by example and encouraging the other team members to exercise their agency. Harris and Muijs caution against "misguided delegation," and in our partnership, Dr. Brown retained the responsibility for making decisions that could not be shared, such as the project setup, budget management, and hiring of the research assistants.

ANALYSIS OF OUR PARTNERSHIP

In the following sections we offer an analysis of our experiences of the affordances and limitations of practicing collective leadership in student-faculty partnership.

Affordances

The three affordances of practicing collective leadership towards student-faculty partnerships that we identified from our experiences are increased productivity, learning from each other, and diversity of ideas and perspectives.

Increased productivity

A clear affordance of having each member of our team take responsibility for elements of the research project was the level of productivity this enabled. In a top-down team structure, the formal leader would spend time delegating, managing, training, directing, and reviewing the work of subordinates. In a collective leadership partnership, each member of the team is producing from an area of strength and experience. Our team meetings were characterized by knowledge building enabled by each member of the team coming prepared to share the work they had moved forward between meetings.

Learning from each other

A student-faculty partnership characterized by collective leadership activates the expertise and skills of all members of the team, providing opportunities for everyone to be both a teacher and a learner. Our experience of student-faculty partnership featured the following important conditions for adult learning that Merriam identifies (2008, p. 97-98): learner autonomy, reflection on learning, dialogue, active participation, and application of learning. The learning each of us engaged in was embedded in the development of our shared project and therefore always featured active participation and application of knowledge. For example, when we needed to share our research findings with our larger instructor team, Josh, our graduate research assistant, was able to draw on his experience leading collaborative design thinking protocols, and Drs. Thomas and Brown had the opportunity to learn alongside Josh in the design, implementation, and debrief of the instructor workshop.

Diversity of ideas and perspectives

Sustained knowledge creation depends on having access to diverse ideas (Scardamalia, & Bereiter, 2003). As we have chronicled throughout this article, collective leadership promoted the conditions for all members of our research team to contribute ideas. Furthermore, bringing forward diverse viewpoints, particularly by including groups who are not in positions of power, provides new interpretations and offers perspectival knowing (Haraway, 1988). As a student and sessional instructor, Josh viewed the relevance and applicability of our research findings from a different perspective from those of Drs. Thomas and Brown. The collective leadership model of our partnership allowed for the student researcher perspective to influence the direction of our research. A tangible impact of this multiplicity of perspectives is evidenced in the diverse ways in which we shared the story of our research to different audiences through presentations and article submissions ((Hill, Thomas, & Brown, 2018; Brown, Thomas, Hill, & Alonzo-Yanez, 2019; Thomas, Brown, & Hill, 2019).

Limitations

The three limitations of practicing collective leadership towards faculty student partnerships that we identified from our experiences were substantial time commitment, underlying beliefs about students' capabilities, and student-to-faculty ratio.

Substantial time commitment

We found that both faculty and students need to commit significant time to engage in a partnership characterized by collective leadership, and this is also reflected in the collective leadership literature (Harris & Muijs, 2004). Adding to this challenge is the emergent nature of the responsibilities and commitments within this model. We were unable at the outset of this project to fully plan for the time we needed. This limitation is significant given the other commitments both students and faculty balance in the modern university (Berg & Seeber, 2017).

Underlying beliefs about students' capabilities

The student-faculty partnership literature notes that student-faculty partnerships can be viewed as "troublesome, threatening, disappointing, and disruptive" and underpinned by the belief that students do not have the necessary understanding or experience to contribute alongside faculty members (Cook-Sather, 2014, p. 189). In our experience, partnership required the development of a relationship of trust and risk taking. This experience is underscored by the collective leadership literature that stresses the importance of building relationships when working together (Harris & Muijs, 2004). We believe that our relationship of trust and risk taking was predicated on a shared belief that students can contribute as partners.

Student-to-faculty ratio

A student-faculty partnership enabled by collective leadership practice may not be scalable to teams with a larger student-to-faculty ratio. In our context, our primary team featured two faculty members and one student. We believe that it may not be possible in a large group for all members of the team to take leadership and responsibility to the extent Josh was able to in our study. As outlined previously Josh's expertise and experiences shaped the direction of our study in significant ways. We believe that if our team had included many students it may be difficult to find opportunities for leadership for all students.

IMPACTS OF PARTNERSHIP

In a review of Students as Partners research, Mercer-Mapstone et al. (2017) point out that the literature is predominantly focused on outcomes for students. To address this gap in the literature and to reflect on our experiences, we have identified benefits of a student-faculty partnership to the student, to faculty, and to the broader university community.

Impact on students

Our student-faculty partnership provided the opportunity for Josh to shed the role of consumer to become a co-producer of knowledge. This experience served as excellent scaffolding to bridge between his PhD course work and his dissertation research project. The impact of partnership for him included: learning about conducting research through experience in all phases of a research project, learning about design-based research methodology, authoring and co-authoring multiple publications and presentations, and gaining insight into the expectations and opportunities of an academic career.

Impact on faculty

The student-faculty partnership offered a new faculty member, our co-investigator Dr. Thomas, the opportunity to be mentored by a more experienced faculty member, and in turn to mentor Josh in conducting research. The partnership also afforded further opportunities for Dr. Thomas to add to her scholarly contributions (i.e., publications and conference presentations) and get further experience in conducting design-based research. The value of the collective leadership model for Dr. Thomas' instructional practice is also evident in the expertise she gained from being exposed to Josh's design thinking processes and is applying to her leadership approach in future courses and research projects.

The partnership also impacted Dr. Brown in her role as the project lead. Providing mentorship to a graduate student Josh throughout the research process and responding to his questions helped Dr. Brown unpack the rationale for research design decisions, foundational literature and theoretical frameworks, methods of analysis, and how to use preliminary findings when making decisions about next steps in the research process. Involving Josh in team meetings as a co-producer led to extended dialogue and lengthier team meetings. This may be viewed as a limitation; however, the extended dialogue also led to increased idea generation and overall productivity. In our original research plan, the team planned for academic conference presentations and publications as methods of knowledge dissemination. The knowledge mobilization resources developed collaboratively by the team were strengthened by the added insights Josh provided. For example, he suggested we create infographics as a method to share our preliminary findings which made our research findings accessible to instructors and students involved in the second year of the study.

Impact on the university

Our partnership offers a response to Healey's (2018) call for student-faculty partnerships to contribute as change agents for teaching and learning in higher education. As we previously discussed, our design-based research study focused on improving teaching and learning within a course that serves over 500 undergraduate students. Additionally, our research offered professional learning for instructors by building their capacity for collaborative instructional design. Furthermore, we have disseminated the findings of our study and our model for student-faculty partnership to a variety of audiences through conference presentations and academic journal publications.

NEXT STEPS AND FURTHER INQUIRY

We are excited by the potential of student-faculty partnerships within design-based research and have many questions we intend to pursue through future inquiry. In the second year of our SoTL study, we will further document the impact of our partnership on teaching and learning. Additionally, we plan to document our experiences of partnership and the norms and tools we use to support co-production. In particular, we are interested in exploring how design thinking collaborative processes, like the ones we used with our instructor team, can support knowledge building within a student-faculty partnership. Beyond this study, we see potential in developing a model for student-faculty partnership in a design-based research study drawing on collective leadership practices. We are also interested in how our experience might be taken up by other teams and be employed to support teaching and learning in other courses. We see potential for this model to be used as a strategy by course coordinators or other instructional leaders to build collective leadership capacity within instructor teams.

NOTE ON CONTRIBUTORS

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Dr. Christy Thomas *is an instructor in graduate and undergraduate at the Werklund School of Education. Dr. Thomas' research focuses on teaching and learning. Within this focus, her research interests include professional learning, leadership, collaboration, and research-practice partnerships.*

Dr. Barbara Brown *is director of professional graduate programs and partner research schools in the Werklund School of Education at the University of Calgary. Her current research interests include research-practice partnerships, professional learning, and collaborative instructional design in technology-enhanced learning environments.*

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CASE STUDY

Exploring the Impact of the Students Assessing Teaching and Learning Program

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ABSTRACT

The Students Assessing Teaching and Learning (SATAL) Program at the University of California, Merced offers assessment support for faculty and program leads while engaging diverse, cross-program undergraduates in students-as- partners experiences in a work setting. Grounded in the Students as Partners (SaP) principles of respect, responsibility, and reciprocity (Cook-Sather, Bovill, & Felten, 2014), our assessment of the SATAL program reveals benefits for both students and faculty acting as co-creators of teaching and learning. Using the SATAL program as an example, we offer readers a logic model to guide the development of student-faculty-staff partnerships and assess the impact of these programs in a more meaningful and consequential manner. We also provide lessons learned from our evolving SATAL program to support others interested in designing sustainable student assisted assessment partnerships.

KEYWORDS

faculty-undergraduates partnerships, students-as-partners in assessment, logic model impact, program assessment.

Across the globe, interdisciplinary faculty have been engaging student voices in their efforts to improve teaching and learning in higher education. Students-as-partners programs place students, faculty, and staff as colleagues and collaborators in the teaching and learning process (Mercer-Mapstone, et al., 2017; Healey, Flint, & Harrington, 2014; Cook-Sather, 2009). Participants in these partnerships have the opportunity to "contribute equally, although not necessarily in the same ways, to curricular or pedagogical conceptualization, decision-making, implementation, investigation, or analysis" (Cook-Sather, Bovill, & Felten 2014, p. 6-7). In their review of Students as Partners (SaPs) literature, Mercer-Mapstone and colleagues (2017) document how this growing movement provides a new approach to student engagement, metacognition, and learning. Additional research provides a tapestry of principles to guide partnership development, including fostering inclusivity, understanding partnership as a process with uncertain outcomes, engaging ethically, and undertaking partnership for transformation that challenges the traditional power structures within universities (Matthews, 2017). A commitment to such principles is central to enacting genuine partnerships. For

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students, these partnerships provide an opportunity to pursue meaningful learning experiences that result in the development of professional skills that will complement their degree completion and transfer to their future careers.

Inspired by Brigham Young University's Students Consulting on Teaching initiative (Sorenson, 2001), we initiated the Students Assessing Teaching and Learning (SATAL) program in 2009 at the University of California, Merced (UCM). Initially, SATAL activities focused on ways to gather assessment data for accreditation purposes. However, with increasing availability of SaP research, SATAL has evolved into a dynamic program that distinctively engages undergraduates and faculty as active collaborators on a variety of assessment tasks that traditionally have been the exclusive purview of instructors (Matthews, 2017). SATAL embodies the mindset that student-faculty partnerships are built on mutual respect and responsibility and offers a reciprocal process for meaningful collaboration (Cook-Sather, 2014). Using a logic model framework, we describe the context for the SATAL program, its priorities and outcomes, its inputs and outputs, and its impact on undergraduate students and faculty at UCM.

CONTEXT FOR SATAL

The University of California, Merced is the newest campus within a large university system in western US, with two of our three schools focusing on STEM disciplines. Soon after its opening in 2005, the campus was designated a Hispanic-Serving Institution conferred by the US Department of Education. Over 75% of its students are first generation college students, 54% are Hispanic/ Latinx, and 70% speak a language other than English at home. While underrepresented minorities (URMs) constitute 71% of the overall student population, they are particularly underrepresented and/or have underperformed in STEM. In response to the unique needs of this growing institution and to improve outcomes for URM students, UCM's Center for Engaged Teaching and Learning was asked to develop a strategic plan for gathering and using evidence about student learning to improve teaching and learning within its research-focused environment. Since its inception, the SATAL program has evolved into a valued component of the institution's assessment processes. The elements of SATAL's design are summarized in the logic model presented below.

SATAL PROGRAM LOGIC MODEL

A logic model is a tool that makes explicit the relationship between program activities and their desired outcomes to enhance the program planning, implementation, and dissemination activities (Kellogg Foundation as cited by the Association of American Colleges and Universities, 2019). It helps educators with program assessment and data-informed decision-making. Based on the work set forth by Hines (2015), the SATAL's logic model provides a comprehensive plan for the evolution of the program by identifying its vision, mission, goals, outcomes, outputs, and inputs (see Table 1).

SATAL priorities

Reflecting UCM principles of assessment, SATAL's vision, mission and goals guide programmatic decisions and set the tone for how the partnership work will be perceived, experienced, and sustained across time. SATAL aims to challenge traditional assumptions about the roles of students and faculty play in higher education, particularly in comes to decisions regarding teaching and learning at a research institution. Foundational to the program is our use of a students-as-partners approach (see e.g., Cook-Sather, 2014) to facilitate the collection of high-quality assessment data which is used to inform instructional decisions and ultimately improve student learning experiences. The four goals targeting the learning environment, the faculty partners, the working interns, and the undergraduates guide program outcomes and outputs.

SATAL outcomes

The program outcomes identify what we envision to be the results of your students - faculty partnerships. Outcome 1 identifies our way of relating and working together, which is based on the principles of good students-as-partners practice (Cook-Sather, 2014). Outcomes 2 and 3 address the results of the joint ownership for teaching, learning, and assessment that is central to enacting this students-as-partners program. Traditional power dynamics are transformed into shared power structures by amplifying the voice of students in their educational experiences. As a result, faculty gain valuable insight into the impact of their instructional decisions and begin to consider alternative, and often non-traditional, pedagogical approaches (e.g., active learning). Interns learn about educational practices and gain skills that would otherwise be gained only by those working in research labs. Outcome 4 focuses on the climate needed for undergraduates to honestly articulate to faculty their insights about the effectiveness of the teaching methods and their overall learning experiences.

SATAL outputs

The outputs of the program define the actual activities of the partnership program. Critical to this work is a program coordinator who adheres to the SaP evidence-based practices to facilitate the partnership development and ensure that SATAL participants understand and uphold the principles of partnership. As co-creators of teaching and learning, faculty and students work side-by-side toward common goals, adopting practices that cultivate respect, reciprocity, and shared responsibility for teaching and learning. Participating in a professional development course arranged through modules, interns explore a variety of assessment activities and protocols. Important to their development is learning how to collect and analyze data, as well as report findings regardless of the discipline in which these activities are conducted. The curriculum is designed to stimulate interest in teaching and learning, build community, foster respect and personal responsibility, and develop action-research processes and gain skills that transcend a particular class, discipline, or situation.

SATAL offers faculty a menu of assessment support services, including entry/exit surveys; classroom observation protocols such as Smith, Jones, Gilbert, and Smith's (2013) Classroom Observation Protocol from Undergraduate STEM (COPUS) and Clark and Redmond's (1982) Small Group Instructional Diagnosis (SGID); focus groups and interview sessions; peer-led feedback workshops; and individual consultations regarding assessment data and its implications. Recognizing the research targets faculty must meet for tenure and promotion, SATAL represents its services as opportunities to conduct action research in the classroom. Faculty can then use assessment data collected by SATAL interns to supplement their formal teaching appraisal documentation, highlighting areas of strength and ongoing improvement efforts.

SATAL inputs

In order to develop and sustain an effective program, SATAL requires a number of resources. Funding from UCM's the Office of Undergraduate Education supports SATAL's program coordinator, office space, and stipends for a group of diverse, cross-disciplinary undergraduate student interns. Program personnel need resources to acquire assessment tools; participate in professional development activities; conduct assessment protocols, analyze data, and summarize findings in reports; and market SATAL services on campus.

Table 1. SATAL program logic model

Program Priorities			
Vision: To engage faculty and students as co-creators of teaching and learning at a student-centered research institution.	**Mission:** Use the students-as-partners approach to facilitate the collection of high-quality assessment data that can inform and enhance teaching and student learning.		
Goals	**Outcomes**	**Outputs**	**Inputs**
1.Community of Practice Create and sustain an environment that reshapes power dynamics by promoting 'good SaP principles' (Cook-Sather et al. 2014) among all partners.	Partners identify SaP principles reciprocity, respect, and responsibility and a shift in power dynamics between students and faculty as central to the effectiveness of their partnership work.	Through professional development activities, the coordinator 1.1 Ensures partners understand and uphold principles of partnership. 1.2 Designs learning experiences and ways of working together that challenge and reshape power dynamics among faculty, staff and students. 1.3 Ensures sustainability of the partnership program (i.e., it does not end when current students' partners graduate).	Input 1: Personnel • SATAL Coordinator • Student Interns Input 2: Community Office Space Input 3: Support Materials • Learning Management System • Software Programs • IT Support • Printer and Supplies • Marketing • Professional Conference Attendance • Professional Journal Subscriptions

Table 1 cont.

Goals	Outcomes	Outputs	Inputs
2.Faculty Promote research-based assessment approaches and data-informed instructional decision-making among faculty as they work to improve teaching and learning.	2.1 Faculty report being satisfied with the assessment services provided; the majority will request services again. 2.2 Faculty make meaningful pedagogical changes based on SATAL assessment reports.	2.1 Identify and implement research-based assessment tools designed to gather reliable and valid evidence of student learning. 2.2 Provide professional development on the use of assessment tools and protocols. 2.3 Focus assessment services on the effectiveness of instructional activities with respect to identified student learning outcomes and level of student engagement. 2.4 Partners meet to review assessment findings, and implications, and plan follow-up activities.	Input 4: Assessment Tools & Protocols • COPUS • SGID • NVivo
Goals	**Outcomes**	**Outputs**	**Inputs**
3.Student Interns Involve undergraduates in experiences that support the development of the institution's General Education Hallmarks (i.e., research, cultural responsiveness, interpersonal	SATAL interns report gains in skill sets that are useful to them in and beyond the university.	As pedagogical partners, interns become full participants in the assessment of teaching and learning. 3.1. Participate in eight, two-hour professional development sessions as part of the apprenticeship model program. 3.2. Work collaboratively with faculty and peers from	Input 4: Assessment Tools & Protocols • COPUS • SGID • NVivo

skills, self-awareness, and intrapersonal skills).		diverse backgrounds, disciplines, and class standing. 3.3. Work responsibly to provide quality services, while maintaining audience awareness and confidentiality. 3.4. Work respectfully when performing in-class assessments and collaborating with others on the team. 3.5. Develop as a scholar: Collect reliable and valid qualitative and quantitative data, perform content analysis, write quality summary reports, and present findings. 3.6. Reflect on professional development experiences, work performed, and skills gained.	

DOCUMENTING THE IMPACT OF THE SATAL PROGRAM

Since 2009 the SATAL program has completed over 1,000 assessment requests, with an average of 100 requests per academic year. Classroom observations, interviews, videotaping, and focus groups are the most requested services, representing 60% of all requests. Over 100 faculty members are repeat users of the SATAL services. In the following section, we document the impact of SATAL on faculty, undergraduate SATAL interns, and undergraduate students in courses we have assessed.

Impact on faculty utilizing SATAL services

Following various assessment protocols, faculty complete a feedback survey identifying instructional modifications they have implemented. Our findings reveal a number of improvements. For example, disciplinary programs have added introductory courses and revised capstone assignments. Individual faculty members explicitly discuss learning outcomes with students, utilize more active learning strategies, consider carefully the quality and quantity of quiz and test items, and adjust their speaking pace during instruction. When prompted about the value they derived from partnering with students, faculty explained:

> The opinions, suggestions, and answers that students give to SATAL staff during focus groups is much more open, frank, and helpful than what they say to faculty directly. SATAL creates an environment that enables students to speak freely. (Applied Mathematics Professor)

> In the past five years of directing the STEM Center, I have used SATAL services to help assess the undergraduate STEM Center Peer-Tutor/Mentor, MACES, and outreach (GirlCode) programs. These were all newly established programs and the surveys and the focus groups SATAL administered helped us assess our learning outcomes and practices. (Chemistry Professor)

Faculty also reported enhanced relationships with students and transformed ways of thinking about learning and teaching practices. Collectively, data collected provide evidence regarding Outcomes 1, 2, and 4.

Impact on undergraduate SATAL interns

Students serve as interns from one to three years, depending on their academic standing at the time of hire. Upon graduation, they complete an exit survey investigating their perceptions of skills gained. Twenty seven of the 31 graduating interns since 2009 have responded to the survey. All interns who responded considered the program to have instilled in them professional skills that will be valuable in their future careers, providing supportive evidence for Outcome 3. Many commented that the apprenticeship model was very helpful to their success, noting activities such as shadowing a more experienced intern as they administered assessment protocols, teaching novice interns to analyze data and develop reports, and leading feedback sessions for undergraduates in classes. When prompted about the value derived from partnering with faculty on classroom assessment, one SATAL intern explained:

> We benefit from taking on tasks that require us to apply a wide variety of skills. We have the opportunity to contribute to a project in any way we feel comfortable... classroom assessment encourages us to think more critically about our own learning.

Many interns noted enhanced motivation for, ownership of, and metacognitive awareness about their own learning, along with deepening their understanding of, and contributions to, the academic community. One key theme emerging from the exit survey data was that the enactment of the values of partnership of reciprocity, respect, and responsibility, as well as the shifting power dynamics as outlined by Cook-Sather (2014), made this work rewarding. Their responses provide indirect evidence of having met Outcomes 1 and 3.

Impact on undergraduate students in courses using SATAL services

SATAL interns work to ensure that solicited student feedback is both meaningful and actionable. For example, the comment, "This class is too early," does not help an instructor who seeks to improve teaching and learning. The Feedback Initiative (FI**),** a research project piloted by SATAL interns during Spring 2014, uses a rubric to teach undergraduates how to provide their instructors with actionable feedback (see Signorini, 2014). Results indicate that undergraduates benefit from direct instruction in how to give useful feedback. As a result, faculty receive feedback that can actually be used to guide instructional decisions. The following comment by a SATAL intern summarizes what many interns feel, providing evidence for Outcomes 1 and 4.

> I witnessed my peers reflect significantly on their learning experiences… [We] used the "think-pair share" method to have them discuss their responses with fellow classmates in order to reach a consensus. All responses are valuable and help shape the current and future structure of the course.

As can be seen in this case study, a carefully crafted logic model can inform the design and impact of student-faculty partnerships and provide a pathway for partners to produce visible and portable evidence of learning.

LESSONS LEARNED

The SATAL Program has evolved from a program created to build assessment capacity to one that partners undergraduates with faculty on a variety of assessment tasks to enhance teaching and learning on campus. We have learned many lessons throughout the tenure of the program that may help other institutions wishing to implement and sustain a students-as-partners program. In Table 2 we present some key insights we gained from this evolving program.

Table 2. Lessons learned

Building a Community of Practice	• As the program grows, we need adequate office space to facilitate collaboration and a sense of community. • We need sufficient time and strategies to overcome differences in experience and expertise within the teams, as well to reshape power dynamics. • We need a robust process to develop trust, especially as new faculty join the institution. • We need to allocate more time for reflection on the students-as-partners approach to provide strong evidence for Outcome 1.
Faculty and Staff Partners	• Because students-as-partners programs challenge traditional assumptions about how to produce transformative results, we need to increase awareness and understanding about student-faculty partnerships across the institution.

	• SATAL does provide faculty with valuable insights into aspects of teaching that they might not gain otherwise.
Student Interns	• We need additional personnel to scale the internship program. • We need resources to increase opportunities for students to engage in Scholarship of Teaching and Learning (SoTL) research and participate in professional conferences, and to address equity in pay. • Professional development for interns needs to be on-going and is time intensive.
Undergraduate Students	• Teaching undergraduates why it is important to provide actionable feedback on course evaluations and how to do so is central to improving teaching and learning on a campus. • Developing peer-to-peer trust when collecting students' perspectives on their learning experiences is essential.
General	• We need to revisit the logic model annually, as it consists of an evolving pedagogy which will change depending on the individual participants. • As the SATAL program grows, we will need additional personnel to ensure quality and timeliness of feedback to faculty and staff partners.

SATAL's logic model has generated evidence that when clear communication of the intended learning outcomes is grounded in the principles of respect, reciprocity, and responsibility, institutions can have a positive impact on teaching and learning. In response to today's demand for increasing learning outcomes, particularly among URM and in STEM courses, creating a sustainable student-faculty partnership approach to assessment holds much promise.

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REFLECTIVE ESSAY

Students as Partners in Academic Placements

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THE ACADEMIC PLACEMENT SCHEME

For the last nine years, I have been working in partnership with students in a way that was new to our field and is still emerging in all its implications. I introduced, to all modules in the Department of English Literature at the University of Reading, UK, the chance for students to undertake an "academic placement." Within this academic placement framework, a student studies on the module just like any other student and takes the exam, but does not write an assessed essay at the end of the term as other students would. Instead, I work with a self-selecting group of students from a range of modules to support them as they design, organise, and then carry out an independent research project in the professional world, usually lasting two weeks, that is linked to the learning on one of their modules. These students then produce an academic placement report as the credit-bearing piece of module coursework.

The academic placement report is not a reflective journal on their experience; instead, it contains a brief description of the research project they have undertaken on their placement, a discussion around the outcomes, an analysis of how this links to the learning on their module, and an examination of how their understanding has developed as a result of their placement. This can be a difficult concept for our students, who are used to personal reflective learning journals and can find this more highly analytical approach challenging.

As a department, we do not provide any of these placement opportunities, and a placement is never a compulsory part of a student's degree programme. Instead, students convert one of their standard modules into a placement module. We discuss possibilities and shape ideas, and then the student engages in discussion with potential placement providers. The module convenor will discuss, scrutinise, and agree on the placement to ensure that the report will be as academically rigorous and relevant as the standard module coursework. This can be unsettling for academics, who are used to providing, and keeping control over, every learning opportunity offered to students.

Within my university, we work on Principles of Partnership that have been evolving in recent years and that define partnership as involving "negotiated responsibility" between stakeholders (University of Reading, n.d.). The responsibility in this context rests for much of the time with the student partners to put themselves forward for a placement against a module, and to source and secure the most appropriate placement. Working with me as placement tutor, they are the lead partner, as they craft the placement. As they secure the placement, they are offering a project that is of value to the placement provider, and so

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there is a level of equality in that negotiation between student and placement provider (and certainly far greater autonomy than is found in a work experience placement).

Despite my university's recent work on partnership, making this scheme a true partnership (and recognising how that might look) is one of the challenges we have faced: How can this truly be partnership, if the module convenor makes the final decision on whether or not an academic placement can go ahead? This is not an isolated problem, nor is it new: It was addressed in a slightly different form in the very first issue of this journal, by Conner and Vary (2017), when they wrote about the need to recognise the "apprenticeships of observation," a term introduced by Dan Lortie in 1975. Connor and Vary considered the potential problem of student-faculty partnerships that are based on students' perception of teaching that is, if left unchecked, limited by individuals' learner profiles and learning experience. They then goes on to consider the same challenge within the lecturer. It is the latter of these that I have had to address. Students on academic placements shape their learning with their placement providers and are ready to stretch their learning experience; I see significant value in this and appreciate the challenge to my perception of teaching and learning that it raises. The growth and change are long term and on both sides of the partnership.

Working with the module convenor as the placement idea develops involves equal and open discussion between student and academic. However, at the point of approval the partnership becomes unequal. This is inevitable. The convenor seeks to protect the student by approving the placement based solely on whether, in the academic judgement of the convenor, that placement will allow the student to fulfil the module marking criteria as a result of the placement. Students have told me that this is an especially satisfying part of the process: to work alongside an academic, creating a placement that is both academically sound and professionally exciting, safe in the knowledge that they are not compromising their chance to gain a good grade.

This lengthy and at times uneven partnership journey only works well if it is recognised as such by all stakeholders, and much of my work as placement tutor for our department has involved detailed and long-lasting discussions with both staff and students to consider what we all mean by the term "partnership" and how this might apply to academic placements. These placements have been a key feature in our developing understanding of learning partnerships.

Some examples of academic placements might offer insight into the types of activities that interest our students:

- Redesigning marketing material for a school ("Persuasive Writing" module)
- Developing promotional material for visitors to a literary museum ("Eighteenth Century Novel" module)
- Promoting "World Book Night" ("Women's Writing" module)
- Redesigning a website for a publisher ("Packaging Literature" Module)
- Producing a series of theatre reviews for a newspaper ("Modern Drama" module)
- Depicting madness on stage in a local theatre ("Shakespeare on Film" module)

When I first devised this scheme, I expected that students would want to talk through their ideas in face-to-face meetings, as that is how I like to work, but I soon discovered that some students prefer to email whenever that is possible; some leave placement ideas in my mail tray and wait for me to contact them; many of them, in the early stages, will grab me in passing to make a "30-second elevator pitch" to test their idea with someone (sometimes, literally in an elevator). Later, some students have told me that they were anxious about whether their placement idea was valid, and so needed a quick initial response before talking it through in more detail. I have had to be ready to respond to these ideas in the moment, which is a skill I have been pleased to develop.

The move to partnership

The academic placement scheme requires a level of partnership that has taken me beyond my experience of mentoring as a personal tutor. In many ways it is more demanding, because it requires the transfer of agency from tutor to students, and that is what takes this scheme beyond simple student engagement.

Students have to work hard and be brave in their efforts to secure a placement, and that is why a partnership relationship needs to be developed. I have had to ask myself some hard questions: How much time would I have to spend with each student? How could/should I make myself available? Too little support, and students might simply abandon the scheme; too much support could lead to students failing to take ownership and become partners, either with me or their placement providers. It took a while to get this right, and I am grateful to those students who persevered despite probably feeling either smothered or neglected as I navigated my way through this new type of partnership.

I came to see that the best way to approach this was to recognise the steps towards partnership, which are outlined in Table 1, below.

Table 1. Steps towards partnership

STEPS	ACTIVITY	RESPONSIBILITY IN THE PARTNERSHIP
Student expresses an interest in academic placements.	One or more brief meetings, either in drop-in sessions or elsewhere.	Me — to explain the process. Student — to share ownership of the project from the outset.
Student returns, having decided within which module to take a placement.	A longer meeting, either at a drop-in session or at a prearranged one-to-one session.	Student — to identify what he or she wants to get out of a placement and to identify both possible projects and potential placement providers. Me — to inspire students as we think together about what a placement might look like. Module convenor — who might already have offered some general placement ideas to a module cohort.
Student and I devise a draft of the placement idea and identify one or more potential placement providers.	This is often achieved by email, perhaps with brief, informal conversations.	Student takes the role of lead partner here.
Student contacts the potential placement	This is usually by phone, occasionally by email.	The student leads again here. I am encouraging but avoid direct involvement if I can.

STEPS	ACTIVITY	RESPONSIBILITY IN THE PARTNERSHIP
providers that we have identified together.		
Student and placement provider review the placement idea and may refine it, or change it radically.	This is usually in a meeting (or several) with the student and the placement provider.	The student and the placement provider work alone at this point, developing their own partnership away from the university.
The case for placement is submitted to the module convenor for approval.	Submission is by email, and negotiated changes might be made to the case prior to approval.	Student and module convenor, with involvement from the placement provider in some cases.
The student undertakes the placement and I am available for support throughout.	This might be by phone, email or in person.	Student and placement provider, occasionally with my involvement.
Student produces an academic placement report.	The report is based upon the assessment criteria of the module, combined with the case for placement details.	I offer instruction on report writing in regular sessions that students can attend if they wish; the module convenor marks/grades the report.

The benefits to the students of the partnership are clear to see from their testimonies, such as this one from an academic placement student who undertook a first-year placement with us:

> I really enjoyed (my academic placement) research project as I led it almost completely on my own. I learned a lot about myself in how I learn and study best as well as how I best organise my own working deadlines and report writing—something I'd never done before. These are key wider skills that have been really helpful for me to learn and practice so early on . . ., and I've gone on to continue to develop and perfect them.

The phrase the student uses here, "almost completely on my own," is important. Students on placement are not working in isolation; they are working in partnership with their placement providers. The student is always the lead partner in that relationship, because it is the student who has designed the project. This expectation is not always easy for a student, but they often tell me in retrospect that it was a key part of their personal and professional development on placement.

Quality assurance

Students have to ensure, of course, that they are creating research projects on placement that fulfil the quality criteria for their module and degree programme, so they need to engage fully with all aspects of the process. In this we were guided by an awareness of the importance of students being engaged in all aspects of their placement, including its assessment, as set out in best practice codes. (QAA, 2018). I work with placement students for many months co-creating both learning and assessment requirements, an SaP practice that is advocated by Bovill and Bulley (2011).

However, although the system provides some quality assurance, there has been, so far, no systematic collection of student responses to their experience beyond the comments they make in their reports.

The placement journey

Quite early on in the process, I decided to be bold and simply refused to pre-arrange any placements. At first, this approach was surprisingly difficult to sustain. As a personal tutor I was used to doing all that I could to help a student, taking on my shoulders a sense that any difficulty my tutees encountered must be solved by me wherever possible. As I developed the role, being a placement tutor became very different. This has been achieved in three ways:

1. Giving students enough information (through weekly drop-in sessions, noticeboards, group emails, lecture shout-outs, and our virtual learning environment) so that they can make informed decisions about whether an academic placement is the right choice for them.
2. Using my experience to offer students ideas for research projects with placement providers that link to the learning outcomes of a module in a way that makes sense to them.
3. Being available, but within the confines of the steps set out in the table above. In this way there is a staged move towards partnership, and each person involved is able to extend to best effect his or her expertise.

The drop-in sessions that usually begin the process are often large, noisy, and friendly, and students form informal support partnerships with each other. This atmosphere offers me the chance to direct my efforts to where they are most needed as we share ideas. Very often family and friends join the process to help secure interesting placements, and this helps students to see the long-term benefits of undertaking an academic placement, which can be seen in the following student comment:

> This placement taught me how to use previous contacts in order to obtain a placement as well as broadened my knowledge about SEN [special educational needs] children and how specific their needs are in the classroom. This knowledge is something that I will have forever and though my placement was specific to a visually impaired child, I can apply this knowledge to other SEN pupils in the future. (Academic placement student on our “Literature, Language and Education” module)

I also always keep my office door open. A minor point, perhaps, but I tell students that they can pop in and ask a quick question about academic placements at any time. In reality, this does not happen as much as I had expected, but students tell me that they find the open door reassuring as they walk past.

Sharing the role of expert

The creation of partnerships away from the university is crucial to the success of academic placements, as students work with professionals who are expert in their field. However, this means that I have to recognise, alongside the module convenor, that we are no longer the only authorities in a particular placement and in a particular field. I teach modules on Shakespeare, for example, but I have never directed a Shakespearean play. So, when one of my students undertook a placement assisting a director in a reimagined version of *Twelfth Night*, my role became one of well-informed and interested observer, rather than the only expert in the room.

Benefit to academics from their student partners

The module convenor will use assessment criteria for the placement report based on a combination of the module criteria and the case for placement that has been approved, so even that most fundamental of roles—judge of the work—ends up being a partnership role between academic and student (Healey, Flint, & Harrington, 2014). This process of marking a placement report is interesting in terms of reciprocity. On the surface, it might appear that the academic is merely judging the work of a student, but in reality the placement report provides an opportunity for convenors to see the learning on their modules come to life in the wider community. This brings with it a reassessment moment for the convenor. It is impossible not to reflect on how a student has applied the module learning to an entirely new situation.

Convenors have shared with me their sense of anxiety when facing a placement report. A student has produced work outside the academic's comfort zone, so grading it will require reflection on the module as well as the academic placement. In the example offered above (the depiction of madness in a local theatre), the student undertook the placement as part of one of my modules, in which we consider the impact of film making on the works of Shakespeare. Since that placement, I have revised the focus of the module, and we now work with a far more integrated exploration of theatre practice and film making. I am grateful to my student partner for that development of the module.

The partnerships that I have described here have been genuine, long term, and fruitful. The very act of creating and securing a placement is a transformative moment in a placement student's development, and it has thrown up surprising and often challenging questions for me as an educator. Once the student returns from placement, of course, the challenge continues. I find myself working alongside my newly accomplished students, more confident in themselves as individuals and as learners. As one finalist, who had been offered a job by her placement provider, put it: "I now have much greater confidence in myself and my professional skills so that I leave university with much more than just a degree. . . . Taking part in two academic placements has been an amazing journey."

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I would like to thank my students for generously allowing me to share their comments.

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REFLECTIVE ESSAY

Students as Partners Beyond Formal Education: A Mentoring Partnership in the First Year of Teaching

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INTRODUCTION

This co-authored reflective essay is a collaborative exploration of a mentoring partnership between a university teacher educator (Benjamin) and a first-year English language teacher (Melanie) from August 2018 to January 2019. It explores our collective attempt to build a partnership less like the traditional "unidirectional oversight and guidance" normally associated with mentoring and more like a reciprocal partnership in which both of us would gain (Cook-Sather, 2016, p. 1).

Upon graduation from my teacher education program, I (Melanie) took a position as an English teacher at a primary school in Ningbo, China, where I had previously completed a two-week teaching abroad program. I was given responsibilities not common for recently graduated teachers, such as developing a storybook-based curriculum to complement the school's English curriculum. In addition, I was asked to support the professional development of my colleagues through observing lessons and delivering lesson demonstrations. The school leadership felt their teachers would benefit from my insights and experiences gained during my pre-service teacher education in Hong Kong.

The first year of teaching is a particularly challenging time as teachers negotiate their new roles and identities. Although school-based mentoring is common, the impact it has on teaching and learning is varied. It depends on the quality of support the novice teachers receive (Hobson, Ashby, Malderez, & Tomlinson, 2009; Gardiner, 2017). Richter et al. (2013) found creating opportunities for individual reflection, fostering experimentation with different teaching methods, and providing room for autonomous decision-making to be effective mentoring practices. However, mentors often do not have adequate time or training to support mentees effectively. In addition, mentees can be reluctant to share their challenges with more experienced or senior colleagues for fear of judgment or risk to their job security (Hobson et al., 2009).

I (Benjamin) already knew Melanie before our mentorship partnership began. I was her tutor for two university courses and mentored her during her eight-week teaching practicum in a Hong Kong primary school. Furthermore, I was the tutor for the teaching abroad program Melanie had participated in the school in Ningbo. I had an ongoing relationship with the school due to my active involvement in the teaching abroad program (Moorhouse, 2018), and so it seemed natural to form a mutually beneficial partnership, where Melanie could receive support in her new role and I could have an opportunity to

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explore my mentoring practices and hopefully improve them. In my role as a teacher educator at the University of Hong Kong, I teach teacher preparation courses and mentor, supervise, and observe students during their teacher practicum in primary schools. I had been in this role for three years at the beginning of the partnership and had mentored many pre-service teachers. However, I felt I was still a novice and my practice could be improved.

The distance between Hong Kong and Ningbo meant that we had limited options to engage in the mentoring partnership "inside" class time through lesson support (Gardiner, 2017). Instead we engaged in a virtual mentoring partnership. This was made possible with the use of technology—we used weekly video chats, shared documents through e-mail, and regularly corresponded through instant messaging.

After every interaction, we would use Google Docs to record the date and main topics that had been discussed. We would then write down our reflections on the interactions. Both of us could see and comment on what the other had written. Google Docs became a shared space for us to deepen and engage in reciprocal reflections. We present our reflections in the following sections:

- Looking Forward, which discusses our reflections before the mentoring partnership,
- Looking In, which discusses our reflections during the mentoring partnership (drawing on the Google Docs' data); and
- Looking Back and Forward Again, which shares our reflections after one semester of the mentoring partnership.

LOOKING FORWARD

Benjamin's interest in the mentoring partnership

An important part of my role is the mentoring of my students during their teaching practicum. However, I have received little training or support in this role. I have regularly left students' schools wishing I had said or done something differently. I noticed that I often dominated the lesson observation feedback sessions with my advice, leaving students with little opportunity to reflect on their own practices. Due to the related but distinct "hats" I wear—tutor (provider of knowledge and good practice), assessor (gatekeeper to the teaching profession), and mentor (guide, supporter, and prompter), I also felt that students tried to impress me and wouldn't tell me if they were struggling as they worried that I would be disappointed in them or even reduce their grade (which I have never done). I have always wanted to find ways to improve my practice, but have had little opportunity to do so. I never prescribed to the "expert" and "novice" dichotomy inherent within the traditional mentoring relationship (Hobson et al., 2009), but I felt this was what was expected by my students and my role. By partnering with Melanie, I felt I would have the opportunity to learn more about my own practices and how they are perceived, outside of the hierarchical relationship of student/tutor. Melanie no longer had to worry about impressing me or about her grades. The use of Google Docs meant we would be able to share our thoughts and feelings after each interaction and that I could see the impact of my words and actions on her. Furthermore, I felt a sense of responsibility to Melanie. It was I who had introduced her to the school through the teaching abroad program and had encouraged her to work in the school.

Melanie's interest in the mentoring partnership

I wanted to be part of this mentoring partnership because I was tasked by the school with developing a new part of their English curriculum from scratch. I was given this role because the school leadership had seen my potential during the teaching abroad program I had participated in previously and felt I was capable. Since I was starting something new for the school in a new role as a recently graduated teacher, I felt I needed some support beyond the teachers in the school. Furthermore, the work environment is different from where I had received my education (Mainland China and Hong Kong, respectively). As a 'foreign teacher', I was unfamiliar with the local background and norms. I was both excited and anxious about this opportunity. Benjamin had been visiting and supporting the school for a few years, he has a better understanding of the school practices and personalities of the teachers there. I thought he could share with me his experience of communicating with them.

LOOKING IN

This was our first time engaging in a virtual mentoring partnership, so we had little knowledge of how the relationship would be different from our previous one. We both felt we were learning from the process—what and how to share and how to reflect. This was partly due to our conceptions of mentoring and our views towards each other's role.

I (Melanie) found it difficult to share things with Benjamin too frequently at the beginning as I was worried that I would be causing trouble. I believed that it was not one of his responsibilities to give me advice, since I had already completed my studies at the university and we no longer had a teacher-student relationship. I thought it would be a burden on Benjamin if he had to keep in contact with every single student he has taught.

At the beginning, I (Benjamin) felt that Melanie would probably want some space to discover herself and therefore did not contact her too frequently either. However, after she had not contacted me for two weeks, I realized that there was an expectation that I would initiate the interactions. While seeming like a traditional approach to mentoring, it turned out to be a good way to start the partnership. It seems that with virtual mentoring, it is important to check in regularly; if not, the partnership could quickly fade.

I (Melanie) gradually let go of my worries when I felt that Benjamin was taking more of the initiative to offer help and advice, such as asking how the activity we discussed went, or simply asking how my week had been.

As time went on, we adapted to each other and found ways to engage in the partnership that were comfortable for both of us. We both noticed and reflected on a change in the kinds of discussions we were engaged in, how the discussions were conducted, and who initiated them, as well as a power dynamic shift from one that was clearly hierarchical to one that was more equal.

The shift in our discussions were from predominantly instructional support during Melanie's initial teacher education to a combination of instructional and psychological support during the partnership (Richter et al., 2013). The following extracts, written after an instant-message communication about Melanie's weekend activities, illustrates this shift:

> I feel comfortable with sharing my personal life with Benjamin and I feel this enhances our mentor-mentee relationship. . . . I feel this is slightly different from a teacher-student relationship? (Melanie)

Moorhouse, B.L., & Oh, H.M (2019). Student as partners beyond formal education: A mentoring partnership in the first year of Teaching, *International Journal for Students as Partners, 3*(2). https://doi.org/10.15173/ijsap.v3i2.3893

> It is nice to see what Melanie is doing outside of school. As she's far away from family and friends, her adjustment to life in Ningbo is important. (Benjamin)

This was also evident in the kinds of advice I (Melanie) sought, as often there was a focus on professional relationships with colleagues within the school, particularly when there appeared to be a mismatch in beliefs. After observing some colleagues' lessons in order to provide professional development, I wanted clarification of my ideas and to seek advice on how to share my observations with my colleagues:

> Why I asked for help is because I didn't know how I can change the teachers' belief, especially when the belief is the opposite of what I have learned in university. . . . It is very difficult to challenge one's teaching philosophy. (Melanie)

As I (Benjamin) was a third-party, Melanie felt comfortable honestly sharing her concern and seeking advice regarding her colleagues' practices. I felt I was able to guide her to consider different perspectives and help her construct her own knowledge. However, I did feel slightly uneasy after reading Melanie's reflections. I felt I had been too direct and put her in a difficult position with her colleagues. Google Docs allowed me to reflect on this and show camaraderie with Melanie when she expressed worry about talking to her colleague:

> This is understandable. I am not brave enough either! We need to strike a balance and be collegial. Things like this take time. . . . This made me reflect on the advice I gave—perhaps I should be careful not to put you in an uncomfortable position. (Benjamin)

This experience reminded me (Benjamin) that I was still in a position of power and my advice may put Melanie in difficult situations. It is important to think carefully before offering advice.

We noticed that instructional support was focused mainly on the students' English abilities, teachers' expectations, and the contextual constraints of large classes (45+ students). An example of this was an activity involving group writing of menus with her Grade Three class. Melanie and her colleagues had felt it might be too challenging for the students; however, through discussion with Benjamin, she attempted it with positive results:

> I was worried that the [menu] task was too difficult for Grade Three students. I was very proud of myself and my students for doing better than expected. (Benjamin)

I (Melanie) felt that without the partnership, I would not have attempted such activities with my students. Through discussing such issues, I was able to implement new teaching ideas and methods and gain greater confidence in my abilities.

The shift in power dynamics seemed to be the most striking thing we noticed. There was a shift from a more hierarchical transmission of teaching ideas and pedagogical skills as tutor/student to a more equal and collaborative relationship that was seen to benefit both of us. After Melanie actively shared an activity she had done with her class and the work they had produced, we felt there was potential to share the work with Benjamin's class of pre-service teachers. Below are our thoughts after the video chat:

> I like sharing students' work with Benjamin and I'm glad to know that he can use them as teaching materials. I think it is also good for student-teachers to see real students' works. They are also very funny and inspiring. (Melanie)
>
> Seeing the students' work and how proud Melanie was of her students made me feel really positive about the changes she is making and the role she has taken in the school. I was naturally worried about her taking on curriculum development responsibilities, as I felt we do not prepare our graduates well enough for this. But seeing the students' work showed me that she is capable of it and we do more than we realise. . . . . It was good for my students to see what a fresh grad can do given the right support and a more flexible teaching environment. (Benjamin)

As the partnership developed, we both started to learn more about ourselves and our roles. I (Melanie) continued to grow my confidence in teaching. While I (Benjamin) had a clearer understanding of how best to support and mentor Melanie.

LOOKING BACK AND FORWARD AGAIN

Benjamin's reflections on the partnership

After partnering with Melanie for one semester, I felt I gained greater self-awareness of the impact and power of my advice, the hierarchical nature of my current practices, and the need to move towards more dialogic and equal practices. I saw that Melanie benefited most when we were able to talk out the issues she found herself in rather than ones I identified. I also noticed that sometimes she was not looking for advice but instead a sense of camaraderie and understanding. Our interactions became less about tips and tricks for the classroom and more of a sharing of ourselves and our ideas.

I became more aware of the emotional and psychological part of teaching and the need to see Melanie holistically rather than just by her pedagogical practices. This is certainly something I will take into my role of mentoring pre-service teachers. Rarely, in the past, did I ask how my students were feeling and instead focused on how the lesson went. I will be mindful of this. I also saw the need to let students take ownership over their mentoring and ask them what they want to work on and improve rather than tell them what they did "wrong"—getting them to critique their own practice rather than critiquing it for them.

Melanie's reflections on the partnership

At the beginning, it was hard for me to accept the change from teacher-student to mentor-mentee because I felt like I was being reviewed and assessed like in university. But it changed when Benjamin showed that he was concerned about my personal feelings rather than just my teaching. I felt that he cared about my personal development and reflection. In university, tutors seem to only focus on how we achieve lesson objectives and show evidence of student learning. Mental support and recognition from my mentor were the two biggest gifts from the mentoring partnership, which were both beyond my expectations.

As a teacher, I need to remind myself that I am the one who makes decisions; I am the one who knows the students best. In university, teaching a lesson might feel like a show to the teachers who observe the lessons. But being a partner in a mentoring relationship, I can make my students my number one priority; it is not about impressing the mentor. So even sometimes when I fail to achieve some of the lesson objectives that I have set, I am also happy and not afraid to share this with Benjamin, because it is a process of learning. This also gives me the bravery to try new things with my teaching. When I change my mindset, it gets easier to open up and share.

CONCLUSION

This has been a very worthwhile partnership that we will continue. We are aware that mentoring partnerships are complex and take time to develop and grow. We feel this partnership was beneficial as Melanie was able to get support in her new role that helped her adapt to its challenges, while Benjamin was able to reflect on and improve his mentoring practices. We believe these benefits were possible due to the voluntary nature of the partnership as well as to the fact that we both felt inexperienced in our respective roles and entered these roles with an openness to self-development.

We are aware that there are limitations to this kind of partnership, particularly with the use of technology. We both felt the opportunity to meet face-to-face regularly would enhance the partnership. However, in our case, technology made the partnership possible. We believe it is important for partners to check in with each other regularly to develop and maintain such partnerships over physical distances.

This experience shows the importance of creating partnerships between students, alumni, and staff to help cultivate mutual and reciprocal professional development. By building such partnerships with graduates who know the staff mentor and their programmes, staff can better understand their own practices and hopefully improve them. For recent graduates, these partnerships can help with their transition into their professions—a critical time when many feel anxiety and stress (Richter et al., 2013).

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BOOK REVIEW

Co-producing mental health strategies with students: A guide for the higher education sector by Rachel Piper and Talia Emmanuel

UK: Student Minds (99 pages)
Available at: https://www.studentminds.org.uk/researchandpublications.html

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Co-producing mental health strategies with students: A guide for the higher education sector is an essential, timely, practical, and comprehensive guide aimed at higher education (HE) staff involved in implementing mental health and wellbeing strategies who value the principles of Students as Partners. Essential, because it explores why co-production is so powerful for mental health, and essential considering the aim of empowering and valuing student experience as a solution to improving mental health. Timely, because student mental health issues have been identified as a significant concern for staff and students, and timely for its contribution to Students-as-Partners discourse with the inclusion of a vulnerable student population. This guide is practical with a focus on "people with lived experience of mental health as experts by experience". This easy-to-access PDF is written in easy-to-read prose by authors Rachel Piper, staff member, and Talia Emmanuel, student. Key recommendations, explanations, definitions, benefits, challenges, tools, and techniques make this a comprehensive guide for engaging students in strategy development.

LANGUAGE

The terms "student voice" and "student engagement' are used synonymously throughout the guide and are identified as being the central tenets; however; the principles resonate with that of an ethic of reciprocity.

"Co-production" is an umbrella term used in this resource including youth engagement and co-design and is "based on the principle that people who use, may use, or refer others to [mental health] services have valuable knowledge through experience and individual context" (p. 13). Co-production is the term named in lieu of partnership, the highest of the four-stage model of student engagement (NUS/HEA cited in Healey, Flint, & Harrington, 2014, p. 16). This particular term, while not commonly seen in the current Students-as-Partners literature, is relevant, prevalent, and important in the context of health and social care (Clark, 2015). Students-as-Partners (co-production) practice is context dependent, an issue clearly argued by Healey and Healey (2018). The language of co-

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production is therefore contextually relevant to mental health and is a demonstration of "creative translation of partnership principles" (Cook-Sather, Matthews, Ntem, & Leathwick, 2018, p. 2). The Students-as-Partners readership might be more familiar with terms like "co-creation" or "student-staff partnership" (Bovill, Cook-Sather, Felten, MIllard, & Moore-Cherry, 2016).

Language is recognised in this guide as being empowering for some while simultaneously disempowering for others. Analogously Cook-Sather et al. (2018) discuss the complexities with the language surrounding Students as Partners. Initially, the term "service user," provoked a sense of neoliberal ethic in the reviewers. However, the term has important historical roots related to the disempowerment of people with mental health issues.

This guide does not shy away from the difficulties of co-production with explicit reference from page two through to identification of pros and cons in each of the tools. Addressing challenges is particularly important when in partnership with vulnerable groups according to Cook-Sather, Bovill, and Felten (2014).

Given the incidence of mental health issues in higher education affecting students and staff, this guide has value for anyone engaged in teaching and learning in higher education.

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