

CASE STUDY

Co-Creating Real-World Research Skills

*Julie Prescott, Duncan Cross, and Pippa Illiff

School of Education and Psychology, University of Bolton, UK

Contact: j.prescott@bolton.ac.uk

ABSTRACT

This case study considers a students-as-partners' research project that aimed to develop technologically-driven tools to enhance teaching and learning in higher education. It focuses on how the project enabled student participants to gain real world research skills and experience. We present reflections from both a student and a staff perspective and propose START (Support, Time, Adapt, Risks, Trust) as an approach to engage students to gain real-world research skills. *Support* refers to providing support for skills gaps and learning in an applied setting. *Time* refers to providing time to settle into the project and develop confidence, including realistic timeframes and deadlines. *Adapt* refers to giving students the space to develop not only the required skills but also the tools to develop their own abilities and confidence through a supportive, flexible and open environment. *Risks* refers to taking risks for example in terms of roles, responsibilities and leadership. *Trust* refers to providing guidance and encouragement that will allow students to achieve on their own and take shared ownership.

KEYWORDS

research skills, student-as-partners, teaching and learning, higher education, technology

This case study considers a students-as-partners' research project that aimed to develop two technologically-driven tools to enhance teaching and learning in higher education. The first being a university- wide mobile app, the second being a course-specific virtual reality game. The project is set at a small, teaching intensive university in the North West of England and this case study focuses on how the project enabled undergraduate students to gain real world research skills and experience. The case study presents reflections from both a student and a staff perspective and puts forward START (Support, Time, Adapt, Risks and Trust) as an approach to engage students in real world research.

Ultimately, the aim of this article is to offer evidence that student/staff partnership working practices allow students to gain a deeper, understanding of research skills and practice through support, and propose START (Support, Time, Adapt, Risks, and Trust) as an approach to providing that support. We will provide a brief overview of the literature,

describe the project, and, finally, focus on our reflections on the process from a students-as-partners perspective.

Students-as-partners projects should engender a positive, meaningful, reciprocal relationship among students and staff that engages all participants equally, though not necessarily in the same manner (Cook-Sather, Bovill, & Felten, 2014), allowing all parties to benefit through working and learning together (Healey, Flint, & Harrington, 2014).

Educational staff have focused on trying to make the student experience more engaging based on evidence that positive student engagement leads to enhanced resilience, persistence, learning, and academic achievement (Celuch, Bačić, Chen, Maier-Lytle, & Smothers, 2018). Some advocates of student engagement have begun to promote the uniting of voices of both staff and students and students' active involvement as, for example, agents of change, co-creators, and partners in their own educational experiences.

The benefits of engaging with students as partners in their own learning include increased motivation and learning (Cook-Sather et al., 2014; Little et al., 2011; Nygaard, Brand, Bartholomew, & Millard, 2013), student perceptions of improved teaching and classroom experience (Cook-Sather et al., 2014; Curran & Millard, 2015; Nygaard et al., 2013), and enhanced employability (Dickerson, Jarvis, & Stockwell, 2016; Pauli, Raymond-Barker, & Worrell, 2016).

Despite the benefits of engaging with students as partners in higher education, there are also challenges. While the shifting of "traditional" hierarchies can be transformational, tensions around power and the shifting identities of "staff" and "student" can arise as partners reconfigure boundaries and structures and navigate the transition from "us" and "them" to "we" (Healey et al., 2014; Mercer-Mapstone, Marquis, & McConnell, 2018). Indeed Mercer-Mapstone, Dvorakova, Groenendijk, and Matthews (2017) discuss the issues around power and the tensions between labels of 'staff' and 'student' which impacted early on in the current project.

OUR PROJECT

Staff co-authors Julie and Duncan applied for, and were awarded, a £34,000 (matched-funded) Student Led Technology Enhanced teaching and learning HEFCE (Higher Education Funding Council for England now the Office for Students, OfS) catalyst fund to support the strategic aims across the HE sector. The project we submitted aimed to engage undergraduate students in researching their own student body to design and develop technology-based teaching and learning tools in order to enhance the student experience within HE. The two tools or interventions developed were a mobile app, that was available to students across the university and a subject specific virtual reality (VR) game, further details on both tools are given below. The initial phase of the project involved understanding current students' use of technology, as well as gaining an insight into what students would potentially like to use within their teaching and learning. Therefore, before any technological intervention was designed, the student researchers collected data using a questionnaire to gather this preliminary information.

The research team was composed of three undergraduate students from three different academic disciplines—Psychology, Education, and Sport—and two academic staff, co-authors Julie and Duncan, from Psychology and Education respectively. Co-author Pippa was a psychology undergraduate at the time of the project, and took the lead on the research element of the project. This article focuses on the perspectives of the three co-

authors, and their reflections on the project from which their START approach to supporting students emerged.

Our project involved identifying student's current and future usage of mobile technology for learning, and attitudes towards technology for learning, from one small, teaching-intensive university. The data we collected informed the design and creation of two technological interventions to enhance teaching and learning. Evaluation took place through user feedback in the form of questionnaires and focus groups for both of the developed tools.

The first intervention we created was a mobile app that we later piloted university-wide, although not discipline specific the app aimed to be beneficial for the whole student body, providing some core academic skills and information to aide learning. The app included an interactive map and educational games, as well as functions to enable students to interact with each other and the university campus through wayfinding functions and a quiz using strategically placed QR codes. This app developed by the students on this project facilitated as a pilot for developing the implementation, and the tailoring, of a commercial university mobile app. As well as wayfinding, the app enabled students to develop some key educational skills such as referencing through the use of educational games. The games within the app also highlighted the support services and facilities available to the students, that students may not be aware of. The second intervention was a therapeutic VR game for use with counselling students at the university and embedded in the BSc Psychology, Psychotherapy and Counselling pathway which Julie is programme lead for. The research team partnered with students from the creative technology department to assist in the development of these interventions.

The following sections consist of our reflections upon the whole research process, with a particular focus on the dynamics of partnership and of change. We emphasise how the student researchers employed on the project honed their research knowledge, skills, and confidence through this opportunity to take part in real-world research. We highlight many of the pros and cons of students-as-partners work in higher education. We conclude by describing the START model that emerged from our reflections and that we developed to encourage and provide some guidance for supporting students working in partnership.

PIPPA'S PERSPECTIVE

At the start of the project, I felt very daunted and slightly out of my depth in terms of skills and knowledge, as did my peers, and therefore the student team members let the staff members take lead on the project. On reflection, this lack of knowledge and skills encouraged traditional hierarchies to persist, as Healey et al. (2014) discuss, in that we trusted Julie and Duncan's knowledge and viewed them as being in a position of power.

As the project progressed, our confidence grew, due not only to our gaining knowledge but also the opportunity to apply that knowledge. We therefore felt able to take control of the project by making decisions, taking initiative, and communicating developments to Julie and Duncan. For example, in the design and development of the app, we knew more than they did. The project began to transform into the students-as-partners project that it was intended to be, supporting Healey et al. (2014) on how transformational the shifting of "traditional" hierarchies in higher education can be. Alongside this, Julie and Duncan's support and trust was paramount to developing a high-quality product.

As a team we worked effectively, which was evident in how we met project deadlines and presented our knowledge at conferences. For the student members of the

team, I think that the desire to gain recognition from the staff team members for our hard work and the challenges we were overcoming was also a motivating element. This desire was founded on the respect we all had for each other's personal, academic, and social qualities. It became increasingly evident throughout the project that we brought different sets of skills and knowledge from our different academic disciplines, for example, knowledge of SPSS, teaching practices, and research experience.

The student members of the team designed the questionnaire that we used to assess students' current and desired use of technology. This was extremely challenging, as we had never designed a questionnaire from scratch. We struggled with how to ask and format the questions. In order to overcome this challenge, we sought Julie and Duncan's advice, and after three attempts, we designed our final questionnaire. Even though designing the questionnaire was a challenge, we overcame it and that has given me the confidence to design questionnaires and to understand what questions to ask to yield the right information to answer research questions.

My discipline, psychology, is research heavy. I did well in the research methods module of my degree, so I felt confident to take the lead on setting up SPSS and data analysis. Reflecting on the experience, I did struggle at first, but with support from the whole team, I learnt how to use SPSS more efficiently. On completion, I felt a sense of achievement and pride that I had been determined not to fail at the task and this added to my newfound confidence as I met the expectations of the project and team. This experience also had a positive impact on my evaluation of my ability to complete my third-year dissertation.

What have I gained from the experience?

On reflection, I have gained an enormous amount from this experience. I have acquired research skills, and my confidence in using SPSS and conducting analysis has increased. My apprehension about writing a dissertation has completely gone and has been replaced with motivation and excitement. In terms of employable skills, I am able to give presentations, manage time, work as part of a team, demonstrate initiative, and learn new information quickly, and I have expanded my professional networks.

My experience of working on the project has had a major impact not only by enhancing my knowledge and skills, but also as an amazing journey of personal development. From the start of this project, I have not only changed as a person, but I now have a clear vision for the future. I have enjoyed and benefited from the project so much that I now want to carry on with research and apply for a PhD studentship and since writing this reflection I am now over a year into my PhD study. Just as importantly, I have created lifelong friendships, so much so that I and another member of the team want to carry on our collaboration. I would like to see more opportunities for students to get involved with research, as being involved in real world research that enhances learning, motivation, and employability skills is an invaluable experience.

JULIE AND DUNCAN'S PERSPECTIVE

We, Julie and Duncan, pursued the funding for this project based on our desire to work with students as partners, supported by senior management at the university. Unfortunately, due to the funding deadline, we had to develop the bid without student input. On reflection, this was not the best way to set up the partnership, as this initially

established our roles as that of employers/supervisors. Our responsibility for reporting to HEFCE and the university also contributed to this sense of hierarchy.

We recruited students to the project through an open call, attracting students from across disciplines, and from this we started to realise that some of our expectations of the students were unrealistic. We had a level of naivety with respect to disciplinary differences that became very obvious during the interviews, as we asked students about their research methods experience in their programmes. The students that we recruited more strongly demonstrated their ability to apply what they had learnt; however, we still held unrealistic expectations of their research expertise, especially for Pippa. Our expectations for the sports rehab and education undergraduates were not as high.

We were surprised when the students could not design a questionnaire, so we introduced more support. However, once we initiated support, we realised quite quickly that the vast majority of the issues we were encountering could be attributed to a lack of confidence. There was a point early in the project where we sat down with the students and discussed whether we thought the project was going to work. We were honest about our fears around the negative impact that we might be having on them and the financial responsibilities that had been placed on us. It was only when we shared our fears with them that there was a lightbulb moment for them and they realised that they could be totally honest about their struggles and their relationship with us. This was a defining and transformative moment for the project. As the students' confidence grew they began to see their own value and worth as partners.

It was hilarious when they took control and led for the first time, as they were trying to gauge our reactions and not offend us. For us, there was a sense of relief that they had finally taken hold of the project. Whilst there were challenges, both of us have gained a tremendous amount from working with each other and with the students. We had worked together previously, but working together on this project cemented our working relationship and developed our friendship. Since this project, we have collaborated on a number of projects and value the critical friendship in supporting our professional development this also gives an avenue for personal as well as professional support through a strong working partnership.

Working with the students was refreshing as it brought us both back to thinking about the basics of building relationships with students and how we can empower them to take charge of their own education.

Transforming from a tutor-led to a students-as-partners project

One of the most challenging aspects of this project was allowing the project to become more student led, which was an initial aim of the project. From our (Julie and Duncan's) perspective, once we established trust, we felt able to let go and let the students take control, and essentially leave them to get on with it. Until that trust and commitment was evident, we as project leads could not let go. As the funding holders, and as researchers, we had the responsibility to report back to HEFCE and fulfil the aims of the project. This responsibility made both of us uncomfortable with the initial power shift, as the students didn't fully appreciate the reporting mechanisms and their roles within the process. However, as trust developed among us and it became clear that the students were invested in and fully committed to the project, it developed into a students-as-partners project. This was particularly evident once the first intervention, the app, was designed and

needed to be developed and the students were involved in appointing and managing the creative technology students.

While many of the early tensions around power and roles eased as the project progressed, some tensions remained because we were unable to involve students in the initial project bid and subsequently recruited them to “our” project. Therefore, despite it being a partnership, reporting structures continually reinforced hierarchies. The team used Cook-Sather et al.’s (2014) partnership principles (respect, reciprocity, and shared responsibility in teaching and learning) to displace traditional structures and roles and to have more balanced and fluid relationships. This balance in roles developed over the first few months of the project. The experience for Julie and Duncan does indeed support the transition issues moving from “us and them” to “we,” as discussed by Mercer-Mapstone et al. (2018) when undertaking the SaP’s project.

At the end of the project, we asked the students to reflect on their experiences. It came as no surprise that applying the skills students learn within the classroom embeds the learning of those skills. However, what was striking and one of the most interesting issues to come out of this process from Pippa is how her confidence in her knowledge of research methods has grown through taking part in this real-world research. It became clear that engaging with students as partners enables confidence building and real insight into the world of research. Pippa’s engagement with this world of research has also included presenting at a number of national conferences, writing reports for the funding body, and wider dissemination of the research, such as a contributing to a book chapter and peer-reviewed journal articles.

CONCLUSIONS AND LESSONS GOING FORWARD

The students-as-partners approach to a research project was new for both Julie and Duncan, and proved a learning curve for all involved. In co-authoring this piece with Pippa, we wanted to share the value of not only involving students within the research process, but also allowing them to take the lead and develop their confidence and skills outside of the classroom. Due to this experience we have developed five top tips that we would take forward into another students-as-partners project, or any project involving students as researchers, through an approach we have called START:

1. **Support:** Provide support for skill gaps and learning in an applied setting, as we did with the questionnaire design. Staff also need departmental and institutional support.
2. **Time:** Provide students with time to settle into the project and develop their confidence. This also means setting realistic timeframes and deadlines. This was a year-long project, a timeframe that provided students and staff with time to engage fully in a students-as-partners project.
3. **Adapt:** Give students space to develop not only the required skills but also in their own abilities and confidence through a flexible and open environment. Students and staff need to adapt to being part of a students-as-partners team.
4. **Risks:** Be willing to take some risks and believe in students, trusting that they want to achieve and do well. This aspect is evidenced throughout Pippa’s reflection and the students’ commitment to the project and desire to achieve. This is also evidenced through Julie and Duncan’s account of the transition from tutor-led to students-as-partners project.

5. **Trust:** Guidance and encouragement will allow students to achieve on their own and take shared ownership. Establishing trust during this project enabled the students to bring their own ideas to the project and this project, the authors believe, was much more successful because of student's perspectives. Students also need to develop trust in academic staff in order to fully engage and for the project to be a true partnership.

Both students and staff need time to understand what each other can offer to the project. Remember this is a partnership, providing students the opportunity to grow as well as an opportunity for staff to learn from, engage with, and understand from a student perspective. Designing interventions or tools for teaching and learning needs student buy-in, in order to increase the success of the tool and its uptake by the student population. As such, what better way is there to gain the student perspective than from engaging in a students-as-partners project?

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NOTES ON CONTRIBUTORS

Julie Prescott is a Reader in Psychology at the University of Bolton. Julie's current research focuses on the intersection of technology and health/mental health, with a particular interest in young people and online counselling as well as how people gain support and use online technologies for their health and mental health support

Duncan Cross is an Associate Teaching Professor in the School of Education and Psychology, University of Bolton with teaching and research interests in teaching and learning in higher and professional education. He is a Principal Fellow of the Higher Education Academy and a National Teaching Fellow.

Pippa Iliff is currently a PhD candidate at the University of Bolton, researching the application of Coaching Psychology to improve university student mental health with a technology intervention. Pippa previously held the positions of HEFCE student researcher and student trustee of the Student Union.

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