4

Students as Partners

Introduction

Working with students as partners in research and in the design, delivery and evaluation of course programmes redistributes power and decision making across all participants in ethical and liberatory ways (Bullock et al., 2022). This is a humane and holistic 'Participatory Design' (Muller, 2007) approach that enhances the experience, and the outcomes, of those projects – for staff and students alike. This represents a move from student consultation to activity that is rooted in genuine and meaningful co-creation and co-production (Harrington et al., 2021). This empowers students to be agents of change, influencing all levels of institutional activity and working as equals reimagining education.

The positives of such relationship-rich education (Felten & Lambert, 2020) are demonstrated across the case studies here, and underscored by the literature: see Burns et al. (2019), Healey et al. (2016), Harrington et al. (2021) and Mercer-Mapstone (2017). Such partnerships are designed to increase student engagement, developing agency, self-confidence, self-efficacy, belonging, purpose and success, with the goal that students feel heard and listened to.

For such partnerships to be successful, they have to be taken seriously by institutions as well as by the academics involved. There needs to be space created to work together with students on authentic projects – with attention paid to due reward for labour, monetary or otherwise. Student engagement as part of a course or module or as part of paid employment not only helps ameliorate workloads, but helps diminish power imbalances. Student partners become more than 'customers'; they become active participants with valuable expertise to contribute to shaping learning, teaching and assessment. This also benefits staff, helping in the development of new and better teaching and curriculum materials as well as teaching and learning provisions and support. As stated by Cook-Sather et al. (2014, 6–7):

> A collaborative, reciprocal process through which all participants have the opportunity to contribute equally, although not necessarily in the same ways, to curricular or pedagogical conceptualisation, decision-making, implementation, investigation, or analysis.

In this section we have examples of students as collaborative partners in the production of courses, resources and research projects for personal and professional development as well as the wider enhancement of the university.

The Case Study Chapters

Enhancing the Wider Postgraduate Experience by Anna Maria Jones, Danielle L. Kurtin, Tianshu Liu and Alisia Southwell outlines how staff and students have worked together in the design, delivery and evaluation of an interactive online, pre-arrival course for incoming postgraduate students. In the delivery, the partnership and student contributions were foregrounded which increased the relatability and relevance of the course. The staff and student authors recommend that projects such as these require adequate funding and enthusiastic dedication to succeed.

Students as Co-creators of an Inclusive Equality and Diversity Teaching Resource co-written by a staff and students collaborative – Annamaria Szelics, Sonya Frazier, Holly Kerr, Jack Knowles, Declan Prosser, Lara Ryan, Victoria Paterson, Nicola Veitch and Stewart White – provides insights into the development of an equality, diversity and inclusion teaching resource that became a part of the undergraduate life science curriculum at the University of Glasgow. The case study highlights the positive effects the jointly developed resource has on both the team members involved in creating it and the students encountering it in their studies.

Speaking of Vocabulary co-written by Daron Benjamin Loo and students – Nima Javanbakht, Zhiqing Rong and Xun Wang – outlines a collaborative, socio-material approach to the creation of a meaningful vocabulary phrasebank by students that was further developed by the tutor into authentic English for academic purposes tasks. The case study demonstrates that such collaborations are an essential part of 'grounded' pedagogy, creating trust relationships between tutor and students that in the process develop student agency, capital and self-efficacy.

In *Staff-student Collaboration across Disciplines*, Andrew Struan, Monica Catherine O'Brien, Ewan D. Hannaford and Stuart J. Taylor provide an inspirational example of a Learning Development team that integrated early career academics – specifically Graduate Teaching Assistants – through authentic collaborative projects. They harnessed an academic literacies approach both to staff development itself, and to the courses, resources and projects they cooperatively produced for the undergraduate students with whom they worked.

In *Researching Together*, Lynn Wright, Max Korbmacher, Martha Gardiner, Julia Ngadi, Ayesha Shahid and Scott M. Hardie outline a university-wide programme that brings together staff and undergraduate students in co-research projects. They argue that successful student-staff partnerships require a structured approach, clear communication about expectations and roles and due care taken with respect to power imbalances. If done successfully, programmes like this increase competence and confidence aiding students now, and in the future.

Enhancing the Wider Postgraduate Experience: Student Partnership in Co-creating Online Learning

Anna Maria Jones, Danielle L. Kurtin, Tianshu Liu and Alisia Southwell

- Partnership with students can significantly enhance quality in HE but requires investment of staff time.
- Student partners should receive sufficient financial compensation to allow them to effectively participate and feel valued.
- Staff-student partnership offers a unique developmental experience for staff and students.
- All partners should have influence over the nature of the student-staff collaboration in recognition of power dynamics.
- Student-staff partnership should be prioritized and funded appropriately at institutional level.

Introduction

Within the Faculty of Medicine at Imperial College London (ICL), UK, a student-staff team have collaborated in the design, delivery and evaluation of an interactive online, predominantly pre-arrival course entitled *Adapt to Postgrad* (ATP). The course is designed to support prospective students in their transition to Master's study through active learning, in the light of the fact that preparedness for postgraduate-taught (PGT) study is an increasingly recognized challenge in the UK (Macleod et al., 2019; McPherson et al., 2017). The literature expresses the importance of early preparation and the 'setting of expectations' to support this transition (Bamber et al., 2019; Evans et al., 2018). In this case study, we propose that the collaborative nature by which the course was developed significantly enhanced the effectiveness of its reach and impact.

The *Adapt to Postgrad* Project

> It has been a completely new experience for me to be working with not only students but also support staff.
>
> (Tianshu Liu, Student Partner)

The *Adapt to Postgrad* (ATP) course is a non-compulsory online, interactive course which was piloted in September 2020 with the purpose of supporting the student transition to PGT study. In its launch year, the course engaged over 600 students and received an overwhelming amount of positive feedback from students who undertook

the course, many expressing feelings of increased preparedness and change of thinking. We as the ATP development team feel that this reception not only suggests success of the course itself, but points towards successful collaboration throughout this project. Whilst it is critical to note that the ATP course has gratefully had input from a large number of students and staff from across the institution, in this case study we will be specifically exploring the nature of our closest and most extensive collaboration: our student-staff partnership.

Funding via Imperial's StudentShapers scheme allowed the ATP development team to recruit four paid student partners to work alongside its staff partners (an Academic Developer, Senior Learning Designer and Project Manager). Whilst student partners were current or ex-Master's students within ICL's Faculty of Medicine, all were students of different PGT programmes of study, and had entirely different amounts (and nature) of experience with collaboration. Three of the four were international students, which may well be reflective of Imperial's high proportion of non-UK students. Due to the Covid-19 pandemic, much of this partnership has been conducted in an entirely remote manner, and as we write this chapter there is a seven-hour time difference between us! Whilst this has required some navigating together, we feel that another indicator of the effectiveness of this collaboration is the extent to which we as students and staff have valued working together in this diverse team. The authors of this case study believe our collaboration serves as a model of student-staff collaboration; for reasons we will discuss further in the sections below.

How It Went: Reflections and Lessons Learnt

> Working with staff on the ATP project has been valuable – it's been refreshing to see how open staff have been to input and suggestions throughout and it has been good feeling genuinely useful as part of the process of improving the ATP course.
>
> (Alisia Southwell, Student Partner)

> Perhaps this is partly due to the fact that I'm in my early career, but it is almost strange for me to use the label of 'student partners' – they are such integrated and effective members of the team that I simply view them as colleagues.
>
> (Anna Maria Jones, Staff Partner)

Our aim was to collaborate in a manner authentic and reflective of the professional workplace, without ignoring areas where student partners required extra support to contribute effectively. Both students and staff were involved in all key stages of course development, including design and evaluation.

Student Partner Reflection

As implied by our case study title, as student partners we very much appreciated being involved in a meaningful project, the ability to influence decisions, having a specific end goal and seeing recommendations being implemented in real time. This, in

combination with being paid members of the team, led to us feeling like genuinely useful and valued partners. For one of us who had not had the chance to experience working life before this partnership, this collaboration provided the chance to experience how work differs from study, and resulted in improvement of communication skills and confidence. We also valued the opportunity to see how the institution functions 'behind the scenes': being able to understand the workload involved when developing and maintaining a course, how projects are carried out and funded. We are not sure where else we would learn this!

Staff Partner Reflection

From the staff perspective, it is very difficult to briefly express all that the student partners brought to this collaboration, but perhaps the most standout characteristic of them all was their unwavering enthusiasm. This could be attributed to their positive working mentalities and the fact that this was a special and temporary opportunity, which they certainly made the most of. They were excellent colleagues who further enhanced the diversity of the team due to their unique perspectives and the variety of their lived experiences and skillsets.

Participant Feedback

Students who engaged with completing the ATP course also valued the student-staff partnership behind the design of the course. Throughout ATP we ensured that our partnership was transparent, so that the insights of our student partners formed content that users engaged with. The feedback consistently stated how much participants valued this, and how it enhanced perceptions around relatability and relevance of the course.

Meta-reflection

In the spirit of true reflection, what could we have done better? One of our student partners recently expressed frustration regarding the barriers of remote working, the lack of spontaneity and more 'casual' conversation. During the Covid-19 pandemic I (Anna Maria, Staff Partner) continually encouraged teaching colleagues to facilitate more 'informal', additional learning in order to enhance a sense of virtual community (Peacock et al., 2020), and yet until this comment I had not thought about creating similar spaces in the collaborative context.

Recommendations for Student-staff Collaboration

[Staff partners require a] desire to understand the student mindset. If one wants to use students to complete tasks, that's all right, but then the student is not a partner, they are a subordinate. If a staff member truly wants to partner with a student, they will then seek to understand and utilise the mindset of a

> student … To prospective staff partners I'd encourage them to ask themselves 'do I have the time and inclination for this responsibility?'
>
> (Danielle Kurtin, Student Partner)

> Characteristics for a good student partner are, in my opinion, someone who is eager to learn and get involved … Other characteristics can be taught and reinforced but enthusiasm and genuine interest will make the collaboration much smoother.
>
> (Erin Simpson, Staff Partner/Project Manager)

Interestingly, we are all in agreement that not all students nor all staff would make effective partners in a collaboration similar to ours. Dedication is essential for all participants, and staff must be willing to not only support and guide, but also learn from students and recognize that student input is highly valuable (Bovill et al., 2016; Cook-Sather, 2014) – sometimes more so than staff perspectives! Effective collaboration requires investment and should not be sought by the time-poor, with student partners supported and incentivized through sufficient financial compensation (Burns et al., 2019; Mercer-Mapstone et al., 2017) if possible.

We also emphasize the importance of addressing the power dynamics inherent in these collaborations (Mihans et al., 2008). One of our student partners noted that in other instances where this power dimension had not been adequately addressed, they felt isolated and unsupported. There must be transparency and conversation regarding 'form and format' from the initiation of the partnership to its conclusion, so that all have influence over the nature of the collaboration and continually review its effectiveness together, as colleagues would (Matthews et al., 2018). Practicalities should not be overlooked, including agreeing joint ways of working, collaborating and communicating remotely, and ensuring that all have manageable workloads.

Concluding Thoughts

> Student-staff collaboration is incredibly important to higher education – both for staff development and student growth … not only are these practices sustainable, they're vital to continue to make the university experience one that allows students to develop their knowledge and skills as well as gain practical experience for post-university life.
>
> (Erin Simpson, Staff Partner/Project Manager)

Having been deeply engaged in a relatively small student-staff team, we are unconvinced of the scalability of such committed partnership, and this certainly raises the question of how, without the commitment of adequate funding for salaries, all HE students might be provided the opportunity to be involved in meaningful student-staff collaboration. However, despite questions around scalability, we feel that student-staff collaboration is sustainable if prioritized (and it should be!), and this requires sufficient staff and students to be willing. Further, to do this in an inclusive manner, institutional funding for such partnerships must continue (Mercer-Mapstone et al., 2017).

Acknowledgements

Students as Co-creators of an Inclusive Equality and Diversity Teaching Resource: An Example from Life Sciences

Annamaria Szelics, Sonya Frazier, Holly Kerr, Jack Knowles, Declan Prosser, Lara Ryan, Victoria Paterson, Nicola Veitch and Stewart White

- In this chapter, an example of a successful student-staff partnership is presented with a detailed description of the working approach that can be applied in various fields.
- It provides insights into the development of an equality, diversity and inclusion teaching resource that became a part of the undergraduate life science curriculum at the University of Glasgow and might serve as an example for other institutions.
- The chapter highlights the advantages of problem-based learning and how this teaching method might support educators in empowering students.

Introduction

The Equality and Diversity (E&D) project in the School of Life Sciences (SoLS) at the University of Glasgow (UoG) addresses issues prevalent in inclusive education. A key aim of the E&D project is to raise awareness about E&D issues within life sciences and beyond: to highlight barriers to entry and participation. This is important because 20 per cent of ethnic minority students have been racially harassed in the UK (Equality & Human Rights Commission report, 2019) and STEM disciplines rank among the lowest among subject areas when including LGBTQ+ experiences into the curricula (NUS, 2020).

E&D can be taught using various approaches (Carrington, 1999): from using more ethnically and culturally diverse examples within teaching practice to tackling prejudice and exclusion directly. The E&D project decided to construct case studies of exclusion, harnessing real voices and experience via a social constructionist approach, where the individual context is highly relevant. This teaching technique avoids lists of definitions and characteristics to provide explanations for group cultures (Deloney et al., 2000), but encourages students to think of each person as an individual whose own understanding of the world makes them unique (Dogra et al., 2016). To create resources that encouraged students to think for themselves, we adopted a collaborative way of working with students as partners, as this best encapsulated our approach and our goal of a more collegiate and inclusive, HE.

Setting

SoLS secured funding from the Welcome Trust in November 2019 to embed the values of E&D into Level 1 and Level 2 Life Science courses as part of the curriculum. The idea was to create resources that highlighted issues of inclusion and exclusion for the approximately 1,000 participating Level 1 and Level 2 undergraduate Biology students. The educational materials were built around the nine protected characteristics embedded in the Equality Act, 2010 (Figure 4.1).

Figure 4.1 The nine protected characteristics of the Equalities Act (2010).

The aims of the resources were:

- Raise awareness of E&D issues and the problems that people face within the Life Sciences and beyond.
- Equip Life Science students with tools that will help them to overcome barriers they may face during their studies and careers.
- Improve equality of access to research degrees by improving student understanding of opportunities and related barriers.

Collaborative Method Adopted

The E&D resources were co-created by six student interns and three staff members. Working with students in the development of educational materials has proven to have long-term benefits for the learners directly involved, including improved research skills, heightened sense of responsibility and enhanced employability attributes (Brew, 2003; Healey, 2005). The student-staff collaboration has also been shown to support mutual learning, effective knowledge acquisition and active engagement (Maunder, 2015). Moreover, embedding the student voice into a course structure was empowering for learners (Boston Advisory Council, 2012; Campbell et al., 2009; Toshalis & Nakkula, 2012). Henneman, Lee and Cohen (1995) and Schuman (2006) suggest that for successful student-staff collaboration a clear structure of common aims is needed, and high levels of commitment, trust, respect and patience are required to ensure meaningful partnership between the two parties. These principles were embedded within the group dynamic, and students were given broad, flexible aims and mainly worked independently within their groups, supported with weekly team meetings.

The Working Approach

Student interns worked in two groups creating materials for Level 1 and Level 2 Biology students. The two teams worked separately, but there was a close collaboration between them. Some of the interns with previous experience in designing educational resources and creating videos assisted others to master these skills. Due to the Covid-19 pandemic, the working process and the resources were moved to a VLE. Both teams had one-hour weekly meetings with the three staff members via Zoom, who provided them with support, advice, feedback and guidance. Besides the three staff members, students received support from various UoG stakeholders including the Learning Enhancement and Academic Development Service, Careers Manager, Race Equality Group member/PhD student and a School of Medicine representative with expertise in PBL. Additionally, the interns were provided with digital support by an E-learning Officer, a Web Designer and an App developer.

The educational materials created by the student interns consisted of case studies, role model interviews and quizzes. Each student intern was responsible for creating

a case study where a protected characteristic is explored in a real-life situation with a linked set of tasks and external resources, such as websites and articles. Prior to developing the case studies, the student interns agreed on a set structure for these educational materials. Each case study had intended learning outcomes, a linked set of questions and further resources about the topic covered. The role model section consists of eight interviews, in which interns asked under- and postgraduate students and external research scientists about the barriers they faced throughout their studies and careers and the strategies they used to overcome these obstacles.

The Teaching Approach

The E&D project resources were designed to be integrated into Collaborative ProblemBased Learning (PBL) workshops for the Biology students. PBL was chosen as a student-centred pedagogical approach with reiterative and reflective learning cycles of domain-specific knowledge which improve knowledge acquisition efficiency in students (Dunlap, 2005). Further advantages of PBL include improved academic results (Wahyu & Syaadah, 2018), increased learning motivation (Kang et al., 2016), structural and psychological empowerment (Siu et al., 2005) and high self-efficacy (Dunlap, 2005). Learners were encouraged to find creative solutions for specific issues (Kek & Huijser, 2011) via discussion of concepts, concerns and topics related to E&D. PBL sessions were facilitated in small groups under the supervision of tutors, enabling learners to freely express their opinions on potentially sensitive topics in a safe environment (Phungsuk et al., 2017). The mobile app is available to download: https://play.google.com/store/apps/details?id=com.gla.diversity.

Evaluation of the Materials Developed

To assess the outcomes of the project (ethics approved by MVLS Ethics Committee), students completed a questionnaire before and after engaging with the E&D resource. The responses showed that on completion of the course, students were significantly more aware of how and where to report discrimination at UoG and in the workplace; how to ask for E&D support at UoG and elsewhere; and the role of Athena SWAN within SoLS. Goodness of fit statistical tests revealed that a significant number of the participating students agreed that the E&D resource:

- made them reflect on their behaviour and how they interact with other students and staff members;
- supported their learning;
- made them feel better equipped to challenge inappropriate behaviour at the UoG and elsewhere;
- reinforced their existing knowledge on E&D issues; and
- taught them something new with regard to E&D issues.

Evaluation of the Process

Student interns were hired part-time for six months. Afterwards, five of the student interns graduated from UoG, while the remaining student intern continued to work on the E&D project for an additional nine months. She had the opportunity to present the E&D project at various conferences along with staff members, which improved her presentation and communication skills. In addition, the student intern also led the preparation of the work for publication.

The interns highlighted that this experience was unique and empowering, allowing them to create a conversation about E&D in the Life Sciences that is fully integrated in the curriculum for students at the UoG.

The interns developed their research, writing and video production in the process of developing the resources. The interns reported that student-staff collaboration enabled insight into constructing and evaluating teaching materials. In particular, staff sensitivity and care created a safe space for open and honest discussion throughout the whole process which increased their confidence.

One of the interns working on the E&D resources provided the following feedback about the project:

> Working on this project was a unique experience. I have always had an interest in the issues science faces in terms of diversity, equality, and inclusion. As an undergraduate in a science degree, it is difficult to feel any power to instill change in these causes I am passionate about. It can often feel that we are on the bottom rung of academia and have little time or accessibility to the kind of decision-making processes that help or hinder marginalised groups within science. However, the project with the School of Life Sciences empowered us students to create the conversation about EDI in the Life Sciences that is now part of the curriculum for students at Glasgow.

Conclusion

This project demonstrated that this student and staff partnership was successful in developing Life Science E&D learning resources. Statistical analysis of the survey data demonstrated a positive change in the awareness and behaviour of the students who used the resources. This will be described in more detail in a future publication. Staff and students engaging with the resource reported having a rich experience by being involved in the development and delivery. An additional benefit of this project was that it developed a pathway to discuss social inequality within a science context, as during the usual life science curriculum, there is little room for this.

Senior staff members involved reported that working collaboratively with student interns supported their scholarship and career development. Student interns involved reported that working collaboratively and with agency within the SoLS E&D team was a unique and empowering experience since as students they were given the experience

of collegiate working and the trust to develop educational resources, boosting their confidence and career prospects.

Due to the success of this co-curriculum design approach, Dr Paterson, Veitch and White will continue this work to embed E&D values into the curriculum of honours life science students. This work will feed into a wider curriculum design of E&D teaching resources within MVLS; it will link into the process of decolonizing the Life Science curriculum, and will support Athena Swan applications within MVLS.

Speaking of Vocabulary: A Socio-material Collaboration with Graduate Students

Daron Benjamin Loo, Nima Javanbakht, Zhiqing Rong and Xun Wang

- Learning is shaped not only through interactions between teacher and students, but with inanimate objects as well (Actor Network Theory).
- Materials for an academic writing module were co-produced with students' contributions of words.
- Students' contributions shed light on their learning ecology.

Keywords

Introduction

This case study is co-authored by and reports a socio-material (Gravett, 2020) collaboration between lecturer and students in an academic writing module. This approach affirms the Actor Network Theory, which recognizes the networks created through the interactions between human and non-human entities (see MacLeod et al., 2019). In an educational setting, the socio-material approach recognizes the ecology of students' learning experiences as essentially collaborative and cooperative; relationships between social entities (students, lecturers, administrators, the public) and materials (academic texts, teaching and learning tasks, the HE environment, etc.). These relationships illustrate meaningful networks between actors, from where knowledge and critical dispositions towards teaching and learning may be created (Gourlay, 2017). This case study provides an illustration of what university educators can do to understand how students may learn outside the classroom setting, and collaborate creatively with each other and the study materials.

Context: The Academic Writing Module

The teaching and learning activities illustrated here are from an academic writing module offered by the Centre for English Language and Communication to graduate students at the National University of SG. This module aims to help graduate students prepare for thesis or journal article writing. The module is taught as tutorials, with lessons typically comprising short lectures on language points (grammar, syntax) or writing features (use of cohesive devices), followed by writing tasks.

A Socio-material Approach for Collaborative Vocabulary Learning

To ensure the relevance of this module to the students' needs, a socio-material approach was taken to enhance the teaching and learning materials. This approach recognizes students' interaction with social and material entities in the larger university ecology. These interactions can subsequently complement learning in the formal classroom (see Kumpulainen & Kajamaa, 2020). It also legitimizes students' informal learning experiences as being valuable (Gourlay, 2017). In short, a socio-material approach recognizes that students learn in diverse manners, and that learning does take place not only in a formal classroom setting but also in the informal and in-between spaces of learning.

The recognition of students' interaction with socio-material entities and each other thus became the foundation for collaborative vocabulary learning in this module. A socio-material approach at the graduate level is suitable, given that various studies have reported the significance of teachers having to work closely with graduate students in identifying and designing suitable materials to create meaningful dialogic learning opportunities, instead of referring to ready-made materials found in commercial textbooks that may be irrelevant to the needs of their students (Casal & Lu, 2021; Durrant, 2016; Towns, 2020). In addition, there is a recognition that students can benefit and learn from peers (see literature on peer mentoring, peer learning). Vocabulary knowledge, especially for graduate students, is a vital capital for academic literacy and success in the wider world (Winkle-Wagner & McCoy, 2016).

Teaching and Learning Activities

In this module, students were invited to contribute vocabulary useful for graduate-level conceptualization and writing on an online Excel file. This approach valued students' interaction with outside materials: contributions could be of any words the students themselves thought useful, without restrictions. The vocabulary could be a single word, or even short phrases. Students also included the context of appearance (the sentence where the vocabulary was used), the source of the text, the contributor's name (removed from this case study) and the date of contribution (Table 4.1).

Table 4.1 A sample of entries of students' contributions. Note: EFC stands for emotion-focused coping.

Word or phrase	Context (sentence or paragraph where word or phrase appears)	Source (doi number; URL; title of source)	Date of contribution
salient + impetus	EFC can reduce the saliency of a threat and therefore the impetus to take protective actions might not be as salient.	https://doi.org/10.25300/ MISQ/2019/14360	21-Aug
delineate	Our classification of EFC helps to more precisely delineate the role of different types of EFC.	https:/ /doi.org/1 0.25300/ MISQ/2019/14360	21-Aug
concrete+ obfuscation +specious+ inconsistent	For those researchers who are talented writers, having a concrete model may prevent obfuscation of specious or inconsistent arguments.	http://doi.org/ l0.2307/2393788	22-Aug
nuanced	With more practice and more nuanced language comes more of the originating insight.	http://doi.org/ l0.2307/2393789	22-Aug
resemble + retention	In doing so, their activities resemble the three processes of evolution: variation, selection and retention.	https://doi.org/10.5465/ amr.1989.4308376	22-Aug
postulated	This has not been true in the case of other postulated moderators.	http:/ /doi. org/10.1037/0021- 9010.66.2.166	23-Aug
taxonomy	We introduce a taxonomy that reflects the theoretical contribution of empirical articles along two dimensions.	http://doi.org/10.5465/ AMJ.2007.28165855	23-Aug
exogenous #: endogenous	Social scientists often estimate models from correlational data, where the independent variable has not been exogenously manipulated.	https://doi.org/10.1016/j. leaqua.201 0.10.010	24-Aug
stereotype	Many scholars have observed the common stereotypes of experiments – particularly ones that are conducted in the laboratory.	https://doi.org/10.1177% 2F1094428107300396	26-Aug

Students contributed from August to November 2020, with a total of 277 entries. The contributed vocabulary was processed with a free online software, VocabProfilers (Cobb, 2021), and a majority of the vocabulary were highly specific disciplinary words, which are also referred to as 'off-list' words. Almost all contributions came from academic sources, such as research papers, with a few from non-academic sources, such as online news sites, online forums, and websites. The main source for contributions

being academic texts affirmed that graduate students interacted closely with academic materials to become more familiar with disciplinary epistemological and discursive processes (e.g. Badenhorst, 2018). Through the process, students made their learning visible and shared their learning with others. In further collaborative dialogue with the students, and based on the contributed vocabulary, the lecturer created language tasks to facilitate students' understanding of these words.

Reflection

Collaboration in this module may not be comparable to conventional student groupwork where impact is confined mostly to the students of a group. Here students played an active role in providing materials to each other and the lecturer, who then curated learning experiences for the benefit of all students. The use of students' contributions as and within meaningful learning materials underscored students' legitimacy: they were co-producers of their learning, engaged and active members of the class and wider learning community. This maintains and increases student motivation (see Wilby, 2020).

This was reflected by the student co-authors of this case study. Nima understood collaboration as a way to develop and reinforce one's understanding of vocabulary; Xun understood collaboration as a way to enrich one's vocabulary pool; while Zhiqing understood collaboration as a way to enrich one's understanding of different meanings of a word. These understandings may be gleaned from the student co-authors' reflections:

> I believe to activate and engage long-term memory, collaboration is needed, in any form including assignment and class discussion; otherwise, it would be too difficult to master them by only checking the dictionary. Metaphorically, improving vocabulary is a 'journey', similar to moving from one point of the city to another. We can use an Uber with GPS (dictionary) to go there, but we certainly would forget how to get there. However, if you walk, discuss, and even go wrong, and correct it (collaboratively), then you will master it and can go in the next times by yourself. In short, learning new words is a 'process' and the collaborative approach can be the 'method' to review and leverage the process in a more entertaining manner.
>
> (Nima)

> I think it can, especially through collaboration among students from different disciplines. As a non-native speaker, I find my vocabulary pool concentrates on the words of my field. Collaborative learning with students from other majors can help enrich my vocabulary pool.
>
> (Xun)

> In my experience, how to precisely select vocabulary for different contexts is the hardest part for me in my higher education studies. Although there are many

vocabulary with the same meanings, they might not apply to the same context due to subtle differences between implications or connotations they might contain.

(Zhiqing)

Recommendations for Practice

A collaborative socio-material approach encouraged students to notice words beyond this module to curate for use by all the students on the module. It also fostered a form of collaboration where students were acknowledged to have a meaningful impact on the classroom. Based on these experiences, some recommendations are:

- In any learning setting (not just language), knowledge or skill development should be treated as a developmental process (see Ozdem-Yilmaz and Bilican on Bruner's notion of Discovery Learning, 2020). By doing this, there will be opportunities for trust to be nurtured between students and their lecturer (Jeyaraj & Harland, 2019). This will also render the learning experience more personal, meaningful and long-term oriented.
- Collaboration in a teaching or learning setting should be shaped by the context, guided by the lecturer's practical wisdom (Biesta, 2012). Caveat: to ensure that the lecturer is not overwhelmed by contributions, the lecturer could clearly determine the learning outcomes as well as assessment criteria for students' contributions. This was a limitation of this current practice.

Further Considerations

Based on our case study, there are some research opportunities for future consideration. First, it might be useful to capture the scope of students' engagement with materials beyond the classroom. This may provide an emic insight into how students enact independent learning and share learning. Second, as seen in the students' contributions, students mainly looked at academic texts as their source for vocabulary learning: How can this be leveraged to help graduate students improve competency or vocabulary usage? Third, the lecturer might explore tasks that are optimal for vocabulary learning, especially in a class with students from different disciplines. Fourth, to understand students' learning ecologies, lecturers might gauge students' motivation for their collaboration and their contribution, which may help in the planning or improvement of learning materials.

Finally, as the lecturer of this module, leveraging my students' contribution to enhance classroom materials allowed me to occupy an intermediary space. This enabled students to view me and my module as relevant support for the development of their academic communication needs. What I did in my class also illustrated how an English for academic purpose setting can be flexible and cognisant towards language materials found in students' broader environment, thus approaching language development in a more critical and reflexive manner (Loo & Sairattanain, 2021; Tietjen et al., 2021).

Staff-student Collaboration across Disciplines: An Academic Literacies Approach

Andrew Struan, Monica Catherine O'Brien,
Ewan D. Hannaford and Stuart J. Taylor

- Working collaboratively, permanent staff and Graduate Teaching Assistants (PhD tutors) can create meaningful, impactful academic literacies development for students.
- Academic literacies teaching is an essential part of promoting student success, and collaboration between staff and students (at all levels) is key to enabling this success.
- Multi- and interdisciplinary teaching, research and pedagogic development are crucial to providing twenty-first-century graduates with the essential skills, knowledge and capabilities to succeed.
- Collaboration across subject areas, and between staff and students, should be a central part of engaging students in their academic development.

Introduction

Learning or Academic Developers in the UK context are those 'third space' professionals who typically work directly with students to help them better understand HE and its codes and conventions – its mysteries. Typically, this work is seen as focusing either on 'skills', 'socialization' or 'literacies' (Lea & Street, 2006) with the latter seen as the most liberatory approach. More recently, Learning Development (LD) and the focus on academic literacies development are increasingly central components of the global HE sector (Boyle, Ramsay & Struan, 2019; Hill, 2010). LDs are essentially collaborative, working with students to build understanding of, and confidence and attainment in, academic study, academic research and academic writing. The academic literacies model creates a partnership between LD and student that encourages students to actively participate in their development of the specific practices of their subject areas (Bury & Sheese, 2016; Lea & Street, 1998, 2006). As seen in the examples presented in this chapter, this model encourages LDs to work in multi-disciplinary/ interdisciplinary modes and foreground 'the variety and specificity of institutional practices' (Lea & Street, 2006, 376) and to work together with colleagues and with students in demystifying and detangling these practices.

This chapter discusses the successful integration of Graduate Teaching Assistants (GTAs), who are employed to teach while they undertake their PhD studies, into the collegiate team of LDs at a Scottish research-intensive institution. GTAs come from all subject backgrounds across the institution, but instead of subject-specific teaching, the GTAs teach academic writing, academic study and researcher development to broad, multi- and interdisciplinary groups of undergraduate and postgraduate students.

These GTAs take on a variety of teaching, course- and curricula-design activities, one-to-one meetings with students, assessment and resource creation. All GTAs are active researchers within their own diverse subject areas, ranging from creative writing to astrophysics, with most aiming to go into either academic careers in their discipline or into LD upon completion of their studies. As a result, the role of the GTA is designed as a career development opportunity into the broader world of learning and teaching practice in HE. The role and development of GTAs across HE have been discussed widely, but such discussion has focused on subject-based or subject-specific teaching (Gaia et al., 2003; Hey-Cunningham et al., 2021; Huffmyer & Lemus, 2019; Prieto & Altmaier, 1994; Ryker & McConnell, 2014). There has been little discussion of the role of a multi-disciplinary team of GTAs working to enhance students' academic literacies.

This chapter uses two examples to demonstrate how strong collaboration across the team, between the team and students and across subject areas enables the successful deployment of an academic literacies-based approach to LD. This case study, written jointly by a permanent LD staff member and GTAs, consequently highlights the ways in which collaboration acts as a guiding force within the department.

Composition of the Team and Collaboration Principles

The team is large: there are roughly thirty-six GTAs working with a team of eight permanent LD staff from across the disciplines, and together they assess and teach approximately 16,000 students per academic year (Boyle et al., 2019; Struan, 2021). While many GTAs have extensive experience of subject teaching, practice in and understandings of academic literacies-based pedagogies may be more limited. As a result, the LD department looks to embrace and embed collaborative practice at the heart of its development of GTAs. GTAs work hand-in-hand with permanent members of LD staff to develop, enhance and deploy a variety of initiatives, programmes of study and courses, as described in the first example. The second example illustrates how this collaborative practice takes the form of GTAs, LD staff and students working across multiple disciplinary boundaries.

Working Together: GTAs and LD Staff

The ethos of collaboration is at the heart of the department's structure and organization. GTAs and permanent staff from all disciplinary backgrounds work together to create and deliver all of the department's resources and classes. Meanwhile, students undertaking undergraduate and postgraduate courses at the university shape the departments' focus and teaching through their continual feedback and participation in the flipped- and blended-classroom approach.

At the organizational level, GTAs collaborate across the team, through open and ongoing communication, regarding approaches to pedagogy, course organization and structures. The LD team were early adopters of the university's collaborative platform *Microsoft Teams* and piloted its initial use at their institution. The 'conversational'

format of the platform helped the team to maintain free-flowing conversations, enabled group and individual collaboration to emerge independently, and supported the rapid sharing and co-creation of documents/materials. The Covid-19 pandemic did not disrupt normal routes of communication and instead further solidified this open, digital form of departmental communication, discussion, and collaboration as the norm. The early adoption of *Microsoft Teams* allowed for a seamless transition to entirely online work at the start of the pandemic; the use of these instant, collaborative forms of communication is central to the team's ethos and the priority of ongoing debate and discussion.

The department's collaboration was exemplified by the development of new suites of courses to engage undergraduate students in the enhancement of their academic literacies at the peak of the Covid-19 pandemic, through live, interactive study of subjects of interest (Yu, 2020). Courses ranged in topic from 'History of Argument', 'Let's Play with Academia!' and 'Introduction to Creative Writing' to 'Rationality in Scientific Debate' and 'Learning from the Great Scientists'. Courses were vastly over-subscribed – there were several hundred students across the variety of courses, with almost 300 on waiting lists for free spaces. GTAs and permanent members of staff worked together to design and deliver the courses (Huffmyer & Lemus, 2019; McVitty & Andrews, 2021; Park & Choi, 2009). The GTAs and permanent LD staff members collaborated on all elements of course design: from topic, through class-by-class discussion points, to assessment and co-delivery of teaching.

Student feedback was overwhelmingly positive about the development of their academic literacies. We feel that the success of these projects is a direct result of the way that the GTAs and permanent members of staff worked together to design and build new courses with new pedagogical approaches to academic literacies teaching – with GTA bringing their research background to the LD community and with a permanent member of LD staff bringing experience in the pedagogical approaches (Abegglen et al., 2019; Chan & Luo, 2021; Donovan & Erskine-Shaw, 2020). Moreover, through this engagement in all areas of new course design, the GTAs involved have been able to develop knowledge and experience in course design from start to finish.

Furthermore, the collegiate approach to course design allowed GTAs to develop independence and a sense of self-efficacy in learning and teaching, an element often missed in their career development (Auten & Twigg, 2015; Ridgway et al., 2017). Importantly, GTAs were offered freedom in their approach to course design, resource creation and topic, and were encouraged to work together to develop ideas. This 'crowd-source' approach to course design allowed for innovation, fresh perspectives and interdisciplinary approaches to be foregrounded in this new provision. Collaborative 'best practices' were co-developed by GTAs drawing on the unique experiences and knowledge of their respective disciplines. The department's development of a free-flowing and comfortable space in *Microsoft Teams* saw daily collaboration between GTAs and LDs, and the space allowed GTAs and LDs to easily circulate and test ideas with their multi-disciplinary colleagues, and receive feedback and advice. Before the pandemic, collaboration also involved meetings of varying sizes for the department's projects. Zoom meetings substituted here, and while timing could be challenging, recordings and *Teams* ensured everyone remained up-to-date and involved in the conversations.

Working across Subjects: An Interdisciplinary Team

One of the main focuses of the LD department is the encouragement of inter- and multi-disciplinary approaches to study and research. The model of academic literacies relies on effective understanding – often co-built between student and staff member – of academic practice and norms across a variety of subjects. This broad subject discussion has resulted in the LD department creating and hosting a unique annual undergraduate research conference and research journal (Bownes et al., 2020).

In this work, GTAs act as mentors for undergraduates from radically different subject backgrounds to their own. This collaboration supports students' development of their communication skills to speak to wide audiences in academia and their future workplaces. The external perspective on their work provided by the GTA also enhances students' critical reflection. The GTAs work one-on-one with the undergraduates in the development of a public research talk or a piece of written research for a multi-disciplinary audience. Through a process of active collaboration between GTA and undergraduate, a truly multi- and interdisciplinary piece of research communication is created.

In this role, GTAs act as mentor, guide, tutor and subject outsider. GTAs and students work together to refine research questions, draft presentations/articles and perfect multi-disciplinary communication. The results are pieces of undergraduate work that have been shaped through working and collaborating with GTAs (Stamp et al., 2015). Through this activity, GTAs bring their own experiences and subject knowledge to a new discussion; pairings have included, for example, historian GTAs working with undergraduate medical science students. Through a process of active – and quite intensive – collaboration, these projects encourage undergraduates to consider the broader implications of their research. From working collaboratively with the GTAs, the undergraduates also gain an understanding of different subject approaches and important experience and understanding of multi-disciplinary approaches that may otherwise be absent from their degree. These projects provide GTAs' valuable experience of working with students from across a variety of subject areas; the GTAs engage actively to develop their skills as mentors, interdisciplinary researchers and teachers (Craney et al., 2011; Gennis et al., 2020; Mariani et al., 2013).

Conclusion

The academic literacies model demands that LDs 'collaboratively investigate the range of genres, modes, shifts, transformations, representations, meaning-making processes, and identities involved in academic learning within and across academic contexts' (Lea & Street, 2006, 376). This model is one that applies directly to the role of GTA: through work with the LD department, GTAs are encouraged, through collaboration with staff and students, to explore the range of genres, identities, modes and processes involved in their own career development as educators, and in the academic development of the students with which they work.

The key takeaway elements from this collaborative practice, then, are:

- the importance of multi- and interdisciplinary development in liberatory learning and teaching practice for early-career academics;
- the significance of a standardized, easy-to-use platform for instant communication and dialogue, where that is then utilized for collaborative, cooperative and collegiate working practices;
- the impact of multi- and interdisciplinary communication as an essential part of the twenty-first-century student's studies and of academics' practice; and
- the ongoing relevance of the academic literacies model in developing students and staff at all levels.

Researching Together: A Collaborative Research Volunteer Scheme and Its Student-staff Partnership Evaluation

Lynn Wright, Max Korbmacher, Martha Gardiner, Julia Ngadi, Ayesha Shahid and Scott M. Hardie

- A 'student as partners' approach successfully underpins our undergraduate research volunteer scheme.
- Successful partnerships require a structured approach, with clear communication about expectations and roles.
- Student 'partners in research' learn from the collaborative co-construction of knowledge.
- Research projects enabling a greater degree of co-creation were seen to provide the greatest mutual benefits.

Introduction

Engaging students in research programmes is beneficial; students gain valuable experience, develop core skills and form collaborative working practices with staff and with each other (Madan & Teitge, 2013). The Research Volunteer Scheme (RVS), a collaborative research initiative for students and staff, has run at Abertay University, Scotland since 2006 and at the time was not typical in the UK sector. The RVS continues to successfully run and has expanded over the last fifteen years covering all academic schools in the University. Increased participation by staff and students across the years demonstrates this to be a robust and enduring collaborative activity. Initially conceived by two colleagues in Psychology, it continues to be self-managed by academic staff, working with undergraduates. It is open to all academic staff across the

Table 4.2 RVS – example project types and degree of potential collaboration.

Type	Student role	Degree of potential partnership/collaboration
Students as partners: Staff/students collaborate to achieve the project	Students and staff are co-investigators, collaborating on all aspects of the project	Full partnership potential (see Cook-Sather et al., 2014)
Assistance/collaboration: Problem/area defined by supervisors but actual project to be co-designed by student participants	Researching specific areas, generating ideas, more aligned with the PG student model	Research team member, possibly akin to a junior researcher role, more autonomy than the previous projects
Dissemination: Science Fair Demonstrators	Co-worker, acting with staff members and/or in student teams	Design of task and implementation is usually collaborative
Research Data Generation: Data Collection, Lab tasks	Carrying out tasks, may or may not be directly supervised but usually trained and supported	Limited a lot of the time but there may be some choices, and some supervisors ask the student to research the area and present alternative methods, etc.
Specific Task Undertaken: Review literature, Transcription, Coding	Conducting the review – some autonomy on topic/search possible	May be limited, often chosen by students returning home during the summer, contact periodically via email

University who want to take part and involves students across all years of study. Each year, staff advertise research opportunities/projects to students to launch the scheme, and students apply for specific collaboration opportunities from a list proposed by staff (see Table 4.2 for examples). While we assume the usual benefits of participation (see John & Creighton, 2011), we wanted to further explore the nature of the collaboration and its meaning for participants in the scheme. Central to this exploration was the staff-student partnership we specifically created to do this. This case study outlines the scheme itself and the findings from our partnership project.

RVS for Students at Abertay University

The current iteration of the RVS involves a tried and tested format. There is an RVS coordinator who oversees the scheme and completes the associated administration. Within subject areas, individuals coordinate a local version of the scheme and contact staff to solicit relevant projects. Templates for project descriptions are provided (title, staff, brief details/tasks, approximate contribution), along with completed exemplars. Projects are collated and evaluated for suitability, and ethical approval is gained. Once collated, projects are advertised to students who are invited to apply. Applications involve students ranking project choices, and crucially involve a 300-word statement outlining their motivations to take part. Student applications are evaluated and

students are assigned to projects based on their interests. Upon completion, they receive certification and a profile of experience (outlining, for example, specific training, experience and skills gained).

The RVS hosts a variety of collaborative projects, ranging from a typical research assistant model (where students assist staff with specific tasks) through to co-working, acting as co-researchers (see Table 4.2 for example).

The RVS Team at Abertay University

In our RVS model, collaboration is essential: throughout our careers we have valued working with others acknowledging collaboration as a powerful way of harnessing the potential of individuals, creating new and exciting synergies. Key to our ethos is the decision that this scheme would be one of partnerships for mutual benefits. Research has highlighted the issue of power and hierarchy within a university setting, especially between staff and students (e.g. Marquis et al., 2019), and we were careful to create a structure with clear expectations and guidelines (see Table 4.2). This included term time limits – and ensuring that skills learned and work carried out were formally recorded on students' Higher Education Achievement Record (HEAR) which accompanies their degree certificate.

A recent collaborative project involved an evaluation of the RVS itself. Our team developed, designed and conducted the evaluation project and analysed the data together. Frequent informal meetings allowed us to exchange ideas, discuss the project and prepare to disseminate the information. Meeting regularly as a group and brainstorming ideas allowed us to get to know each other and work much more collaboratively.

Method

The aim of our evaluation was to investigate perceptions of working together within the RVS project from both student and staff perspectives. Four student researchers and two staff members worked on the project. The students designed two interview schedules based on previous empirical research on student research experience (see, for example, Davidson & Lyons, 2018). Questions asked to students and staff included motivation for participating in the RVS, what they hoped to gain from participation and reflections on working with staff/students. Participants were recruited via an advert on the University's intranet, and through meetings with other staff and students participating in the RVS.

Eleven students and four staff were interviewed face-to-face, and seven staff and eight students completed interview questions online. All participants had experience of the RVS. Interviews were transcribed verbatim and analysed thematically using Braun and Clarke's (2006) six steps. The research team read through all transcripts, making coding notes. Initial codes were examined, reflected upon, combined and refined, and

thematic maps were developed and consolidated in an iterative process. In this case study, we focus on the 'Working Together' theme. The other themes not directly related to collaboration (e.g. enhancing employability, developing research skills, increasing confidence) will be discussed elsewhere.

Findings: Working Together

'Working Together' covers aspects of collaboration, mutual benefit and perceptions of what students and staff gained from their partnerships, whatever form their research projects took.

Overall, the RVS was seen by participants as authentic collaboration from its inception, and this is summed up by *Staff 3* who reflects the cooperative ethos:

> Examples in other institutions with research volunteers … where I suppose students were taken advantage of, so students were perhaps keen and naïve and would do lots and lots of stuff sometimes to the detriment of their own work. [RVS] was going to be supportive and also be useful for the student and for the staff member so that both parties were winning.

This view was shared by *Staff 4* and *Student 19* as something more than the experience gained:

> It's a real two-way thing, students get experience and staff get help and support with research projects.

> It did influence me as a team member as I learnt to collaborate with different people and to share responsibilities and tasks according to everyone's strengths and limits.

This also reflects the view that there was a clear sense of partnership, chiming with Cook-Sather et al.'s (2014) definition of SaP. This is supported by *Staff 2*, illustrating that the RVS enables the sort of breaking down of barriers suggested by Bovill (2017):

> I felt I was part of the team. It wasn't just that they were joining working with me, I was joining working with them. So, we were a team …

This was also highlighted across many student interviews, where participation created a sense of inclusion, community and involvement, confirming participants' identities as collaborators within the team, making them partners in their own education rather than mere consumers (Gravett et al., 2020). The opportunity to co-construct knowledge and engage in authentic aspects of university academic practices empowers students' academic development and identity.

This transformation was outlined by a number of students describing how they felt part of a collaborative team and community, and this is summed up by *Student 3*.

> There's more of an understanding in a collaborative sense and I feel from working with supervisors … that it's more of a relationship you have with them, that it's working together with them on a project, not they're going to tell you what to do …

The collaborative nature of their RVS project also helped increase their confidence:

> Confidence would probably be the right word, to have ownership of a project and … collaborate with other people and do it together ….
>
> (Student 3)

Whilst on the whole the experiences were positive there were responses that suggested 'students did not participate fully' or that staff email communication was not engaging. This emphasizes the need for a meaningful partnership to have mutual effort, good communication and clarity of roles (Martens et al., 2019). It is also essential to address issues and power imbalances early on and establish a strong community for a sustainable and successful partnership (Healey et al., 2014). We feel that our open but structured approach to true partnership has been central to this; good practice is to set out the parameters for cooperation at the start and create an ongoing dialogue between partners.

Conclusion and Recommendations for Practice/Praxis

The RVS is a robust and long-lasting co-curricular programme that is academically focused and collaborative; that facilitates the formation of valuable partnerships between staff and students; and is scalable and portable. As reinforced by our evaluation, it has a positive impact not only relating to research skills and experience, but it also enhances competence and confidence aiding students now, and in the future. A vital component for this is the enactment of SaP principles, namely that students and staff work together in a mutually beneficial collaborative relationship. To quote one staff member, where students are co-creators and co-constructors of the study, 'that works especially well' which represents the higher end of Bovill and Bulley's (2011) ladder and epitomizes key elements of a successful approach.

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