Undergraduate students as partners in academic research: The Winchester Research Apprenticeship Programme (WRAP)

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Abstract

This case study introduces and discusses the Winchester Research Apprenticeship Programme (WRAP) in the Faculty of Business, Law and Sport at the University of Winchester. WRAP realises a student-as-researcher approach, with undergraduate students working alongside academics as paid 'research apprentices' on current disciplinary or pedagogic research projects. This allows students to gain first-hand experience of academic research and to develop research skills, as well as transferable skills for employability.

WRAP also increases staff engagement in research-informed learning and teaching and strengthens the research culture within the Faculty. This paper outlines the development of the scheme over nearly a decade, describes its implementation and discusses feedback from student and staff participants.

Introduction

This paper examines the Winchester Research Apprenticeship Programme (WRAP) in the Faculty of Business, Law and Sport at the University of Winchester. The WRAP scheme provides opportunities for students to work as 'research apprentices' alongside academics on their current research projects.

The value of research-based learning has long been recognised and discussed in the academic literature (Brew, 1999 and 2003; Healey and Jenkins, 2009; Walkington, 2015 and 2016). Consequently, undergraduate research programmes or scholarship schemes have been established in the United States for many years (Blackmore and Cousin, 2003) and have more recently become increasingly common in the United Kingdom (UK), as reflected in an expanding academic literature (Ayres and Wilson, 2018). This development has in part been a response to the Department for Education's Teaching Excellence and Student Outcomes Framework (TEF), which strongly encourages student engagement with research (DFE, 2017).

Whilst many universities aspire to develop their students as researchers and as participants in the academic community of practice, students' engagement in research is frequently separate from the research of academics in their discipline and often limited to assessment tasks. Brew (2006, p.13) argues that students "*need to be fully inducted into the culture and community of researchers*" in order to develop essential skills of critical inquiry. The distinctive feature of WRAP is that undergraduate students participate in and contribute to the current disciplinary or pedagogic research of academics in their departments, rather than working on their own separate projects. The use of the term 'apprenticeship' in the name of the scheme points to this concept of learning by working alongside an expert in a field.

As the Faculty encompasses departments with very diverse subject areas, WRAP projects vary widely: for example, apprentices in the Business School worked on a project entitled 'Generation Z Business Incubation Modelling'; others explored 'The Responsible

Management Paradox'. Recent projects in the Law Department included 'A Drama in Many Stages: The Parliamentary Passage of the European Union (Withdrawal) Bill 2017' and 'Critically Ill Children, Privacy and Social Media in a Digitally Incontinent World'. In the Department of Sport, Exercise and Health, students contributed to research projects on 'The Reliability and Validity of Push Band as a Device to Measure Lower Body Power' and 'University Rugby Players' Perspectives on Sport, Injuries and Health'. Students were able to familiarise themselves with the research philosophy and methodological approach of their project leader, as well as with relevant academic literature, and in many cases contributed to eventual academic outputs.

The main purpose of WRAP is to facilitate opportunities for undergraduates to participate in real academic research and develop as researchers in their own right. The programme is aimed at – and, with a few exceptions, limited to – Year 2 students, in order to maximise the value of the learning experience for students ahead of their independent research project in the final year. Alongside these research skills, WRAP apprentices also develop general transferable skills, thereby improving their employability.

Participating academics also profit from WRAP, mainly through the work carried out by the apprentices. In addition, leadership of a WRAP project can be recorded as a research and knowledge-exchange activity and as evidence of research-informed teaching. As the WRAP application process is much simpler than for most other funding sources, it requires minimal administrative effort. WRAP is therefore an ideal starting point for early careers researchers; nevertheless, several experienced academics have also become regular participants.

Alongside student apprentices and academics, the institution overall profits from WRAP, as the scheme strengthens the research culture within faculties and increases staff engagement in research-informed learning and teaching. Finally, there is some evidence that WRAP encourages participating undergraduates to consider postgraduate education.

The scheme

WRAP was initiated by the University's academic development team and piloted in one faculty in 2008/09. From 2009-2018, WRAP at the University of Winchester has encompassed more than 240 projects, involving over 270 academics and 370 students.

Student participants receive a scholarship payment, which is above the minimum wage. Offering payment for participation has become increasingly important for recruitment of apprentices and reflects the University's commitment to widening participation (University of Winchester, 2018), enabling students with more limited financial resources to take part in the scheme. WRAP funding is sourced from central learning and teaching funds, from Student Academic Council and from faculty research budgets.

WRAP is managed independently in each of the University's four faculties. Over the years, each faculty has developed a slightly different approach regarding selection criteria for projects, the number and length of projects offered and the process for recruiting participants. In the Faculty of Business, Law and Sport, WRAP is managed by the Faculty's Learning and Teaching Fellow; this paper discusses the processes and practices in this faculty.

Implementation

The annual WRAP process is initiated in July with a first 'Call for Projects'. During the summer, most academics focus on their research and plan ahead for the coming academic year and so this starting point allows them to integrate WRAP into their plans at an early stage.

Academics propose projects specific to their area of expertise and related to their own active research. Projects are required to meet two main criteria: first, they should provide a genuine and valuable learning opportunity for students, allowing them to develop research and transferable skills; second, they should make a real contribution to the research of the staff members involved and thereby also benefit the Faculty and the University more widely.

Projects vary in length from one to three weeks for one apprentice; where a project involves two apprentices, the combined number of project weeks is limited to four. A project week involves thirty-five hours of work for the apprentice – time which, by agreement with the project leader, can usually be carried out flexibly over a number of weeks. This allows students to manage their WRAP workload in accordance with their other commitments. In addition, more practical aspects are considered: project goals should be realistically achievable within the timeframe of the project, apprentices should carry out a variety of tasks and they should have the opportunity to interact with other academics and researchers to enrich their experience during the apprenticeship. The apprenticeship should not coincide with the assessment period, assignment deadlines or project leaders' annual leave or lengthy commitments elsewhere.

After the proposal deadline, in mid-September, project proposals are reviewed and funding is assigned. All proposals receive feedback and, where they are not suitable in their initial form, proposers have the opportunity to submit a revised proposal for reconsideration.

In the second week of the new academic year, WRAP is launched to Year 2 students. They are e-mailed details of available projects and invited to apply for one or more of these by submitting an application letter and CV. Information is also posted on the electronic noticeboard and on the VLE pages of Year 2 core modules. In addition, project leaders are asked to promote their WRAP projects to their students, and WRAP students from the previous cohort are invited to give brief presentations in lectures and seminars. After the deadline, project leaders review student applications for their project, shortlist and interview candidates and appoint one or more research apprentices.

WRAP projects may take place either during the semester, on a flexible part-time basis, or during the holidays, by agreement between project leader and research apprentice. Most years, a second round of project proposals is invited at the end of Semester 1, with recruitment of apprentices starting at the beginning of Semester 2, and these projects are usually carried out during the summer break, the majority immediately after the end of the exam period.

Once apprentices have completed work on their projects, they receive payment. Subsequently, some WRAP students voluntarily join their project leaders in presenting at staff seminars or other internal events and, each year, a few accompany academics to external conferences or other events.

At the completion of each annual cycle, all participants are asked for written feedback and, with some prompting, the majority of participants complete the surveys. Overall, feedback from project leaders and research apprentices has been – as will be discussed later – mostly positive; however, feedback also highlights some of the challenges.

Challenges

Over the years, WRAP has encountered various difficulties. Some challenges of the early years were actually reversed as the programme became established: for example, the initial dearth of project proposals became a surplus later on. The continuing success of such a programme therefore relies on constant responsiveness to feedback from stakeholders and alertness to changing circumstances.

Funding

Initially, funding for just eight project weeks was made available and, very quickly, interest in WRAP from both academics and students made it necessary to attract additional funding. For several years, various sources had to be identified and extra funding applied for annually. Fortunately, funding for WRAP has now been stable for several years and its long-term success is at least partly attributable to the University's sustained financial commitment to it.

Level of payment

Students currently receive a scholarship payment for WRAP rather than an hourly or weekly wage. The main advantages of this approach are simpler administration and more effective use of resources, as this type of payment does not affect students' taxable income.

However, although the payment is above the level of the current minimum wage, it is still comparatively low, which may prevent from participating those students who need to prioritise better-paid work. Such a possibility, however, has to be weighed against the advantages of maximising the number of projects and project weeks that can be offered to students.

Number of projects

In the early stages of WRAP, it proved challenging to recruit a sufficient number of project leaders. As a result of sustained promotion of WRAP and increased familiarity of academics with the programme, this difficulty was soon resolved and, by the fourth year, project proposals substantially exceeded available funding. At this stage, project criteria were revised and more narrowly defined, reducing the number of proposals. The majority of project proposals received now meet the requirements, or are revised to meet them, and therefore receive funding, indicating that a sustainable level has been reached.

Timing

The current timing of WRAP has been established through a process of trial and error. Initially, WRAP was launched at the beginning of the academic year; however, this coincided with a particularly busy time for academics, who were focusing on teaching and administrative tasks. The earlier launch suits the needs of academics better and allows for recruitment of student apprentices at the start of the academic year.

At first, the scheme allowed for only one round of applications per academic year, which led to the loss of some projects that were potentially very suitable. A second round after Christmas proved highly successful straight away. A trial of three rounds per academic year, however, resulted in much the same number of projects as had two rounds, but with a higher administrative load; the three-round model was therefore abandoned. Current arrangements with two rounds of proposals per academic year, the first with a proposal deadline in early September and the second in early January, have proved to be most effective.

Recruitment of students

From the launch of WRAP, student applications outnumbered projects available. However, recruitment of students has nevertheless faced various challenges. One issue regularly raised in students' feedback is insufficient promotion of the scheme. Various approaches have been trialled over the years and a range of avenues are employed; however, many students unfortunately seem to ignore e-mails and announcements on the VLE, which are the main modes of communication. Projects promoted directly to students by the project leaders tend to attract a greater number of applications.

Whilst there are more student applicants than project places overall, applications tend to cluster around some projects, while others receive none. This may occasionally be related to the project itself – for example, projects consisting solely of a literature review tend to be less attractive to students – but the main factor appears to be the active involvement of the project leader in promoting a project.

In recent years, the number of applications has decreased in comparison to the early years of WRAP. Informal feedback from students indicates that, although they would like to participate, most now have part-time jobs during the semester and many work full-time during the holidays and do not have time to take on additional commitments. This is just one indicator of the negative effect that financial pressures have on student engagement and learning. Flexibility regarding the timing of projects has helped to address this problem only in part.

Clashing expectations

Occasionally, student apprentices' work does not meet the project leader's expectations regarding quality, quantity or both. This often coincides with feedback from apprentices indicating a perceived lack of supervision. Similarly, feedback from academics at times indicates that project supervision was more time-consuming than expected. Possible causes include: the ability of the student apprentice; the structure of the project; the information and instruction made available to the student at the beginning of the programme; and the differing expectations of the student and the project leader regarding the appropriate level of support.

These difficulties are often exacerbated by a lack of clear communication at the interview stage and at the initial meeting of project leader and apprentice, but can usually be managed if communication channels are kept open between researcher and apprentice and with input from the programme manager.

Many of the challenges discussed were identified through the regular evaluation processes, which, however, present their own difficulties.

Evaluation

Statistical information about WRAP participants is compiled by WRAP project managers in each faculty and annually reported to the University's Academic Quality and Development department. This department has also attempted to establish more long-term outcomes – such as WRAP students' progression to postgraduate study – which are more difficult to assess within faculties. Only an incomplete overview of outcomes currently exists and would offer itself as a focus for further investigation.

Similarly, although feedback is collected from participating academics and students every year, data on specific project outputs, such as conference papers or publications, have not been collected systematically, mostly because there is frequently a considerable interval between the project and specific measurable outcomes. Project managers instead keep informal records of outcomes reported back by project leaders.

Although it is therefore difficult to quantify the effectiveness of WRAP, continuing evaluation of the scheme has produced extensive qualitative data. Feedback from participants has highlighted numerous positive outcomes: academics especially appreciate having "*that extra pair of hands*" and value the contribution students make to their projects. The project bid process and the application and interview processes are seen as easy and straightforward and this is considered a particular strength of the programme in comparison to the time-consuming applications required for other internal and external research funding.

Consequently, academics have described WRAP as *"a fantastic opportunity for both students and staff" and "of great value".*

Students particularly appreciate the opportunity to develop useful transferable skills, and many refer to research skills relevant for their FYPs:

"I have gained a variety of skills. They are communication skills, collecting information and collating it, organising, time management. Moreover, I have gained a clearer perspective about the MBA programme, which I might pursue in the future. The experience was relevant for my FYP for the final year. I learnt more about ethics in conducting research, collecting primary data though interviews, how to arrange all the research data in an orderly manner, how to arrange my schedule for different tasks."

"I have enhanced my research skills, speed-reading and picking relevant articles to be used for a literature review. I also gained experience of picking out points that can be used for a literature review which will be useful when I begin researching for my dissertation next year."

"An insight into the process of research, greatly increased knowledge of participant care and equipment knowledge."

Students also report back on the supervision received and most agree that lecturers were available, helpful and approachable, with very few specific concerns raised – and those usually where effective communication broke down.

This generally positive experience is reflected in students' concluding comments:

"I would like thank my supervisor and those involved in organising WRAP for the brilliant opportunity. I hope that this programme is able to continue so that many more students are able to benefit for this valuable experience."

"I would recommend everyone in the future to apply for this project because it is such a great experience, the work is manageable! …And it is really fun!"

As part of their feedback, students made various constructive suggestions for improving the WRAP experience. One such suggestion was to offer shared projects to allow for more teamwork, mutual support and co-operation whenever possible. The majority of projects now offer two apprenticeship places. Initially, students were able to apply only for projects within their own department; however, student feedback suggested that projects should be opened up across departments. Again, this suggestion was taken up and students are now encouraged to apply for projects offered by academics from other departments in the faculty, as long as they can offer the required skills, knowledge and experience. Several students have been successful with such cross-departmental applications.

Conclusion

Several factors have been critical to the scheme's success overall. These include a firm institutional commitment to WRAP, expressed predominantly in sustained funding, and, somewhat conversely, a decentralised approach: WRAP has profited from being managed within each faculty rather than centrally. This has facilitated responsiveness to disciplinary preferences and has also allowed the programme manager to act as a champion for WRAP with colleagues and students. Continuous evaluation of and responsiveness to feedback from participants on one side and to the changing context on the other have also been essential for the success of WRAP.

Effective individual WRAP projects have invariably involved close cooperation between project leaders and students in the spirit of the apprenticeship model. Where students were mostly required to carry out narrow, prescribed tasks independently, without much opportunity to observe and interact with the project leader, learning opportunities, satisfaction and outcomes were usually more limited.

Many initiatives come and go in higher education, yet the Winchester Research Apprenticeship Programme has lasted the course for nearly a decade and has proved to be a successful format for engaging undergraduate students as partners in academic research.

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