Abstract

Much of the current debate about undergraduate student research and particularly the final dissertation or project can be theorised considering a focus on students as partners and co-constructors of knowledge (Healey, Flint, & Harrington, 2014, 2016). This emphasises interesting tensions between freedom – to develop autonomy, problem identification and solving, research and writing skills and creating knowledge, and the role of structuring frameworks, supervision relationships, and practices. Undergraduate research supervisors might feel we are in a bit of a quandary. How far can we help manage a balance between frameworks of development and support, and the kind of independence undergraduate student researchers need to develop? If we use the RSD (Willison, 2009, 2012; Willison, Sabir, & Thomas, 2017) and other frameworks at every step of the undergraduate research journey, will this be a straitjacket? Or an essential, supportive scaffold? This paper explores some of the issues and practices of supervisors working with students. It looks at frameworks, scaffolds and the need for freedom, creative co-construction of knowledge to enable the success of undergraduate research and researchers when engaged with the dissertation, at undergraduate third year (UK) or honours (Australia).

Introduction: Undergraduate Dissertations and Autonomy

Being interested in and engaging with research is not just the task and privilege of a few academics or scientists; rather, it is a normal and essential drive, fascination and a way of systematically getting on with learning for all learners. Research is a focused quest for and creation of knowledge, understanding and ideas, and an articulation of those understandings, knowledge and ideas as expressed and owned by the learner. There is a continuum for the undergraduate and another researcher, from ideas generation through structured, focused hard work to completer finishing. Research activities take place wherever
learning is, and for undergraduates working with a curriculum and learning and assessment activities that are recognised and which enable this, it takes place at all stages of their degree study. This includes early questions and tasks for the dissertation or project (third years in the UK, honours year in Australia). While the journey and the product for the postgraduate working towards a thesis will be greater (though the actual findings could be anything from tiny to world shattering), for the undergraduate this dissertation or project is the biggest and most important, significant piece of work so far on their learning journey.

Willison (2009a.p.5) cites several examples of researchers who recognise the importance of autonomy for research and student researchers, including Boud (1988), Bruce (1995), Butler (1999), Fazey and Fazey (2001). More recently, the exploration of kinds of research (Brew, 2001), and developing students as researchers (Jenkins, 2001), emphasises ways in which research approaches and enthusiasm, as well as success, can be embedded in curricula throughout the degree. The development of independence and autonomy in research appears in the RSD framework (RSD7; Willison, J. and O’Regan, K., 2008) on the far-right hand side as ‘Unbounded researching’, where the parameters for the research, as well as its processes, are student-developed and directed.

Autonomy in the research context for undergraduates is both an end in itself and a staged process. It can be seen on a sliding scale or a continuum ranging from student engagement with closed inquiries directed towards a pre-determined outcome, involving a high level of structure and guidance and using prescribed methods and processes, through to open inquiries involving high levels of autonomy and self-determination. This relates to all elements and stages of the research and encompasses what is investigated and how the research is carried out, resulting data analysed, findings drawn, writing completed. Ranging from one side of the RSD framework to the other, questions and research projects which they inform can be classified as ‘closed’ (supervisor-initiated, specified) or ‘open’ (student-specified). This can relate to: the question, hypothesis or aim of the task; the research methodology and methods, research vehicles or equipment used; the answer to a research question and the confirmation (or not) of a hypothesis, and then the findings drawn and any plans for further research (Hackling & Fairbrother, 1996).

Willison’s Research Skill Development framework is built on earlier work (Willison & Regan, 2005) linking research development stages with autonomy in practice. There are rows in the framework corresponding ‘to the six major student research facets’ and we note that ‘the movement through these facets is not linear, but recursive’ (Willison, 2009: 5).

I see our interaction as supervisors with students in relation to this framework as a conscious one. It is part of both a developmental process where students move at various rates of progress from the left hand (supervisor directed, more closed) to the right hand (unbounded research, student directed) as partners in
this process. Movement is at a different pace probably for each student and their project in the context of the discipline.

While researching as undergraduates, students transit through the cycles back and forth like the game of snakes and ladders. They go up the ladders, finding new levels of complexity and new research tasks, and slide down the snakes to start the new level of work, perhaps progressing faster up each ladder each time (or not, depending on their confidence and success). They are starting perhaps with new tasks and new years of study and returning to an early stage or level with new complexities and demands until the time they begin the dissertation process. At this point, the newness of the research work could well send them down a major snake in this serious snakes and ladders game, yet again, partly because of the length, breadth, depth and sheer enormity of the task. Willison identifies the autonomy of Level 5 with Glassick et al.’s (1997) moment of high level of autonomy and creativity in researcher terms, where they apply the ‘standards’ of rigour and impact (Glassick, Huber & Maeroff, 1997) to construct new knowledge.

My thought about our supervision of their work is that we match their moves and supervise different learners as they transit between the levels at different stages, differently for each other. Beginning with sound, structured agendas and clear working procedures is a good start, since the research learning journey could well be quite messy and complex. A manageable structure, that fine structure, like fine silver wire round the developmental, creative soap bubble of their research work, questioning, exploration, developing certainties and forms of expression, needs to be firmly established. The creative, in my view, is nurtured by the delicate but firm structure (Wisker, 2007; Wisker, 2009; Wisker, 2013).

**RSD and Students as Partners**

The RSD framework is initially defined as a conceptual diagnostic tool to identify what the research learning demands and skills are and where the student’s development towards autonomy is located. I see its application in practice in terms of contributing to an effective part of the students as partners movement, its theory and processes, in action. Using the framework in supporting and enabling undergraduate student research is a partnership activity. Both working with students as partners, and engaging the framework in supervision are important. Dialogue between supervisor and student, and very soon after the inception of the process, student-led co construction of the research and dissertation, are underpinned by the values of students as partners. Like the RSD framework itself, this dialogue and co construction is another interesting balance between freedom, autonomy, equality, and guidance, support, structure, empowerment.

There is a great deal of policy support for this drive towards student autonomy and partnership, and such partnership in the research process is part of this. The Welsh Government’s (2013) ‘Policy Statement on Higher Education’ states that:
Partnership is about more than just listening to the student voice and enabling students to have input in decisions that affect them. True partnership relies upon an environment where the priorities, content and direction of the learning experience are all set by students and staff in partnership (Welsh Government, 2013: 21).

In 2012, the UK National Union of Students (NUS) published ‘A Manifesto for Partnership’ (NUS, 2012), and in the same year the UK Quality Assurance Agency (QAA) published a new chapter of the Quality Code, on Student engagement. Strategies for engaging students as co researchers include: ‘Emphasize the construction of knowledge by students rather than the imparting of knowledge by instructors…. Ensure that students experience the process of artistic and scientific productivity’ (Hattie & Marsh, 1996: 533). And, importantly, at module level, this relates not just to dissertation and projects, as Jenkins notes:

- Develop student understanding of the role of research in their discipline
- Develop students’ abilities to carry out research in their discipline
- Manage student experience of staff research. (Jenkins, 2001)

The undergraduate research dissertation is the longest, deepest piece of work a student has undertaken to date, and for the student it could well feel both exhilarating and very daunting – a chance to nurse a fascination over a long period of time and produce a large body of work. It might feel like climbing a mountain. Asking very hard questions and undertaking very complex research processes is the way forward. It is, however a matter of perspective, managing what is realisable without losing the inspiration, excitement of new breakthroughs in thinking, and the skills development. As a supervisor, you will know that there are a number of constraints on this large-scale plan and this world shattering intention and change process. In the scheme of research undertakings, the undergraduate dissertation instead looks small (length of an article) and short on time (often, in the UK, from October to early May, 7 ½ months; in Australia a year for honours perhaps), and the skill development needs substantial. The first task is usually to help the student narrow the grand, large scale aims and scope they have in mind. It might look like a lifetime’s endeavour but it is actually only half a year’s task.

In a similar vein, Margaret Kiley and Gerry Mullins put the PhD into perspective when they said, ‘it’s a PhD not a Nobel Prize’ (2002). But by being realistic, we don’t want to squash enthusiasm, and we do want to enable a certain level of autonomy and independence because these are essential for good research. So, the movement back and forth from control to autonomy, an iterative move, is essential. There are also many skills to be developed. These include planning the project and managing the time; learning to source, select and critique materials for literary review; theorising to deepen the conceptual exploration and understanding and used as a lens; identifying methodology and methods which suit the project and inform
the dissertation; carrying out a complex enough project in time and space with people, things, contexts; analysing data and drawing findings from this. During this developmental journey and then over and over, iteratively at the end of the research and the written piece, for cohesion, there is the skill of communication. Typing it all up into a well expressed, well argued, well managed piece with a central argument, claims and evidence linked is crucial so that the work can be shared, and this involves research writing skills. It is also essential that the work does make (an albeit possibly quite limited) contribution to knowledge – perhaps big for the student, small for mankind. The whole journey should enable the skills development and learner independence which will be valuable in future research for master’s and beyond for some, in employment on a regular basis for all.

The tasks for supervisor and student together as partners in this research process are to find ways in which this delicate, robust, strong as steel, balanced structure of research development programme, and the messy, exciting, frustrating, rewarding, creative journey of the undergraduate research can take place effectively and successfully.

**Enabling Structures**

I am not personally fond of project planning or the over complex straitjackets of management structures where paper versions of rules, regulations, practices and plans pretend to substitute for the messiness of exploring, trying out, confusions, re-evaluation. However, I do think that with the undergraduate dissertation, as any other research project, the structure afforded by making steps, stages, outcomes and processes to enable a student to get there explicit, explained, understood in place and followed should run alongside this energy of discovery and enable the discovery to take shape. I think of the undergraduate dissertation, the imaginative exploration and originality of it, the ideas and excitement of it, and the planning and managing processes that enable this, as like a soap bubble carefully encased in silver wire. One survives because of the other; nothing is crushed.

As supervisors then, our task is to enable this delicate, tautly structured process to support not only the students’ ideas but their practices, their enthusiasms, their ideas, hard work and completer finishing, making these steps manageable and a positive experience. The steps include exploration, planning, achievement, learning from mistakes, the reflection and awareness of what works and doesn’t, what is being learned and what needs to be rerouted, re-thought through. The stops and starts of a research project and the iterative processes involved of returning to the question, the data, findings and the writing to hone and perfect are all part of the learning journey experience. We work as partners in the process but like the supportive structure of the dissertation framework, we are also supportive both in a systematic and identifiable way. This entails regular meetings and clear indications of the route, the feedback and feedforward, and being responsive and proactive with different students and different projects to match
those different needs. We support and nudge students to maintain momentum, maintain energy, excitement and creativity and also to produce a planned, managed articulated work. I don’t see any contradiction in this, and the RSD framework helps to structure this process rather than to straitjacket and mechanise it.

**Conclusion**

A good dissertation accompanied by an awareness of the development of accompanying skills is not something produced by shamanistic activity; it is not actually something so ephemeral that we cannot talk about it. I think as supervisors it is our job to make the structure clear and explicit and negotiate it with the student as partners, offer appropriate meetings, plans and enable the visualisation, then the embodiment of the really achievable goals and outcomes. Some of the flexibility and creativity emerges at every step of the research process, with the student’s guided, nudged, questioned choice and selection of question, theory, literature, methodology and methods, data analysis practices, and what is important, significant, in terms of themes and findings, the contribution. Much of this is clarified and enabled in mutual dialogue between partners, based on a scaffolded structure such as, in this discussion, the RSD, that silver mesh enabling the soap bubble of something new (enough) to emerge and be visible. The scaffold, the silver mesh, like the nurturing and provoking supervisor, offers both security and the opportunity to do something daring, risky, in a managed environment. The scaffold and supervisor also support their ability to realise what they are achieving, how far they have developed and what they need to do next to move on. This requires a lot of supervisor skill but this too is not magic, it is mostly about a mix of structured planning, staged meetings, and some measure of empathy and flexibility with the differences that learners present in their undertaking of this complex, demanding project and process. This process often seems to emerge out of chaos and take shape in a well written dissertation, and the student’s knowledge both of their own limitations and developed skills.
References


www.nusconnect.org.uk/campaigns/highereducation/partnership/a-manifesto-for-partnerships

www.qaa.ac.uk/publications/informationandguidance/pages/quality-code-B5.aspx


