

## Enhancing the Undergraduate Research Experience

Engagement with undergraduate research is associated with a number of benefits for the individual student (Seymour, Hunter, Laursen, & DeAntoni, 2004) and research experience may be particularly beneficial for those wishing to work within the subject discipline (Lopatto, 2004). In British universities, particular emphasis is placed on the role of the final year or capstone research project (Booth & Harrington, 2003). Consequently, the dissertation holds 'a privileged place within many degree programmes' (Hemmings, 2001, p241), forms a substantial part of the degree classification (Pathirage, Haigh, Amaratunga, Baldry & Green, 2004) and may be used to determine student ability at examination boards (Webster, Pepper & Jenkins, 2000).

Research dissertations vary considerably and Levy (2009) developed the Healey (2005) model of undergraduate research and inquiry to distinguish between research projects that are staff or student led and research that explores and / or acquires existing knowledge or research that builds knowledge. Little information exists however about the experiences of students engaging in the resulting forms of undergraduate research (pursuing [information-active], authoring [discovery-active], identifying [information-responsive] and producing [discovery-responsive]). The current study investigates current practice and student and supervisor perceptions of undergraduate research within Psychology Departments at British Higher Education Institutions. A Higher Education Academy Psychology Network mini-project grant supported the study.

### Method

Students ( $N = 108$ ) and supervisors ( $N = 62$ ) completed the online survey. Telephone interviews held with additional students ( $N = 10$ ) and supervisors ( $N = 13$ ) enhanced the survey data. Separate versions of the survey and interview were available for students and supervisors. Participants were recruited from psychology departments at British Higher Education Institutions. Participants completing the online survey first reported how prepared students were to complete a number of tasks by the time of the initial supervisory meeting and rate how student or supervisor led various aspects of the research project were. The remainder of the questionnaire asked participants to respond to a series of statements, describing student skill development, the role of the supervisor, the extent to which the supervisor should also act as a mentor, the research community and student satisfaction. Students and supervisors were asked additional questions where appropriate and the telephone interviews addressed these subjects in more depth.

## **Results**

Students reported being significantly more prepared for the research project than supervisor ratings with regards to the critical review, research question, research design, location of materials, ethical issues and project management. Students believed the project to be more student led than supervisor reports with regard to the research area, research question, methodology, measures and analysis. Supervisors assigned significantly more value to the project, believed that the project developed skills that other assessments could not, formed a good measure of ability, represented an important part of the degree and also reported that participation in other projects developed skills.

Students and supervisors perceived the role of the supervisor differently. Students were more likely to report that supervisors should be an expert within the subject area, provide feedback about progress and record the content and outcomes of supervisory meetings. Students were more likely to report that supervisors should act as a mentor, providing insight into the research process and encouraging students to publish their findings. Supervisors were more likely to perceive students as members of the departmental or psychological research community and believed students more likely to enter research following the project. However, students were more likely to report that undergraduate research enhances disciplinary knowledge.

There was no significant difference between students and supervisors on student satisfaction. The extent to which projects advanced knowledge and leadership of the project (supervisory or student led) predicted student satisfaction. Those conducting student led projects and advancing knowledge reported higher levels of satisfaction, suggesting that the authoring and identifying types of supervision are the most and least satisfying respectively.

## **Discussion**

The current study investigated student and supervisor perceptions of undergraduate research, extending previous research conducted at American institutions or focusing on postgraduate research. Consistent with previous findings (Wuetherick & Berry, 2008), the current study revealed important differences between student and supervisor perceptions of research conducted by psychology undergraduates. In particular, students were less likely to believe that students form part of the (departmental or psychological) research community. These findings are consistent with Zamorski's (2000 p1) conclusion that 'While students value being close to research, and to the idea of a university as a research community in which they are included, there are many ways in which they feel excluded'. This suggests that supervisors should encourage students to become members of the research community, through for example dissemination of findings.

With regard to project types, Levy (2009) highlights the importance of project leadership (supervisor or student led) and the acquisition of new or existing knowledge, resulting in four primary

research types (pursuing [information-active], authoring [discovery-active], identifying [information-responsive] and producing [discovery-responsive]). In the current study students were more satisfied if the research project had been student led and acquired new knowledge, suggesting that authoring (discovery-led) research is the most rewarding and identifying (information-responsive) the least rewarding form of undergraduate research. Therefore encouraging students to take ownership of the project and build new knowledge may enhance the student experience.

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