Reciprocal elucidation: a student-led pedagogy in multidisciplinary undergraduate research conferences (0051)

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Abstract:

A multidisciplinary national undergraduate research conference is framed as a threshold experience for the development of self-authorship. This paper presents student reported learning gains from 90 interviews conducted over three consecutive years of a National Conference of Undergraduate Research. It reveals that some students co-create a pedagogy of Foucauldian reciprocal elucidation, through a sense of 'unfinishedness', allowing them to reflect on their own learning in the light of converging perspectives, questions and frames of reference. Bidirectional exchange of ideas and insights enable students to ask and answer questions that transformed each other's thinking, a deep learning transaction they described as empowering. This reciprocal elucidation derives from a multidisciplinary engagement with ideas and concepts in the moment. The opportunity to present research in an authentic setting beyond disciplinary and institutional contexts developed students' skills and confidence, giving additional value over and above the recognised benefits of engaging in research.

Text:

There is no previous study of the benefits of attending a national multidisciplinary conference dedicated to undergraduate researchers, despite the growing number of such conferences internationally (e.g. The United States, Canada, Australia, UK, Ireland, Netherlands), the time and costs invested in attending, and the benefits of a 'students as researchers' approach in Higher Education generally. This paper addresses this gap in knowledge of the learning gains from these conferences, and reveals a student driven learning process, a multidisciplinary signature pedagogy framed here as Foucauldian 'Reciprocal Elucidation' a form of bi-directional knowledge building. This research analyses the reflections of 90 undergraduate conference presenters over three years of the British Conference of Undergraduate Research across the full range of disciplines in order to understand the value of conference participation to the student learning experience and its place in student learning. The research explores the students' experiences through several lenses: extending information flows with the potential to deepen student learning (Foulger 2004), self-authorship (Baxter Magolda 2004, 2009) and as a transformational and liminal experience (Meyer and Land 2006; Meyer, Land and Baille 2010; Cook-Sather and Alter 2011).

The value and efficacy of undergraduate research in student learning is well evidenced as a high impact educational practice (Kuh 2008) promoting critical thinking and reflection, increasing motivation and confidence, and advancing skill sets and for many the intention to pursue post-graduate study (Hunter, Laursen and Seymour 2007; Lopatto 2006; Russell, Hancock and McCullough 2007; Spronken-Smith et al. 2008). While undergraduate project work has featured in higher education

learning for the last 200 years, the emphasis on research has grown and is fore-fronted, for example, in the statement that undergraduate research is the 'pedagogy of the 21st-century' (Council on Undergraduate Research 2005). Multidisciplinary student conferences enable participants to view their research findings in a wider context, allowing recognition of their own disciplinary perspective for understanding the world as they are about to graduate. Multidisciplinary undergraduate research conferences are a relatively recent innovation.

As students develop self-authorship (Baxter Magolda 2004, 2009), they are able to consider what they know and how they came to know it, to judge the suitability of their knowledge as applied in particular contexts, and to be able to reframe their knowledge purposefully for different contexts. Promoting self-authorship at undergraduate level requires learning to assume the form of a collaborative exchange of perspectives. This necessitates interaction between a diversity of individuals in order for learners to reflect on alternative viewpoints, to shape self and to help shape others. This paper demonstrates that conference settings can offer spaces for conversation, interaction and reflection that promote self-authorship.

The methodology comprised a total of 90 interviews, averaging 30 minutes in length, were undertaken with students who had presented either a poster or a paper at the British Conference on Undergraduate Research, a national multidisciplinary undergraduate research conference. The interviews focused on three main areas: the experience of preparing for the conference, of presenting their paper or poster, and of being a conference participant, especially in terms of interacting with other poster and paper presenters.

The results reveal that an undergraduate research conference is an authentic setting in which students can experience a step-change in cognitive and affective processing, becoming critically self-aware and committing to enhancing the thinking of other students by developing the *confidence to ask the difficult questions* (R45). The conference can be conceptualised as a liminal space (Cook-Sather and Alter, 2011) or threshold in which there are changes to power relationships and the participants recognise that their understanding is in a state of contested flux. Palmer et al (2009) used liminality to look at turning point experiences as students' transition into HE, and we argue that the conference is an experience at the transition into either employment or further study.

Related to this, the state of being 'unfinished' is what Freire has claimed makes us educable (Freire 1998). The bi-directional flow of information and ideas to develop a shared understanding was a crucial element of the experience for some students, and there was clear acknowledgement that we need multidisciplinary settings to forefront reciprocal elucidation (Foucault, 1977). The findings strongly suggest a shift from the prevailing transmission model of education to a work of thought model.

There are clear implications for practice. A number of universities used departmental, faculty or University-wide undergraduate student conferences to prepare their students for national events such as BCUR. The results here suggest that further development of these opportunities, particularly in a multi-disciplinary context, would have significant value for students not only in terms of closing the 'gap' in the research cycle (Walkington, 2008) through dissemination (Boyer, 1998) but also in communication and lifelong learning skills. The sense of unfinishedness that many students

experienced at the conference challenges us as academics to think of ways in which this process oriented approach can be embedded within the curriculum, providing a space for thinking to develop (Savin – Baden, 2008), allowing students to move beyond a fixation on grades to a focus on building connections for their future and developing powerful knowledge through reciprocal dialogue with each other, enabling them to access new ways of seeing and gaining a broader perspective on the purpose of research and their understanding of the world.

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