Chapter 6

Perceptions of Collaboration Amongst Novice Design Students

Philip Crowther
Queensland University of Technology, Australia

Andrew Scott
Queensland University of Technology, Australia

Tom Allen
Queensland University of Technology, Australia

ABSTRACT

This chapter presents a case study of a large common first year unit/subject in a major Australian university. The unit introduces students to the theory and practice of design through a learning environment that is brief and intense; being delivered in block mode over just four days, and being free of other academic commitments. Students choose from one of two concurrent environments, either a camping field trip or an on-campus alternative, and work in mixed discipline groups of six to nine students, on two sequential design projects. Participant survey and reflective journal data are used to analyse student perceptions of the learning activities and to establish the pedagogical success of learning about collaboration through the act of collaborating; specifically through a project-based design environment. The data supports the hypothesis that groups that emotionally engaged with collaboration and collaborated more effectively achieved higher academic grades.

INTRODUCTION

Collaboration is a critical aspect of professional practice in all design disciplines, and similarly so in design education. As such it is an important learning outcome of the design unit (subject) reported on in this chapter. This case study explores a large ‘common’ first-year unit in a School of Design at a major Australian university, and seeks to expose students’ perceptions of their multi-disciplinary collabora-

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tive experiences. Limited evidence to date suggests that the experience is highly enjoyed by students though the value of the learning experience is less clear. This research hypothesises that students do learn about collaboration through deep engagement; they learn about collaboration through collaborating. In the context of design education, Shon (1984, p. 4) makes the interesting distinction between knowing about something and knowing how to do something; the theoretical and the practical. This study asks the question: is an intense experience of collaboration a successful mode in which students can learn about collaboration, and what are the lasting perceptions taken away from the experience. It will study how students collaborated in order for them to learn about collaboration. This will provide valuable understanding from a pedagogical point of view, as well as a professional one.

Collaboration is an important aspect of the signature pedagogy of design (Schulman 2005, p. 54). The problem-based learning activities of the unit being studied here rely heavily on collaboration as a mode of learning by doing; an important characteristic of the signature pedagogy (Shreeve, Sims, & Trowler, 2010). If what students learn (learning outcomes) is embedded in how they learn it (context and doing) then further research into that context is important (Laurillard & McAndrew, 2002). A constructivist theory of learning supports this view of students creating their own mental models from their experiences (Jonassen & Reeves, 1996, p. 695). This research seeks to understand the mental models that students are constructing, especially around the topic of collaboration, and to understand those models using established pedagogical frameworks.

This research study provides new knowledge about student perceptions of design collaboration and generalizable pedagogical knowledge about student collaborative processes in design education. It has the potential to significantly improve our understanding of collaboration as a pedagogical process in our design education context, and through this allow us to adapt our practices to improve student learning. In the context of design education, Shon (1984, p. 4) makes the interesting distinction between knowing about something and knowing how to do something; the theoretical and the practical. This research project seeks to answer the question; what can students learn about collaboration by doing collaboration?

Analysis of the case study offers two researched understandings of the collaborative activities that the students experienced. Firstly a theoretical analysis of the activities using three significant pedagogical frameworks (Delahaye, 2005; Laurillard, 2002; Honey & Mumford, 1992) to explain the breadth and depth of the structured program, and to support an assertion that this form of collaboration offers greater opportunity for constructivist learning. Secondly the chapter presents an empirical study, through several data sources, of student perceptions of trans-disciplinary collaboration, as experienced through the program. Evidence from this analysis similarly supports the success of the program in enabling student learning. Comparisons are made between the field trip setting and the less immersive and more familiar on campus setting; and also between groups of students who received high grades and those who received lower grades.

Student perceptions have been gathered using an on-line survey and asked students to reflect on their experiences of collaboration and engagement during the unit activities. The survey has used a five point Likert scale (‘strongly disagree’ to ‘strongly agree’) for responses to questions pertaining to experiences of collaboration and engagement during the block-delivery activities. Data from the survey was cross referenced with students’ visual journals in which they reflected on their learning experience of both design and collaboration. In general student perceptions of the collaborative experience were positive and support the hypothesis that students can learn about design and collaboration by doing design and collaboration.
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