Chapter 10

Learning Design
Through Facilitating Collaborative Design:
Incorporating Service Learning into a First Year Undergraduate Design Degree Course

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ABSTRACT

This chapter presents a project in which students taking an undergraduate course on Design Thinking participated in a university widening participation project, visiting local schools from a low socioeconomic status background and engaging the school students in a design exercise. The project aimed to draw on the value of service learning, learning through an engaged and socially meaningful task, with tertiary students learning to facilitate design, following principles of co-design, in a community of stakeholders, and secondary students gaining contact with university life, seeing an undergraduate perspective on design, and receiving education in design thinking. Tertiary students were asked to develop design thinking toolkits that would support their design facilitation process. The authors present the results of a study of the project, based on students’ assignment submissions, and a focus group following the activity.

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INTRODUCTION

This chapter presents the findings of a study into service learning for tertiary design students, and its potential benefit in giving students useful experience working in teams and facilitating collaborative design. Service learning is a method for teaching students by putting them into the context of a community service activity, with the aim of providing synergistic relationships between students’ educational goals and members of the community benefitting from their support in some way, possibly also an educational outcome, and also to encourage deep reflection in learning through meaningful and real activities (for a discussion of definitions see (Billig, 2000; Billig & Waterman, 2014)). The service learning activity described in this chapter was developed in response to The University of Sydney’s widening participation program, which sought to bring tertiary students in contact with secondary students from low socio-economic status (low SES) schools, giving school students who wouldn’t normally consider university education opportunities to gain familiarity with a university pathway to the workplace.

This chapter outlines how the service learning paradigm was adapted to a design education context, fulfilling these dual goals of service learning in a way that is suited to the specific needs of the design discipline, including, in particular, the need for students to gain hands-on experience working with clients (Nicol & Pilling, 2005), the need to develop teamwork skills in groups of mixed expertise (Adamczyk & Twidale, 2007), and the need to observe and gain an in-depth understanding of design cognition and decision making in a teamwork context (Wright & Davis, 2014). The authors set out to study how service learning might bring mutual benefits to both tertiary and secondary students, in this context.

The chapter discusses the results of the project based on data gathered from the tertiary students’ assessed work, documentation of the process, and a focus group with the tertiary students at the end of the project. It concludes by offering recommendations for using service learning in design education.

This chapter begins by looking at the background in teaching contemporary design thinking, widening participation and service learning. It then details the goals and design of the study, the results, and a discussion that takes into account design thinking education and guidelines for duplicating the activity. The chapter concludes by summarising the case for the effectiveness of the approach.

BACKGROUND

Teaching Contemporary Design Thinking

Design and design thinking are increasingly gaining traction not just as a way to create new artefacts but also as a method of innovation and management (Cross, 2011; Brown & Martin, 2015), following the recognised benefits to the wider population of education in the methods of design thinking (Cross, 1982; Waks, 2001). In addition to developing skills to manipulate physical materials, design and technology education is useful for developing general problem solving skills (Middleton, 2005; Cross, 1982). Technological literacy is another common theme in research on design and technology education (Williams, 2013). As Wells (2012) outlines, design thinking is important to technological literacy, as technology and the built environment take over a greater share of our daily interactions; technology education in school is already a given, and design thinking allows students to identify and define potential technological advancements and how they will play out socially and in terms of the built environment (Wells, 2012).