Chapter 25

Interdisciplinary Studies in Built Environment Education:
A Case Study

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ABSTRACT

The School of the Built Environment at the University of Salford redesigned its undergraduate programmes to include multidisciplinary project work at all 3 levels. This chapter provides a case study of the development and implementation of the interdisciplinary module at final level catering for students from five different disciplines. Overall, students responded positively to the module and academic tutors and visiting practitioners were also positive about student performance, but thought insufficient time had been allocated for module delivery and management, which was demanding than the traditional lecture/ tutorial pattern. The use of a dedicated website for communications was seen as a useful co-ordinating and cohesive device although the use of ICT could be significantly expanded. The greatest challenges concern operational difficulties associated with managing large numbers of students in teams, and composing clear requirements with associated assessment criteria.

INTRODUCTION

Although promoted by several movements in the USA since the 1930s (Chettiparamb, 2007) it is only over the past 20 years that interdisciplinary approaches to problem solving within the built environment has had any real impact. This corresponds with a similar pattern in academic disciplines as diverse as healthcare, music, engineering, law, history, computer science, and biotechnology for example. Education policy in the UK has over recent years accepted the importance of interdisciplinarity / multidisciplinary collaboration and it is now encouraged within both teaching (Higher Education Academy, 2009) and research (EPSRC, 2009).

In response to these agendas, the School of the Built Environment at the University of Salford has redesigned its undergraduate programmes to include multidisciplinary and interdisciplin-

ary project work at all 3 levels of study. This chapter reports on a case study of the design, development and implementation of the 2008/09 interdisciplinary module at final level. There were approximately 200 students across five disciplines: Architectural Design & Technology, Building Surveying, Construction Project Management, Quantity Surveying and Property Management & Investment.

BACKGROUND

Disciplines and Professions Within the Built Environment

As Adam Smith predicted, the enormous expansion of economic activity in the 18th and 19th centuries encouraged a tendency towards increasing specialization, and with the rise of technology and occupational expertise, many groups began to claim *professional* status: architects, engineers and surveyors them. This fragmentation of disciplines within construction and real estate provided a degree of efficiency in the performance of the various tasks. However, by the second-half of the 20th century, the UK industry was plagued by conflict and characterised by a win-lose mentality, thereby becoming increasingly ineffective. Attempts to improve the management and co-ordination of projects had only a marginal impact on performance.

As a result several recent reports consistently and heavily criticised the industry as being unable to satisfy its clients, citing the relatively divisive nature of the construction industry in the UK when compared to Japan, USA and other European countries (Collier et al., 1991). A recurring conclusion was the need for greater collaboration amongst professionals. Attempts to encourage an interdisciplinary approach appeared to gather momentum through reports published by the Royal Institute of British Architects (Burton, 1992), the

Construction Industry Council (Andrews & Derbyshire, 1993), Latham (1994) and conferences at the University of Cambridge (1991) and the University of Central England (1995).

In parallel, the significant growth in the use of *partnering* or *alliancing* systems of procurement also created a focus on: the identification of mutual objectives; robust problem resolution techniques; and systems to monitor continuous improvement in performance (Bennett & Jayes, 1998). All three would require substantially improved levels of co-operation between disciplines and project participants if partnering approaches were to be successfully implemented (Wood, 2005).

The Nature of Interdisciplinary Activity

Arguments for interdisciplinarity generally stem from debates surrounding disciplinarity. According to Chettiparamb (2007) two main threads can be found. The first argues for interdisciplinarity normatively, positioning it either in terms of filling the interstitial gaps left between the disciplines, or in terms of collaborative transcendence surpassing what disciplinarity can achieve independently. A perspective summed up by Sir Alan Cockshaw, "What we can do together that we cannot do apart is truly amazing" (Spence et al., 2001, p. xii). The second type of argument for interdisciplinarity is more phenomenological, in that it emanates from observations of practice. This view proposes that interdisciplinarity already exists within disciplines.

Cooper (2002) makes the distinction between multidisciplinary work where two or more disciplines work together without stepping outside their traditional knowledge domains, and interdisciplinary work where there is a shared perspective which transcends boundaries. Newell and Swan (2000) use the jigsaw, kaleidoscope analogy: multidisciplinary being the former where pieces are combined but not changed to create the overall

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