Chapter XLIX
Teaching the Socio–Technical Practices of Tomorrow Today

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ABSTRACT

This chapter explores the challenges associated with teaching the principles of socio-technical systems in the dynamic climate that characterizes work in today's—and tomorrow's—world. Avoiding a "socio-technical gap" involves preparing the designers of tomorrow in such a way that they can anticipate society's future needs and technology's future potential and prospective peril. By way of a narrative that draws on the author's own experiences teaching social informatics (SI) as part of an information studies degree program, this chapter discuss how her own research perspective in relation to socio-technical and social networking systems co-evolves with the classroom experience. The case study offers examples of tutorial activities and assessments to illustrate how the suggested approach to teaching and learning can be applied in an STS classroom.

Habits are useful but they can also be deadly. They are useful when the conditions in which they work are predictable and stable. But what happens if and when the bottom falls out of the stable social world in and for which we learn? Is it possible that learning itself—learning as we have come to enact it habitually—may no longer be particularly useful? Could it be that the very habits that have served us so well in stable times might actually become impediments to social success, even to social survival?

—McWilliam, 2005, pp 2

INTRODUCTION

Our 21st century existence is highly mediated and digitised. Social responses to what seems like an ever increasing rate of technological change range from the dystopian to the utopian—with a very rich and diverse middle ground. The modern digital landscape is under constant transformation.

Consequently the educational programs needed to equip future designers of the socio-technical systems required in such a world are undergoing a transformation of their own. Handling the complexity of social interaction and technological innovation is increasingly multidisciplinary in principle as well as in practice. Training on specific tools and applications is swiftly out of date (e.g.: Bawden et al, 2007; Hartman et al. 2005).

Understanding the social realm is equally challenging given the diversity and complexity of social engagements in this landscape. Thus navigators of this terrain need to be able to respond quickly to change. To be truly successful as a designer of such worlds, however, an individual must also be able to quickly appreciate the multiple perspectives in existence and proactively devise tools to help others make sense of it. Thus, the demands placed on educators in the field of socio-technical design move well beyond teaching about tools and applications for designing solutions to today's problems. The dynamism and complexity characterising the working world our students will enter means we need to prepare them to innovate, anticipate and imagine what might emerge.

This chapter explores the challenges associated with teaching the principles of socio-technical systems in the dynamic climate that characterises work in today's—and tomorrow's—world. Avoiding a "socio-technical gap" involves preparing the designers of tomorrow in such a way that they can anticipate society's future needs and technology's future potential and prospective peril. By way of a narrative that draws on the author's own experiences teaching social informatics (SI) as part of an information studies degree program, this chapter discuss how her own research perspective in relation to socio-technical and social networking systems co-evolves with the classroom experience. Thematically this topic relates to Social Informatics, eLearning practices and education research.

CHALLENGES FACING TEACHERS OF SOCIO-TECHNICAL COURSES

Teaching practices associated with the education of students in the area of socio-technical design and social networking systems challenge both the teachers and the learners to move beyond conventional analytical/creative dichotomies. The pace of change is such that whatever we are teaching about design and socio-technical systems today is likely to be overrun by outcomes in research and practice by the time our students enter the workforce. With the rapidity of change in digital environments, graduates are increasingly called upon to devise imaginative solutions to organisational and social challenges.

Social computing and Web2.0 developments are recent illustrations of the rapidity with which the landscape is changing. Working in these industries requires analytical techniques for identifying and evaluating social consequences of design and implementation. In addition to technical know-how, it requires imaginative problem-solving. The successful professional in these industries is one capable of adapting to change because the rate of change will quicken, not slow. Thus, it is highly unlikely that students could ever hope to receive all the technical know-how that might be expected of them in these industries. A glance through job advertisements in any part of the world amplifies what is being reported in studies of the job market and university training (see for example: Bawden, 2007, Grant, 2007; Clayton-Pedersen, 2005; Kling et al, 2005; McWilliam, 2005). While an awareness of technical elements is still important, other qualities characteristic of innovators must also be valued: creativity, imagination, curiosity, networking and communication skills. These trends suggest that those who will flourish in this environment are those who don't necessarily have a mastery of particular tools or systems, but rather a capacity for lifelong learning.

Are such environments becoming the domain of the 'generalist' who possesses some adaptable 'specialist' skills (acquired while in a degree pro-

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