Chapter 5

Analysis and Description of Education Employing Technological Platforms: Terminology, Features and Models

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ABSTRACT

This chapter aims to provide a background to two aspects that figure prominently in later chapters of this book, by introducing many of the concepts relevant to them, and establishing a consistent terminology with which to describe them. The first of these aspects is that of the technological platforms employed. Technological platforms are used in a range of different activities within interprofessional learning. These activities include accessing learning objects, conducting situative learning in order to establish jointly developed knowledge, providing an opportunity to develop an online professional identity and creating links within a community. In this discussion, one particular platform is particularly referred to throughout. That is the immersive virtual worlds (IVW), also referred to as multi-user virtual environments (MUVE). This is to provide more information for those unfamiliar with immersive virtual worlds and because these particular environments form the basis of many of the case studies described in the remainder of the book. Experience of virtual worlds also indicates that they may have special relevance to interprofessional education, particularly around notions of ‘presence’, ‘embodiment’ and ‘identity’, and these are concepts that have been given a fuller explanation for this reason. Secondly, a range of different theoretical frameworks for understanding the education activities and interactions that take place using these technological platforms are introduced and discussed.

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INTRODUCTION

This chapter aims to explain some of the elements of technological platforms to support learning, and some of the theoretical frameworks with which to analyse the communication that takes place within them, however, some of the terms used in the literature are used with more than one meaning. This first section aims to disambiguate some of these terms and to explain the terminology employed within this book.

Two Definitions of “Mediated Communication”

The educational scenarios described within this book have one thing in common, are all mediated through a technology and can take place at a distance. The term “mediated” is ambiguous in this context, however. In one usage of the word, all learning is mediated to some extent using a tool, since learning occurs “not only inside the person, but in his or her ability to use a particular set of tools in particular ways and for particular purposes” (Littleton, Toates & Braisby, 2007, p. 202). This act of mediation through the employment of an external artefact is a cornerstone of Activity Theory. Activity theory, as formulated by Vygotsky in the 1920s, demonstrates this in the form of a triangle (Center for Activity Theory and Developmental Work Research, 2004), (Figure 1).

Activity theory is misnamed, in that it is not really a theory since it does not have (nor is intended to have) the explanatory or predictive properties of theories (Masterman, 2008, p. 224). However, what Activity Theory does is provide a means to describe an activity through a division of that activity into its constituent parts; considering actions to be both orientated towards some objective and mediated through an external tool or instrument. E-learning focuses on the use of digital technologies as tools, but the distinction between digital learning technologies and other tools is an arbitrary distinction; everything we use in learning and teaching, a chalkboard, a pen, even the words we use, is an information and communication technology in this broader sense.

However, the term “mediated communication” is also used with a different meaning, illustrated in reference to Figures 2 and 3. In Figure 2, Steuer (1995, p. 38) refers to a traditional view of communication occurring between two people A and B, either proximal or remote, where the communication is directly between them. The representation of mediated communication is shown in the next figure. In this scenario, the participants are always remote from each other; communication does not occur directly between sender and receiver, instead an intermediary technology platform (which Steuer calls a “mediated environment”) is created. In this view, the participants then experience this platform, not any direct communication from the other (Figure 3) (Steuer, 1995, p. 37).

Three Definitions of “Object”

The word “object” is another term that is used differently within different disciplines. Within Activity Theory as described above, the term object-orientated was used. This term (or more commonly the US English contraction “object-oriented”) is used differently in different contexts and so this too needs to be defined. In Activity
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