Chapter XX
Visual Meaning Management for Networked Learning

Margaret Turner
University of the Sunshine Coast, Australia

ABSTRACT

This chapter introduces an approach to writing content for online learning over networked media. It argues that few resources currently utilise the fluid and multivoiced capacity of the Internet's networked nodal structure to provide multiple pathways through content, opportunities for independent research and reflection, or collaboration with peers in knowledge building. 'Learning objects' are one way to conceptualise content ideas and learning activities within this flexible environment. To effectively use this resource requires something quite different to traditional sequential writing. A more appropriate approach is to use nonlinear software that can map the nodes of the knowledge domain and make visible the internal relationships, connections, and paths of meaning. The purpose of this chapter is to provide the reader with a guide to developing a better understanding of how meaning is managed visually and proposes tools and strategies for a new structure of writing for networked media.

THE PROBLEM

A key issue for teachers in creating online learning objects for university students is bridging the considerable conceptual gap that lies between the understanding that underpins teaching and presenting learning in a print-media world and those understandings needed to teach effectively in a networked, electronic-media environment such as the Internet. In a book, an author's task is to construct a context and make possible paths made of learning objects through the content which in turn guides the reader towards building complex understandings. Because of the constraint of the medium (pages bound together as an ordered and discrete entity), authors often discard material that is peripheral to the central trajectory. They develop meanings in a direct sequence that can

be relied on to remain as they were written for as long as the book lasts. In many cases, this discarded material would enrich the understanding were it able to be included in such a way that it would not inhibit nor interfere with the essential created meaning of the text. Footnotes are one way of dealing with this tangential material. This sequential method of writing imbues print-media with the perceived qualities of certainty, stability, and authority or control: qualities with which teaching and learning methodologies have long sought to be associated. The networked medium of the Internet, on the other hand, has very different qualities, each with consequences on the making of meaning.

This chapter focuses on rethinking the way we design teaching materials to accommodate and leverage those differences. If content can be reconsidered, redesigned, and married with the concept of 'learning objects,' as elements in a multinodal text, which allow readers/learners to map a path that supports their individual understandings, then a text can become a construction which potentially has greater meaning for the individual learner. These new approaches to writing are broader in their impact than simply making better use of the networked Internet for learning objects. They are relevant to all aspects of academic work because the Internet is changing the way communication is made.

There remains contention as to the form a learning object should take. Should it fit the SCORM model of small instructional components where reusability in different learning contexts is of prime importance (Wiley, 2000), or is a learning object more along the lines of Stephen Downes' (2003) definition: 'Anything—absolutely anything—can be used in learning. What makes it a learning object…is that there is some educational context in which the object was found to have pedagogical value.' In this chapter, learning objects are both the discreet learning object (comprising a purpose, activity, and way to assess achievement) and the broader educational context in which a number of

learning objects (e.g., demonstration, skill tutorial, research questionnaire, practice activity, reflective module) are brought together into a pedagogical object with flexibility for independent activation and exploration.

Rethinking the writing of learning for networked media requires an understanding that we manage meaning visually and that meaning making is rarely straightforward. That we make meaning visually is not something new. A moment's reflection reveals that to build a coherent argument within a lecture (paper, book), academics organise the visual order of ideas and their connections one to the other, over the span of sequential pages. Their idea of appropriate paths to proficiency of knowledge in their domain is gained through their own experience of that domain under guidance of an expert. In the lecture theatre, the lecturer can provide the appropriate guidance, contextualisation, and strategic understandings that identify a learning domain simply by being there and talking in the language of that domain. In the stand-alone and online learning environment, other means are required to establish these discipline-specific understandings. This is where networked media, with its expanded expressive resources, can help take meaning management into new forms, branching out to a distributed map interface that emphasises the visual spread and plurality of connections between concepts. A concept map is a close visual approximation of this way of managing meaning.

Meaning management in a networked environment requires the development and expansion of visual rhetoric—the body of rules, methods, and means derived from experiences that make efficient communication at another time and/or space possible (Fowler, 1908). These rules are important because they establish a common ground that allows meaning to be communicated across boundaries of difference. In the concept map, the connections and relationships, or paths, between ideas, theories, and practices are made more visible than the same ideas expressed in

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