Chapter 8

High-Touch Interactivity around Digital Learning Contents and Virtual Experiences:
An Initial Exploration Built on Real-World Cases

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ABSTRACT

In high-demand learning, such as in higher education, high-touch interactivity between the subject matter experts and learners is critical as is the mutual creative frictions between the learners themselves. Technological affordances have enabled digital learning contents and immersive spaces to promote high-touch interactivity, intensive long-term conversations, interactions, co-designs, collaborations, and innovations between people. A majority of the digital contents and immersive experiences have been designed for particular purposes; some others are more free-form. In addition, these digital contents may be human-mediated or automated. This chapter examines real-world cases in the uses of digital contents and mediated virtual experiential contents for high-touch interactions.

INTRODUCTION

As learners in higher education specialize in a particular domain field, they engage in complex learning—which often involves ill-structured problem-solving and fresh innovations. A critical element in such learning involves "high-touch interactivity," which refers to intensive social interactions, multi-modal communications, co-designs, collaborations, and innovations. In e-learning, high-touch learning may be encouraged and enhanced by digital learning contents and virtual experiences—most of which are purposively designed for particular aims, and some of which are free-form (created without a particular purpose in mind, unstructured).

The concept of high-touch emphasizes the human-to-human collaborative element, but some digital contents and virtual experiences are not human mediated. They may be automated and involve only the learner and the computer-space (as in computer-based trainings). Information and communications technologies have broadened the modes through which people may interact, with a broader range of multimedia response types: textual, auditory, video, multimedia, and various mixed methods. These interchanges may be synchronous, asynchronous, or occurring in mixed-times. Various systems allow enriched intercommunications and knowledge management, with a wider ability to share knowledge through multimedia.

To explore the dynamics of high-touch interactivity around digital learning contents and virtual experiences, this chapter involves analysis of real-world cases of designed digital contents and virtual experiences—and how they enhance high-touch interactivity.

The two main types of digital contents that will be examined involve (1) digital learning contents—which are discrete stand-alone learning objects that may be integrated into a larger sequence or strategy of learning. These objects include audio podcasts, video podcasts, narrated and non-narrated slideshows, videos, interviews, webisodes (Web episodes), digital photo albums, imagery, stories, analytical cases, and other elements. (2) The second main type of contents involves virtual experiences, which tend to be more immersive, or full-sensory and more engaging, and which continue over a certain period of time. These may be shared events like virtual conferences and colloquiums. These may be simulations, scenarios, role plays, digital games, augmented reality experiences, and virtual immersions in virtual worlds, and socio-technical spaces. In other words, virtual experiences tend to be more in-depth for learning, more demanding of the learner, and more involved over time. Both the digital learning contents and the virtual experiences are deployed through various computing machines: desktop computers, mobile devices and smart phones, handheld devices, smart installations, and others.

REVIEW OF THE LITERATURE

A foundational understanding of interactivity may be drawn from the human perception research in psychology, which conceptualizes interactivity of a human being with his or her environment as a natural part of survival. Interactivity refers to the way people engage the environment to fulfill their needs; interactivity involves gathering information about how the world works. This concept may be applied with multimedia in the sense that the person interacts with the information of the digital environment to learn about the nature of that environment, at one level.

The educational literature offers a range of interpretations of the term "interactivity." One interpretation of media interactivity refers to a media's "potential ability to let the user exert an influence on the content and/or form of the mediated communication" (Jensen, 1999; as cited in Jensen, 2008, p. 129). Jensen describes a typology of interactivity based on four sub-concepts: "transmissional interactivity" (the user's ability to choose from a variety of one-way media); "conversational interactivity" (the media's potential for user-production in a two-way media system, which allows sharing); "consultational interactivity" (a media's potential ability to allow a user to choose "from an existing selection of pre-produced information in a two-way media system with a return-channel"), and "registrational interactivity" (a media's ability to register information from and "also adapt and/or respond to a given user's needs and actions, whether they be the user's explicit choice of communication method or the system's built-in ability to automatically 'sense' and adapt" (Jensen, 2008, p. 129).

This more mechanistic approach in analyzing interactivity has been applied to the design of user

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