

# Chapter 98

## A Review of Activity Theory Studies of Domestic and International Students Using Technology in Higher Education

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### ABSTRACT

*This chapter serves as an introduction to the two studies featured in Section 2 (Chapters 7-10). It presents a review of a decade (2002-2012) of nine Activity Theory studies from peer-reviewed journals of higher education students' learning in technology-mediated contexts. The review is organized around the following elements: purpose; rationale for Activity Theory use; summary of technology use; focus on technology-mediated learning; data collection; data analysis; findings, conclusions, and implications. The methods section provides an overview of why the nine studies were included while others were excluded. The chapter includes a comparison of the nine studies with those presented in Section 2, Chapters 7-10.*

### INTRODUCTION

In Section 1 of this book, we applied Activity Theory to hypothetical contexts of higher education learning in order to illustrate the important constructs and principles in Activity Theory. In this second part of the book, the focus is on applying Activity Theory to study real contexts of technology use in higher education. To achieve that goal, in Chapters 7-10, we apply Activity Theory to the study of international higher education students. Activity Theory always adopts the perspective of a group of subjects in the activity system. Rather than adopt the broad perspective from the population of all students, we narrowed our scope to the perspective of a particular subset, i.e., international students. We were interested in illustrating how technology mediates cultural and historical aspects of their learning. Focusing on individuals who come together from varying sociocultural and sociohistoric contexts yet use the same tools for the same tasks, as Basharina (2007) explained, provides an opportunity to highlight the role of culture and history in technology-mediated learning.

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In terms of research on higher education students' use of computers and the Internet for learning, studies have investigated their academic Internet use (e.g., Selwyn, 2008), and their access to, use of, and experience with technology, with a focus on how it assists them in their studies (e.g., Kennedy, Judd, Churchward, Gray, & Krause, 2008; Smith & Caruso, 2010). Other studies have focused on classroom contexts of higher education to investigate students' perceptions of the use of computers (e.g., Lowerison, Sclater, Schmid, & Abrami, 2006) or technology in general in their classes (e.g., Moseley, 2010). Research has also been conducted in the area of library studies (e.g., Gardner & Eng, 2005). There have also been studies of online courses with higher education students (e.g., Eom, Wen, & Ashill, 2006; Morris, Finegan, & Wu, 2005; Northrup, 2009; Wojciechowski & Palmer, 2005; Young & Norgard, 2006).

In relation to international students, studies have been conducted on their use of computers and the Internet for learning. These studies have investigated their attitudes towards technology (e.g., Lin, 2004), use of library-based technology (e.g., Howze & Moore, 2003), and needs related to information and communication technologies (ICTs) (e.g., Hughes, 2009; Mehra & Bilal, 2007). Other research has inquired into the relationship between international students' cultures and their preferences regarding interface design (e.g., Evers & Day, 1997), their perceptions of the usability of tools (e.g., Adeoye & Wentling, 2007), or their experience in online courses (e.g., Sheu, 2005; Zhao & McDougall, 2008). The online, web-based programs and courses investigated in these studies of higher education students differ from what is known as the print or correspondence model of distance education, which traditionally has not relied on online technologies (see Taylor, 1995; Taylor, Kemp, & Burgess, 1993).

Some studies of international students using computers and the Internet for learning have focused on one particular linguistic or cultural group such as Chinese students (e.g., Thompson & Ku, 2005; Tu, 2001; Zhao & McDougall, 2008). In addition, researchers have tended to focus on cultural issues in particular (e.g., Adeoye & Wentling, 2007; Al-Harathi, 2005; Shattuck, 2005; Walker-Fernandez, 1999). Although considering issues related to cultural differences might provide some insights into international students using computers and the Internet, it is also important to consider the broader contexts of learning when investigating international students (Zhou, Knoke, & Sakamoto, 2005). In the context of their study of "the myth of 'passive' East-Asian students" (p. 288), Zhou, Knoke, and Sakamoto (2005) argued against explaining students' behaviours based solely on cultural difference.

Comparatively limited research has been conducted using Activity Theory to investigate domestic and international higher education students' use of computers and the Internet for learning. In this chapter, we review some of these studies. In the chapters that follow (Chapters 7-10), we present two studies in which we use an Activity Theory framework to investigate international students' use of computers and the Internet for academic and non-academic purposes (Chapter 7) and international students in online learning (Chapter 8-10).

This chapter provides insights into other Activity Theory studies that have been conducted of higher education students and technology. We include in this chapter nine Activity Theory studies of higher education students in general and not only international students. We begin with an overview of the methods for this review of the literature. We specify the inclusion and exclusion criteria and provide an overview of how we analyzed and organized the literature. In relation to the nine studies, we identify the following: purpose; rationale for Activity Theory use; summary of technology use; focus on technology-mediated learning; data collection; data analysis; findings, conclusions, and implications. We follow with a discussion and comparison of how the two studies we present in the following chapters add to this literature.

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