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Questioning Teaching and Technology Beliefs (0122)

Programme number: R7

Research Domain: Digital University

Why is reflecting on our beliefs important?

Existing and emerging net-based technologies and practices continue to have intense, immediate, and disruptive transformations; nowhere is the impact felt more than on the practitioners who teach, and students who learn, in the higher education sector. Moving into a fourth decade of extreme transformations and changing global trends in how courses and programs are designed and delivered, emerging net-based practices continue to exert profound influence on academic communities (e.g., MOOCs).

As net-based technologies have become more pervasive, expressions of uncertainty, concern, and scepticism have also become more pervasive (e.g., see *The Chronicle of Higher Education & Wired*: http://chronicle.com/section/Home/5). Concerns include commercialization of teaching; lack of face-time between students and teachers; techno-centric models prioritized over face-to-face culture; devaluation of oral discourse/discussion practices; centralization of decision-making and service provision; concerns that complex and deep learning cannot be satisfactorily achieved without real-time classroom experience; increased technological and pedagogical uniformity; surveillance options that violate privacy policies; re-contextualisation of established cultural practices, such as education as a cultural discourse; and concern about the growing digital divide and downloading of costs to students (Kanuka, 2007).

When this kind of nomenclature arises, it can be useful to step back, reflect, and consider the nature of what is being said. If we reflect on our own, as well as others', opinions about both technology and teaching through a reflective lens, it is possible to become aware that the differences in opinions can be reduced to perspectives on tacitly held beliefs. Draper (1993) asserts that an examination of our opinion, conceptions, attitudes – or our philosophical orientations – is more than an academic exercise. Our beliefs determine how we perceive and deal with our preferred teaching methods including how (or if) we choose to use technologies, and a reflection of our philosophical orientations about the core aims and functions of higher education. The purpose of this study was to explore beliefs — or philosophical orientations— of academics whose disciplinary expertise is in education and research is on technology.

A philosophy of teaching and technology can be defined as a framework that embodies certain values from which we view the many aspects of teaching and technology (Zinn, 1990). This study used two conceptual frameworks to guide the research design: philosophies of

technology (Dalberg, 2004) and philosophies of teaching (Elias & Merriam, 2005). Following were the research objectives:

a. Identify *patterns within* philosophies of teaching and philosophies of technology

b. Through patterns identified, establish *links between* technology and teaching philosophies

Data Collection / Analysis

The research method used in this study was a closed interview, guided by modified repertory grid techniques. Seventy-five participants were selected who were working in institutions of higher education whose discipline is education and field of study involves teaching with technology. Participants were purposefully selected from Australia, Norway, Sweden, Denmark, Canada, United States, and the United Kingdom.

The interview data were collected in-person with paper and pen. The data were inductively analysed using constant comparison techniques (Strauss & Corbin, 1998), eventually divided into units and grouped into categories for patterns to emerge. The identified patterns were used to re-construct a grid that identified participants' understandings as regards to teaching and technology beliefs.

Findings

The results of this study reveal participants' beliefs of teaching have a tendency to fall within the progressive orientation (Elias & Merriam, 2005), which is often associated with the more familiar constructivist learning theories. Within this orientation the data revealed there are differing positions that fall along two dimensions. The first dimension defines the constructivist position along a continuum between understandings of knowledge as being individually constructed versus a view of understandings of knowledge as being socially constructed. The second dimension, also along a continuum, defines the aim of learning as a process (e.g., experiential, inquiry-based) versus learning as a product (e.g., knowledge, skills and attitudes). Though statistically weak, patterns in technological beliefs in relation to teaching beliefs were found within each of the four quadrants arising from the teaching beliefs (individual, social, process, product). Specifically, participants who believe learning:

- is a **process** that is **individually** constructed tend to also believe that technological tools are **neutral**, with the capacity to satisfy the purposed/needs for instructors.
- is a **product** that is **individually** constructed tend to also believe technological tools **inscribe** meaning, which shape the way instructors and learning think, impacting the choices they make
- is a **product** that is **socially** constructed tend to believe that technological tools are **shape** the form and content of its use within educational systems
- is a **process** that is **socially** constructed tend to believe that technological tools create a **mutual** shaping process between the context, the technology and its users.

Theoretical Significance

Knowing our philosophical orientations will dictate how we view teaching and the use of technology. When we can identify and articulate our philosophies we can act with intention and informed practice where decisions about the learning activities are made reflectively and rationally. When we can articulate our philosophical position about teaching and technologies we not only know *what* we are doing but *why*. The results of this study provide a framework from which we can begin to identify our beliefs about teaching, as well as teaching with technology.

As educators, it is important to take time out from our *doing* and ask *why* it is important. "Thoughtful practitioners know not only what they do, but why they are to do it. Experience combined with reflection leads to purposeful and informed action" (Darkenwalk & Merriam, 1982, p. 37). This, in turn, is at the core of one of SRHE's conference questions: *What do we know about the essential elements involved in constructing a productive higher education experience that develops the knowledge and wisdom needed to secure our global, social and economic futures?* The answer to this lies in knowing, and articulating, our own epistemological beliefs about the aims and goals of a higher education.

Theory without practice leads to an empty idealism,
and action without philosophical reflection leads to mindless activism.
(Elias & Merriam, 1980)

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