Chapter 10

Situating Technological Literacy in the Workplace

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The developing discourse centered around the definition of technological literacy has been taken up from many quarters and between conflicting perspectives (Kahn & Kellner, 2006; Keirl, 2006). While the array of different technologies and applications that might be considered gives rise to differing disciplinary viewpoints (Liddament, 1994), there remains a lack of an adequate framework from which to view technology and its use within a particular context of practice. Seeing this as central to the development of professional disciplines immediately places technology literacy not simply as something useful for ensuring that certain technologically mediated tasks can be adequately satisfied but rather, because of technology’s pervasive quality, as something that encompasses the nature of working life itself.

Arguments as to what technological literacy should be have primarily turned toward the educational system (e.g., Garmire & Pearson, 2006). Beyond this, there has been considerable consideration of how the results of education can enable a meaningful engagement with the progressively technological world (see Ingerman & Collier-Reed, 2011). There has, however, been little direct, empirically informed understanding of technologies’ consequences for the various wide-ranging concerns of working practitioners. In this sense, notions of technological literacy have remained abstracted from situated everyday working experiences beyond the scope of the isolated operation of technologies themselves.

Considering technological literacy as something being realized within work situations, among other things, provokes the question of how it can be identified and studied. As no single body of attributes or characteristics is as yet able to successfully point to what it means to be technologically literate in...
everyday practices, then, if the term is to move beyond a merely aspirational endeavor, the narratives of those engaging purposely with technology can be seen as a way of understanding how it plays a part in situated practice. This approach relates to the ways workers express their own understandings of technology as they engage with it in their everyday practices.

The understanding of technology’s position within the workplace has been studied widely from different quarters, such as those of STS (science and technology studies) and CSCW (computer-supported cooperative work). Although these unearth much that can inform us of the situated role of technology, there has been little in this direction specifically related to technological literacy within professional work contexts. This is clearly demonstrated in the fields of both nursing and teaching. There are many studies that tackle issues related to the influence of “electronic patient journals” in hospitals or consider, for example, the didactic improvements to “interactive whiteboards” within schools, but there is little focus on the broader needs of practitioners to integrate and align these with the wider concerns of their everyday lives. In this respect, we consider technologies not as isolated tools freely adopted and discarded at will but rather as materials and systems of understanding variously embedded within working life and mediating the progressive reconfiguration of procedures, processes, and structures. Technologies are therefore continually being realized within work situations, raising important questions as to how they are best understood in relation to their multiple consequences.

In the following, we draw on empirical work aimed specifically at considering the need to develop technological literacy among the professions of nursing and teaching (Wallace, 2012; Tafdrup & Hasse, 2012). Central to this is the study of how technology has been reconfigured within the everyday workplaces of Danish hospitals and schools coincident with the changing practices they influence. Technological literacy is understood not as an ability or competence derived solely through prior educational means but as something continuously developed in the workplace through practice-based learning in the face of the constant mutual reconfigurations of technology and practice. It becomes an important aspect of professional expertise to handle and negotiate these reconfigurations without losing sight of the motive for the practice itself.

What we propose here is a shift of focus from technology as something defined in disciplinary, educational, corporate, organizational, design, or even social terms. Alternatively, the attempt is to grasp technology as continually playing shifting and emergent roles within ongoing and recurrent interactions across a sphere of professional workplace influence. In this respect, we align with those scholars who see technological literacy as a way of acting and, as expressed by Ingerman and Collier-Reed (2011 p. 141), as “something that is realised in particular settings and situations-over and over again.” Technological literacy doesn’t result from an understanding of what technology is, whether from a historical viewpoint (Feenberg, 2006) or that of technological knowledge (De Vries, 2006), or that it is socially