

CONTEXT AND CONCEPTS IN MOBILE LEARNING

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ABSTRACT

This reflective paper discusses the contextual and situated character of concepts in mobile learning. It aims at challenging current conceptualizations of mobile learning by utilizing ideas from pragmatist and socio-cultural perspectives. This challenge includes a framework that embraces a distinction between interactional and transactional world-views. The paper suggests a dynamic non-dualistic view of mobile learning. This view includes examples of concepts that might be appropriate for conceptualizations of mobile learning.

KEYWORDS

Conceptualization, context, mobile learning, participation, pragmatism, socio-cultural perspective

1. INTRODUCTION

In a well-quoted paper by Traxler (2007) it is claimed that a conceptualization of mobile learning must recognize that it “is essentially personal, contextual and situated” (p. 1). This idea of conceptualization also appears in recently published papers within the field of mobile learning, e.g., in discussions of contexts and seamless learning (e.g., Milrad et al., Forthcoming; Sharples et al., 2012; Traxler, 2012). Nevertheless, this reflective paper will try to challenge the current interpretation of the personal, contextual, and situated character of mobile learning by addressing some of its philosophical ideas. In this challenge, the paper applies a theoretical framework consisting of interactional and transactional world-views. It suggests that a chosen world-view has consequences for which concepts are suitable to apply if a coherent understanding of mobile learning is sought. In particular, this discussion relates to mobile learning and its inherited contextual and situated character. While some concepts, e.g., interaction, more clearly link to interactional world-views, this challenge also concerns the current use of concepts. Influenced by ideas taken from the pragmatist and socio-cultural perspectives this paper suggests that mobile learning is a dynamic and ecological phenomenon built on transactional ideas of human action (see Jaldemark, 2010, 2012). The rest of this paper starts with a discussion of the relation between mobile learning and the environment. From this discussion follow consequences for how to understand the relation between context and the environment. Finally, the paper concludes by suggesting suitable concepts for a transactional understanding of mobile learning.

1.1 Mobile Learning and the Environment

Some of the most influential papers in the field of mobile learning link to ideas presented by Dewey (1916) and Vygotsky (1978). These two scholars are without a doubt among the most influential within the pragmatist and socio-cultural perspectives. They both had a big impact on later development within educational theory. Among the works of scholars within the field of mobile learning (e.g., Hwang, Yang, Tsai, & Yang, 2009; Pachler, Bachmair, & Cook, 2009; Sharples, Arnedillo-Sánchez, Milrad, & Vavoula, 2009; Sharples, Taylor, & Vavoula, 2007; Zurita & Nussbaum, 2007), papers are found that link their work either to Dewey and Vygotsky or successors such as Engeström (1987) or Lave and Wenger (1991). However, if we start to investigate mobile learning based on the ideas originally discussed by Dewey and Vygotsky, how can these studies be understood, and how can some of the most vital concepts of mobile learning be understood?

To start this discussion, we have to start with the ontological question of the relation between the human being and the surrounding environment. From a philosophical perspective, at least three positions have

unfolded over time. One of them, the idealist position, discussed by Plato, among others, emphasizes the minds of human beings as the location where the real world exists. The surrounding environment is just a shadow world, a pale version of the real world that exists in the mind. The second position, empiricism, popularized by Francis Bacon in the 17th century, among others, emphasize the minds of human beings as a separate mental world that is subject to the influence of external experiences. Both of these positions make dualistic claims that include a strong separation between mind, body, and environment.

Dewey (1916) and other scholars within the pragmatist movement rejected these dualistic positions. According to Dewey, this position isolates people from each other and the communities in which they exist. This means that physical and social aspects of the environment are important for understanding human beings. Human action is a part of this environment and a condition for the emergence of “a mind of his own” (Dewey, 1916, p. 344). Dewey discussed the inseparability between the human mind and the surrounding environment by claiming that “the self achieves mind in the degree in which knowledge of things is incarnate in the life about him; the self is not a separate mind building up knowledge anew on its own account” (p. 344).

Simultaneously, scholars within the socio-cultural movement in Russia raised similar thoughts about the inseparability of man and the surrounding environment. Building on Marxist ideas, Bakhtin and Vygotsky emphasized the cultural, historical, and social transformations that occur through human activity. In the 1930s, Vygotsky (1978, p. 60) claimed that “the influence of nature on man, asserts that man, in turn, affects nature and creates through his changes in nature new natural conditions for his existence”. In other words, living is a dynamic and ecological phenomenon of being a part of the cultural, historical, and social patterning of the world. Bakhtin (1935/1981) emphasized the relation between man and the surrounding environment in terms of humankind’s constant dialogue with the world. In short, he argued that human understanding is an intertwining of responses in dialogues. He claimed that understanding and response dialectically merge “and mutually condition each other; one is impossible without the other” (p. 282).

In the mobile learning literature, it is popular to emphasize the strong relationship between mobile learners and the surrounding environment (e.g., Milrad et al., Forthcoming; Sharples et al., 2007; Traxler, 2007, 2012). Often such discussions are held in terms of context. For example, Milrad et al. (Forthcoming) claims that “cross-contextual learning can enable a continuous learning experience across different settings, such as home-school, or workplace-college”. Also Sharples et al. (2007, p. 225) discuss context by claiming that it should be seen “not as a fixed shell surrounding the learner, but as a construct that is shaped by continuously negotiated dialogue between people and technology”. Such dynamic ideas of the relation between mobile learners and context follow in the footsteps of the world-views of the pragmatist and sociocultural perspectives discussed above.

A conclusion drawn from ideas discussed by these scholars is that human beings can be understood as inseparable from the surrounding environment. Moreover, a dynamic and ecological non-dualistic position can be applied in conceptualizations of mobile learning. However, if we take this position and follow in the footsteps of Dewey and Vygotsky, two consequences for conceptualizations of context in mobile learning follow. First, we need a conceptualization of contexts that includes the relation between learners and the environment. Second, such concepts should embrace the inseparability between learners and the surrounding environment. In the next section, a deeper look at these issues will follow. Below, this paper interprets these claims through a framework consisting of interactional and transactional world-views (Altman & Rogoff, 1991; Dewey & Bentley, 1949/1960).

2. CONTEXT AND THE ENVIRONMENT

According to Dewey and Bentley (1949/1960), the understanding of context and situations, in terms of the relation between man and the environment, relates to a distinction between interactional and transactional world-views. A choice between these world-views gives different answers to conceptualizations of context in mobile learning. According to interactional world-views, e.g., empiricist or idealist positions, context in mobile learning is a rather uncomplicated phenomenon. While interactional world-views are derived from the ideas of Newton, and the laws of motion where “action and reaction are equal and opposite” (Dewey & Bentley, 1949/1960, p. 68), human action and its context is a system that is treated as a phenomenon that involves particles, boundaries, and different laws of effect. In such a system, contextualized human action is

fragmentized and seen as a reaction to the preceding action. Therefore, in this distinction, interactional world-views can demarcate human action in a particular context from other contexts. However, Dewey and Bentley (1949/1960) claimed that such a dualistic view is a disadvantage for inquiry regarding human action, such as participation in mobile learning, while it “shatters the subjectmatter into fragments in advance of inquiry and thus destroys instead of furthering comprehensive observations for it” (p. 68). Interactional world-views are dualistic when they separate human beings and their minds from the surrounding environment. Such a world-view makes it possible to understand participation in mobile learning without reference to the conditions of the surrounding contextual features. Learners might be discussed in a narrow sense in terms of being separated from the surrounding environment, and aspects of time and space might be deemphasized. As a consequence, an interactional world-view can support the idea of a separation between offline and online participation. In fact, they can be understood as two separate phenomena. Nevertheless, such a world-view seems to be hard to link to the contextual claims of some of the leading scholars in the field of mobile learning (e.g., Milrad et al., Forthcoming; Sharples et al., 2007; Traxler, 2007). Instead, they emphasize a complex relation between aspects of context, human action, and technologies.

From an interactional world-view, one conceptual consequence for understanding mobile learning is that applied concepts do not necessarily need to have an intersectional character. In short, concepts need to take into account the fact that mobile learning is about processes of action and re-action. Such an approach might be useful if mobile learning is discussed solely from a narrow perspective, as in the case of a technological phenomenon that denies the consequences of learners’ experiences and feelings. However, such definitions of mobile learning “are constraining, techno-centric, and tied to current technological instantiations” (Traxler, 2007, p. 4). The dualism of such world-views is problematic as “epistemologies that isolate two components, that set them up separately and then endeavor to put them together again, fail” (Dewey & Bentley, 1949/1960, pp. 151-152). Following the claims of Dewey and Bentley, an interactional world-view excludes a coherent dynamic and ecological understanding of mobile learning contexts as a nexus between learners’ participation in multiple settings. Nevertheless, such a world-view might be applicable for demarcated dualistic conceptualizations of mobile learning. Such demarcated understandings are the issue of challenge in this paper. However, the idea of conceptualization in this paper follows the idea that participation in mobile learning is a complex, cross-contextual, and boundless phenomenon. Such a conceptualization can be achieved in applications of a transactional world-view.

Transactional world-views are dynamic and ecological and reach across time and space. Such world-views comprise “the right to see together, extensionally and durationally, much that is talked about conventionally as if it were composed of irreconcilable separates” (Dewey & Bentley, 1949/1960, p. 69). Discussing mobile learning in terms of transactions incorporates a non-dualistic view of human action in terms such that “there are no separate elements ... the whole is composed of inseparable aspects that simultaneously and conjointly define the whole” (Altman & Rogoff, 1991, p. 24). It also focuses on situations that arise where actions, human beings, and the environment intersect. Therefore, transactional world-views allow a conceptualization of mobile learning contexts as a nexus between learners’ participation in multiple settings. Such world-views on mobile learning need to conduct an intersectional analysis that embraces spatial and temporal aspects as well as processes of change. Mobile learning discussed from such an approach is a dynamic and ecological phenomenon that takes into account the inseparability of human beings from their actions and the nexus of the multiple settings in which these actions occur. Moreover, such an account of mobile learning recognizes cultural, historical, and social aspects of human actions. Both the pragmatist and the sociocultural perspectives link to such a transactional world-view.

As the quotes above from papers by some of the most prominent writers within the field of mobile learning suggest interactional world-views suit with demarcated conceptualizations; however, if a conceptualization takes into account the contextual and situated character of mobile learning, it might benefit from the application of a transactional world-view. As discussed above, such a world-view is applied in studies of mobile learning. Nevertheless, the use of concepts in such studies should benefit from being demarcated from ideas derived from dualistic and interactional world-views. This paper emphasizes the importance of being consistent between the chosen world-view and the application of concepts in analyzes, descriptions, and discussions of mobile learning. A careful choice of concepts seems to be important to avoid interactional connotations in conceptualizations of mobile learning. Following the distinction between interactional and transactional world-views, the final section of this paper comprises suggestions on how to apply transactional world-views in conceptualizations of mobile learning.

3. CONCEPTS IN MOBILE LEARNING

This paper suggests that contextual and situated analyzes, descriptions, and discussions of mobile learning benefits from concepts that have an intersectional character. This intersectional character can afford conceptualizations of mobile learning with a coherent link between world-views and applied concepts. Embracing such concepts links mobile learning to two or more aspects of its contextual and situated character. Support for such a claim comes from a well-quoted definition of mobile learning. Sharples et al. (2007, p. 225) defines it tentatively as “the processes of coming to know through conversations across multiple contexts amongst people and personal interactive technologies”. An interpretation of this definition implies that mobile learning can be analyzed, described, and discussed as an intersectional phenomenon that is understandable if it simultaneously embraces aspects of mobility as well as learning. This interpretation has been documented in studies of mobile learning (e.g., Sharples et al., 2007; Traxler, 2007; Wu et al., 2012). Mobile learning can, based on this definition, be interpreted as a phenomenon that occurs at the intersection of aspects such as communication, the environment, human beings, learning, and technologies. Below are a few suggestions for how such intersections can be embraced in a conceptualization of mobile learning.

An important phenomenon of mobile learning is the intersection between the people involved in the mobile learning process. In studies of mobile learning, different concepts are applied to emphasize this process, such as communication, collaboration, conversation, dialogue, and interaction. The last concept, interaction, is frequently applied in such studies. However, it has been found that the concept of interaction is applied in conceptualizations built on both interactional and transactional world-views (Jaldemark, 2012). Moreover, interaction sometimes is discussed as a phenomenon that concerns the interplay between a human being and a non-human object, e.g., a course or technologies such as tablets or smart-phones. Other applications of this concept include the interplay between human beings. This makes the concept indistinct in transactional applications. Nevertheless, it fits better within applications of demarcated dualistic interactional world-views.

To discuss the interplay between human beings, dialogue is a concept that seems to be suitable. This concept is an intersection of communication between at least two participants. In the Bakhtinian (Bakhtin, 1935/1981) sense, dialogues define the communicative interplay between human beings, between the listener and the speaker, between the writer and the reader. This concept can include communicative actions that are independent of boundaries by space and time. Another concept related to the interplay between human beings is learning communities. The concept of communities is an old concept discussed by, among others Dewey (1916), and during recent decades, it has been popularized, in terms of learning communities, by Lave and Wenger (1991) among others. This concept is an intersection of learning and communication between human beings. Moreover this intersection also embraces its relation to cultural, historical, and social aspects of being members of different communities. It can be included in an intersection with technologies, e.g., in terms of mobile learning communities and online learning communities.

Another important phenomenon in mobile learning is the intersection between human beings and the surrounding environment. As discussed above, a transactional world-view excludes dualistic claims. Therefore, the concept of the environment needs to be carefully used to avoid dualistic interactional deployments. As transactional approaches are non-dualistic, it is recommended to avoid wordings that indicate the existence of multiple environments and different types of environments, e.g., geographical environment, learning environment, or social environment (Jaldemark, 2010). In short, there is only one environment. Moreover, in academic discussions, the concept of a learning environment is usually unclear and undefined. The difference between applied technological concepts and a so-called learning environment needs to be discussed to reach a coherent understanding. Therefore, understanding and conceptualization could benefit from the application of other concepts that are more suitable, e.g., a learning management system, technology, tools, or educational settings. Among these suggestions tools could be used as a concept to replace the learning environment as an intersection between a human being and technology. This concept emphasizes the involvement of human action. This is claimed by, among others, Vygotsky (1978) who indicated that, before being used, a technology is just an object: it needs a system of human activity in which it “could serve as a conductor of human influence” (Vygotsky, 1978, p. 55). To conceptualize the intersection of human beings with the environment, one suggestion is to apply the concept of setting. A setting is something in which a human activity exists and refers to the totality of the surrounding conditions. Settings

can embrace cultural, ecological, historical, and social aspects. Therefore a setting relates to the past, present, and future states of the surrounding conditions. Different settings, e.g., educational settings, home settings, leisure settings, and work settings, might intersect in mobile learning (e.g., Milrad et al., Forthcoming). In short, a setting is a concept that addresses human action in different contexts and situations.

Studies of mobile learning can embrace concepts that comprise intersections of two or more aspects of mobile learning. Such a conceptualization could reflect the mobile character of learning regarding the interplay between human beings and issues of time, geographical movement, and the deployment of various devices. This reflective paper has raised some issues on the conceptualization of mobile learning. Its aim has been to challenge the way in which mobile learning is conceptualized. In this challenge, ideas from pragmatist and sociocultural perspectives, in terms of a dynamic, ecological, non-dualistic transactional approach to the conceptualization of mobile learning, are identified as fruitful because they reflect the current contextual and situated debate within the field of mobile learning.

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