COMMUNITIES OF PRACTICE, ACTIVITY THEORY AND DISTRIBUTED LEARNING

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Abstract

Communities of practice and activity theory are two theoretical frameworks used for understanding distributed teaching and learning. In this paper, we argue that both can play complementary roles in practitioners' efforts to understand distributed learning environments. Communities of practice can be used more as a heuristic process and activity theory more as an educational model that gives answers to specific problems. However, it is not always possible to make a clear distinction between the two as they are interwoven when practitioners think about distributed learning contexts. Practice-based examples show how these frameworks can be employed in understanding distributed learning environments.

Introduction

Communities of practice and activity theory are two of the main theoretical frameworks used for understanding distributed learning. This paper will try to locate and describe the key elements of these two social and cultural perspectives and the relationship between them. It will also deal with the comparison and contrast of the value of these two approaches to understanding distributed learning and it will refer to some practice-based applications by examining their usefulness for practitioners engaged in distance and / or online learning.

Definitions and key elements

An evolution or shift in the formation of theoretical frameworks on how individuals learn has taken place during the last 20 years. This "social turn" (Gee quoted in Lea & Blake, 2004) is deemed necessary to compensate for the inability of behaviourism and cognitive psychology scientists to explain effectively the learning processes of the individual and the way knowledge is *transmitted* or created (or both).

Since this paper makes use of concepts whose meanings are context-specific, let us give some definitions that will help us to set an appropriate context in which this analysis will be made. First, *teaching* can be viewed as any teacher's activity to facilitate the learner to support, help, define, explain, document, prove, etc. concepts, theories, practices, etc. that already exist and/or create her own ones.

The aim is to *change* the learner and this change is accomplished through *learning*. Thus, learning is a positive action on behalf of the learner that requires, in most of the cases, a willingness to learn (Rogers, 2002). Second, both teaching and learning are the constituent parts of *education*. Education is planned learning that serves the attainment of a certain goal (Rogers, 2002). At the same time, there are other elements that have been considered as learning also: knowledge accumulation, information gathering, comprehension, etc. These elements and concepts seem incomplete. This can be attributed to the notion of learning as continuously changing and there is no universally accepted definition of it.

What derives from the above concepts is the need to know more about the relationship of learning with *knowledge*. Rowntree (2000) describes two "continua" attempting to distinguish what is considered as "worthwhile knowledge" and what is "effective learning." At the one end of the first continuum, knowledge is considered as pre-existing, prescribed and containing fixed notions on how individuals see the world, speak about it and act within it. At the other end of this continuum, knowledge is a personal and (at the same time) social construction and the ideal learner is the one who constructs her own knowledge through reflection on her viewpoints about how she sees the world, speaks about it and acts within it.

The second continuum describes how teachers consider their role. At the one end, they feel their duty is to transmit knowledge to a mass of learners and make them competent to absorb and reproduce others' experiences and viewpoints ("the sage on the stage"). At the other end, teachers are interested in the progress of each individual separately by encouraging her to create her own viewpoints and construct new knowledge through her own ideas and experiences ("the guide on the side").

Thus, the ends of the these continua represent the *closed* and the *open* concept of education and shows us that a) learning cannot be transmitted, b) learning is discovered by the individual through certain methods and practices, and c) teaching activity alone cannot lead to learning. As a consequence, there is a need to use new theoretical frameworks to understand learning in more depth and create the respective learning environments. This is even more crucial when we come to distributed learning, where time and place make this need more imperative.

Lave and Wenger (1991) made an effort to respond to this need. They reject the perspective that knowledge is transmitted from one individual to another by using Vygotsky's work on Zone of Proximal Development (ZPD) in the sense that the important point is that learning is a process of personal and social transformation. As a result, they consider learning as involving active participation (of the

individual) with others in communities of practice. Learning concerns the whole person acting in the world (Lea & Blake, 2004).

Another effort to respond to this need may be traced back to the late 1930's. Activity theory uses some of the work of the Soviet cultural-historical school (Leont'ev, Luria, & Vygotsky quoted in Lea & Blake, 2004) and it analyses human behaviour in terms of activity system. An activity system is the basic unit of analysis for both cultures and individuals' psychological and social processes and consists of a subject, an object, and tools (Lean & Blake, 2004). Activity systems are goal-oriented, historically situated, and co-operative human interactions (Russell, 1997). This concept (i.e., the activity systems) has much in common with *systemic theory*, especially as it is applied in distance education (Moore & Kearsley, 1996).

Concepts, Frameworks and the Relationship between Communities of Practice and Activity Theory

There are some relationships among concepts and frameworks of both communities of practice and activity theory. They have to be examined as they will be the basis for assessing their value to understanding distributed teaching and learning (see next section).

Lave and Wenger in their work on communities of practice suggest that meaning is fundamental to all human activity as learning, thinking, and knowing can only occur within a socially and culturally structured world. For them, it is systems of activity and the ways in which people understand such systems that constitute the social-cultural world which, in turn, includes both material and intellectual culture (Lea & Blake, 2004). As Russell argues (quoted in Lea & Blake, 2004), activity theory deals exactly with the relationships among participants within the system and their shared cultural tools. That is, *community of practice* theory examines the people-systems relationships while *activity theory* can be used as a lens to examine the relationships among participants within any of these systems.

Lave and Wenger focus more on informal, situated learning, considering it as learning taking place mainly outside formal educational settings. However, they recognise that in the latter, learning stems from participation in the respective community and this participation requires engagement in the social relations, activities and technologies of that community. They use the term "legitimate peripheral participation" to explore the process by which newcomers/novices become part of a community of practice (2002). They, also, use the term "apprenticeship" in its broadest sense to describe how newcomers/novices gain access to the community through their own growing involvement in the

community's practices and everyday operations. They see this procedure as a means for the newcomer to become a different person — to change her, to use Roger's words (see section 1). On the other hand, activity theory considers activity systems as being: a) historically developed, b) mediated by tools, c) dialectical, d) analysed as the relationships of participants and tools and e) changed through the zone of proximal development (Russell quoted in Lea & Blake, 2004).

In terms of the communities of practice theory, a newcomer / novice participates in historically developed communities within an activity system, uses some (material and/or symbolic) mediational tools to achieve her goals, enters in a dialectic relationship with the material and intellectual constituents of each community of practice and changes by doing things and thinking in ways that she would not have done by herself alone. And all these happen when a newcomer enters a new activity system and the associated communities of practice. She brings with her other tools and ways of using them and, through the already described procedure, she contributes not only to her change (as a person) but to the changes of the activity system and the associated communities of practice.

Technology is viewed as one of the factors that influences learning and Lave and Wenger focus their attention on their "visibility" of them and how this visibility affects learning. Activity theory considers technologies as a part of the mediational tools used by individuals within activity systems. They are viewed as a means used by the *subject* to achieve her *object(ives)*. Activity theory goes more in depth more than communities of practice: it accepts that these tools can be used in many different ways to achieve the same object(ive). Communities of practice simply recognises the importance of technologies as mediatonal tools but is more concerned with how they can be used effectively to generate learning. The way tools/technologies are used as mediatonal means depends on the context of the activity system and communities of practice within which the activity systems exist (Lea & Blake, 2004).

Communities of practice theory was developed by Lave and Wenger mainly as a heuristic device: a way of exploring and understanding learning outside the formal structures of educational institutions (Lea & Blake, 2004). These structures are many and an individual may be a member of many of them. Learning is something inextricably linked to these communities of practice. On the other hand, activity theory components are more visible and easily identified. Thus, activity theory is easier to be analysed.

Communities of Practice and Activity Theory Value to Understanding Distributed Teaching and Learning

Both communities of practice and activity theory contribute to understanding distributed learning. They both can be used as heuristic or educational models — the first, communities of practice, more as a heuristic process, and the second, activity theory, more as an educational model that gives answers to specific problems (Russell, 2002). However, it is not always possible to make a clear distinction between the two as they are interwoven when practitioners think about distributed learning contexts.

Lave and Wenger (1991) argue that knowledge has its own meaning within the community of practice in which it is constituted (Lea & Blake, 2004). Consequently, its value lies in the fact practitioners have to ask questions about the nature of transferable skills individuals bring with them into distributed learning environments (what knowledge they have and are willing to put in or what knowledge they are expected to have?). Activity theory can help practitioners by providing a more focused view on how learners engage in different practices in order to achieve similar outcomes. Thus, activity theory can complement and extend the way practitioners view learners' capacities when entering a distributed learning environment.

The narrow psychological definition of knowledge transmission by Lave and Wenger in their work on communities of practice enables practitioners to think in a different and more effective way about how students learn through participation in practice. Moreover, it enables them to think about their roles as teachers / facilitators and the ways they have to act and behave in a distributed learning environment. At the same time, activity theory and its respective systems gives practitioners the ability to explore difference and to think how the same objectives might be achieved through enacting different practices using corresponding tools (Lea & Blake, 2004).

In addition, Lave and Wenger's claim that learning is the result of participation in the respective community and this participation requires engagement in the social relations, activities and technologies of that community helps practitioners a lot. It enables them to foresee and think about the roles and practices that are possible for students and how a novice student becomes integrated in the community of practice of a given distributed learning environment. Legitimate peripheral participation is the way the newcomer is gradually introduced into community's (here distributed learning environment's) practices, mainly by understanding the balances of power that exist within them. At the same time, it forces practitioners to assess the probable contribution of the newcomer to the whole spectrum of the distributed learning environment activities and the nature of this impact to the

other elements of this environment. On the other hand, activity theory acknowledges and examines the cultural and historical contexts within which newcomers / participants are acting (or are expected to act) and takes into account the diverse rules and norms that might be implicated within the activity system (Lea & Blake, 2004).

As noted above, technology is viewed as one of the factors that influences learning and Lave and Wenger focus their attention on their "visibility" of them and how this visibility affects learning. Practitioners take for granted technologies that are embedded in their teaching practice and are more concerned with technologies that promise the bridging of the time and space gap. Lave and Wenger suggest (albeit indirectly) that practitioners have to rethink on how technologies affect students' learning and deal more cautiously (from the same perspective) with new Information and Communication Technologies (ICTs). Activity theory reminds practitioners that they have to explore how mediating means (technologies / tools) are viewed and interpreted by learners within different distributed learning environments. Furthermore, it prompts them to understand why using particular technologies (especially new ICTs — Haughey & Anderson, 1998) for learning does not necessarily bring the predicted outcomes and that technologies are just one element of the whole (distributed) learning environment (Lea & Blake, 2004). In this case, communities of practice suggest practitioners to reconsider technologies while activity theory provides the lens to focus on the relevant issues and analyse them in more depth.

Finally, Lave and Wenger move practitioners away from considering learning as an individual cognitive activity towards a notion of learning that takes place through participation with others in communities of practice/distributed learning environments (Lea & Blake, 2004). Activity theory extends this notion by suggesting that success or failure does not reside on the individual but on the effectiveness, appropriateness, etc. of communication with others within an activity system. Thus, the burden for learners' success is on the shoulders of practitioners, as they have to create a distributed learning environment that ensures this kind of participation and communication. However, we consider this view problematic — it treats learner as a member of herd. She is not considered capable of doing things alone — probably the ZPD concept suits more in this case (a learner can achieve more with the help of knowledgeable others) but, in a distributed learning environment, only the tutor is assumed to have this capacity (at the beginning, at least).

Applications in Practice

We shall now examine some practice–based applications of these two theories derived from the literature. Thorpe (2002) uses the community of practice concept to examine if and how practitioners in the field of post-compulsory education have changed their approaches to student learning during the last 30 years as different technologies have been adopted for course delivery (Lea & Blake, 2004). She concentrates on Computer Mediated Communication (CMC) and suggests that collaborative learning in open and distance education is an example of a new focus on learning as participation on communities of practice that include not only tutors but other practitioners also (technicians, librarians, etc).

Wegerif (2002) deals with Asynchronous Learning Networks (ALNs) and argues they are particularly effective for supporting collaborative learning and focuses on the ways in which ALNs support the social dimensions of learning (Lea & Blake, 2004). He uses the communities of practice concept as both a heuristic tool and as a pedagogical model for course design.

Russell (2002) uses activity theory in his effort to explore distributed learning environments. In his approach, activity theory may explain why teaching and learning in new environments do not fulfil teachers'/practitioners' expectations. Activity theory can help them to recognise the complexity of learning with ICTs, the need for a specific (and tailor-made for each case) pedagogy and that learning involves a complex relationship between people and (mediating) tools.

Billet (2002) along with Guile and Young (2002) attempt to analyse workplace learning with the aid of activity theory. Billet believes that individuals are energetic and do not merely respond to a given context but engage actively within it. Guile and Young focus on apprenticeship in the sense used by Lave and Wenger and (by using communities of practice, activity theory and ZPD notions) show that there are many similarities between classroom and workplace settings.

Conclusion

This paper analysed the most important characteristics and features of two frameworks used in understanding distributed teaching and learning. The comparative analysis undertaken showed that both communities of practice and activity theory can play complementary roles in practitioners' effort to understand distributed learning environments. They can both be used as, more or less, heuristic or pedagogical models. This analysis was accompanied by practice-based examples that showed how these frameworks can be employed in understanding distributed learning environments.

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