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# Wikipedia in Education: Acculturation and learning in virtual communities

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Alexios Brailas [a,*], Konstantinos Koskinas [a], Manolis Dafermos [b], Giorgos Alexias [a]

[a] Panteion University, Department of Psychology, 136 Sygrou Avenue, 176 71 Athens, Greece
[b] University of Crete, Department of Psychology, Rethymno 74 100, Greece

A R T I C L E   I N F O

A B S T R A C T

The present study investigates on the learning impact of utilizing Wikipedia's community in education. Today, many instructors assign their students editing Wikipedia's articles as part of their coursework. Participation in a cyber-community during an educational assignment exposes students to a brand new culture and netiquette, to a set of explicit and tacit rules and cultural norms. This requires students to internalize the embedded online culture in order to join the community — a form of acculturation which may cause stress, but which can lead to opportunities for growth, learning and development. By taking advantage of a virtual community, educators can literally bring a whole thriving community into their classrooms. The acculturation of the educational group into the culture of a hosting virtual community, through collaborative actions, conflicts and disturbances, results to the formation of a collective zone of proximal development: what the students' group manages to perform today with the aid of the community's members will be performed independently tomorrow. The formation of a virtual learning community through the procedural and structural coupling of two discrete activity systems opens a new space for participatory learning.

## 1. Introduction

Behind the scenes of Wikipedia performs a thriving online community, which constantly develops and maintains a pioneering project, the largest online encyclopedia in the world (Shirky, 2008). Wikipedia constitutes a unique and complex virtual cultural system. According to an early (1954) definition by the Social Science Research Council: "An autonomous cultural system is one which is self-sustaining — that is, it does not need to be maintained by a complementary, reciprocal, subordinate, or other indispensable connection with a second system. Such units are systems because they have their own mutually adjusted and interdependent parts, and they are autonomous because they do not require another system for their continued functioning" (Social Science Research Council, 1954, p. 974). Wikipedia meets all these criteria for cultural autonomy. Back in 1954 there were numerous dichotomous ways identified in which cultures could be classified, according to the Social Science Research Council, such as simple-complex, folk-urban, and Apollonian–Dionysian. We argue that Wikipedia constitutes a complex cultural organization, a nonlinear system, where many properties and interdependent agents co-exist and interact and where emergent properties appear all the time as the byproduct of these synergies (Brailas, 2013). In this context, Wikipedia's culture can be broadly characterized as participatory (Shirky, 2008) and as a collaboration of good faith (Reagle, 2010).

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* Corresponding author.
 E-mail addresses: abrailas@yahoo.com, abrailas@panteion.gr (A. Brailas), kkoski@panteion.gr (K. Koskinas), mdafermo@uoc.gr (M. Dafermos), galexias@panteion.gr
(G. Alexias).

Many instructors worldwide are using Wikipedia in their educational praxis, by assigning their students to write new articles or to improve existing ones (Brailas, 2011; Farzan & Kraut, 2013; Infeld & Adams, 2013; Roth, Davis, & Carver, 2013). Thus, Wikipedia constitutes a competent case study for investigating the utilization of a virtual community in education. In particular, the case of an educational group (both students and their teachers) joining the virtual space of an online community can be realized as a process of virtual acculturation. We argue that Learning comes as a "side effect" of this virtual acculturation process. Students learn while they try to understand a particular digital culture, to participate into the virtual community life, and to become legitimate members and active agents of the online cultural context.

Instructors assign their students editing Wikipedia's articles in an effort to improve their learning experience (Carver, Davis, Kelley, Obar, & Davis, 2012; Knight & Pryke, 2012; Konieczny, 2012; Wannemacher, 2011). Wikimedia Foundation articulates many educational benefits for instructors to offer Wikipedia editing assignments ("Education/Reasons to use Wikipedia," n.d.). But as the present study contents, the learning benefit in these assignments depends on the demanding process of joining Wikipedia's virtual community. Students and teachers have to get out of their "comfort zones", out of the protected physical space defined by the classroom, into a different cultural setting, where they are offered the opportunity to assimilate new cultural norms: "Given the chance to observe and practice in situ the behaviors of members of a culture, people pick up relevant jargon, imitate behavior, and gradually start to act in accordance with its norms. These cultural practices are often recondite and extremely complex" (Brown, Collins, & Duguid, 1989, p. 34). In this case, the educational group has to cope with the resulting acculturation stress. During this acculturation process, by understanding the cultural norms that are essential for surviving successfully in the virtual social environment, students cultivate a range of skills. In the case of Wikipedia, these skills are closely connected to Wikipedians' culture and include (but are not restricted to) the ability to research in depth the literature about an article, to compare and evaluate conflicting sources, and to communicate arguments clearly and efficiently with other editors in a virtual social environment (Brailas, 2013). This acculturation process takes place outside the "protected", walled and culturally familiar environment of a classroom. Virtual acculturation takes place into a virtual environment of real social interactions and peer-to-peer editing transactions that sometimes can be experienced as a context quite "hostile" or "aggressive", full of virtual dangers, like cyber trolls, flame attacks, editing wars etc. Some of these sociocultural skills are cultivated in every standard academic or school context. However, in Wikipedia these skills are prerequisites for the successful collaborative production of quality encyclopedic content. Some other skills cannot be cultivated outside the cultural context of a community of practice, either a virtual or a face-to-face one. These skills include the ability to collectively negotiate meaning and content, defense your arguments and try to understand other's point of view.

Successfully entering a new cultural environment necessitates the remodeling of old behaviors and practices and the adoption of new ones leading to personal growth and development: "The problematic nature of cross-cultural adaptation must be viewed in the context of new learning and psychological growth. Both of these aspects of adaptation, taken together, provide a more balanced and complete interpretation of the experiences of individuals in an unfamiliar environment" (Kim, 2005, p. 377). Participating in a virtual community during an educational intervention exposes students to a brand new culture, to a set of explicit and tacit rules and cultural norms that constitute a virtual learning organization and a new cultural context. Through continuous interaction with established community members, individuals adjust their behavior and internalize values and norms in an effort to adapt to the culture of the hosting virtual community and to function appropriately and efficiently: "communication is the necessary vehicle without which adaptation cannot take place, and that cross-cultural adaptation occurs as long as the individual remains in interaction with the host environment" (Kim, 2005, p. 379). Learning in the form of internalization of cultural values and norms and of the consequent adaptation to the requirements of the virtual cultural setting allows newbies-students to interact smoothly with the Wikipedians, the regular members of Wikipedia's community.

## 2. Background

### 2.1. Educational technology and Wikipedia community

Educational technology is the deliberate use of technological tools to serve formal or informal educational purposes. Educational technology cannot be separated by its cultural context: "by ignoring the situated nature of cognition, education defeats its own goal of providing useable, robust technology" (Brown et al., 1989, p. 32). For the most part of the 20th century educational praxis was inspired by behavioral and cognitive learning theories. During the second half of the 20th century the constructivist learning theories of Piaget and Vygotsky came to the educational foreground (Harasim, 2012). As a result educational technology in the previous century was mainly linked to these learning paradigms. In the 1990s the notion of learning as something that takes place in communities of practice was highlighted in the work of Lave and Wagner (Lave & Wenger, 1991). Today, people are becoming more and more active producers of knowledge content instead of passive consumers. In this networked social landscape, there is an urgent need for a new pedagogy. People's activity is closely intertwined with the available technologies and learning is always situated into the cultural context of a knowledge community; by ignoring the cultural context of cognition, education defeats its own goal of providing useable, effective instruction. In the previous century, objectivist approaches to educational technology attempted to provide quite sophisticated systems to model students' learning (Harasim, 2012). However, the realization today that we are complex beings living in a complex world (Mitchell, 2009) compels us to seek no linear pedagogical model (Davis & Sumara, 2006). The most sophisticated ITS (Intelligent Tutoring System) ever made cannot address the inherent complexity of a networked individual. Today it is urgent, instead of trying to model students according to outdated educational models, "to provide students with the tools, facilities and communities they need to support the development of models for