Journal of Educational Leadership in Action

Volume 2 | Issue 1 Article 2

9-2013

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GLOBAL EDUCATIONAL OPPORTUNITIES IN THE EMERGING INFORMATION SOCIETY

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Abstract

This paper addresses the issues of new educational opportunities available through the growing variety of web services. The study's objective is to explore the perspectives of the global and regional educational projects with regard to the emerging global information society. Summarizing key characteristics of Web 2.0, the researchers raise questions that should be answered by the new pedagogy. Virtual educational communities, open e-learning resources, massive open online courses (MOOCs), and educational online competitions are discussed in terms of their influence on education. Describing global opportunities, the authors cover challenges for traditional educational systems.

1. Introduction

Listen to Dr. Mikhail Bukhtoyarov & Ms. Anna Bukhtoyarova, Lecturer Siberian Federal University, Russia, discuss emerging educational opportunities.

The Internet and the variety of Web 2.0 services have been changing the way people communicate, entertain, work, and learn in many communities all over the world. Modern information technology (IT) tools make access to information cheaper and easier than ever in the history of humanity. The Information Society is becoming real with more than a third of the world's population using the Internet. According to Marc Prensky (2001) who initiated a discussion about "digital natives" and "digital immigrants" in education, most young learners of the twenty-first century live in a very intense technological environment that has significantly affected their way of processing information and thinking. Prensky wrote his series of articles about the students living in the United States more than a decade ago. In today's reality, we are facing challenges of intensifying global educational change because digital natives have already become a global phenomenon. Teachers in most countries of the world have to adopt the information technologies. However, not all the challenges of the emerging Information Society can be adequately met by the relatively slow-changing national educational systems which naturally tend to be conservative. This gap between the needs of the learners and the abilities of the educators to meet their needs creates new forms of

educational activities on the Internet that are initiated and supported by the growing online community of learners and teachers. The question is whether the emerging global educational initiatives will be supporting the existing national educational systems or competing with them during the next decade. In our opinion, there is evidence that the new educational paradigm implies the emergence of a global educational environment that will provide people of all nations and social groups with lifelong learning opportunities.

2. Perspectives

Access to the Internet provides learning opportunities for a growing number of individuals regardless of their age, gender, geographical location, nationality, social status, physical abilities, and previous educational experience. People use the overwhelming information flows and powerful tools of the Web to invent new ways of learning and teaching. Every individual involved in multiple educational activities play different roles depending on his/her preferences and abilities. Modern learners create and utilize personal learning networks where they can share their knowledge and experience with others. Large groups of Internet users participate in a complex process of global collaboration and communication. It may look like chaos, but according to Stephen Downes (2007), it is not. It is a dynamic system of knowledge generation and circulation that is the core of the Information Society.

Most of the existing and developing Web 2.0 tools utilize the following key concepts:

- information sharing,
- social networking,
- communication,
- collaboration,
- dynamic user-centered environment.

The authors believe that global expansion of these tools will build a totally new educational paradigm for the emerging Information Society and reshape learning and teaching in accordance with the philosophy of the Digital Age. We agree with George Siemens (2005) and Stephen Downes (2007) and think of this philosophy as connectivism. The main idea of connectivism implies collective forms of learning through the multiple acts of collaboration which target production of knowledge.

The variety of educational opportunities challenges a modern learner with a seemingly endless list of choices and questions:

- Which available option is better for the individual learning path?
- How can the chosen options be combined with the previous and future ones?
- What role to choose: a learner or a teacher?

Education is becoming an art of finding or designing strategies of effective utilization of the learning networks that include educational services, quality information resources and self-regulated online learning and teaching communities.

3. Methodology

A discussion on the emerging educational paradigm and the global educational opportunities can be based on the observation, analysis, classification, and evaluation of the online learning and teaching activities; texts and multimedia sources about modern education and its trends; and participating in some online educational projects. The wide range of data sources includes educational web sites, blogs and forums, personal communication with educators and learners, participation in massive open online courses, our personal experience in designing and teaching distance education and blended courses, and receiving feedback from students.

4. Findings

The variety of online educational opportunities is growing. They have already challenged traditional face-to-face education. The authors think that the following innovations in teaching and learning with regard to the web-based tools are important for the current and upcoming changes within the entire educational paradigm:

1. Virtual educational communities of learners and teachers appear on the Web. Members use various tools to communicate and share their knowledge and experience. People can work synchronously in *Skype* or *Google Hangouts*; post their ideas and comment in forums, blogs and microblogs; create videos and share them via *YouTube* or other video hosting services; publish photos in online albums; record and comment on podcasts and voicethreads; or collaborate with peers using wikis or *Google Documents*. These communities can work within social network sites and use the tools of these sites. Such communities can be either formal or informal. They can congregate around particular activities and projects and last for a short time, or they can form stable groups of collaborators who invent new activities. Such groups collaborate without a certain set of goals and without planning (though, some activities have to be pre-arranged). The authors would define this type of working style as “crowd teaching” and “crowd learning,” by analogy with crowdsourcing. The group activities are a mixture of acts of peer-to-peer collaboration where members can either

teach or learn, depending on the situation and the role assigned for a project. Our experience of membership in a virtual community of educators and learners began in 2011 when we joined the *Skype in the Classroom* social network. This network was designed for professional communication and collaboration. We found numerous projects and started ones of our own. Through one of the projects, we found a growing international group of teachers who collaborated on a regular basis. The group was called *HLW Skypers*. It started with four or five members in 2011, and currently has more than 150 educators and volunteers from different countries who work online on a regular basis. We exchanged lessons via video conferencing tools, continue to find new ways of connecting classrooms via creative projects and activities, and share our experience of using technology in schools or colleges.

2. Numerous open e-learning resources and other sources of knowledge are available on the Internet. Growing information banks make it easier to find any type of learning materials either in hypertext or in multimedia formats. The simplicity of access and a large number of competing sources is one reason for the great inflation of information that, according to Doomen (2009), can influence education by changing the roles of teacher and learner and make the educational process less manageable. The authors believe that in the long run the instant access to the global network with its potentially endless growth of information, will create a great inflation of knowledge and will change the nature of learning. Open e-learning resources give a modern learner opportunity to construct his/her individual knowledge domain without the traditional school procedures of information selection and distribution of a standardized set of ideas among the group of learners. However, misunderstanding between the learners due to the lack of common knowledge shared by the group can occur. In addition, formal learning groups can be extremely hard to manage due to growth of diversity. This could be one reason virtual learning communities are based on other individuals' views and experiences but still within some shared set of ideas.

3. Distance education programs of schools, colleges, and universities have already reshaped the educational market. One more "killer" of traditional education has been the rising movement of massive open online courses (MOOCs). Projects like *Coursera*,*Udacity,* and *edX* provide high quality university courses for free or at a very low cost compared to tuition. These courses make higher education available for the categories of learners that could not have access to it before due to social, financial, geographical, and other challenges. Moreover, such courses can eliminate the borderline between schools and colleges as they provide college-level education without requirements of having a high school diploma. MOOCs for schools are the next step of this new educational trend. The fact that gifted students from any part of the world can be easily found via these global educational tools makes them behave as global human resource management tools. MOOCs can revolutionize the educational paradigm of the modern world and lead to what we would call the "Renaissance of Enlightenment" as they provide a new model of mass higher education that inherits the older philosophical concept that equal public access to education is a common good. Most MOOCs create virtual online communities and organize collaborative and peer-to-peer teaching and learning activities for their

students either inside the course or via additional online tools: Google Hangouts, Facebook pages, wikis, and blogs.

4. Educational and scientific online competitions for young learners and researchers are becoming an important part of this new paradigm. They are currently limited but still provide learners with the opportunity to practice their skills and knowledge in a highly motivating environment. Competitions based on peer review assessment of learners' collaborative projects set specific standards and goals for the learners' activities and help their participants work on high level critical and reflective thinking. The emerging global initiatives such as International Cyberfair, Virtual Classroom, and Google Science Fair for teenagers need to be expanded. They could serve as important milestones for the most active and ambitious young learners. They could also compensate to a certain degree in the lack of a systemic approach in an online educational environment as they motivate the participants for obtaining specific competencies.

The authors believe that with the growing list of opportunities on the Web, the traditional curriculum-based educational model cannot be effective due to the rapidly changing content and environment. The MOOCs and other "education-on-demand" services and e-learning resources provide separation of learning from the traditional idea of curriculum. The variety of new ways of acquiring an education provides the modern learner construct unique routes for his or her personal educational quest. Following an individual learning path on the Internet is a lifelong process of engagement into numerous Web-based activities. This path cannot be planned and constructed according to the requirements of a national or institutional educational set of standards or policies because the learning environment of the Information Society is too dynamic and multidimensional. Such a path should be continuously developed in accordance with the learner's personal needs, current and lifelong goals, and requirements of his/her social and professional setting. For example, gaining access to particular virtual learning communities may be based on completion of some tasks (such as participation in specific MOOCs or passing an entry test).

The main question is whether an adequate form of tracking the learner's achievements can be found and approved by the society. We think that in this educational model the role of a teacher as a motivator and an advisor can be performed either by an individual or by a group (like virtual learning community).

5. Discussion

The authors believe that there are many teachers who start using the most up-to-date web services, take risks, apply new teaching and learning methods without a clear vision of the consequences. There is no universal set of standards or recommendations for such educational initiatives and it is extremely difficult to create such standards due to the rapidly changing technological environment. Furthermore the existing differences

in the perception of web-based teaching methods in different cultures (Bauer, Chin, & Chang, 2000) and national educational systems throughout the globe make unification and standardization highly complicated. In our opinion, further development of the trends discussed above can be based on global quality control promoted by teaching/learning communities. The principles of their self-regulation and policy- making is quite similar to the ones used in global marketing, but unlike business assets knowledge in an emerging learning/ teaching paradigm belongs to everybody who is capable of utilizing it.

Currently the important task for the global educational community is not just to integrate the highly demanded IT tools and Web services into all levels of professional work but also to develop the strategies of their effective utilization. To be successful in developing these strategies, educators need to get involved in continuous monitoring and research on the best learning and teaching practices. Both formal and informal tools to enhance learning with technology should be integrated in the educational process supporting the individual learning path of a student. National educational systems have to start working on embedding new ways of learning in their standards focusing on the students' achievements. Web-based learning that keeps track of personal successful experiences can become an exceptionally useful human resource management tool on both local and global scales.