Chapter 4
Crowd Learning: Innovative Harnessing the Knowledge and Potential of People

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ABSTRACT

Understanding sources of learning has become a major area of research in Education Management. Building on the assumptions that crowd learning is distributed across societies and education institutions and that it creates an innovative perspective for education for next-generation over the time, this article examines the link between formal education and innovative crowd-created knowledge. The article concludes by examining implications of crowd learning concept for actual and future education management systems. This paper explores how the crowd learns and remembers over time in the context, and how more realistic assumptions of student experience may be used in building crowd knowledge processes. The aim of the paper is to determine the assessment of crowd learning, its history, concepts and its influence on future learning process, including the changing instructor’s role.

INTRODUCTION

A variety of terminology is currently used in regard to crowds, e.g. crowdsourcing, collective intelligence, citizen science and crowd learning. A crowd according to its definition is any group of people who can act collectively to make decisions and solve problems. The wisdom of crowd theory simply suggests that a collective can solve a problem better than most of the members in a group can by acting alone. The difficulty in approaching crowd learning is that the concept is still relatively new but already rich with many theories (Orey, 2010).

Crowd learning by its definition is strictly linked with the crowd sourcing, and it’s related with the learning over the time and the ability to remember future directions of knowledge. In this paper for the definition and structure purposes, the students (or workers), who take part in the crowd learning systems, are called agents. New technologies offer the opportunity to learn online, and the first reason to implement that process in life is the “adjacent possible” (Kauffman, 2000). On one hand this possible-

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ity is strictly connected with the growing population of Internet access (Internet World Stats, 2014). However, the learning online had another important feature. While learning with others, all connections are being transferred into crowd interactions, which expand the impact of sharing knowledge and group experience. Crowd learning it’s an element of distance education, which is the fastest-growing mode of both formal and informal learning. It is multi-faceted in nature, encompassing e-learning and mobile learning, as well as immersive learning environments.

**BACKGROUND**

Historically, learning was almost always linked with the crowd, from methods and tools, into customs and people’s culture (Dron & Anderson, 2014). In recent times in the 21st Century, there is an increasing convergence of all forms of communication and learning using a digital platforms based on networks. The crowd learning as the element of social software existed for many years and was defined as “software that supports group interaction” (Shriky, 2003). Nowadays the Internet with its possibilities gained the capacity for human interaction and decision-making process. In theory there are three main types of interactions: *one-to-one, one-to-many* and *many-to-many*. There is a specific need of taking into account also other types of different forms of social software that aggregates interaction, i.e. *many-to-one*, the type of the *synchronous* and *asynchronous* communication that can transform into direct and indirect interactions. The comparison of the forms of social software, that are elements of crowd learning are listed in the Table 1 (Arthur, 2009).

Presented social software examples may have a wide range of features. That implements the thesis that agents enjoy learning with others, and potentially it creates the opportunity to build up new interactions and new social contacts. It is no exaggeration to claim that the number of users of crowd learning systems and social software exploded during the first decade of the 21st Century.

There are numerous scientific definitions of crowd learning and social software systems. Because of that, there are numerous functions and forms of crowd learning. The value of crowd learning can be seen in a few main areas:

- Building communities (Wenger, 1998),
- Creating knowledge (Benkler, 2006),
- Engaging, motivating and enjoyable process (Panitz, 1997),
- Cost-effective (Annand, 1999),
- Encouraging active learning (Chang, Sung, & Lee, 2003),
- Accountable and transparent (Chang, Sung, & Lee, 2003),
- Spans the gap between formal and informal learning (Marsick & Watkins, 2001),
- Addresses both individual and social needs,
- Builds identity, expertise, and social capital (Page, 2008),
- Easy to use,
- Accessible,
- Protects and advances current models of ownership and identity;
- Supports multiple media formats,
- Encourages debate, cognitive conflict, and discussion,
- Leads to emergence and supports creativity,
- Expands the “adjacent possible” (Kauffman, 2000).