Chapter 2
Learning Theories Within Gamification

ABSTRACT

In the previous chapter, you learned about a variety of different approaches used within gamification to support gamification elements within a social context. These social aspects provided you with a critical introduction in how social gaming elements, team-work, gaming mechanics can affect the learner. In this chapter, we are going to build upon chapter 1 and explore different learning approaches within gamification. The chapter starts with an introduction to learning. It follows with a brief analysis of learning theories used within gamification. The chapter then presents a new theoretical framework incorporating aspects of learning theories to improve motivation and learning experience of the individual within the community. Then finally the chapter aims to outline other research areas belonging to gamification and learning theories.

LEARNING

A simple definition of learning as posed by Cambridge (2004) is "the process of getting knowledge or a new skill". As Bransford et al. (1999) points out, learning can be seen as goal oriented and directed towards actively seeking new information and knowledge. The learners come into formal education "with a range of prior knowledge, skills, beliefs, and concepts that significantly influence what they notice about the environment and how they organize

and interpret it. This, in turn, affects their abilities to remember, reason, solve problems, and acquire new knowledge" (Bransford et al., 1999, p. 21). Learning refers to the orientation of problem solving, decision making, and using embedded real-life tasks and activities to enable the learner to think, communicate, and build upon prior knowledge and experience. Learning takes place with respect to content and context; you learn something somewhere (Wenger, 2000; Edelson, 2001; Sharples et al., 2010). Without teaching, the learner would not have the opportunity to develop a firm conceptual base for the content of coherent knowledge structures (Bereiter et al., 1989; Grabinger et al., 1995; Bransford et al., 1999). Building on this base the learner will develop effective ways of synthesizing, processing and transforming knowledge.

Learners have individual approaches to how they learn. There are a variety of different types of learning theories that can be used to describe these approaches. The next section, analyses the following five learning theories thought to be of most directly relevance to gamification:

- Community of practice
- Connectivism
- Connective knowledge
- Community centre approaches
- Personalisation

LEARNING APPROACHES WITHIN GAMIFICATION

Community of Practice

The Community of Practice, "CoP", theory, focuses on building a community-based learning system that promotes knowledge for individuals within a collective intelligence environment. CoP can be seen as a way of conducting learning while the primary focus is on a teach-learn process in which knowledge and skills are passed from one community/group to another. As pointed out by Yamori (2008), CoP can be formulated into three building blocks, the first part being the Learner "Internalization", second is "formation and maintenance" and finally "identity (re-)building". These three building blocks associated with CoP according to Yamori (2008) enables an environment to support learning through "Teach and Learn", while integrating them into a dynamic community. Community learning will give groups of people the chance to

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