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# A Critique of “Gamification” in Khan Academy

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## ABSTRACT

Khan Academy (Kahn Academy, 2013) is an informal online learning platform that is adding game elements that participants encounter as they move through curricula. This “gamification”, includes the addition of badges, accomplishment statistics and skill tree visualizations that reflect the completion of different learning task and participation in the online community. In this paper we outline the types of gamification used in Khan academy and reflect on their effectiveness in relation to learning theory and motivation theory.

## Keywords

gamification, Khan Academy, computer science education, online learning

## INTRODUCTION

Khan Academy (Kahn Academy, 2013) is an informal online learning platform that is adding game elements that participants encounter as they move through curricula. This “gamification”, includes the addition of badges, accomplishment statistics and skill tree visualizations that reflect the completion of different learning task and participation in the online community.

The use of the term gamification has its supporters who suggest that game elements can motivate and sustain interest in learning (Kapp, 2012). Other detractors of gamification suggest that it is exploitive (Bogost, 2011) and “pointsification” (Roberts, 2010), rather than tied to the essential elements of gaming. We use Khan Academy as a case study to examine how theoretically effective the gamification of their platform is for learning and as a game experience. To do so we look at the elements of motivation, persistence, and community of practice that impact learning. We also theorize on the degree to which Khan Academy participants engage with fundamental aspect of gaming. Much of what we find is the balance between intrinsic and extrinsic motivations of the gaming elements become fuzzy and interdependent similar to some gaming experiences. For example, working to earn the next badge or level may be a face saving tactic (DiSalvo, Bruckman, Guzdial, & Mcklin, in press) that allows participants to engage with a community of

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learners they would normally reject because of cultural values. In this ways the game elements may be effective for learning persistence, but become an identity to hide behind, rather than the activity that allows for deep engagement and complex challenges. However, other aspects of the gaming elements in Khan Academy may allow for users to role-play, such as earning additional badges and reward for coaching activities. Is this gaming? If “rich cognitive, emotional, and social drivers” (Roberts, 2010) are present in the system along side of the competitive or achievement elements does the system move beyond pointsification into gamification?

We chose Khan Academy computer science modules as a case study to focus on issues around gamification rather than critiques of exploitation, profit driven motives, and poorly designed and executed e-learning tools. Khan Academy is a donor-supported not-for profit company that allows users to learn a variety of subjects when needed at the user’s pace. Khan Academy has a goal of “changing education for the better by providing a free world-class education for anyone anywhere.” (Khan Academy2, 2013). It strives to meet this goal by providing an extensive library of video tutorials, interactive challenges, and assessments. The computer science module, launched in September 2012, contains a new platform for teaching programming that emphasizes creativity and exploration. The first available tutorials within computer science cover not only programming basics, but also drawing and animation, topics clearly designed to increase the diversity of informal CS learners.

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