

Using Digital Badges in Middle School Education: Impacts on Students Motivation and Performance

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A badge is a digital representation of a skill, learning achievement or experience and are usually used to set goals, motivate behaviors and communicate success. They also provide a more complete picture of the learners' skills, achievements and qualities (Mozilla Open Badges, 2014). Numerous education groups, organizations and web entities currently issue badges, such as The Khan Academy, Microsoft Education Community and edX, (an online learning platform sponsored jointly by MIT and Harvard University). Badges can represent an opportunity for education to rethink what is of value and recognize achievements that could be codified and assessed but currently are not (at least not explicitly). They support multidimensional and continuous learning, not just through traditional school assessment (such as tests scores) but also by assessing the kind of knowledge and skills that come from initiative, investigation, critical thinking and other 21st century skills. On the one hand, they can be used to recognize /represent and validate achievement and learning; and on the other hand, they can be used as a method of motivating learners to undertake activities that they might not otherwise (although some research points out that this motivation may not be sustainable). For digital badges to be broadly accepted as legitimate indicators of expertise, skill, or experience in the education community, badges must appear credible. This depends, at least in part, on the level of quality control for these awards and on the criteria used for issuing a badge. Bearing this in mind, a tiered digital badge system was designed which has one main objective: to create and use digital badges (with demanding criteria and clear evidence, necessary to be perceived as credible by the school community) to promote motivation and multidimensional learning in Geography classes. The badge system allowed for some systemic considerations such as badge per task, badge families and structure, meta badges and learning paths (Berge & Muilenburg, 2016). This study is conducting a quantitative research methodology, based on student's surveys (pre and post use of the digital badge system) and performance results, involving two classes of students (n=40) and the same Geography teacher. It analyses and compares survey data conducted amongst the students about the pupils' perceptions on the use of a digital badge system and its impact on their motivation/ dedication and performance in Geography classes and activities. It also analyses the impact of using digital badges on student's school performance, through a quantitative analysis of students' assessments along the school year.

Keywords: Gamification; Badges; Pedagogy.