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Taking badges to school: A school-based badge system and its impact on participating teachers



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ABSTRACT

While current research on badges typically examines the relationship between badges and learners' motivation, this study explores a badge system's impact on participating teachers. Through qualitative analysis, the data suggests that the badge system provides teachers with new information about students not readily available through typical school-based interactions. Additionally, while the badge system initiated new meetings and opportunities for teachers' joint work, the data did not suggest that these collaborative activities established a public practice of instruction for participating teachers nor did the teachers report changes in their instructional practice. The paper ends with implications and plans for future research.

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1. Introduction

Advocates of educational badges internationally suggest that badging and badge systems may support learning, learners' motivation and make public the accomplishments of learners (Gibson, Ostashewski, Flintoff, Grant, & Knight, 2013; Finkelstein, Knight, & Manning, 2013; Alliance for Excellent Education, 2013). Specifically, they draw comparisons between the traditional assessments of formal schooling and the badge-based assessments of informal learning and virtual settings. The suggestion is that the pedagogical advantages of scouting or game badge systems can be extended to other educational opportunities. For example, schools are beginning to explore the potential badges could play in enriching the learning experiences provided for students (Wardrip, Abramovich, Bathgate, & Kim, in press).

However, while offering opportunities for re-organizing students' educational experiences, badges also face the challenges of other innovations that have been 'brought to school.' For example, there is empirical evidence that suggests that educational games can help students build powerful epistemic frameworks (Shaffer, 2006). However, many schools, restricted by standardized testing or curricula, cannot implement the games as intended and consequently reduce or remove any educational value of a game. It is possible that as badges are incorporated into schools then their pedagogical could be similarly lessened or absent.

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In order to better understand how badges could be successfully implemented in schools, this work addresses two areas of research on badges that have yet to be developed. While the extent research literature on badges has primarily addressed the potential of badges in distributed digital environments (e.g. Abramovich, Schunn, & Higashi, 2013; Ahn, Butler, Alam, & Webster, 2013; Barker, 2013), this study will describe a functioning badge system in a school setting. In addition, although the current research on badges typically examines the relationship between badges and learners' motivation (Abramovich, Higashi, Hunkele, Schunn, & Shoop, 2011; Abramovich et al., 2013; Ahn et al., 2013), this study will describe the impact of a badge system on participating teachers (i.e., the teachers who facilitate the badge system in the school). By focusing on these two areas, this study begins the process of unpacking how badges function in formal learning environments by providing analysis that could lead to successful implementations of school-based badge system. The focus of our analysis is on practical implications for digital badges from our data as well as connecting those implications with extant, relevant learning research.

The findings of this study are drawn from a qualitative analysis of interviews from participating teachers, the principal, and students, as well as a review of badge-related documents from a school that completed two years of a badge system. The analysis applied a conceptual framework to address the ways in which the badge system provided teachers new information about students, the ways in which the badge system encouraged collaborative activity among teachers, and the ways in which it impacted the participating teachers' instructional practice.

There are several noteworthy findings from this study. First, the data suggests that the badge system did provide teachers with new information about students not readily available through typical school-based interactions. This information included students' interests and strengths as well as challenges students face outside of school. Additionally, while the badge system initiated new meetings and opportunities for joint work, the data did not suggest that these collaborative activities established a public practice of instruction for the participating teachers. Finally, most of the teachers did not acknowledge changes in their instructional practice related to their participation in the badge system.

While these findings originate from a focused study of only one school, the data offers implications for future school-based badge implementations. First, a badge system could be an element of an information infrastructure of teachers to support data-informed instruction. Explicitly accounting for student information in future designs could make teachers more aware of what they are learning about students. In addition, future badge system designs should consider norms of collaboration, such as protocols, to facilitate the potential of teacher collaborative work around the badge system. Finally, while the badge system presented the teachers with new elements of instructional practice, such as technological tools, rubrics, and disciplinary practices, future badge system designs should support the chance for new instructional practices to emerge.

2. Theoretical perspective

2.1. Background on badges for learning

Badges have a long history of documenting accomplishments (Halavais, 2012). Defined as "... a symbol or indicator of an accomplishment, skill, quality or interest" (Open Badges Working Paper, 2011), badges are public representations of what one has learned, accomplished and experienced (Gibson et al., 2013; Plori, Carley, & Foex, 2007). While much of the literature on badges characterizes them as digital or inhabiting digital spaces, badges can be both digital or tangible (Halavais, 2012). One of the most common referents for badges in communicating what they are is the tangible - merit badges that are awarded to scouts of the Boy Scouts of America,¹ the Girl Scouts of America,² or international Scout Associations.³

Another possible origin for the modern educational badges is from video and computer games. Built as "... secondary reward systems that have been developed for digital games" (Montola, Nummenmaa, Lucero, Boberg, & Korhonen, 2009, p. 94), these badges are designed to provide represent deeper levels of engagement and experience by providing more opportunity for players to receive feedback (De Paoli, De Uffici, & D'Andrea, 2012). They are viewed as optional reward structures that can scaffold a users' direction through a game as well as increase player motivation. Consequently, badges can be considered a game mechanic or a type of gamification (Deterding, Dixon, Khaled, Nacke, O'Hara & Dixon, 2011; Zichermann & Cunningham, 2011). Taken within this context, badges would be thought of as a way to shape the way a player plays a game.

2.2. Taking badges to school

By implementing a badge system in a school, the explicit goal is to positively influence student learning. However, efforts to innovatively improve teaching and learning in schools have a checkered history. As Ann Brown has written, "... successful interventions are a chimera or at least are extremely fleeting and fragile, not readily transportable to settings outside the innovator's control" (1992, p. 172). This is especially true with respect to technological innovations (Gomez, Gomez & Gifford, 2010).

Ultimately, innovations fail to impact the "core technology" of schools, which is classroom teaching and learning (Hawley & Valli, 1999). This core technology has been further specified for schools as the "instructional core," or the interrelationship

¹ <http://www.scouting.org/meritbadges.aspx>.

² www.girlscouts.org/program/basics/for_volunteers/where_to_place/junior.

³ <http://scouts.org.uk/what-we-do/badges-and-awards/>.

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