

Students' perspectives on badges in educational social media platforms

The case of SAPO Campus tutorial badges

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Abstract—This paper, reporting on research at an early stage, aims to analyse the impact of badges when used in conjunction with an introductory tutorial that aims to help users getting to know its most important areas and functionalities.

With that in mind, a test session was designed, asking learners new to SAPO Campus platform (an institutionally supported social Web platform), to complete a tutorial, discovering the existence of badges and how they could be earned and associated with their profile page, visible to the community. Learners were also asked about the impact of badges on their desire to complete the tutorial, and their general attitude towards being rewarded for completing several actions inside and outside the platform. Preliminary data reveals that learners considered that badges had a significant positive contribute to make them feel more engaged and motivated to complete the tutorial.

Keywords—SAPO Campus, badges, social media, motivation, gamification

I. INTRODUCTION

Lifelong learning plays an important role in society today, as jobs and the skills required for them are constantly changing [1]. “Learning is not just seat time within schools but extends across multiple contexts, experiences and interactions. It is no longer just an isolated or individual concept, but is inclusive, social, informal, participatory, creative and lifelong” (p. 3) [2].

The emergence of a whole ecology of tools and services labelled “social software” has boosted a new movement where collaboration and content creation are predominant [3]. In this context, badges can play a critical role in the connected learning ecology, acting as a bridge between contexts and making these alternative learning channels more viable, powerful and impactful [2].

II. THE POTENTIAL OF DIGITAL BADGES IN EDUCATIONAL CONTEXTS

According to Boutelle (1867) cit in [4], in the original use of the word, badges “were subsets of coats of arms intended to identify an individual or a household”, being used as a way of identifying members of a group and also as a symbol of authority and control.

In the context of social media, badges are symbols representing accomplishments, achievements and marks of experience that can be awarded by institutions, organizations, groups or individuals [5].

Despite the strong link with military and religious values, badges can be designed to keep the philosophy of open education and assessment in mind. According to Barey et al. [6] they can be seen as a new way of assessment, promoting lifelong learning skills and improving users' engagement and motivation.

Recent motivational studies are supporting that individual motivation and engagement in learning activities can be related in a meaningful way to norms, values or characteristics of the social context [7]. In this view, engagement and motivation are socially created and maintained through an active process of participation, interaction, sharing and co-regulation.

In line with that perspective, badges can also promote participatory learning environments, peer-based learning communities and encourage and motivate participation and the achievement of learning outcomes [6]. They also can serve as a clear way of expressing the community values, allowing for a self-directed gratification among the group.

III. DEVELOPING AN INTRODUCTORY BADGING SYSTEM FOR THE SAPO CAMPUS PLATFORM

SAPO Campus (SC)¹ is an institutionally supported platform offering its users social media core services as photos, videos, status, blogs, links and comments sharing systems in order to allow them the development of their own Personal Learning Environments (PLE) [8].

Besides the institutional dimension - that provides an acknowledged environment for secure content sharing - SAPO Campus' users have a personal area that automatically aggregates the content they have published. On each user's newsfeed area, content shared by members followed by the user is automatically aggregated, an area where users can also access their recommendations, notifications and favourite content. This social dimension is an important part of the platform.

In order to promote users' engagement and motivation, a new functionality was added to the platform: a badging system.

Games and game-like elements are becoming increasingly important in diverse domains including education [9]. This phenomenon called gamification is defined as the use of game mechanics, dynamics and frameworks in non-game contexts [10]. Lee and Hammer [9] add that the adoption of game-like elements in

¹ <http://campus.sapo.pt/>

educational settings could bring advantages in three main areas: cognitive, emotional and social (Table I).

TABLE I. ADVANTAGES ON THE ADOPTION OF GAME-LIKE ELEMENTS IN EDUCATIONAL SETTINGS

Cognitive	- clear set of rules and multiple routes to success - existence of immediate rewards keeping the learner engaged and motivated
Emotional	- positive emotional experiences such as optimism and pride - effort is rewarded and the failure could be seen as an opportunity to learn
Social	- social credibility and recognition for academic achievements

Taking these principles into account, a badging system² comprising a manual and an automatic attribution is being developed. The automatic attribution is integrated in a challenge-based tutorial. The tutorial is composed of two major challenges: In the first one, the user must visit and explore the main areas of the platform (institutional, personal and social) to earn the "Explorer" badge. To accomplish the second challenge and win the "Socialize" badge, the user must visit, follow and mention at least one user and make at least one comment.

After making this functionality available in the platform, a test session was developed with a group of students new to SAPO Campus.

IV. METHODOLOGY

This paper reports on the first steps of a case study that is being developed at University of Aveiro focused in assessing the impact of badges on the students' engagement with the tutorial and their general attitude towards the possibility of earning badges when completing several actions inside and outside the platform.

A. Participants

A class of twenty-seven students of an elementary school at S. João da Madeira (Portugal) participated in this test session. Figure 1 shows the distribution of the participants by gender and age.

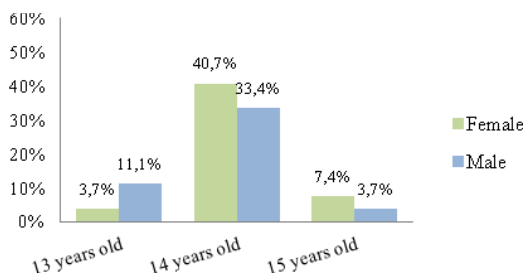


Figure 1. Distribution of the participants by gender and age

B. Procedure and instruments

Participants were asked to login in SAPO Campus platform, to complete the tutorial challenges in order to win the corresponding badges and to answer a short online

questionnaire at the end. The questionnaire was composed by 6 multiple-choice questions and 2 scale questions (scale 1 to 4) addressing the contribution of badges on learners' engagement with the tutorial and the possibility of earning other badges in association with activities occurring inside and outside the platform. This session lasted nearly 20 minutes and was conducted by the teacher during the class.

V. RESULTS

When questioned about the experience of earning badges after completing the tutorial challenges, the majority of the participants stated that have enjoyed (51,9%) or enjoyed a lot (40,7%). Additionally, almost 90% of the inquired learners agreed that the badges have contributed for them to feel more engaged with the tutorial challenges (Table II).

TABLE II. LEARNERS' OPINION ABOUT THE BADGES CONTRIBUTION TO THE ENGAGEMENT WITH THE TUTORIAL CHALLENGES

(N=27)		
Do you think that badges have contributed to feel more engaged with the tutorial challenges?	f	%
No. They were the only reason why I did not like to complete the tutorial challenges	0	0,0
No. They haven't contributed	3	11,1
Yes. They have contributed	21	77,8
Yes. They were the only reason why I wanted to finish the tutorial	3	11,1

After being questioned about the possibility of earning more badges in SAPO Campus (85,2% claimed that would like to have that possibility), the participants were asked to select one or more contexts in which they would like to earn more badges. The results (Table III) show that the participants would like to earn more badges especially in the context of the classroom (e.g. for doing a good work). The possibility of earning badges in the context of school activities occurring inside (e.g. write a good post about the school) or outside (e.g. participate or win a sports event) the platform or even in the context of activities occurring outside the school (e.g. being an exemplary scout) was also claimed by most of the inquired learners.

TABLE III. LEARNERS' OPINION ABOUT IN WHICH SCENARIOS THEY WOULD LIKE TO EARN MORE BADGES

(N=20)		
In which scenarios would you like to earn more badges?	f	%
In the context of the classroom	16	80
In the context of school activities occurring inside the platform	14	70
In the context of school activities occurring outside the platform	13	65
In the context of activities occurring outside the school	12	60

Finally, the participants were asked about whom, in their opinion, should be able to assign and create badges. The results (Table IV) show that the participants consider that the school and teachers should be the main responsible for the creation and assignment of badges. From the correlation study was found a strong (0,58) and statistically significant ($p \leq 0,01$) relation between learners opinion about who should be able to create and assign badges, and the results

² Supported by Mozilla Open Badges: <http://www.openbadges.org>

seems to indicate that learners, contrary to what could be somehow expected, withdraw themselves from the role of creating and assigning badges.

As students were asked to select one or more options, the sum of the percentages (in table III and IV) is superior to 100%.

TABLE IV. LEARNERS' OPINION ABOUT WHO SHOULD BE ABLE TO CREATE AND ASSIGN BADGES

	Create badges		Assign badges	
	f	%	f	%
School	16	66,7	19	79,2
Teachers	18	75,0	16	66,7
Students	11	45,8	11	45,8

VI. DISCUSSION OF THE RESULTS

Although still in progress, preliminary data indicates that, as mentioned by some authors [4] [6], badges have contributed to the engagement with the presented challenges.

When asked about the contexts they would like to be able to earn more badges in, 80% of the inquired participants want to be able to earn badges mostly in formal contexts. These results can possibly indicate that this group of students sees the potential of badges as “symbols of recognition” for achievements and acquired skills and possibly as an alternative way to assess classroom activities.

Collected data also shows that the inquired participants assign the responsibility to create and assign badges primarily to the school and teachers, which could be related with the educational approach and the hierarchical position adopted by the different educational agents in that context.

However, since this was only a pilot test, in the next phases of the study the learners and teachers opinion about the manual system of badges attribution will be assessed. The school administrators will have the main responsibility to analyze content and user actions in order to reward them with badges. Having in mind the possible effort and time that these tasks could represent, it is being considered the development of a mechanism that would enable the community to participate in this process.

In the manual attribution system are currently being developed different possibilities: a) the platform will provide some pre-designed badges that can be used by the institutions; b) users will be able to create new badges, through a set of elements (frames, backgrounds and images) provided by the platform and c) any user will be able to recommend and support the assignment of badges.

The main goal of this badging system is to connect the formal and informal activities occurring in the schools with the digital environment of the SAPO Campus platform. Thus, badges that can be rewarded by mastery and proficiency of learners in both activities occurring in school (e.g.: participate in or win a poetry contest) as within the platform (e.g.: share the best picture of the school) are being designed and will soon be available in the platform.

VII. CONCLUSIONS

These results seem to indicate that the integration of badges in collaborative learning platforms may be a useful

way to promote users' engagement and motivation - as Barey et al. [6] point out, they require participatory learning environments, peer-based learning communities and, according to Halavais [4], can serve as a clear way of expressing the community values, allowing for a self-directed gratification.

Also, the results of this pilot test may be useful in guiding the development and implementation of the manual system for badges attribution at SAPO Campus, and can also be a starting point to a deeper analysis about the meaning and role of badges in promoting motivation and new ways of assessment and recognition.

Starting from this first analysis, the next phase of the study will be structured in order to collect the opinion of different educational agents in different educational levels (basic, secondary and higher education) regarding the meaning of badges and how, why and in which contexts they can promote motivation and engagement.

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