

THE USE OF A DIGITAL BADGE AS AN INDICATOR AND A MOTIVATOR

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ABSTRACT

Digital portfolios can provide a space where evidence of a learner's competency is stored and digital badges can be used in their portfolios as valid indicators of accomplishment, skill, knowledge, or interest. The authors issued 'digital badges' to our students who successfully completed the modules of a Medical English Terminology course we developed on Moodle by using its badge function. The badges which students earned for the course were designed to function as a validated indicator of students' achievements to demonstrate to their teachers. We anticipated that the use of badges would not only help the learners confirm their achievements for the course but also help motivate them toward further autonomous study. Through a reflective questionnaire about the use of badges, about 77.5% of the students found the badge assessment system comprehensible and the great majority of students (87.2%) were satisfied with their study through this course. The questionnaire results also showed that 67.6% of the students found the use of badges helpful in confirming their course achievements and 63.7% of them found that earning badges helped motivate them toward further autonomous study. These findings indicate that while there is still room for improvement, the use of digital badges has the potential to provide students with opportunities to celebrate their achievements and enhance their learner autonomy for online self-study courses.

KEYWORDS

Digital Badges, Moodle, Indicator, Motivator, Autonomous Study

1. INTRODUCTION

In monitoring students' learning outcomes, teachers have long been using a range of traditional measures such as allocated grades or credits. However, these specific measures are institutionally controlled, awarded according to achievement and do not always represent a learner's true effort or illustrate their progress. In e-learning environments, learners have more choice in the time and place the learning will occur. While teachers design digital content and activities to achieve identified objectives, the ultimate responsibility of achieving those outcomes is transferred from the instructor to the learner. In these more personalized environments, learners need to be more self-motivated and self-directed (Clayton, 2009).

Digital portfolios can provide a space where evidence of learner's competencies and achievements are stored and systematically evaluated (Fiedler, et al, 2009). Digital badges have been designed to indicate progress at the point of achievement and are used as valid indicators of accomplishment, skill, knowledge, or interest.

At Shimane University, the authors implemented the idea of issuing 'badges' in a Medical English terminology course we developed using the badge function of Moodle, a popular course management system. The course included 13 sections, each of which had three types of terminology quizzes. Students who successfully completed all the quizzes of each section were issued a 'section badge' and when students had earned all of the section badges and passed the final test, they were issued a "course badge." The badges were displayed in a learner portfolio, which functions as a validated indicator of progression. We anticipated that the use of badges would not only help the learners confirm their achievements, but also help motivate them toward further autonomous study.

2. AWARDING BADGES

Badges actually have been used in many ways to reward achievements. For example, boys and girls in scouting programs earn badges when they have progressed their skills or attended special events. They are given a badge to wear on their uniform to show others what they have achieved. These badges are a source of pride to the scout members who earned them and a way to demonstrate what they have accomplished. In a very similar way, video games also award badges to provide players with rewards for completing various levels.

This idea has been applied to e-learning and there exists a variety of e-learning courses which award badges to users when they have achieved targeted levels or skills (Pöldoja, et al, 2016). The use of badges in educational settings has substantial potential for future growth.

In this study, the authors hypothesized that we could enhance learner autonomy by implementing digital badges for the online courses we developed. We expected that using badges would help learners confirm their achievements, help them engage more with the courses available and participate more autonomously in learning activities.

We implemented the idea of issuing ‘badges’ in a Basic Medical English Terminology course we developed using the badge function of Moodle. The course was designed to help 1st-year medical students of Shimane University review 1,000 basic, frequently-used terms which are keys to better understanding up-to-date information about health-related issues, medical conditions, diseases, symptoms and treatments. The course included 13 sections such as body parts, symptoms, medical devices, facilities and abbreviations (Figure 1). Each section included three types of quizzes such as a multiple-choice quiz and a matching quiz as shown in Figure 2 and 3.



Figure 1. Course Page



Figure 2. Multiple-choice



Figure 3. Matching Quiz

Students first chose a section in the course and then worked on the quizzes they chose in that section. To pass each quiz, they had to meet certain criteria we set. When students successfully passed all the quizzes of each section, they were issued a ‘section badge’ (Figure 4). When students had earned all 13 section badges and had passed the final test, they were issued a ‘course badge’ (Figure 5). The badges were displayed in a learner portfolio (Figure 6), which functioned as a validated indicator of the learner’s progress. The badges earned in the portfolio demonstrate the skills and knowledge the learners have acquired. We anticipated that the use of badges would not only help the learners confirm their achievements through the course study, but also help motivate them toward further autonomous study.

In addition to asking the questions mentioned above, we asked our students to give comments about the use of badges and the following is a selection of some of the comments that were given:

- “The course was very demanding but I found it very helpful with my review of the medical terminology.”
- “I think this digital learning environment will give us a more holistic view of our progress.”
- “The badges I earned should be more clearly displayed on the course.”
- “The design of the badges, especially the course badge should be improved. It would be more motivating if it was a trophy.”

While students mentioned the benefits of earning badges and the appeal of the digital learning environment, some feedback showed that problems still remain such as there is room for improvement in terms of the display of the badges as well as in the badge design.

4. CONCLUSION

In this study, the authors developed a Basic Medical English Terminology course on Moodle using the badge function and investigated if the use of the badges would help learners confirm their achievements through course study and help them participate more autonomously in learning activities.

The initial findings from the survey on students' perceptions of their study through the course indicated that as a whole, the majority of the students (77.5%) found the badge-based assessment was comprehensible and the great majority of them (87.2%) were satisfied with their medical terminology study. The survey results also revealed that two-thirds of the students (67.6%) found the badges helpful in checking their achievements while about one-third of them (32.4%) were still unsure about the effects of the badges. With regard to the function of the digital badges as a motivator, the same basic results were found. About two-thirds of the students (63.7%) found that earning badges motivated them with their study. The comments given by the students about the use of badges showed that there is room for improvement in terms of the display as well as the design of the badges.

We are conscious that we need to further investigate how awarding badges actually helps students check their progress and how it helps them become motivated to study autonomously. We also need to modify the design of badges and the layout of the portfolio.

Digital badges are a response to an emerging educational landscape in an increasingly digital world. They provide a framework that facilitates learning in new contexts and provides opportunities for learners to mark and celebrate their achievements. The challenge for the authors is to rigorously review the use of 'digital badges' to ensure they meet the learner autonomy requirements. We will continue to use digital badges in our online language courses to further enhance self-directed learning and learner autonomy among our students.

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