Gamification or Game-Based Learning? Designing an Online Writing Course

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Abstract

Good Writing: What and How is an online writing project conceptualized, designed and launched at the Centre for English Communication (CEC), Singapore Management University (SMU) in response to a call from the Ministry of Education (MOE) Singapore. Initially conceptualized as a response to SMU students' feedback on feeling unprepared on writing fundamentals when they enter university, the course will serve as a pre-course primer for SMU students matriculating in 2016.

Academic writing has been taught in universities for over 50 years, relying on conventional *chalk and talk* methods. In conceptualising this project, CEC too, converged towards established definitions of what good writing is, and evidence from research on the fundamentals of writing for academic purposes. However, CEC has diverged from conventional thinking by opting to use gamification. Opting for a divergent pedagogy, i.e. looking at different methods of teaching writing, has raised the following questions for course designers:

1. Online, how do we get the depth of teaching and learning conventionally possible in face-to-face instruction?
2. How do you motivate and engage incoming university students in an online writing course?
3. Which is more appropriate – using gamification or game-based learning?
4. Do you have to be a Subject Matter Expert (SME) as well as an Instructional Designer (ID)?
5. Do you produce the course in-house or engage a vendor?

In confronting these questions, CEC recognises opportunities, challenges and constraints in going online to teach cognitively challenging skills like writing.

Keywords: academic writing, adult-centred online learning, game-based learning

Introduction

To prepare incoming freshmen cope with the rigour of academic writing at the university, the Centre for English Communication (CEC) at the Singapore Management University (SMU) designed a web-based writing course entitled *Good Writing: What and How*. The project was initiated by the Ministry of Education (MOE), Singapore in 2014 as one outcome from a working Committee on ICT-Enabled Learning (CIEL). This project provides an online learning platform both for SMU undergraduates and the public to learn about writing.

The course is designed as a primer on writing fundamentals before students undertake the Programme in Writing and Reasoning (PWR) in their first year at SMU. Since PWR is taken by 85% of first year students annually at SMU, having a strong foundation in writing before the course starts is critical.

Contexts

In Singapore, children enter formal education at the age of 7 and go through six years of compulsory education at the primary (elementary) level (Ministry of Education Singapore website, n.d.). At the end of the sixth year, they sit for a placement test known as the Primary School Leaving Education (PSLE) and enter secondary education for four or five years depending on the students' academic ability. For secondary education, students can go to mainstream schools or specialized schools like the School for Science and Technology, School of the Arts and the Sports School. At the post-secondary level, students have the option of enrolling in more industry-based courses offered by the Institute of Technical Education College and the polytechnics. Alternatively, they can take the route towards pre-university preparation by enrolling in junior colleges or centralized institutes before proceeding to enter university (Ministry of Education Singapore website, n.d.).

The different routes taken by students before they enter university have exposed them to varying rigour of academic writing. As such, it is crucial to ensure that they enter university equipped with basic academic writing skills.

In SMU, all freshmen go through a common curriculum which include Foundation Core, University Core, Asian Studies, Global Studies, Technology Studies, Entrepreneurship Studies, Modes of Thinking and General Education (Singapore Management University, 2016). The Programme in Writing and Reasoning comes under the Foundation Core. It equips students with skills such as critical analysis, synthesis and argumentation for them to write persuasively and convincingly in academic, business and professional settings. These foundational skills ensure that they are applied to other courses while students are at the university. Bearing all these in mind, the writing course needs to take into consideration the profile of the learners.

Learners

Today's learners belong to Generation Y, also known as the millennials. Being millennials, they have traits that are different from their previous generations of Baby Boomers and Generation X especially in the way they think and process information. They have been referred to as 'Digital Natives' (Prensky, 2001) who use the digital

language of computers, video games and the Internet. Howe and Strauss (2003) observed and identified seven core traits of millennials and they are: special, sheltered, confident, team-oriented, conventional, pressured, and achieving.

Millennials are brought up by their parents to feel special and important. As such, they crave for prompt, frequent and constructive feedback about their performance. Having helicopter parents who are ultra-protective and over-involved, millennials lead sheltered lives. Hence, they need to learn to take responsibility for their own learning. Because of their sense of confidence, millennials tend to multi-task and underestimate the time needed to complete a task. As for being team-oriented, millennials learn collaboratively, that is, they like to be in a group but they do not necessarily like working on teams. They are also conventional, that is, they want everyone to get along with each other. Due to over-programming, millennials feel the pressure to succeed and thus expect others to make adjustments in their favour. As for achieving, millennials focus more on their grades rather than personal development.

The above traits have implication on the way millennials learn and these have become the impetus for using gamification in designing a web-based writing course.

In designing a web-based writing course, one consideration is how to incorporate technologies in academic literacies without disrupting the appreciation of the written tasks. Which approach is more effective – using gamification or game-based learning?

Approach

Karl M. Kapp, Professor of Instructional Technology, Bloomsburg University, Bloomsburg, Pennsylvania differentiates games and gamification as follows:

Games refer to "A system in which players engage in an abstract challenge, defined by rules, interactivity, and feedback, that results in a quantifiable outcome often eliciting an emotional reaction" (Kapp, 2012: 280).

Gamification refers to "Game-based mechanics, aesthetics, and game thinking to engage people, motivate action, promote learning, and solve problems" (Kapp, 2012: 280).

Instead of dealing with each definition separately, I would like to focus on the key words, in bold, from both definitions that are relevant in content creation. Collectively, these key words form the basis for gamification. The purpose of creating game-like elements in a non-gaming environment is to engage the learners as they embark on this self-directed learning as a source of motivation to promote learning and problem-solving. As they immerse themselves in the game, rules are needed to govern the play. The games they play involve interaction with the content (not so much interaction with other players as this is a single user game) and feedback is provided for the learners to gain mastery of the game and achieve the goal of playing the game. This can be in terms of the collection of points after each task completion. Simply put, gamification is the use of game design elements and game mechanics in non-game contexts as compared to game-based learning (GBL) which can be described as 'serious play' (Kapp, 2012) or 'playful learning' (Plass *et.al.*, 2015).

In designing the course, the team from CEC used strategies of game design elements to engage learners at different levels – cognitive, affective, behavioural and sociocultural (Plass *et.al.*, 2015) - to provide learners with a virtual experience to acquire writing skills using games. Game-like elements are inherently fun and their inclusion motivates learners to promote learning, engagement and tasks productivity that lead to a desired behavior as opposed to learning more conventionally. Gamification creates a more involved and an active, self-directed learner who are engaged, informed and educated through games. In this case, what is gamified is **the content**, through the addition of game elements, game thinking and game mechanics using digital storytelling. Gamification, as emphasized by Kapp (2012), should not be about badges, points and rewards or about trivialising learning, that is, playing games for its own sake rather than learning through the game.

At CEC, when the team first conceptualized the content, we wanted to use a simulation game. The initial motivation to use game-based learning was driven by our awareness that current learners, being millennials, have grown up playing video games and are familiar with the gaming formats for entertainment. Thus, using game-based learning extends existing familiarity with videos for entertainment to using videos for educational purposes. However, for a writing course which is skills-based, creating content is challenging especially when trying to avoid artificially creating content to incorporate game-based elements. Whether it is game-based or gamification, more importantly, the approach chosen in designing the course content should be based on the learning goals, the learners and the setting. The team is aware that we do not want the online writing course to be a video lecture of PowerPoint slides. We want animation and interaction. Overall, we want learners to have an engaging and immersive multi-sensorial learning experience with meaningful interaction.

Course Design

Course Structure

This stage comprises the course design, design review and concept revision. One of the considerations in the concept design was to ensure that the content did not cannibalise the main course which is the Programme in Writing and Reasoning (PWR). For each unit, the lesson objectives and learning outcomes were outlined before selecting the concepts to be covered. The skills set covered for the online writing course focuses on the following: 1) taking a stand, 2) making a claim, 3) knowing the audience and purpose, 4) organizing texts and 5) writing clearly, coherently and concisely. The skills for PWR cover critiquing, synthesizing and argumentation. The content for the online course covers what learners need to know prior to PWR.

The course designed was reviewed by a team comprising a faculty member from the School of Business, full-time Teaching Consultants at CEC and an adjunct instructor. The blueprint was revised to include the feedback from the review team.

The online writing course consists of five bite-sized units. Learners only need to spend between 10 to 15 minutes for each unit. Each unit comes with a video embedded with a set of tasks. The video makes use of animation and interactivity

which employs gamification. The game elements include feedback on each quiz with a notification of the correctness of the answer, and the number of correct answers in each game. Learners cannot progress to the next activity unless they achieve a minimum score of 80%. Feedback is given on the response to the tasks. At the end of the unit, the total points accumulated from the different tasks are displayed.

Course Development

A completed copy of the blueprint was handed over to the vendor who was responsible for employing its own Subject Matter Expert (SME). Despite having the blueprint, the vendor had difficulty contributing to the creative content and visual appeal for the video production. Each unit went through three cycles of iterations. And each time when the issues were fixed, new issues surfaced that needed to be addressed. It thus became difficult to sign off the completion of each unit.

After working with the vendor for six months, there was very little progress of the project, so its contract was terminated. During that time, a student assistant from the School of Information Systems (SIS) was brought on board to continue work on the remaining units and to rework on the earlier three units produced by the vendor.

The student assistant was a 2nd Year student from the School of Information Systems (SIS) who had completed the Programme in Writing and Reasoning during her freshmen year. She had experimented using the software GoAnimate but had to learn how to use the Articulate Storyline 2 software.

After the five units of *Good Writing: What and How* had been developed, they were piloted to 46 students who were doing PWR in the current term. The pilot allowed information gathering in the following areas: content coverage, presentation of content, timely interactive feedback, visual appeal of the content, appropriateness of the tasks, inoperable functionality (eg. When the right answer was given, the system flagged it as incorrect), browser incompatibility (eg. Would different browsers support the use of flash instead of html5?), and user interface (eg. Would the animation appear childish to SMU students?)

In designing a web-based writing course, some fundamental questions came to mind.

Questions

The questions asked touched on issues related to pedagogy, motivation, approach, expertise and production.

1. Online, how do we get the depth of teaching and learning conventionally possible in face-to-face instruction?
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Pedagogy

1. Online, how do we get the depth of teaching and learning conventionally possible in face-to-face instruction?

When developing an online course, we took the decision that such short modules could only cover the breath rather than depth. We think that depth will still occur in face-to-face teaching.

Motivation

2. How do you motivate and engage incoming university students in an online writing course?

This is tricky in terms of balancing the content (bite-sized) and the level of activity (interactivity) to motivate and sustain students' interest.

Approach

3. Which is more appropriate – using gamification or game-based learning?

We started off wanting a game-based, simulation, scenario-based learning but ended up using gamification because the nature of the content is skills-based as compared to content-based. We were also mindful of presenting the students with game-like interactive learning experience to ensure that learners are learning through the game instead of just playing the game.

Expertise

4. Do you have to be a Subject Matter Expert (SME) as well as an Instructional Designer (ID)?

We discovered that we needed to be jack of all trades – knowing the content and visualising how the product would look like. However, having a team of audio, video and graphic designers, beside the instructional designer, is the ideal situation, if possible.

Production

5. Do you produce the course in-house or engage a vendor?

It all depends on the team members. This can be done in-house if you have the relevant experts available. However, do not discard the idea of working with student assistant or interns for the project especially if budget is an issue.

The next section discusses the opportunities, constraints and challenges in developing a web-based writing course.

Opportunities

Firstly, working on this project has given the team the opportunity to convert our course materials to online format which is in line with the university-wide initiative towards introducing blended learning among students. It is also one way to prepare for the Emergency Preparedness for Teaching and Learning (EPTL) should there be an outbreak of diseases or environmental situation (eg. haze) which prevent face-to-face instruction. Secondly, this project involves positive opportunities for working with other parties within the university contexts such as the Centre for Teaching Excellence, the Integrated Information and Technology Systems (IITS) department, the Library, Office of Legal and students.

Constraints

The video production for the course is restricted to the use of the following software: GoAnimate and Articulate Storyline 2, the ones that were used by the vendor. To ensure consistency in terms of the look-and-feel of the rest of the units, the same software had to be used. Articulate Storyline 2 is used to create interactivity in the video. However, the types of interaction available are limited to drag-and-drop for matching task, multiple-choice option, and sorting. This software is also heavy in terms of storage that at one point, the personal laptop used by the student assistant crashed and she had to invest in a new laptop. As a result, the units which she was working on had to be redone.

Another constraint is in terms of copyright compliance. The university is covered under the institutional license for the use of print and non-print materials. However, if the course is made available to the public, a separate license and copyright law apply. Copyright clearance is also needed for the use of images and music for the video production.

These constraints added to the challenges the team faced in producing the web-based writing course.

Challenges

The main challenge the team faces is the issue of continuity due to the change of team members because of human resource issues - end of contract, resignation or transfer to another department. The Project Lead is the sole remaining member from the original team. Another challenge is having to deal with an incompetent vendor. After working with the vendor for six months, the team had to make a judgement call to terminate its service due to unsatisfactory standard of deliverables. The vendor was also unable to provide appropriate suggestions in terms of creative content and visual appearance for the project. Furthermore, the level of gamification provided was not appropriate for university-level students.

After producing the course, the team was faced with the issue of browser incompatibility, for instance, Chrome will no longer support flash, a feature that is used in the video. Another aspect is in terms of operable functionality in terms of the machine used to access the course. Apple laptops does not have flash installed in the machines and hence, learners using them will not be able to access the course. One

way to get around this is to convert the video to html5. However, in doing the conversion, some of the properties in the video may be lost. The video needs to be amended or redeveloped.

In terms of course inclusivity, we realized that the course is not able to cater to learners with hearing impairment or those who are visually challenged. For the former, having subtitles may help to a certain extent. As for the latter, heavy dependence on audio will result in having to narrate what is already presented in each video frame.

Moving Forward

A follow-up to this web-based writing course is to have it available in a mobile version as that is the trend in online learning. Another follow-up to this project is to study learners' perception and behavior on adopting the use of technology in academic writing. Other possible areas of study include looking at the effectiveness of course in terms of learners' completion rate and time-on-tasks in comparison to the learning goals.

Conclusion

Producing a web-based writing course has been a challenging endeavor that has resulted in a steep learning curve for the members in the project team. It is not just about converting readily available content from one learning platform (traditional teaching) to another (online teaching). What is at the heart of this course will still be the learning goals that instructors set out for the learners. Most importantly, it is about the learning rather than the platform for learning, and the effectiveness of the learning process. As educators, we will continue to explore for the most effective ways to bring learning to our learners. Technology remains a tool or a driver for learning; it does not replace the learners, the instructors or the learning.

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