

CAN ANY MARKETING INSTRUCTOR TURN CASE STUDIES INTO A GAMIFIED EXPERIENCE FOR STUDENTS?

Area: General Marketing Education Issues

Abstract

Marketing educators often use case studies as it is a form of experiential learning. However, successful case-study teaching requires students to be prepared. Yet, research shows that students are becoming more and more reluctant to reading assigned class material and their motivation is lower when teaching is done with traditional media. Students have become the virtual generation who plays games every day and games can keep them motivated several hours at a time. But the development of teaching games is costly and instructors are reluctant to use games that have been developed by others as they rarely completely match their expectations and teaching styles. This paper describes two case studies showing that a marketing professor with no previous experience in Second Life and not particularly technology-savvy can gamify a case study into a sandbox virtual world.

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CAN ANY MARKETING INSTRUCTOR TURN CASE STUDIES INTO A GAMIFIED EXPERIENCE FOR STUDENTS?

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Introduction

Marketing faculties place a great emphasis on how the taught content can be applied, to allow students to develop the competencies, such as problem solving, that are required by prospective employers (McMullen, 1998). A review of all articles published in the Journal of Marketing Education between its creation in 1979 and 2012 showed that “experiential learning” had the second greatest number and percentage of articles published, right after “assessment” (Gray et al, 2012).

The case study or teaching case¹ method has been found, by Alexander et al (1986), to be favored by 94% of strategic management instructors who use some form of case discussion in their teaching. It is also one of the most popular experiential learning teaching techniques among marketing instructors: Gray et al's (2012) review of all articles published in the Journal of Marketing Education indicates that within the category “experiential learning”, “cases” has the highest occurrence.

From student-led presentations to instructor-led discussions, there are many different ways of teaching cases (Lamb and Baker, 1993). However Crittenden et al (1999) clearly state that regardless of the style utilized by the professor, the two necessary components to a successful case teaching class are student preparation and class participation. McQueen (1995) states that proper case preparation can require up to six hours: 2.5 to four hours of preliminary individual preparation, one hour of group discussion and one hour of final individual preparation. However, a research conducted by Smart et al (1999) showed that among the changes perceived by faculty over the previous ten years was the fact that students seemed to have a general unwillingness to read assigned materials, as well as a low overall motivation and low involvement with traditional media (Hunter-Jones, 2012).

Indeed, several recent research (Roberts et al, 2005; Lenhart, 2008; Woodward, 2000) corroborate that students have become what Proserpio and Gioia (2007) call “the virtual generation”. A research conducted in 2006 by Bridgeland, Dilulio, and Morison, aiming at

¹ For the rest of the paper, to avoid confusion between the case study used to teach and the case study as a research method, the expression “case study” will be only used for the research method of this paper, whereas case studies as a teaching method will be called “teaching case”

understanding the reasons why US high-school students drop out, found out that nearly half of them said a major reason was that the classes were not interesting, and 70% said they were neither motivated nor inspired to work hard. Another research conducted by the US National Center for Educational statistics (2003) shows evidence indicating that the same students who are most at risk for failure in the traditional classroom setting, also spend an average of twenty seven minutes per day more than their counterparts, using video games. Sousa (2001), supported by others (Squire & Jenkins, 2004; Squire, 2003 and Gee, 2003), feels that the way schools are currently set up could be disabling for some students who might shine if they were given a different learning environment. Proserpio and Gioia (2007) explain that instructors teaching styles and the Virtual Generation learning styles should be compatible. The New Media Consortium/Educause joint 2014 report, includes game-based teaching in their list of technologies likely to have the largest impact on education over the next two to three years. In this context, can gaming techniques be introduced and more widespread in the teaching of marketing?

Research suggests (McFarlane et al., 2002; Sandford & Williamson, 2005) that the use of games in formal teaching situations can present problems because it can be difficult to find appropriate games for specific teaching situations. There are a limited number of commercial educational games available and these commercial off-the-shelf games may not map closely to the desired learning outcomes and curricula (Hollins and Whitton, 2011). In addition, the research of Bain & McNaught (2006), states that many academics resist the use of computer-assisted learning that has been “created elsewhere”, explaining it through patterns of relationships between the teacher’s beliefs and general practices on the one side, and the computer assisted learning practices on the other side. This can be extrapolated to game-based teaching: practically, this would mean that the adoption of educational games is limited to the educators who feel a match between the authored games and their own beliefs and practices. Consequently, game-based teaching would be much more widespread if teachers were provided with games that they can adapt to match what Bain and Mc Naught (2006) call their beliefs and practices and what Proserpio and Gioia (2007) call their teaching styles. But teaching-games are expensive and complicated to set up, mainly because their development requires a story, art, software and pedagogy (Zyda, 2005) as well as programming skills (Burgos & al., 2007).

As explained previously in this introduction, teaching through cases is widespread among marketing educators and thus seems to match their “beliefs and practices”. Teaching cases have been successfully gamified in the virtual world of Second Life (SL), (Emad , 2011; Halvorson and Emad, 2012; Emad et al, 2012). SL can be defined as a “synchronous, persistent multi-user virtual environment, facilitated by networked computers, in which people, represented as avatars,

experience others as being present in the same environment, or 'being there together' even though they are geographically distributed" (Bell, 2008; Bartle, 2004; Castronova, 2004; Koster, 2004; Minocha & Reeves, 2010). In simplest terms, SL is a virtual world which "provides an experience set within a technological environment that gives the user a strong sense of being there" (Schroeder, 1996; Warburton, 2009). SL was launched in 2003 and is operated by LindenLab.

In order to move through this virtual world and interact with other virtual people and objects, users have first to download the SL software and open an account which can be free for the basic activities or charged in Linden dollars (convertible in real currencies) for premium activities (such as owning or renting a land). Then new users have to create an avatar who can be customized to get an extended self, 'would-be' or fanciful persona. Avatars can also be nonhuman (for instance, animals or robots). After being created, avatars can move in virtual 3D spaces by walking, running, flying or 'teleporting' to any desired location and they can converse in real time through gestures or audio- and text-based communication (i.e. chat and instant messaging) (Baker *et al.*, 2009; Minocha & Reeves, 2010). Therefore, SL can be considered primarily as a 3D online space for social interaction.

More specifically, SL can be used in online teaching because of these remote interaction capabilities. SL can be customized through its objects, buildings, furnishing and landscapes in order to provide a teaching environment which favors interactions with the teaching staff and among students. For instance, instructors can hold office hours or arrange meetings with online students, or they can hold lectures (Baker *et al.*, 2009). According to Warburton (2009), SL can enhance teaching experience thanks to extended and rich interactions, visualization, individual and collective identity play, immersion in 3D environment, simulation (reproduction of contexts that can be too costly in real life), community feeling by promoting a sense of belonging and purpose, and content production. This can provide a supporting environment for experimentation, exploration, task selection, creation and dynamic feedback (Jarmon *et al.*, 2009). A major drawback is the time that students and instructors have to invest up-front learning how to use SL, even if, for most of people this process takes place within an hour. It can be unacceptable especially for people who are not willing to try new technologies or who do not enjoy online interaction (Baker *et al.*, 2009).

Using the specificities of SL, a teaching case was deconstructed, the information separated by role and spread around the imaginary setting of the case in the virtual world of SL. Students were meant to collect the information by moving in the environment and interacting with objects, then they had to gather in teams to interact and to reconstruct the case using an Aronson (1971) type

of cooperative learning method (Fig. 1). Students' motivation was enhanced by allowing them to access the case information by playfully collecting it in the virtual environment, instead of being given a stack of 12 to 35 pages to read. (Emad , 2011; Halvorson and Emad, 2012; Emad et al, 2012). Could this be done by any marketing faculty?

Teaching cases already include the story and pedagogy part mentioned by Zyda (2005). Gamifying them would still require the art and software programming skills (Zyda, 2005; Burgos et al, 2007). Heiphetz and Woodill (2010) describe SL as an "open sandbox" where one establishes the rules, explaining that it provides an unlimited opportunity to build one's own scenarios and use them for whatever purpose one chooses. Bainbridge (2007) states that the whole point of SL is to empower users to create anything in their virtual world themselves: it offers scripting and graphic tools that allow anyone to build whatever they chose to. This was very recently reaffirmed by Linden Lab's² newly appointed CEO who confirmed that SL is not in the business of creating content, but in the business of empowering content creators (Altberg, 2014). The aim of this paper is to test if non-technology-savvy marketing instructors can gamify a teaching case in the sandbox virtual world of SL.

Methodology:

A method was developed to gamify teaching cases in SL (Emad , 2011; Halvorson and Emad, 2012; Emad et al, 2012) using two simple scripts and a drag and drop technique, to turn static virtual objects into interactive objects able to give a piece of information, when students clicked on them. This method was tested by a Marketing teaching assistant and by a Marketing Professor, to check if they were able to implement this method and if they felt that this approach was easy-to-use. This was measured through the 3 following indicators:

1. It will not take more than 60 minutes training, for them to be able to understand how to, and to implement, on their own, the teaching-case gamification method in the virtual world of SL.
2. They will perceive the workload related to adapting and implementing the teaching-case gamification method as acceptable.
3. They will perceive the cost related to adapting and implementing the teaching-case gamification method as low.

The case studies

Case study on a teaching assistant:

The case study on the teaching assistant took place over the summer of 2010, at the University of Applied Sciences Western Switzerland, Geneva Business School (HEG Geneva). The

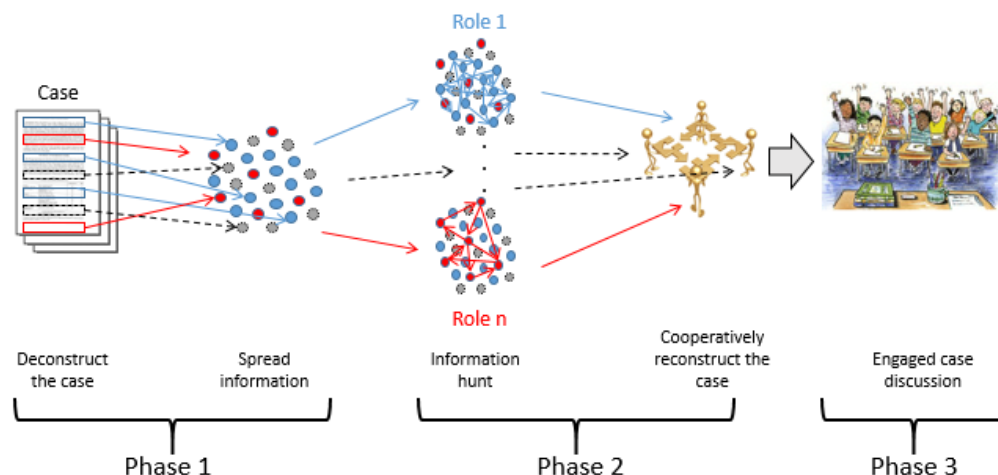
² Linden Lab is the company that created Second Life <http://lindenlab.com/>

assistant was 29 years old. He had no practical Second Life experience, yet, he had a good experience in gaming in general.

The objective of this case study was to check if an individual, with no SL experience whatsoever, would be able to implement, on his own, the defined scenario of the gamified teaching case in SL.

This case study took place in an asynchronous format, over a certain number of weeks, where the assistant would work on his own, as he could fit that into his schedule. He could therefore not be observed while completing the various tasks he was assigned and feedback was provided by asking him to report on his experience, as well as by the quality of the work he could deliver.

This case study was conducted using a 12 pages self-developed case on a fictitious consumer goods company. Students were asked to develop its marketing strategy and marketing plan. The teaching assistant was shown a graph describing the concept of the gamified case study (Fig. 1) and was asked to deconstruct the case and to build the game setting in SL.



Source: Author

Figure 1: Illustration of the concept of the gamified teaching case

About 20 minutes were spent showing the teaching assistant the SL market place, the web store where SL residents can purchase virtual items that would be then delivered directly to their avatars in SL, and explaining to him the difference between modifiable and non-modifiable objects in SL³.

³ Objects in Second life can have specific properties, according to what their creator defines: they can be modifiable, meaning that those who purchase them can alter their shapes or add content in them such as scripts or other things. Non-modifiable objects cannot be altered. They can be transferable, meaning that those who purchase them can give them to other people. Non-transferable objects cannot be given to other people. They can be copy, meaning that they can be multiplied. If an object is no-copy, this means that those who buy them will own

Within the 20 minutes, he was also shown how to re-texture⁴ existing modifiable objects, as well as how to build and texture basic geometric shapes that could then be used as objects or boards to display or distribute pieces of information. Another 20 minutes were spent showing him how to drag and drop the scripts and the pieces of information in the modifiable objects to make them interactive.

The assistant was asked to look for modifiable objects on the SL market place, so it would be possible to use them for the teaching case, by dragging and dropping pieces of information in them. He came back within a couple of hours, with the requested items. A game plan was designed, detailing for each different piece of information, the object that would hold it, the location where it would be retrieved, the format it would have as well as the role that would be able to collect it (see fig 2 for a simplified version of the game plan). The teaching assistant was given the game plan and sent back in SL to implement it. Within a week, he reported back that he had completed the task. Tests showed that everything worked perfectly and the assistant explained that he had a lot of fun doing so.

	Role 1
Location A	Piece of information 1, object X, Format

Source: author

Figure 2: Simplified version of a cell of the complete game plan.

Summary of the case study on a teaching assistant:

This first case study shows that a teaching assistant in his late twenties, gamer but new to SL, was perfectly capable of building the gamified teaching case on his own, provided a total of 40 minutes training.

This clearly shows that if a marketing professor were reluctant to implement this method, a marketing professor working with a teaching assistant interested in games, would be perfectly capable of implementing this method completely.

Case study on a marketing professor:

This second test, done with a marketing professor, was more structured, with a well-designed process, encompassing a proper training and an assessment through real time observation and qualitative interview. Her actions and comments were noted and documented for later analysis.

only as many copies as they paid for. Any object can be modifiable or non-modifiable, transferable or non-transferable and copy or no-copy, or almost any combination thereof.

⁴ Change the coloring. For example, in Second Life, a book case can be easily self-built by rezzing (making it appear in the virtual world) a virtual plywood rectangle and texturing it with a texture mimicking a bookcase (i.e. back of book covers surrounded by a wooden frame)

The marketing professor was a 40 to 50 years old female, holder of a PhD in services marketing, with a marketing teaching experience of more than 10 years. She had a good experience of paper-based case teaching and was generally comfortable with computer software. However, she had no prior experience with SL at all. She was also not a gamer and never really played games in the past.

Given the limited availability of the professor, it was decided to perform this research in two steps: The first step began with a brief explanation of the “offline” case preparation activity: deconstructing the case and splitting it by role then deciding which type of object could host the pieces of information as well as which type of setting would be most adapted to the case narrative, and ultimately developing the game plan. These elements being part of what any marketing professor already does, their feasibility was only tested by describing them to the marketing professor, using figures 1 and 2 above. The Professor agreed that this was easy and within the usual scope of what she does, stating that she would probably be prepared to do it, especially if the case study was well structured and could be reused several times and thus she would consider the required time as an investment. Alternatively, she commented that she would ask her teaching assistant to help her on it.

For the second step of the case study, the marketing professor was given a training package that included a descriptions of the various tasks she would need to perform as well as an explanation of how these tasks should be performed, along with a second document including print-screens of what she would be shown. The professor sat next to a trainer who showed her how to create a texture and upload it into SL, how to purchase an item form the SL marketplace, how the purchased item needed to be full permission and mostly that the next owner should have the authorization to modify it in order to enhance the object with the required script and piece of information. She was shown how to unpack an object and then place it in SL, as well as how to place the required script and the piece of information in the object, to make sure they were given to the students clicking on them. She did not have any question. The training had lasted exactly 33 minutes.

The Professor then logged in the virtual world with an avatar that was lent to her. She was requested to reproduce on her own what she had just been shown. It took her exactly 27 minutes to complete the 9 tasks that she was performing for the first time of her life. Altogether, the training and the practical exercise had lasted exactly 60 minutes. So even if we consider that the first run of the practical exercise is also part of a training, we would still be within the hypothesized 60 minutes of training. Her reaction was that this exercise had been much easier than what she had

expected. The training - seeing the trainer perform the tasks and getting the provided documents and printscreens - was all she had needed to be able to succeed.

Regarding costs, she commented that the items she had seen on the SL market place were really inexpensive, which made the whole exercise really low cost.

Summary of the case study on a marketing professor

This second case study shows that a non-gamer, middle aged, new to SL, marketing professor is indeed capable of performing the tasks needed to implement the gamified teaching case method, with a less than 60 minutes basic training. The marketing professor's feedback was extremely positive and showed that she was positively surprised by how simple the process was. She stated that she was probably prepared to invest the time to do it, especially because the case study could be reused several times and thus, the required time would be considered as an investment. The marketing professor also found very interesting the idea of working with a teaching assistant on this, as this type of work could be easily delegated, provided some guidance. Lastly, she confirmed that she thought it would not be expensive to implement.

Conclusion

In this research, we wanted to test whether marketing instructors that are not familiar with SL would be able to go from a paper-based teaching case and build and implement it themselves in SL, to prepare, on their own, a gamified teaching case of their choice.

The first aim of this research was to check if it would not take more than 60 minutes training for educators to be able to understand how to build and implement, on their own, a gamified version of a teaching case in the sandbox virtual world of SL. A first case study with a teaching assistant showed that a 40 minutes training was sufficient for the teaching assistant to complete the gamified case-study. Apart from that, there were a few check and validation sessions, which correspond to what any professor normally does with a teaching assistant. A second case study with a full marketing professor showed that it took overall 33 minutes to train the professor to perform the key tasks needed to build a gamified teaching case. Consequently, both case studies proved that indeed, with less than 60 minutes training, 2 separate marketing instructors, otherwise not familiar with SL, were able to understand how to build and implement on their own, a gamified teaching case.

The second goal of this research was to verify if the workload related to adapting and implementing the paper-based teaching case into a gamified teaching case would be perceived by the educators as acceptable. This question was not directly addressed with the teaching assistant because he had a lot of fun working on this project and therefore not only considered this workload as acceptable but even as enjoyable and certainly worth the effort. Regarding the

Marketing professor, this question was specifically discussed with her and led to the conclusion that indeed, the workload to build and implement a gamified teaching case was perceived as acceptable, as it was anyway an investment, since a same teaching case could be run several times. And eventually, it would be possible for a marketing professor to require the help of their teaching assistant to work on such a project.

Lastly, the third aim of this research was to assess if the cost related to adapting, building and implementing the paper-based case into a gamified case would be perceived by the educators as low. The marketing professor clearly stated that she found that adapting and implementing the gamified teaching case in SL appeared to her as inexpensive. Man-hour costs were not taken into account since, as according to what was explained by the marketing professor, the time spent on the implementation should be considered an investment, as the same teaching case could be reused several times.

Hence, these two case studies hint that any marketing instructor could be capable of gamifying a teaching case in the sandbox virtual world of SL, even those well in their forties, not particularly technically savvy, with no prior gaming affinity and with no prior knowledge of virtual world.

Further research

This research was limited to the field of marketing, however, the method itself is not specifically correlated to the marketing subject and as such, could be transposed to cases pertaining to other disciplines. Such off-the-shelf cases exist for other subjects and it would be interesting, in further research, to apply this method to other areas of business education. The first 2 areas that would come to mind would be on one hand strategy, as the teaching cases in that area are quite close to marketing cases. The other one would be anything related to organizational behavior and leadership. Attempts could also be done in fields less experienced with the use of cases for teaching, such as accounting, statistics or economics.

Recent development in the area of virtual worlds and virtual reality provide us with new, more immersive tools for gamifying teaching cases, which might enhance the feeling of presence experienced by students. Virtual reality headsets such as the Oculus Rift, which has been recently purchased by Facebook for 2 bn USD, are compatible with SL and it would definitely be worth trying to pursue this research by conducting it with the inclusion of the Oculus Rift.

Lastly, in this research, the marketing assistant and the professor both tried implementing this method only once. It would be interesting to ask other instructors to try implementing this method several times in a row to check if there is a learning curve making instructors more efficient and more effective at each run.

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