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Digital Storytelling for Start-Ups: A Canadian MOOC Design Experience

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Abstract. The four-week Business Start-up Massive Open Online Course (MOOC) is the first MOOC designed at the Southern Alberta Institute of Technology (SAIT), Calgary, Canada. This work in progress paper discusses the author's experience designing the course through digital storytelling in partnership with seven successful Canadian entrepreneurs using powerful digital tools, including 2D whiteboard video animations and interactive video presentations, to engage and motivate learners in planning their start-ups. The MOOC's target market is diverse and global: internal students from various programs at SAIT, alumni, lifelong learners, and professionals.

Keywords: MOOC, e-Learning, business start-ups, entrepreneurship, digital storytelling, whiteboard animations, interactive presentations, case studies, course design, video design, video production, authentic learning.

1 Introduction

The MOOC movement represents a great opportunity for Canadian higher education institutions to be part of a new wave, the democratization of online education. The ongoing revolution in information technology demands changes to not only what is known and learned inside or outside the classroom, but also how the learning needs and learning processes of lifelong learners are managed in an adaptive and engaging open learning environment that supports them in a just-in-time format. Currently, a gap exists in the Canadian MOOC market. There are few MOOCs with Canadian content that offer potential entrepreneurs courses to acquire new skills to plan their business start-up. The majority of MOOCs are offered by American or European colleges and universities. Entrepreneurs who want to start new businesses urgently need to acquire the skills to plan and operate them. They express interest in a just-in-time, online, condensed course of only a few weeks, a course with a step-by-step approach that will help them define their vision and make their dream a reality.

2 Opportunity

The project focused on the design of a four-week Business Start-up MOOC through digital storytelling and real entrepreneurial case studies. The seven entrepreneurs involved in the project wanted to contribute by sharing their stories and by providing useful information related to the different phases of a business venture. The course was developed for learners who would not otherwise be able to access such a course due to their location or their busy personal and professional schedules. The main objective is to reach a global audience of entrepreneurs who are interested in acquiring just-in-time learning to plan and launch their new business venture.

3 Course Design

Authentic learning techniques – learning by doing based on real problems with practical applications – were used for the course design, as they are considered to be among the most effective learning methods. Authentic learning typically focuses on real-world, complex problems and their solutions, using role-playing exercises, problem-based activities, case studies, and participation in virtual communities of practice [3]. Moreover, the value of authentic activity is not constrained to learning in real-life locations and practice; the benefits of authentic activity can be realized through careful design of web-based learning environments [2].

The course design focused on creating easy ways for learners to understand the business content using powerful digital tools such as 2D whiteboard video animations, interactive video presentations and real case study videos with seven entrepreneurs. These tools have been utilized in the past, however, this project was innovative by adopting the best practices from the film and multimedia industries producing more engaging online course content. Additionally, the real case studies are not merely interviews with real entrepreneurs but instead are comprehensive stories that are interwoven throughout the fabric of the course content. In this way, learners can explore the course through storytelling, which effectively combines their learning in each of the four modules and their actions to apply this new knowledge to building their integrated business plan. A total of 94 videos (59 talking heads, 22 interactive presentations and 13 2D whiteboard animations) were produced for the course content and assessments. The course was structured in four consecutive modules, each addressing the key components of a business plan: 1) Business Opportunity and Market Assessment Strategy; 2) Marketing Strategy; 3) Operational Strategy, 4) Financial Strategy. The digital learning's content is broken into microlearning units to improve learners' engagement and to allow them to be in control of what and when they are learning. At the end of each module, learners are quizzed through video questions from all entrepreneurs on specific topics covered in the module. After, they are invited to start the related module's section of their business plan. For their final assessment after completing all modules, learners will produce a 2-minute elevator pitch video to sell their business ideas to potential investors and will be evaluated by their peers. Furthermore, learners can build an entrepreneurial business community that engages them to be more active in their own learning through online discussions where they can share their business ideas with peers.

3.1 Tips and Recommendations

2D Whiteboard Video Animations. 2D whiteboard animation is a technique used to draw a story on a whiteboard with different animations and voiceovers such that it looks like a video. As mentioned previously, this MOOC focused on using innovative digital technologies as an effective way to grab learners' attention and add life to the learning content.We used Videoscribe, an application designed to generate whiteboard animations and conceptualize complex business theories in a short video clip with voiceover. Images from Sparkol were also used to enhance the whiteboard videos. The combination of handwriting with visuals, plus voiceover and a light audio track gains and holds learners' attention as they are engaged through storytelling, making it more fun to learn the content. This use of 2D whiteboard video animations takes storytelling to the next level by making it more creative and visually interesting for learners. This type of digital technology has the potential to spark discussions among learners, supplement key concepts, provide real-life business examples, demonstrate problem solving, and introduce the various challenges related to start-ups.

Interactive Video Presentations. Traditional PowerPoint slides or Prezi presentations were not suitable options for engaging learners through storytelling or for conveying the course content. Time and resources were focused on producing interactive video presentations containing visually stunning images, video footage, audio narration, and background music making the online presentations more dynamic. To respond to the needs of the target market, entrepreneurs, a way had to be found to encourage active learning and engagement with the content and improve long-term retention of the business course material, particularly for those who were unfamiliar with the different business topics and concepts. It was also important to grab the learners' full attention and to complement the seven entrepreneurs' stories with 2D whiteboard video animations. Initially, key learning goals were identified in areas that were not covered through the 2D whiteboard video animations and where learners normally have difficulty understanding the content. Then short interactive video segments for each topic were created to enhance learning. Excessive use of printed text was avoided to prevent cognitive overload, as it can be challenging for the brain to read and listen at the same time. A videographer/video editor was hired to produce in-house videos and money was invested to buy royalty-free high-resolution photos, images, illustrations, vectors, and videos that matched the scripts, storyboards, and audio narration. The online provider Colourbox was used extensively in the video production process. Moreover, it was important to use a conversational style in the videos (such as "you" and "your") to make the learners feel more personally connected to the digital stories. Video presentations were broken into shorter segments of three to five minutes to encourage learners to understand one concept at a time before moving onto the next. This allowed them to control the pace of their learning for each of the four modules.

Talking Head Videos. The talking head is by far the most commonly used video style, followed by presentation slides (PowerPoint style), or a combination of both [4]. Traditional talking head videos can evoke monotony [1] and can be very ineffective if they are too long and do not look professional. However, through in-class experience,

the author has found that they can be very effective, interesting, and engaging for learners if they are done the right way. Four basic rules and advice from colleagues in the Film and Video production program from the SAIT School of Information and Communications Technologies were followed.

1 Prep the subject: Make the subjects of talking head videos write down their main discussion points prior to the interview, but do not let them read them during the interview. For example, it was agreed upon in advance with each of the seven entrepreneurs which of the topics they wanted to talk about related to each of the four modules of the MOOC.
2 Choose the right location and use the right equipment: Use two cameras simultaneously. For the videos, one camera was fixed on a tripod for the master shot, and then a second camera, either hand-held or on a table or dolly, was used so that there is a second angle to create some movement during the editing process. It is also very important to have the right camera angles and the appropriate lighting equipment. Position the two cameras 30 degrees apart, one giving a portrait and the other one a three-quarter view of the subject. Different video shots from these two cameras can be used to make the video come to life.
3 Invest in the production of the videos: Hire a professional videographer/video editor who can do both jobs and provide professional results. Use background music, stock footage, and images to make the video and voice more enjoyable to increase the learners' engagement.
4 Decide the video length: Each video should be less than five minutes. Use videos to tell a story or share an experience related to a specific topic in the course content. The research results of Reutemann [4] on a comparative report of video styles and course descriptions on different platform providers confirms the decision to divide the videos into short sequences (less than five minutes) in order to keep students' attention and avoid participant dropout. The author of this study also found that the viewing completion rate decreases rapidly for videos longer than 12 minutes.

If videos are well produced, learners are more likely to watch them all the way through, then engage in action to complete post-video activities. In the author's MOOC, learners are asked to complete a specific part of their business plan and are then tested with video quizzes related to each of the four modules of the MOOC. The importance of following this procedure was apparent throughout the course design and development experience and demonstrates that just making a few different choices when planning and producing the MOOC videos can create dramatically better results.

3.2 Challenges

Designing and producing a MOOC with innovative digital tools can create many challenges to overcome. To be successful in this journey, one may need to secure the appropriate resources right from the start of the course idea. Six challenges the author overcame during the design and production of her first MOOC were as follows:

1 Recruitment and selection of subjects: Persuading potential successful entrepreneurs to be the basis and storyline of the course content was a real roller coaster. It was decided to reinforce the brand story as an institution and focus on successful SAIT alumni from different industries who had a strong sense of belonging to the institution and wanted to give back by helping new entrepreneurs.

2 Content coverage: One cannot cover everything and unique course content must be created. Choices must be made on what is important for learners to know, and main topics and theories need to be summarized. Videos must be short enough to keep learners engaged. Consider separating the videos into microlearning units (multiple segments) with distinct topics under main modules.

3 Copyright for content: It is very difficult to obtain permission to use textbooks, online images, and videos for free. In order to offer great interactive video presentations to learners, invest time and money in choosing high-resolution photos, images, illustrations, vectors, videos, and audio through online providers such as iStock, Colourbox, or Shutterstock, to name just a few. It's worth the price!

4 Faculty workload: Producing videos requires pre-production planning, filming, and post-production, all of which can be time-consuming. The use of innovative digital technologies to produce short video segments to replace long video lectures and PowerPoint slides means the course designer will also have to plan the video interviews, scripts, and storyboards of the 2D whiteboard video animations and interactive video presentations. Plan and manage your time adequately.

5 MOOC platform providers: It may be difficult to find a platform provider that will accept your course right away if you are not a top American or European university. It can also be a long process with certain MOOC providers. Some of them will take a long time to provide an answer, while others will reject your offer right away because you are not the type of university they are looking for (or you are a college). Some of them will be happy to partner with you for a price. It can cost your institution thousands of dollars per year to host your MOOC with promises of giving you back some royalties.

6 Timeline and budget: Both are challenging. The planning, design, and production of the videos for a MOOC can be very time intensive and expensive. Learning how to use the audio-visual equipment and editing software requires training and time. In order to achieve high-resolution, quality productions, it is sometimes necessary to apply for funding to support a MOOC project. This funding will be critical to help make the MOOC a reality. Additionally, hiring the right contractors may be a great investment. A videographer/video editor (interactive video presentations and interviews) and a videoscriber (2D whiteboard video animations) might be necessary to produce high-quality, engaging animations and videos. It is also difficult to predict the total cost when it is your first experience. You may need to ask different departments and colleagues in your institution whether they can contribute financially or voluntarily to the realization of your course.

Designing a MOOC is a continual "work in progress," just as it is with any other type of course delivery method. Educators and course designers must continually try to adapt to new educational technology trends and innovate by using new digital tools in order to remain relevant. The main goal should be to provide learners with the best open online learning experience. Building a MOOC does not change the vision of education or intention to do better, but reinforces it. Overcoming these challenges is part of the deal for being involved with designing quality and innovative online courses. When designers know how to overcome common instructional design challenges, they can carefully craft a well-planned instructional design to make their MOOC a reality and possibly a great success.

4 Conclusion

Finally, this work in progress paper adds another dimension to the ongoing discourse of MOOC course design experience in higher education. Moreover, this MOOC model can be shared with and used by other SAIT's faculty, as it will be a measurable, observable first model providing a pathway for the implementation of more MOOCs throughout the institution. It will be beneficial to conduct more research that would further explore and measure the effectiveness of this course design and its impact on the learners' engagement and motivation to complete the course.

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