

Using Camtasia to Create Video Tutorials

Students as Academic Partners Project Report

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Online tutorials, screen capture software, Camtasia

Abstract

The aim of this project was to create a series of online video tutorials for a Level 4 module (COMP1342 – Creative Computing). For various reasons, students may miss a seminar or prefer a different learning style than is presented during a specific Computing session. Thus, some students may benefit from having a series of online tutorials that present similar information presented in a specific seminar. Web links to the videos can be posted to Blackboard where students may view the online tutorials at their convenience.

The project was led by a Computing tutor who supervised a Computing student who created six weeks of online video-based tutorials for the COMP1342 module. The tutorials were created with Camtasia, a software product which records both the computer screen activity

and audio from the speaker. This can be especially valuable for creating tutorials of computer-based lessons.

Results of the first four weeks where the content was available showed that an average of 21% of students did watch the video tutorials. Several students expressed the appreciation of having tutorials that they could watch at their convenience, especially if they did not fully understand the lesson presented in the regular class seminar.

Introduction

Students have a variety of learning styles, and it is important to have an inclusive methodology in order to meet the needs of students in a variety of environments. Bolliger & Supanakorn (2011) explain several different styles:

- Visual learners who prefer maps, graphs, diagrams and pictures
- Aural learners who like to explain idea and discuss topics with others
- Learners with a read/write preference who like texts and manuals
- Kinaesthetic learner who prefer hands-on approach.

The authors state that some students enjoy a combination of activities from various styles. This project could benefit students with visual and kinaesthetic styles, as the video tutorials are visual, and also involve hands-on activity where the student follows the video instructions. Olapiriyakul & Scher (2006) conducted a case study where they investigated student learning styles and found differences among students. Those who engage in online learning (e.g. Blackboard), often appear to be more visual learners who prefer visual presentations. This could correlate to the students in this project who do use online learning

resources. A product such as Camtasia videos would be beneficial for students with visual learning styles.

Due to personal circumstances or illness, student they may miss an important seminar. In this case, they could be placed at a disadvantage by missing topics presented in class. Smith & Turner-Smith (2007) indicate that there are often times in classroom demonstrations where the demonstrated actions are often too quick or too difficult to follow. In either situation, students would benefit by having access to online tutorials that could be replayed at their convenience.

There are a variety of software tools that lecturers can use to augment the learning experience of students and provide for alternative learning styles. Staff at California State University implemented Camtasia screen recording technology into courses in 2005. Originally, students had to refer to assignment briefs over and over, and often did not comprehend the instructions. With the use of Camtasia to record instructions, students could refer to the video at their convenience, and had better comprehension of the materials (Selvester, Mulholland, & Wong, 2006). A 2013 study of the use of Camtasia videos was conducted at Velencia College in Florida on undergraduate physiology classes. The researchers found that introduction of video-lectures improved class average on essays by 6%, the class median by 8% and appeared to have the most positive influence on lower-performing students (Miler, 2014).

Camtasia is an inexpensive screen recording software package that allows users to create a variety of video and audio recording files that can be uploaded to Web sites or Learning Management Systems. These recordings can be used to demonstrate lessons, tape reviews of computer labs assignments, record PowerPoint lectures and other software tutorials (Smith & Turner-Smith, 2007). According to Cox, (2004), the use of Camtasia can be faster and cheaper than when attempting to use traditional video recording and editing methods.

This type of technology is perfect for students who have missed a classroom session, or had difficulty in following a specific classroom presentation, as the videos can be replayed over and over again.

The Project

The aim of this project was to create a series of video tutorials for a Computing module, and to have a student gain experience in use of a software product for his career. There were several benefits that were identified:

1. Students in the COMP1342 module will be able to have step-by-step screen recording training sessions of how to use the Edge Animate software. Having a visual screen recording (and audio) will help them visualize how to use the software. In addition, if they miss class, they will be able to play the videos at their convenience.
2. The student in this SAP programme would develop would gain employability skills. First, he would gain real-world experience developing in the industry-standard screen capture software. The student would gain knowledge of both Camtasia and Adobe Edge Animate. These are software products that are often used in industry, so the student gains employability technical skills. The student would also gain soft-skills in team-work and also time-management by working with a lecturer. He would have the opportunity to give input into module materials (from a student point of view).

The Design

After the Student as Academic Partners proposal for this project was approved, a meeting was conducted with the supervisor and Level 5 student to determine the proposed schedule that could be accomplished within the 100-hour time-limit. Various lessons were reviewed,

and a potential schedule of 7 weeks of screen capture would be done to create videos that taught students how to use Adobe Edge Animate. The student would begin to create the tutorials at the beginning of February 2014. The first two weeks of tutorials had to be completed before the week of 9-March, 2014, as that was when the 7 weeks of the topic was due to start in the COMP1342 module. The planning was that all of the 7 weeks of tutorials would be completed before 1-April, 2014.

The next phase of the project was a short analysis of which software to use to create the screen capture videos. We decided to review three major screen capture software solutions:

1. Adobe Captivate 7
2. Camtasia (Techsmith)
3. Camstudio (Techsmith)

We performed an analysis of the three software products. Although Camstudio would have been free, its functionality was poor. Both Captivate and Camtasia are very similar products, although Captivate is quite a bit more expensive. However, both products did offer a 30-day free trial. Because we decided that all tutorials needed to be completed between the beginning of February and beginning of March, it was possible to use the 30-day free trial for either of these products. Because the student has some limited prior experience with Camtasia, we decided to use Camtasia for this project.

Table 1: Software comparison

| | Adobe Captivate (Abode, 2014) | Camtasia (Techsmith, 2014) | Camstudio (Camstudio, 2014) |
|----------------|----------------------------------|-------------------------------|--------------------------------|
| Price | £849 | £220 | free |
| Trial | 30-days | 30-days | NA |
| Screen capture | Yes | Yes | yes |

| | | | |
|------------------------|-----------|------|------|
| Record live video | Yes | Yes | yes |
| Quizzes | No | Yes | no |
| Powerpoint integration | Yes | Yes | no |
| Video editing | Yes | Yes | Yes |
| Full interactivity | Extensive | Good | poor |

Implementation

Tutorial development started the beginning of February and concluded at the beginning of April 2014. The team discovered several unanticipated problems. First, we had not considered where to actually host the video files, so we had to consider several options. One option was to upload the video files to a YouTube account. However, since these tutorial videos were university property, we did not feel YouTube would be a valid place to host the files. Another hosting option was to upload the files to the Worcester Business School student server. However, this server has a bandwidth limitation that could cause problems with large video files. Therefore, it was decided to host the files on STAFFWEB server because there would be no bandwidth issues, and the server was owned by the university.

The second development issue was designing the 'look and feel' of the video production. We decided a menu-based approach would work best for the students. A menu of each weekly video would be placed in Blackboard. The student would click on the appropriate weekly link. Figure 1 shows the layout of the link to each video within Blackboard. Figure 2 shows a screen shot of a Camtasia lesson, along with a Web Link.

With the funds available, the student was able to complete the tutorials in the one month's we had originally budgeted. We did not anticipate the amount of video editing that would need to be done for each of the tutorials, so were not able to complete all tutorials as originally planned. Although the student had some prior basic experience with Camtasia, there was a learning curve at the beginning with some of the extra features and functions that we wanted to implement in order to give the videos a more functional and professional look and feel. For example, Camtasia has the ability to do 'sketch motion' callouts (see Figure 3). These allow the developer to emphasize specific areas that the students should visually concentrate on in the tutorial. Learning some of these extra Camtasia functions took some time at the beginning. Also, since the student is studying in a full-time degree, he was not able to devote more than 10-20 hours per week on the project. Also, another issue was he had to use the 30-day free trial of Camtasia, so was constrained by the free version.

Results

In Blackboard, the report 'All user activities in Content area' was run to determine how many users were viewing the videos weekly. Table 1 shows the results of the first four weeks where students could view the video content. The number of students in the module was 60, and the average weekly viewing was 21% (with a low of 13% and a high of 23%). This should that a significant number of students did find the videos a benefit and continued to watch them weekly.

Table 1: Weekly Video Views

| Week | Number of student users in Blackboard | Percentage of student using video |
|---------|---------------------------------------|-----------------------------------|
| 2-March | 8 | 13% |

| | | |
|----------|----|-----|
| 09-March | 20 | 33% |
| 16-March | 14 | 23% |
| 23-March | 9 | 15% |

Informal discussions were also done in the weekly seminars to determine the student's views on the videos. Approximately 15% of students had not purchased the text. Through informal discussions, many indicate it is a financial issue as they could not afford supplemental materials, or would borrow texts from the library or their friends. These students found the videos were helpful as they could keep up with the content. Also, informal discussions with students indicated that they liked being able to view tutorials as a supplement to the book.

The results of the module feedback indicated that students were pleased with the tutorials. Table 2 shows the end-of-module results for three questions that deal with the learning environment, including IT, Blackboard, tutorials, etc. The overall results for the three questions indicate that students had over a 90% satisfaction in these areas. Although the questions did not specifically relate to only the tutorials, the level of satisfaction seems to show a positive outlook by the students. Also, there was one written student comment that directly related to the video tutorials:

'The tutorials, blackboard and teaching was good'.

Table 2: Module results for IT facilities questions

| Module evaluation question | Strongly agree | Agree |
|--|----------------|-------|
| Blackboard (or module website or other virtual learning environment) was helpful to my learning | 50% | 50% |
| I have been able to access the learning resources (library, IT and specialist resources) when needed | 53.3% | 46.7% |
| The learning resources (e.g. library and IT resources, and specialist facilities) were | 38.5% | 46.2% |

| | | |
|---------------------------|--|--|
| satisfactory for my needs | | |
|---------------------------|--|--|

Although no measurable surveys were given on the actual statistics of student use, through the informal discussions and positive results on the module survey, it appeared that students were pleased with the inclusion of video tutorials. If this this type of project were repeated, the researcher would expand the project to include measurable quantitative and qualitative statistical analysis on some of the results, and perhaps conduct debriefing or focus groups with the students.

During debriefing, the SAP student mentioned that he found this project extremely valuable from both an academic as well as an employability viewpoint. Academically, he was able to acquire skills in both Camtasia and Adobe Edge Animate. Both of these products are used frequently in industry, so he was able to gain software product knowledge. Second, this project helped the student gain employment. At the end of this project, the student interviewed for a year-long Computing placement. During the interview, he was able to present the project videos as part of his project portfolio, and he was offered a placement position.

The one concern with this project was that due to the 30-day trial period for Camtasia, the student needed to get the work done quickly and did not have time to really learn all the functionality to create a 'bells-and-whistles' video production. Because of the short nature of the project, the Worcester Business School (WBS) would not purchase a full license for something that a student would only use for a short amount of time. However, because of the success of this project, and other tutors requesting the software for other projects, during the middle of the project, the WBS decided to purchase two copies of the Camtasia license and installed it on the two extra WBS laptops. These laptops are available for extra tasks, such as providing support for Exam Boards, or if tutors need to borrow them for a few days when they may need a mobile computer.

Conclusion

This project aimed to develop supplemental teaching videos for a Level 4 Computing module. The project was successful from two perspectives. First, a sizable number of the COMP1342 students did view the videos on a weekly basis and found the supplemental material to be helpful. Although this type of tutorial methodology was aimed more at students with visual learning styles, the tutorials were available to all students. It may be possible in the future to design other supplemental materials to meet the needs of students with other learning styles.

Besides benefiting the students in this module, the SAP student found the project valuable. He was able to gain valuable software skills on products that are used in the Computing industry, thus increasing his employability options. This project was an excellent opportunity to build his project portfolio when eventually looking for a position after graduation. This type of project would be of benefit to future students wishing to gain the same type of experience.

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Figure1: Links in COMP1342 Blackboard

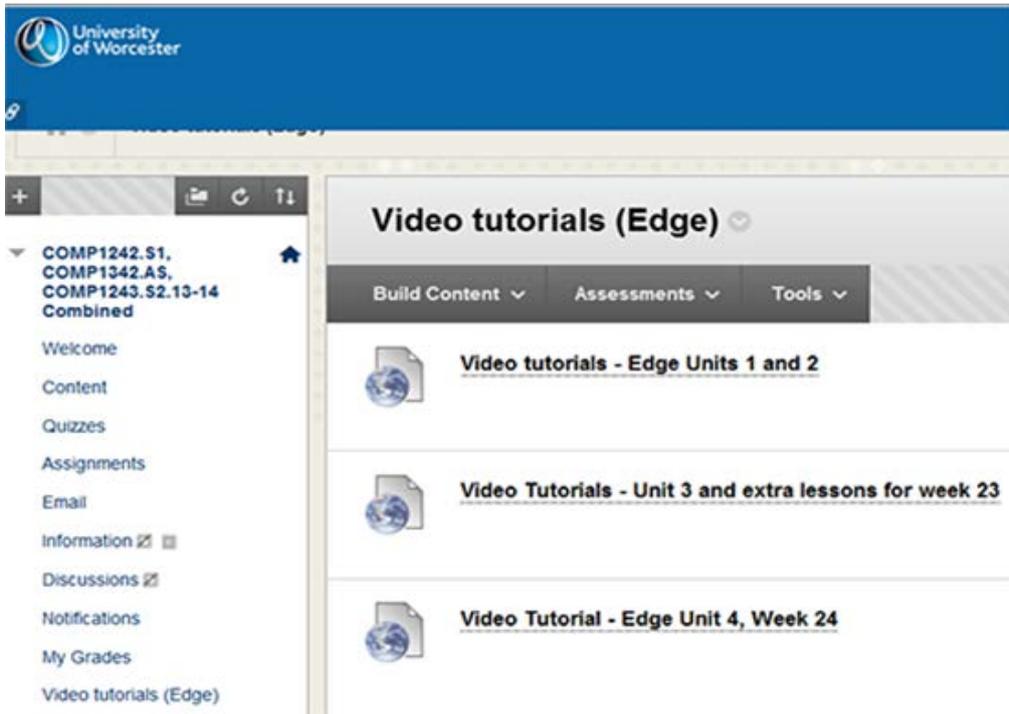
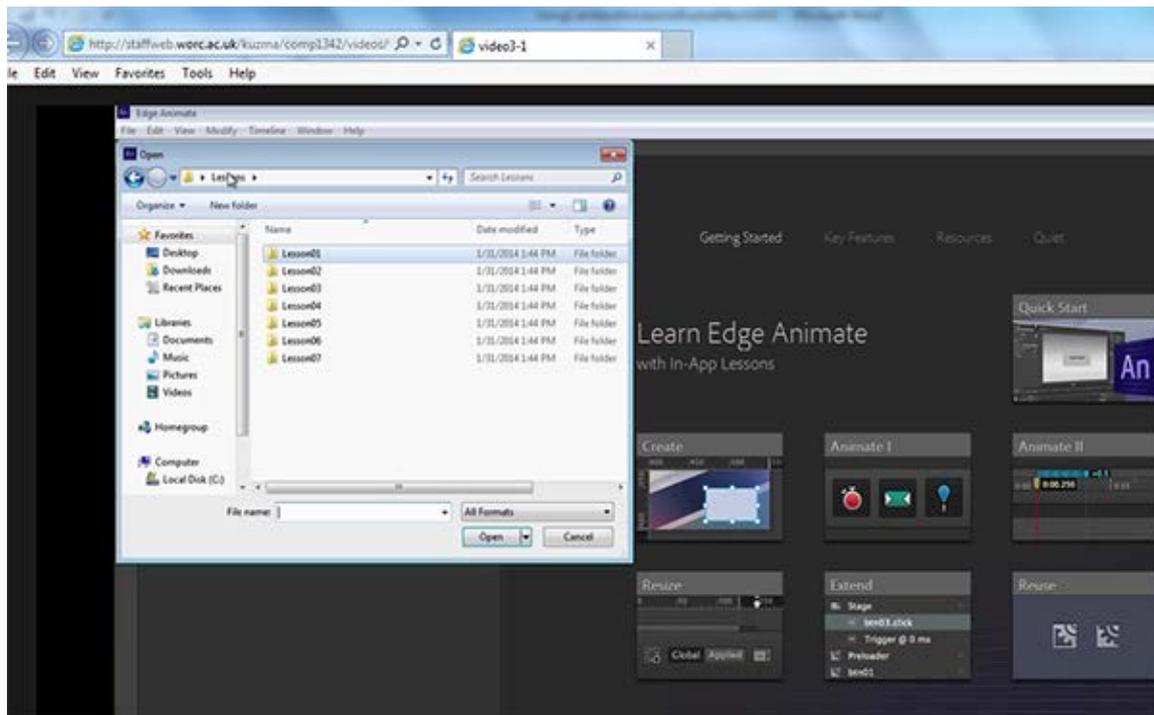
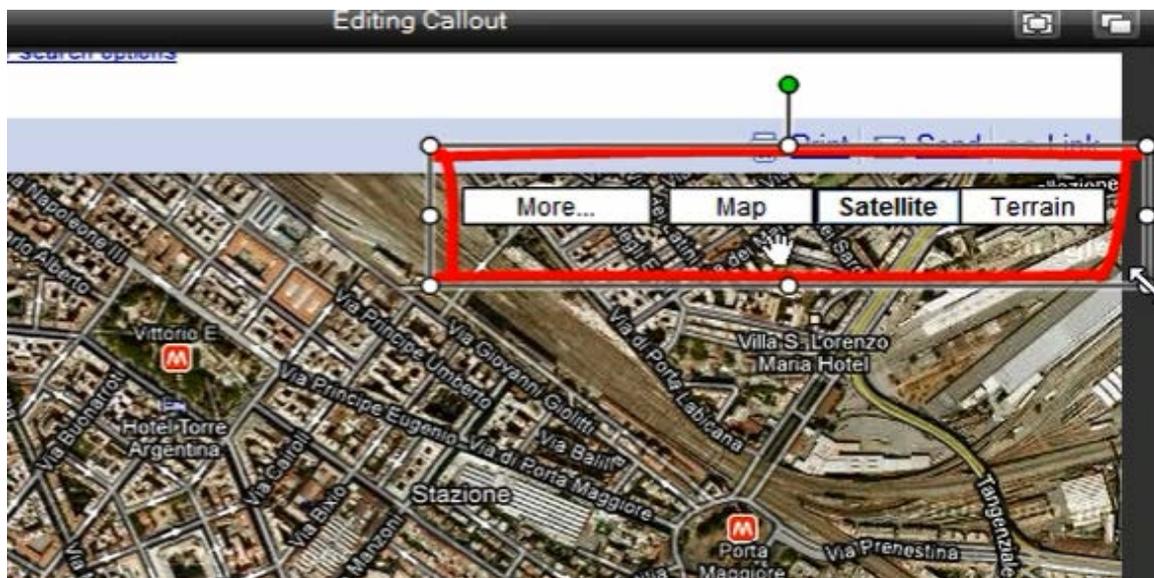


Figure 2: Screen Shot of Camtasia Lesson



<http://staffweb.worc.ac.uk/kuzma/comp1342/videos/week23/video3-1/index.html>

Figure 3: Camtasia Callouts



Terminology

- Adobe Edge Animate – software from Adobe that is used to create computer animations. It is often used in Web design and Games industries.
- Adobe Captivate – software from Adobe to create e-learning module content with interactivity. A competitor of TechSmith
- Camtasia - software from TechSmith to create e-learning module content with interactivity. A competitor of Adobe.
- Camstudio – freeware screen recording software
- StaffWeb – the UoW staff web site where staff can upload video and web content.