

Video tutorials: Camtasia in the ESL classroom

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The increasing quality and ever growing presence of technology in and outside the classroom allows teachers to experiment with new forms of lesson delivery, from video production (Gromik, 2007), to blogging (Pinkman, 2005) and teacher produced podcasts (Diem, 2005). Recently however a new form of lesson delivery is becoming available. During the JALT CALL 2006 conference, Allard and Gromik presented a workshop about creating video tutorials using Camtasia. Following up on this workshop, this article describes a current research project that presents Camtasia-based video tutorials about software operation to English as Foreign Language (EFL) Japanese learners.

Video tutorials are not a new concept, emerging in the late 1960s, when Bandura first commented on the issue of self-modeling (Hitchcock, Dowrick & Prater, 2003). Since then, video modeling has been described as “instructional videos” or “video tutorials.” Most video tutorials are produced as a strategy to promote guidance in developing new skills and abilities, for example, to improve teacher training (da Silva, 2005) or to prepare medical students for their internship experience (Lee, Jacobs & Kamin, 2006). Also video tutorials have been used to assess their effectiveness in improving students learning efficacy (Zhang, Zhou, Briggs & Nunamaker Jr., 2006).

Since their release, video tutorials have established a new presence online mostly for the benefits of corporate training or individual users, (see, for example, *atomiclearning.com*, 2006). Very few articles document the use of video tutorials and fewer investigate the implications that such learning approach would have on language as well as on skills development.

The Multimedia English course requires that students design two electronic presentations in English. These two projects focus on language development and computer operation and are not the concern of this paper (see Allard & Gromik, 2007; Gromik, 2006 for such details). However, after purchasing *Camtasia* in 2006, the author designed video training tutorials in the target language under the assumption that such resources would assist learners understand how to independently operate *OpenOffice.org* software. Therefore the aim of this paper is to report on the educational benefit of viewing video tutorial productions, which demonstrate how to use *Impress*, an *Openoffice.org* electronic presentation design software.

To explain the benefits of delivering technical operation video tutorials, the first part of the article positions the learning activity within the sociocultural theoretical framework to claim that video tutorials resemble peer to peer coaching, however in this case the peer is a video tutorial. The second part describes *Camtasia*, screen-capture software. The third part explains the educational milieu and the subjects who participate in this on-going project. This section also outlines the task that participants complete and explains how *Camtasia* is used to assist learners study independently. The final part reports on the findings generated from students final productions as well as feedback. The aim is not to prove that using *Camtasia* leads to target language acquisition, but to demonstrate that such software can actually energize more traditional teaching methods. Therefore the final section also provides some areas for further research.

Video tutorials and constructivist theory

By offering audio-visual demonstrations, the teacher can employ a video tutorial to develop a particular skill or strategy. Thus, video tutorials can be used as a medium to encourage students to learn independently outside the regular classroom schedule. The audio explanation, and the visual demonstrations become achievable goals that the learner can reach by understanding and applying a similar process to produce their own project. For example, students learn by themselves to operate particular software or to understand the structure of letter format. In this situation, the teacher is not physically present when guiding the learner. The video tutorial resources may used to engage learners to explore their technical skills. This is defined by Vygotsky (1978) as the Zone of Proximal Development; the gap between what a learner is capable of undertaking by themselves and what they can potentially achieve with guidance.

Exposure to software operation in the target language might empower students to become familiar with the target technical lexical items thus enabling them to discuss their difficulties with their teacher or peer. Hence the teachers' role becomes one of facilitator or guide when a student needs further assistance, and their oral interaction has the potential to change from language learning to purposeful communication exchange whereby problem-solving is the focus.

Video tutorial software - *Camtasia*

Video tutorials have the potential to be an effective approach to delivering all forms of content, from simple instructions to more complex explanations. *Camtasia* is a TechSmith product which allows such possibilities. It is Windows compatible, and Mac users interested in such software can consider *snazProx*. A freeware equivalent is *Bulent*.

Video tutorials created with *Camtasia* differ from the general video structure in the sense that there are no actors or costumes. Rather, the software assists in creating demonstration videos by recording computer screen activities. For example, I could video record this screen as I type this text. *Camtasia* is user friendly however, some video editing skills are necessary. After recording a screen activity, *Camtasia* stores the production on its editing working environment. During the editing stage it is possible to add narration or music, photos or other movie elements. Finally the finished video tutorial is saved either on a CD or DVD and can also be uploaded on a website for online access (see Figure 1).



Figure 1. Screenshot of *Camtasia* software

Figure 1 reveals that *Camtasia* resembles the *MovieMaker* software available on Microsoft XP computers. It is easy to import pictures, audio and video files. Using a simple timeline, teachers can edit their video tutorial resources. The software allows for the inclusion of call outs (similar to Post-it notes), shades and colors to bring attention to a particular visual cue, or focus in or out of a specific computer screen position.

Advantages of using screen capture software

Teachers and students alike can gain from using and viewing video tutorials. First, as explained above, students can have access to audio-visual explanation without having to attend a class. Second, teachers can write narrations with the specific purpose of guiding students to focus on form, or certain lexical items. Finally, one of the benefits is that *Camtasia* offers teachers of Languages Other Than English (LOTE) the opportunity to deliver video tutorial resources to intensify students' exposure to the target language.

Disadvantages of using screen capture software

Creating video tutorials can be time consuming. First the narration must be succinct, clear and appropriate for the targeted group of learners. Second, the videos must follow consistency and developmental stages; from easy to more difficult. Third, each video tutorial should have a revision segment as well as a lead into the next level. Finally recording a perfect narration can require a lot of effort; especially when considering pronunciation, speed and intonation.

The next part of this paper reports on a recent experiment conducted at Tohoku University, whereby a selected group of students were provided with access to video tutorial resources to design a power point presentation.

Method

Activity

Students were required to prepare two electronic presentations using Impress, a component of the *OpenOffice.org* office suite. The first electronic presentation was a warm up activity to expose students to the software. Students designed a **five minute presentation** with a speech. The second electronic presentation required students to deliver a ten minutes speech aided with an electronic presentation. Both groups of participants received no teacher assistance for preparing the first and second electronic presentation. The aim was to reveal the students' ability to develop their technological abilities to an advanced level.

Participants

This study was conducted during the spring semester of 2006. Two classes of sophomore English as Foreign Language students were selected based on their similarities. Both classes were made up of Engineering Students. The experimental group comprised 21 students (19 males and 2 females). The control group had 23 students (21 males 2 females). While the control group's classes were held in a regular classroom without any technical facilities, students in the experimental group had their class conducted in the computer laboratories at Tohoku University.

The aim of this research project was to assess whether or not Japanese sophomore students would benefit from viewing video tutorials, which demonstrate how to use *Impress* to a higher degree of competence, the experimental group was directed to teacher developed English video tutorials, which they could access via the university website anytime at their convenience, in or off campus. The control group was not informed about the website where the video modeling tutorials were stored and were not provided with any in class electronic presentation design instructions. The control received no resources to assist them with designing their electronic presentations. Instead class time focused on general reading and communicative activities, using resources such as the book "the Life of Pi."

Course

Multimedia English is a one semester course. Students attend a 90 minute class once a week. As most of the class time is scheduled for students to deliver their speech, no in-class lesson was allocated for learning how to operate the software. However, students who enquired about certain aspects of the software during their own time received assistance with their enquiry.

Video Tutorials

Five video tutorials were created to demonstrate how to use the *OpenOffice.org* software *Impress* software to design electronic presentations; this software is open source equivalent of *Microsoft Power Point*. The first video tutorial demonstrated how to set up an electronic presentation and how to save the final document (time length 3 minutes). The second video tutorial provided a brief revision (accessing the document and saving it at the end) as well as a demonstration of how to change various colors and fonts (time length 3 minutes). The third video tutorial explained how to create a background using pictures retrieved from the Internet as well as structuring a presentation with an introduction and a conclusion (time length 4 minutes). The fourth video tutorial explained how to move text around the document and how to create text animations (time length 4 minutes). The final tutorial explained how to make an automatic slide presentation (time length 5 minutes). These video tutorials were produced by a Romanian advanced learner of English.

The following website was created to store the video modeling materials, <http://www.high-edu.tohoku.ac.jp/~gromik/studyfilms/welcomeuser.htm>. This site provides access to another set of video tutorials which target *Text Editor*, another program developed by *OpenOffice.org*. These videos were produced by a visiting British teacher in training. The aural explanations were delivered in a slow comprehensible manner using basic English terminology. In addition, both sets of video tutorials offered visual demonstrations of electronic presentation design.

Procedure

Since this is an on-going project, the research methodology follows an action research approach which emphasizes understanding students' use of the video tutorials. Should students reveal that these visual aids did not assist them, the author planned to reconsider the merit of the project, so four types of feedback collection methods were implemented. The first feedback was in the form of student diary. It was anticipated that by encouraging students to record how often and the duration of viewing the video tutorials, that it would be possible to define a study and technical manipulation comprehension pattern (Burns, 2000). The diaries were also perceived as a lead-in for further discussions with students. The second was the actual student electronic presentation and the third was a brief teacher-student interview conducted in English immediately after the presentation and speech were delivered. The interviews were considered as a source to clarify any comments provided in the diaries, or to gauge the extent to which students were familiar with a particular *OpenOffice.org* software feature (Burns, 2000). The fourth feedback source was in the form of two test items on the final term exam; 1) explain the process of inserting a background picture, and 2) describe the process for creating an automatic slide transition.

After completing their first presentation, the experimental group was provided with one lesson which explained where to find the website, and how to keep track of their learning. Students were asked to keep a diary to keep track of their visits to the site, the length of time spent viewing the video tutorials, and whether or not the video oral explanation was easy to comprehend. The diaries were then collected and reviewed.

The students' second electronic presentation was the most reliable resource to ascertain whether or not participants had been able to capitalize on the provision of video modeling software operation tutorials. After delivering their second presentation, students were briefly interviewed at the end of the class. The purpose of the interview was to assess whether or not students could remember how to use the software as well as to determine whether or not they relied on the visual or the audio descriptions to learn to operate the software. If students had viewed and understood all the video tutorials, it was expected that their electronic presentations would have included a small video or audio insert as well as used automatic slide transition and animated text.

Results

Figures 2 (solar) and 3 (orthopedics) display examples of first electronic presentations styles. As can be seen from these examples, students include little or no pictures, they do not use colored fonts and there are no automatic slide transitions or animated text.

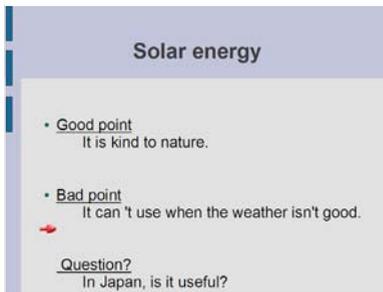


Figure 2. Solar

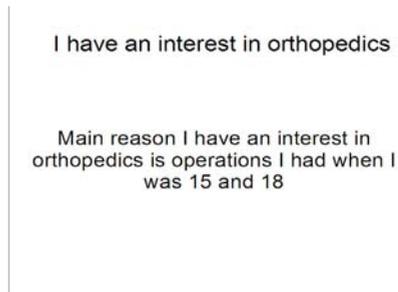


Figure 3. Orthopedics

The differences in the quality of the electronic presentations of the two groups clearly revealed that video tutorials played a significant role in providing assistance (see, for example, Figures 5 (control group) and 6 (experimental group)).

This text description cannot reveal the animation included in Figure 6 above, however there was some difference in the use of images text and colors. The student who created the example in Figure 6 retrieved that image from the actual movie clip. This shows a higher degree of computer expertise than the student who created the example in Figure 5; retrieved from the internet.

Out of 21 students from the experimental group of learners, 19 participants utilized the software to its full capacity. That is to say, **two students included movies, one student included music, and 16 included text and picture automatic animation as well as automatic slide transitions.** All students were able to include creative background images.

As the diaries were non-assessable items, students either forgot to write in their diaries, or did not provide any valuable details, and phenomenon also noted by Ellis and Barkhuizen

(2005). Nonetheless, ten students kept a diary documenting their visits. All students viewed all five video tutorials, and all students commented that the video tutorial oral explanations were easy to understand. Three commented that the slow speed of the tutorial speech allowed them to comprehend the explanations. However seven diaries revealed that students viewed the videos only once. Two diaries indicated that learners watched the videos four times. One student commented that they had viewed most videos twice, but the fourth video was viewed five times.

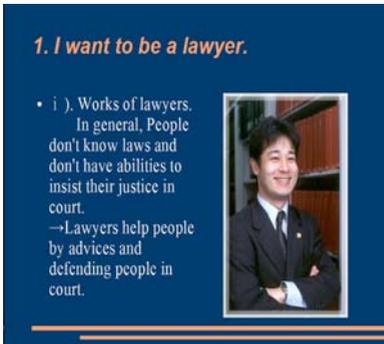


Figure 5 (control group)



Figure 6 (experimental group)

The interviews confirmed that the easy oral explanation was of major benefit for students listening comprehension to operate the software. The interviews also revealed two interesting points. First, the majority of the students who did not keep a diary indicated that they only visited the video tutorials to see how to operate one specific function of the software, mainly automatic slide transition. Second, sixteen students indicated that although the oral explanations were easy to understand they mainly relied on the visual cues to learn how to use the functions of the software.

The final term exam revealed that from the experimental group 17 out of 21 students remembered how to: a) insert a picture successfully and b) include an automatic slide transition.

In contrast, the final exam revealed that ten out of 21 students from the control group could clearly explain the steps to insert a picture and an automatic slide transition. Furthermore, none of the students from the control group were able to investigate the software beyond its basic features such as inserting pictures and background colors. By the end of the term, 13 students still could not properly insert a picture into their electronic presentations. One student commented on forgetting how to save the final document.

Discussion

The aim of this research was to assess whether or not Japanese sophomore students would benefit from viewing video tutorials. The evidence collected suggests that video tutorials were beneficial for students' learning development. The progressive approach of the video

tutorials facilitated students' computer operation comprehension. For example after viewing the video tutorials, students were able to manipulate images and change the font, size and color of text.

It seems that video tutorials were an appropriate form of training delivery for sophomore Japanese students as it provided students with the opportunity to learn independently to operate *Impress*. Students responded positively to such a test revealing that they benefited from investigating the English software *Impress* from openoffice.org at their own pace without teacher assistance.

Limitations of the research

In relation to second language learning, video modeling can be used to empower students to gain either technical expertise or language development. However as the evidence revealed students did not necessarily rely on the oral explanations to deduct comprehension of software operation. Further research targeting specifically the maximization of listening over observation comprehension is needed. Also, since video tutorials are structured with the intention to lead the viewer from the known to the unknown in a progressive approach, further research into the scaffolding structure of the video tutorial might be of benefit to improve video tutorial specifically designed for language learners.

Also, Gruba (2006) reports an experiment which aims to understand the benefit of students' independent viewing of teacher selected news items. Following a similar research method it would be possible to interview students while they watch the video tutorials to document the process students apply when viewing these resources.

The study also failed to take into consideration learners' previous technical experience to determine whether or not the better achievement of the learners in the experimental group could be attributed to the tutorials themselves, or rather to prior technical knowledge. Finally, further research could investigate the relationship between video tutorial discourse with students prior knowledge of English to assess the extent to which students are familiar with the lexical items utilized in the video tutorials.

Conclusion

The aim of this project was not to assess students' linguistic gains through the activity, but rather to assess whether or not video tutorials that explain how to operate the *OpenOffice.org* software *Impress* would assist students develop their computer skills.

Since students' feedback revealed that these video tutorials provided some assistance in improving their software operation skills, this article suggests that further research into the linguistic aspect of such teaching method be conducted.

Software such as *Camtasia* in combination with Internet services are empowering educators to deliver. From the students' performance and the feedback they provided, the outcome of this research revealed that sophomore English students benefited from accessing online audio visual video tutorials that provided guidance in operating *Impress* one of the *OpenOffice.org* office suite. The paper concludes that **video tutorials as a teach-**

ing approach are conducive to establishing an efficient EFL curriculum which encourages students to investigate software, independently problem solve software operation, and promote an environment whereby students are in control of their own learning progress.

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