

The Effects of Using Streaming Video in Teaching A Fundamental English Course

ผลการใช้สื่อสตรีมมิ่งวิดีโອในการสอนวิชาภาษาอังกฤษพื้นฐาน

Asst. Prof. Kalaya Boonsirijarungradh*

บทคัดย่อ

งานวิจัยนี้มีจุดประสงค์เพื่อศึกษาผลการใช้สื่อสตรีมมิ่งวิดีโອในการสอนกระบวนการวิชาภาษาอังกฤษพื้นฐาน และเพื่อศึกษาเจตคติของนักศึกษาและอาจารย์ผู้สอนที่มีต่อประสิทธิภาพของสื่อสตรีมมิ่งวิดีโອที่ใช้ในการสอนกระบวนการวิชาภาษาอังกฤษพื้นฐาน รวมทั้งเพื่อศึกษาเจตคติของผู้เรียนต่อการสอนกระบวนการวิชาภาษาอังกฤษพื้นฐาน โดยใช้สื่อสตรีมมิ่งวิดีโອ กลุ่มตัวอย่างเป็นนักศึกษาชั้นปีที่ 1 มหาวิทยาลัยเชียงใหม่ ซึ่งลงทะเบียนเรียนวิชาภาษาอังกฤษพื้นฐาน 2 ในภาคเรียนที่ 1 ปีการศึกษา 2555 จำนวน 53 คน และอาจารย์ผู้สอนกระบวนการดังกล่าวอีก 2 คน เครื่องมือที่ใช้ในการวิจัยคือ สื่อสตรีมมิ่งวิดีโอซึ่งเป็นวิดีโอกลิปบันทึกภาพและเสียงของอาจารย์ผู้สอนรวมถึงภาพและตัวอักษรประกอบคำบรรยายเนื้อหาวิชาภาษาอังกฤษพื้นฐาน 2 จำนวน 2 บท แบบทดสอบวัดผลสัมฤทธิ์ในการเรียนภาษาอังกฤษของนักศึกษา แบบสอบถามเพื่อวัดเจตคติต่อประสิทธิภาพของสื่อสตรีมมิ่งวิดีโອที่ใช้ในการสอน แบบสอบถามเพื่อวัดเจตคติต่อการสอนด้วยสื่อสตรีมมิ่งวิดีโອ แบบบันทึกพฤติกรรมการเรียน และแบบสัมภาษณ์เพื่อวัดเจตคติต่อการสอนด้วยสื่อสตรีมมิ่งวิดีโอ กลุ่มตัวอย่างทำแบบทดสอบก่อนและหลังเรียนด้วยสื่อสตรีมมิ่งวิดีโอ และทำแบบวัดเจตคติหลังเรียนด้วยสื่อสตรีมมิ่งวิดีโอ จากนั้นจึงนำข้อมูลที่ได้มาวิเคราะห์หาค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน และ t-test ส่วนข้อมูลที่ได้จากการสังเกตพฤติกรรมการเรียนของกลุ่มตัวอย่าง และการสัมภาษณ์ถูกนำมารวบรวม ผลการวิจัยพบว่า กลุ่มตัวอย่างมีความรู้ในเนื้อหาภาษาอังกฤษเพิ่มขึ้น มีเจตคติเชิงบวกต่อสื่อสตรีมมิ่งวิดีโอที่ใช้ในการสอนและต่อการสอนด้วยสื่อสตรีมมิ่งวิดีโอ

คำสำคัญ

การสอนโดยใช้สื่อสตรีมมิ่งวิดีโอ การสอนภาษาอังกฤษ

Abstract

The purposes of this study were to explore the effectiveness of streaming video in teaching a fundamental English course and to examine the attitudes of students and teachers towards the efficiency

*Lecturer, English Department, Faculty of Humanities, Chiang Mai University

Email: kalaya_boon@yahoo.com



of the streaming video used in teaching Fundamental English along with investigating the students' attitudes towards the course study via streaming video. The subjects were 53 first-year Chiang Mai University students who enrolled English 001102 in the first semester of 2012 as well as their two teachers. The research instruments consisted of offline streaming video, which are video clips delivering English 001102 lectures of units eight and nine along with pictures and text clips that complement the lectures, an English achievement test, two sets of attitude questionnaires, an observation form, and an interview form. The achievement test was administered before and after the experiment, whereas the attitude questionnaires were completed after the experiment only. The subjects were also observed and interviewed. Mean, standard deviation and t-test were used to analyze the quantitative data whereas content analysis and interpretation were used for the qualitative data. It was found that the subjects had a higher English achievement and positive attitudes towards both the efficiency of the streaming video used and the course study via streaming video.

Keywords

Streaming Video Teaching, English Teaching.

Introduction

Due to advanced technology, language learning and teaching appear to undergo a major shift. Traditional lectures that focus on transferring information have turned into the learner-centered ones that provide rich media content and focus on learning by doing (Barr and Tagg, 1995, as cited in McCrohon, Lo, Dang & Johnston, 2001). The perception of learning has also been changed. It is no longer concerned with memorizing, but discovering and using data (Garris, Ahlers & Driskell, 2002). Learning by discovery and learning how to learn are also emphasized via technology in various forms (McCrohon, Lo, Dang & Johnston, 2001).

Streaming video is an evidence of the use of technology as a pedagogical tool according to the new paradigm. Fill & Ottewill (2006) explain that streaming video is a video clip provided on the Internet and can be displayed without having to wait for the download. It is called streaming video according to the way the video file is sent in a continuous stream of data. However, streaming video can also be viewed offline. Both online and offline streaming video can be used effectively as a teaching support tool since learners can access both visual and verbal multimedia learning at the same time and, therefore, achieve better understanding and better performance. Hartsell & Yuen (2006) mention the strengths of streaming video teaching that it can help students remember and retain the content learned better than other kinds of instructional media which provide only either audio or visual content. Furthermore, Greenberg &

Zanetis (2013) view that streaming video does not only help strengthen learners' retention but also improve them in the following aspects.

1. Grades and performance
2. School readiness
3. Collaborative abilities
4. Overall academic development
5. Workforce preparation

The use of streaming video in teaching mainly aims to enrich pedagogic value by lessening the limitations of traditional lecture classes and serving the diverse learning styles of learners. Learners can access materials whenever and wherever they like. Besides, they can pause or repeat their lessons as many times as they want. Streaming video also helps learners understand complex concepts that are difficult to perceive via the use of texts and pictures in traditional teaching materials (Klass, 2003 cited in Hartsell & Yuen, 2006). Similarly, Laothajaratsang (2010) states that streaming video is an effective alternative in teaching since a video clip has a more powerful impact on learners' learning than other kinds of teaching materials where learners can only access visual content. Moreover, streaming can draw learners' attention due to its modern image ("Rhode Island PBS Video Streaming Program", 2006; Jamrungsee, 2004). In addition, Thornhill, Asensio & Young (2002) claim that streaming video can help reduce the cost in teaching material production.

The pedagogical value of streaming video is evident in the use of streaming video by several educational institutes. For instance, the Academic Resources Center of Khon Kaen University (<http://www.library.kku.ac.th/edbfree/>) uses streaming video, which includes case studies and real events on psychological counseling and therapy, in an online training course. Some parts of this streaming video are also used to replace traditional teaching. Besides, the university also provides streaming video on various fields, such as education, dance performance, women and social movement, and world history.

In addition, there are several studies on the effects of streaming video on learners. To start with, a study on streaming video teaching at the Terrassa School of Industrial and Aeronautical Engineering of Polytechnic University of Catalonia in Spain revealed that streaming video could help boost the subjects' learning motivation and maintain the effectiveness of teaching process without any extra expense (Simo et al., 2010). Another study was conducted with 10 students of the Manchester Royal Infirmary who took an online streaming video medical course. The findings showed that all the subjects had higher achievement and had positive attitudes towards the course study via streaming video. They viewed that, with streaming video, they could cover everything they wanted to take notes since they could go backward and forward



it whenever they desired (Strom, 2002). Similarly, a group of graduate students at North Carolina University were taught Biology via both online and offline streaming video. It was found that the subjects who attended the streaming video classes had higher achievement than those who attended traditional classes (Michelich, 2002). Additionally, at Pibulsongkram Rajabhat University, 20 students from English Program and Tourism Industry Program and 10 hotel receptionists in Phitsanulok studied Communicative French for Tourism via video. It was found that all of them achieved higher proficiency in French and the video was proved effective (Naksawat, 2007).

From all the benefits of streaming video mentioned, it was interesting to find out whether streaming video can be effectively used in teaching fundamental English courses for university students. Hence, this research was conducted to study the effects of using streaming video in teaching Fundamental English 2 (001102), which is a reading and writing course for first-year students of Chiang Mai University, and to examine the attitudes of teachers and students towards the efficiency of the streaming video used in teaching as well as investigating the students' attitudes towards the course study via streaming video. To avoid the difficulties in accessing online streaming video, which Greensberg & Zenetis (2013) state its possibility, offline streaming video in the form of video clips recorded on CD was used in this study. The video clips showing Fundamental English 2 teachers teaching two units of the course along with pictures and text-clips showing the key ideas and the answers of exercises were displayed in Fundamental English 2 classes. The content of the streaming video included Adjectives, Graphs, Common mistakes and Note taking. The teaching experiment took six periods of 75 minutes. Each period included streaming teaching via streaming video for 65 minutes and the other 10 minutes was spent as a question session. Furthermore, students could take the CD back home for self-study.

Research Objectives

The following are the purposes of the study.

1. To find out the effects of using streaming video in teaching a fundamental English course
2. To examine the attitudes of teachers and students towards the efficiency of the streaming video used in teaching a fundamental English course
3. To investigate the students' attitudes towards the study of a fundamental English course via streaming video

Research Methodology

The subjects of this study were 53 first-year Chiang Mai University students who enrolled English 001102 in the first semester of 2012 as well as their two teachers. The research instrument included

streaming video, which are video clips delivering Fundamental English 2 (001102) lectures of units eight and nine along with pictures and text clips displaying the key ideas and the answers of exercises that complement the lectures, an English achievement test, two sets of attitude questionnaires for investigating the subjects' attitudes towards the efficiency of the streaming video used in teaching Fundamental English 2 (001102) and the course study via streaming video, as well as an observation form and an interview form for in-depth information on what they thought about the use of streaming video in their classes.

Additionally, the criteria for interpreting the mean scores of the attitudes were also designed as follows.

3.51 - 4.00	=	very positive
2.51 - 3.50	=	positive
1.51 - 2.50	=	negative
0.00 - 1.50	=	very negative

In order to achieve the research objectives, the following three steps were followed.

1. The subjects were taught the two units via the streaming video.
2. To find out the effects of using streaming video in teaching a fundamental English course, the subjects were asked to do the achievement test before and after the experiment.

3. To investigate the attitudes of teachers and students towards the efficiency of the streaming video used in teaching a fundamental English course and the study of a fundamental English course via streaming video, the subjects were asked to complete the attitude questionnaires after the experiment. They were also observed and six of them were randomly chosen to be interviewed with six questions asking about their opinions on Fundamental English 2 learning via streaming video as well as problems and suggestions regarding streaming video used in the teaching.

As for the data analysis, mean, standard deviation and t-test were used to analyze the quantitative data whereas content analysis and interpretation were used for the qualitative data.

Research Results

The research findings were as follows.

1. The subjects had a higher English achievement after studying English via streaming video.



Table 1

The subjects' English achievement before and after studying English via streaming video

Number of students	Test	Mean	Standard deviation	t-test	P-value
53	Before experiment	15.62	5.30	6.959	0.000*
	After experiment	20.57	4.48		

*P<.001

2. The subjects had positive attitude towards both the efficiency of the streaming video used in teaching English 001102 and the course study via streaming video.

Table 2

The subjects' attitudes towards the efficiency of the streaming video used in teaching Fundamental English 2 (001102)

Number of students	Mean	Standard deviation	Meaning
58	2.92	6.69	positive

Table 3

The subjects' attitudes towards Fundamental English 2 (001102) study via streaming video

Number of students	Mean	Standard deviation	Meaning
58	2.51	1.92	positive

In addition, the information gained from the open-ended part in the questionnaires revealed the limitations of the streaming video used that it was one-way communication since there was no interaction between teacher and students. The students also stated that, unlike the traditional classes, their assignments were not commented in classes since there was no "real" teacher.

Furthermore, the data gained from the observation revealed that it took a few periods for the students to adjust themselves to the new style of learning since they did not realize in the first few classes that they were supposed to look at the screen instead of their textbook so that they could see all text clips. However, the streaming video could enrich a great learning environment as the students paid a lot of attention in their study and always took notes what they learned although none answered the questions asked by the teachers in the streaming video.

According to the findings gained from the interviews, two of the interviewees seemed to like the streaming video used a lot whereas another two of them did not quite like it and the other two viewed that

the streaming video teaching had both good and weak points. The advantages and disadvantages of the streaming video used which all the interviewees listed were as follows.

Advantages	Disadvantages
<ol style="list-style-type: none"> 1. Since the streaming video classes needed a good preparation, it could be trusted that there was nothing missed or incorrect in the content taught. 2. The streaming video contained both pictures and clear text clips which, therefore, had a powerful impact on the students' retention and understanding. 3. The streaming video teaching could enhance the students' motivation and attention better than the traditional one since most teenagers were likely to be interested in teaching via technology. 	<ol style="list-style-type: none"> 1. There was no interaction between the teachers and the students. 2. When the students did not understand something, they had to wait until the last 10 minutes of the classes before they could ask questions. As a result, some of them might forget what they wanted to ask. 3. The content taught in the streaming video classes was based on the textbook only. No extra knowledge was added. 4. The white background in the streaming video caused difficulties in reading.

In addition, when being asked to compare the effectiveness of streaming video teaching with that of traditional teaching, most of the interviewees commented that they could not specify which one was more effective since both of them had both advantages and disadvantages as follows.

Streaming video teaching	Traditional teaching
- Streaming video is good for teaching grammar or lectures which expect students to concentrate on their lessons or to listen to teacher with no classroom interaction needed.	- Traditional teaching is good for the classes focusing on speaking and listening skills as students can communicate with teachers.
- The content taught is accurate and complete.	- It is possible that teachers may miss something in their teaching if they fail to prepare their teaching properly.
- Asking questions is limited to only during question session.	- Students can ask questions at all times.
- There is no interaction between teachers and students.	- Students are more alert due to the interaction between them and their teacher.
- Unlike traditional classes, it is impossible for teachers to recognize when students do not understand lessons.	- Teachers can observe students while teaching to check if they understand what they are taught.



This can be concluded that streaming video teaching seems to be more appropriate for the classes with no spontaneous classroom interaction as well as the classes that need a good preparation whereas traditional teaching is great for the classes that focus on interaction between teacher and students.

Nevertheless, one student viewed that the most important factor that can cause the effectiveness in teaching is not whether it is streaming video class or traditional class, but the teacher itself.

As for the atmosphere in the streaming video classes, most interviewees thought that, due to a lack of class interaction, there was dead silence during the classes which led to uncomfortable feelings and also caused some students to fall asleep. However, one of the interviewees believed that studying in silent classes was not a problem for every single student as some might like it since it could help them concentrate on their study.

Additionally, the interviewees suggested that, in order to gain more attention from students, streaming video teachers should have a sense of humor as some jokes should be inserted in streaming video teaching to make students enjoy their study. In addition, there should also be some students studying in video clips to provide virtual classroom atmosphere. As for the issue regarding the nationality of teachers in streaming video, three of them preferred Thai teachers whereas only one of them preferred native ones under the condition that there must be Thai subtitle. The other two interviewees wanted Thai teachers for grammar teaching and foreign teachers, with Thai subtitle, for teaching speaking and listening skills.

In addition, when being asked for the appropriate number of students in streaming video classes, the opinions vary from 50 to 200. Nevertheless, all of them agreed that too many students in streaming video classes can lead to difficulties in keeping all students concentrating on the lessons. Moreover, technical support for audio and visual equipment should be considered for a large streaming video class.

Last but not least, when it came to the question whether or not they preferred streaming video teaching to traditional one, four of them believed that classroom interaction, which was not likely to take place in streaming video classes, was an important factor to motivate students in their study and, therefore, they preferred traditional teaching. Only one of out of six interviewees had opposing opinion. However, all the interviewees believed that streaming video would be very beneficial for tutoring. They viewed that streaming video could be effectively used as a supplementary teaching tool for students who want to review their study or compensate the classes they missed. This could be done by uploading streaming video on a website where students have access wherever and whenever they want or providing them offline streaming video.

Discussion

According to the research findings, the subjects had a higher English achievement after studying the fundamental English course via streaming video. This is mainly due to the fact that streaming video has both pictures and text clips which can complement lectures and can attract students more. Streaming video can also help them understand and memorize their lessons better since they learn by both watching and listening at the same time (Greenberg & Zanetis, 2013).

As for the efficiency of the streaming video used in teaching English 001102, the findings revealed that the subjects had positive attitudes towards it. This is because most of them believed in the accuracy and clarity of the content provided in the streaming video. They viewed that, generally, the production process of streaming video needs a careful preparation and the streaming video used in the study had been checked by an expert so the whole content taught was more accurate and reliable than that taught in traditional classes. Moreover, the subjects also appreciated the streaming video because it consisted of both pictures and text clips which could draw their attention and enhance their understanding and memory.

Additionally, the reason why the subjects had positive attitudes towards the course study via streaming video was that, as Greenberg & Zanetis (2013) claimed, streaming video is a kind of innovation and, therefore, owns the image of modernity which can boost students' motivation.

Conclusion

In conclusion, teaching a fundamental English course via streaming video can help improve students' English achievement and students have positive attitudes towards the efficiency of both streaming video itself and course study via streaming video. Moreover, according to all the qualitative data gained from the observation forms, the open-ended question in the questionnaires, and the interviews, it can be concluded that streaming video's advantages include the accuracy and completeness of the content taught as well as text clip whereas its main disadvantage is a lack of classroom interaction. Streaming video is also viewed as an effective supplementary teaching tool.

As for the limitations of this research, they are as follows.

1. The quality of the visual and audio equipment provided in the classrooms where the research took place was not as good as desired. This led to the problem in seeing and hearing of some students.
2. Not many resources on streaming video used in language teaching are provided. Therefore, it was difficult to complete literature review.
3. There was a lack of previous studies on streaming video teaching, especially the ones conducted in Thailand. Therefore, there were no exact guidelines on how to conduct the research.



In addition, according to the findings of the study on The Effects of Using Streaming Video in Teaching a Fundamental English Course, there are some suggestions as follows.

1. Suggestions on the use of streaming video in teaching English

1.1 Students

1.1.1 According to the findings obtained from the observation forms, it is suggested that there should be a session before starting streaming video classes for giving students instructions on what they should do when studying via streaming video. For example, they should focus on screen, not their textbook, when the teacher in streaming video explains lessons and they should jot down the questions they want to ask and keep them until the question session.

1.1.2 There should be different versions of streaming video for different groups of students regarding their language competency. This will make it easier to figure out the time length for doing exercise and scope the details of the content taught.

1.2 Classroom Equipment

1.2.1 Before streaming video classes, it is suggested that all class equipment should be checked to make sure that everything will work properly in class.

1.2.2 Streaming video should be manipulated by a teacher to provide the flexibility in teaching regarding students' competence.

1.3 Streaming Video

1.3.1 Streaming video should be designed to encourage classroom interaction in order to create a friendly and comfortable atmosphere in class.

1.3.2 Various techniques, such as the use of animation, should be used to make streaming video teaching more interesting.

1.3.3 There should be a training session for teachers teaching via streaming video.

2. Suggestions on further research

2.1 Further research on using streaming video as a supplementary teaching tool should be conducted. This can be done by doing the need survey focusing on the topics students need and allowing students to choose their own time and place for their study as well as the sequence of the topics they want to study.

2.2 Further research on the comparison of the English achievement of students who take streaming video classes and that of students who take traditional classes should be conducted in order to examine the possibility of replacing traditional teaching with streaming video teaching.

2.3 Research and development should be commissioned to lessen the limitations of streaming video so that it can be used effectively in streaming video courses.

2.4 The use of streaming video, both as supplementary and in-class teaching, for other courses, apart from English, should be studied.

References

Fill, K. & Ottewill, R. (2006). Sink or Swim: Taking Advantage of Developments in Video Streaming. *Innovations in Education & Teaching International*. 43(4), 397-408.

Garris, R ; Ahlers, R. & Driskell, J. E. (2002). Games, Motivation, and Learning: A Research and Practice Model. *Simulation & Gaming*. 33 (4), 441-467.

Greenberg, A. D. & Zanetis, J. (2013). *The Impact of Broadcast and Streaming Video in Education: Executive summary*. Retrieved 15 March 2013, from <http://www.cisco.com/web/strategy/docs/education/ciscovideos.pdf>

Hartsell, T. & Yuen, S. C.-Y. (2006). Video Streaming in Online Learning. *AACE Journal*.14(1), 31-43.

Jamrungsee, P. (2004). *Effects of Lecture Streaming Media Presentation Patterns in e-Learning Upon Learning Achievement of Undergraduate Students*. Bangkok: Chulalongkorn University.

Laohajaratsang, T. (2010). *Classroom of Tomorrow*. (Publication). Retrieved 19 February 2011, from <http://www.it.chiangmai.ac.th/issuedetail.php?ID=17>

McCrohon, M ; Lo, V ; Dang, J. & Johnston, C. (2001). *Video Streaming of Lectures Via the Internet: An Experience*. Retrieved 5 August 2013, from www.ascilite.org.au/conferences/melbourne01/pdf/papers/mccrohonm.pdf

Michelich, V. (2002). Streaming Media to Enhance Teaching and Improve Learning. *The Technology Source*. January/February 2002. Retrieved 17 September 2012, from <http://ts.mivu.org/default.asp?show=article&id=1034>

Naksawat, T. B. (2007). *Instructional Packages on Communicative French for Tourism Using Video Aided Instruction for Hotel Receptionists and Tourism Business in Phitsanulok*. Retrieved 22 April 2014, from human.pn.psu.ac.th/ojs/index.php/eJHUSO/article/view/24/38

Rhode Island PBS Video Streaming Program (Publication 2006). Retrieved 16 February 2011, from <http://www.ripbs.org/Education/Learn360/learn360.html>

Simo, P ; Fernandez, V ; Algaba, I ; Salan, N ; Enache, M ; Albareda-Sambola, M ; Bravo, E., ...Rajadell, M. (2010). Video Stream and Teaching Channels: Quantitative Analysis of the Use of Low Cost Educational Videos on the Web. *Procedia - Social and Behavioral Sciences*. 2 (2), 2937-2941.

Strom, J. (2002). *Streaming Video: Overcoming Barriers for Teaching and Learning*. Retrieved 14 February 2013, from <http://cde.athabascau.ca/ISEC2002/papers/strom.pdf>

Thornhill, S ; Asensio, M. & Young, C. (2002). *Video Streaming: A Guide for Educational Development*. Manchester: The JISC Click and Go Video Project.