DEVELOPING CRITICAL THINKING SKILLS THROUGH CONTENT BASE LEARNING USING MEDIA

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Abstract

English as a foreign language (EFL) has been transformed from a passive, skill-based training course focused on drill and practice to a subject that can potentially foster critical thinking skills in our society. With the advancement of technology, various methods of media utilization have been tested and adopted in diverse language courses. YouTube, a video sharing website on the Internet, contains an infinite amount of content that can be employed as a good resource for English teaching and learning. From personal entertainment, educational support, and worldwide news, the available variety of videos present educators and learners with endless choices. This study examined EFL students’ perception on their critical thinking and information retrieving skills in an English learning course instructional design utilizing reliable international news and other documentary broadcasts via YouTube as teaching materials in a university in Japan. Participants (N=86) were exposed to social and economic issues followed by activities including reasoning, research and situation analysis. Quantitative analysis was performed to retrieve participants’ attitude and self-evaluated learning effectiveness toward using YouTube video clips. Empirical results indicated positive feedback on the impact of learning among participants’ self-perceived knowledge gained and synthesized. In addition, content analysis using rating on a “cline,” based on written reflective essays performed at the end of the course, indicated that a majority of the participants were able to demonstrate a certain level of critical thinking skills by writing out conclusive statements from the assorted data gained in class.

Keywords: Computer Assisted Language Learning (CALL), EFL, YouTube, media, English, critical thinking ability

1. INTRODUCTION

English as a foreign language (EFL) has transformed from a passive activity focused on drill-and-practice to a subject that can potentially foster critical thinking skills in our complex society, domestically and internationally. Various English textbooks attempt to include critical thinking skills by presenting students with information regarding different cultures, news, and events in the world. However, text-based literacy still falls behind the information simultaneously uploaded via Internet technology. At the same time, information technology devices have been normalized across all generations. The use of innovative teaching methods utilizing technology to provide students with up-to-date content to foster critical thinking among economic students using up-to-date content has become prevalent (Klebba& Hamilton, 2007; Smith, 2003). With the advancement of technology, various methods of utilization have been tried and adopted in courses of all subjects. Within the variations of technology, information sources from the Web have been used as a part of the teaching materials which complement traditional textbooks in formal education since the mid-1990s (Allison, Miller, Oliver, Michaelson & Tiropanis, 2012).

YouTube, a video sharing website on the Internet contains an infinite variety of potential materials in the form of videos for students and teachers of all subjects. Another persuasive reason for using sources from YouTube is the visual and audio impact on learning (Chuang & Yang, 2010). YouTube sources, when used as a medium of instruction, can provide non-native English speaking students additional cues to support their understanding. The benefits from utilizing reliable international news and documentary broadcasts also has the added benefit of providing students with useful knowledge from the selected teaching resources while contributing to their learning of the target language.

Today’s education curriculum should be designed with the goal of providing students with knowledge to support their thinking process; therefore, it is necessary that all courses, regardless of subject, integrate the teaching of various knowledge such as ethics, moral values and other characteristics, which foster students’ personal development, in with the core curriculum. Furthermore, engaging students in activities where they must synthesize the material presented discuss this information with their peers, and conduct research to support their claims will contribute to
higher order of thinking both inside and outside the classroom. This should also include non-biasing instructions to unravel inherent bias.

Much emphasis has been given to the skills of developing students’ critical thinking ability in higher education (Wu, Marek & Chen, 2013). In truth, critical thinking ability is in many ways a composite that must accompany the outcome of higher education in a traditional concept. Critical thinking skills encompass a broad scope which may be applied to the studies of diverse fields. When adopted to use for educational purpose, critical thinking ability can refer to general skills of reasoning (Davies, 2015), which teachers hope their students to possess the ability to understand things logically and critically. This can be shown in skills of argumentation, reorganizing, and constructing different source of data and eventually to decision making. In the current paper, the researchers adopted Martin Davies’ theoretical framework/definition on critical thinking ability, which emerged from the plethora of definitions and distinctions on “critical thinking ability” posited over many decades. Davies (2015) proposed to define critical thinking skills as the ability in inference-making and argumentation; as (reflective) judgment formation, and as a variety of dispositions and attitudes (p. 49). Inference is a way of reaching a conclusion from data. It makes logical assumptions about gaps in data and then reaches a conclusion. Argumentation means having the power and the knowledge to argue effectively. Judgment formation refers to the ability to reach an unbiased or reasoned judgment from data. Dispositions and attitudes are the mental or emotional outlook or mood, which may also be a state of mind. It refers to a tendency to think in a particular way.

Modern people depend heavily on technology for many aspects of their lives. People today are leading a technology-mediated lifestyle and are more inclined toward a multicultural environment as well as an international interactive worldview (Wu & Kawamura, 2014). As a result, audiovisual learners are becoming prevalent and are observable in English classes (Wu & Marek, 2013). The use of videos in class has been studied widely and has been believed to have an effective function, and to increase motivation for language learning. It is also believed that the use of English native speaking videos can help develop EFL students’ listening and speaking ability, and stimulate ideas on classroom learning (Joseph, Phil, & Baskaran, 2011).

This paper explores EFL learners’ attitudes toward using videos on YouTube for English learning. Through a web-based instruction designed to develop students’ critical thinking skills on content learned in the class, the researchers wanted to understand students’ attitude and their perception of the effectiveness of a web-based instruction using YouTube. The research questions are as follows:

Research question one
What are students’ perceptions regarding the effectiveness of YouTube materials used in their English classes?

Research question two
How do students develop critical thinking skills through the web-based video instructional design?

2. METHODOLOGY

This paper adopts a mixed research methodology which includes an analysis using quantitative data collected with a survey questionnaire and the rating on a “cline” to examine the critical thinking skills acquired from this web-based videos instructional design. The purpose of the survey is to understand how students perceive their English learning achievement when using media, and how they perceive using YouTube to think critically about topics learned in class. The survey contains 13 questions, categorized in three parts: (a) Using YouTube in English classes, two items; (b) Effectiveness of using YouTube clips as a learning resource, nine items; (c) Perception of using YouTube clips in other English classes, two items. Survey questions are shown in Table 1 in the Results and Discussion section.

The idea of using a cline to rate students’ critical thinking skills particularly after they had received an English class utilizing resources available on YouTube was inspired by Carter and Long (1991) who used a cline to rate some achievement which was difficult to categorize because it was a combination of many features (p. 101). Critical thinking ability is a combination of different features interwoven together which are difficult to examine separately. Therefore, the authors believe that a cline was best able to rate students’ critical thinking ability as a whole. The cline, as described by Carter and Long (1991) and a possible rating for this study is shown below:

![Figure 1: Example of a cline adapted from Carter and Long (1991)](image)

The raters are authors of this paper who are both specialists in teaching EFL and
computer-assisted language learning (CALL). The raters scrutinized the content of students’ reflective essays to understand if they had developed critical thinking skills. The analysis using the cline on these essays was grouped into three categories, inspired by Davies (2015), which include: (a) conclusive statements from different data about topics learned; (b) self-developed convincing ideas about topics learned; and (c) having an unbiased attitude.

As explained before, inference is a way of reaching a conclusion from various data. Inference-making ability means a person making logical assumptions from different data to reach a conclusion. The power for argumentation means to argue effectively after inferring from different data, and is similar to the ability of judgment formation. Dispositions and attitudes are two similar words that refer to a state of mind having a tendency to think reasonably. Based on these theoretical assumptions, in the reflective essay students must (a) write conclusive statements for all the content for each topic; (b) write convincing individual ideas about all the topics learned in class; and in particular (c) students need to make a reasonable judgment based on the data seen in class.

2.1 Participants

The participants of this study are Japanese university students, between the ages of 18 and 19, majoring in Economics. These students have had six years of compulsory English education in junior and senior high school and now as university students; they are required to take four English each week for two years to meet their graduation requirement. The courses are titled: Listening, Reading, CALL, and Communication and Writing. Classes of listening and reading use textbooks strictly designed for the goal of the class with DVDs for listening and reading comprehension activities containing short answers and multiple choices in the text. CALL class, uses voice-recognition software for students to listen and repeat sentences for pronunciation training. Communication and Writing courses are conducted by native English speakers focusing on presentation skills and formal writing. This study was conducted in three classes of the Communication and Writing courses which incorporated content from YouTube for presentation and writing.

2.2 Teaching materials

Teaching materials were developed for the three Communication and Writing classes with the integration of YouTube resources. Material contents were divided into three categories: English and employment, women in the workforce, and first impressions. Followed by several sub-themes, each category included YouTube news videos and documentaries pertaining to the topics in each category. All participants were placed in intermediate level English Communication and Writing class based on their entrance examination and TOEIC (Test of English for International Communication) scores.

Students learned the above-mentioned topics in class using a textbook in a traditional learning method. The teacher selected reliable and valid video resources from YouTube and played them in class after each topic was studied. For each learning topic, two to three YouTube video clips were selected. The teacher planned pre-questions to guide students, and post-watching questions to assist students to thoroughly understand the content of these videos. The asking and answering process of these questions were open to discussion in class before and after the video watching.

3. RESULTS and DISCUSSION

3.1 Survey results

Items and categories included in the survey are as follows. The reliability coefficient of all measures is .83 (Cronbach’s \( \alpha = .83 \)).

<table>
<thead>
<tr>
<th>Items</th>
<th>Description</th>
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<tbody>
<tr>
<td>1.</td>
<td>The YouTube clips, including news and specific sources, viewed during the course, helped me understand the topics covered in class better. (M=3.50)</td>
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<tr>
<td>2.</td>
<td>The YouTube clips we viewed increased my interests in the topics covered in class. (M=4.23)</td>
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<tr>
<td>3.</td>
<td>I received new information from the YouTube clips viewed for topics learned in class. (M=4.56)</td>
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<tr>
<td>4.</td>
<td>My listening ability has gotten better because I got used to watching clips on YouTube. (M=3.31)</td>
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<tr>
<td>5.</td>
<td>I think YouTube clips provide valid information on various topics. (M=4.33)</td>
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<tr>
<td>6.</td>
<td>I think using YouTube to support classroom learning is a good strategy. (3.42)</td>
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<tr>
<td>7.</td>
<td>Overall, I feel that my English language skills have improved from using YouTube clips as a learning resource. (M=3.30)</td>
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<tr>
<td>8.</td>
<td>I will search for information on YouTube for English learning in the future. (M=2.78)</td>
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<tr>
<td>9.</td>
<td>I now have a better understanding of foreign cultures from the YouTube clips we covered in class. (M=4.43)</td>
</tr>
<tr>
<td>10.</td>
<td>I know have a better understanding of social, ethical and economic issues in general. (M=4.43)</td>
</tr>
<tr>
<td>11.</td>
<td>I have acquired vocabulary and knowledge from the</td>
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Table 1
Mean Scores of Survey Question Items
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<tr>
<th>YouTube clips viewed in class. (M=2.83)</th>
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<tr>
<td>12 I would like my other language courses to utilize YouTube learning of different topics and different levels of critical thinking ability shown on individual. Individuals who demonstrated high-level abilities regarding English and proficiency on the topic of Women in the Workforce. Also, female students were more inspired by topics pertaining to their gender and generally proposed better ideas regarding Women in the Workforce in comparison to the other topics. From the analysis of the reflective essay content, most participants could trace back to what they had learned from different resource and piece separate information together to reach some conclusions. A small part of these participants had proposed unbiased judgments on these topics, sorting out different data learned in class. Overall, the rating of students’ gains in critical thinking skills was acceptable.</td>
</tr>
<tr>
<td>13 The course integrating media as a whole was a valuable experience on English learning. (3.80)</td>
</tr>
</tbody>
</table>

Results from quantitative analysis showed that EFL students regarded English courses utilizing media as interesting and beneficial. Watching YouTube video clips helped them to gain more knowledge and perspective regarding the topics learned in class. The materials contributed to a more comprehensive and general understanding of the topics learned in class. Watching these video clips also contributed to students’ listening and other English skills like vocabulary, particularly related to the topics covered in the lessons. Incorporating YouTube as an additional learning resource is feasible and beneficial to an English class since students demonstrated a positive attitude toward it. However, results also showed that students were not very motivated to using web-based videos for learning. As shown from the results of items 8 and 12, students held a negative attitude toward using YouTube in other classes or to search for more video clips by themselves outside of the classroom. The researchers infer that some video clips made by English native speakers available on YouTube might be difficult for EFL students to understand. Specific guidance and more assistance from the teacher is required if YouTube clips are to be used as an additional learning resource.

3.2 Results from rating on the cline

The analysis of the essays, based on rating on clines on categories including (1) the use of some conclusive statements for all the content added together for each topic; (2) the use of some convincing individual ideas about all the topics learned in class, particularly (3) making a reasonable judgment amongst different data seen in class. Analysis on these reflective essays showed that most students developed some degree of critical thinking skills; however, the level of critical thinking skills differed by individual and topic. Most students could remember about 70% of the content learned from the textbook and YouTube video clips seen in class. One-third of them could propose convincing individual ideas about the topics learned while another one-third had written down individual statements that were barely acceptable to convince others. The remained had written unsatisfactory, fragmented sentences. These responses could be explained by the individual’s English ability and proficiency in other skills—such as being a sharp observer or good at synthesizing information. There are, however, different levels of critical thinking ability shown on individual. Individuals who demonstrated high-level abilities regarding English and proficiency on the topic of Women in the Workforce. Also, female students were more inspired by topics pertaining to their gender and generally proposed better ideas regarding Women in the Workforce in comparison to the other topics. From the analysis of the reflective essay content, most participants could trace back to what they had learned from different resource and piece separate information together to reach some conclusions. A small part of these participants had proposed unbiased judgments on these topics, sorting out different data learned in class. Overall, the rating of students’ gains in critical thinking skills was acceptable.

Other recurring themes observed from students’ reflective essays included:
(a) Students thought courses utilizing YouTube resources was beneficial to their English learning.
(b) Students believed a web-based language course design gave them a new experience.
(c) Students observed the importance of history and the underlying meaning of iconic cultural elements, such as holidays and festivals.
(e) Students’ ability to adopt a multicultural worldview increased.
(f) Students’ confidence and knowledge on topics learned in class increased.

4. CONCLUSION

This study utilized selected YouTube materials based on their reliability, subject matter, and appropriateness for a Japanese second-grade university English Communication and Writing course. The results of our analysis showed that the use of YouTube video clips can contribute to EFL students’ listening and other English skills, broaden their horizons on topics learned in class, and eventually move students to a more comprehensive and general understanding of these topics. Three critical thinking skills were evaluated through students’ reflective essays, which where they were required to write down conclusive statements about things learned from different sources, state convincing ideas as a result of learning, and make unbiased judgments on related topics. Rating of these skills demonstrated an acceptable learning result, which showed that incorporating media into English education can be both feasible and beneficial. However, students indicated weak motivation towards using more videos to learn English outside of the classroom. They also were
not interested in watching more video clips in other English classes. We believe a certain level of linguistic difficulty demotivates EFL students, and video clips that are educationally oriented may appear to be boring to students. Therefore, the authors of this paper suggest that the use of YouTube has been proved to be effective to students learning, but, for EFL students, specific guidance and strong assistance from the teacher is very important. Before each video watching session, the teacher must explain the purpose of the video, use additional resources to prepare the students, and motivate students by relating the video content to the students’ personal world, so as to gain better learning results. Activities should be developed after each video watching, so that students’ responses can be developed and they can approach the topics learned in a structured way. In addition, students can join in the video selection process. Students can look for videos which interest them and are related to the learning topics, recommend these videos, and the whole class can join in deciding which videos will be viewed for learning.

In conclusion, with proper instructional design, a web-based English course using YouTube video clips can be fruitful, interesting, and motivating to many EFL students.

5. REFERENCES


