

Affective States Arising from the Removal of Captioning Support in EFL Multimedia Environments

Aubrey Neil LEVERIDGE*, Jie Chi YANG

Graduate Institute of Network Learning Technology, National Central University, Taiwan

*neill@lst.ncu.edu.tw

Abstract: This study explores affective states resulting from the removal or absence of captioning support in movies for the instruction of English as a foreign language listening comprehension. It aims to provide evidence of different affective states, which arise from the removal of this support, according to levels of proficiency. Prior knowledge of these states may enable EFL instructors and course designers to weigh the costs of exposing learners to this support and prepare learners for possible negative effects, avoiding any negative emotions, which may affect learning.

Keywords: Affective states, captioning EFL, listening comprehension

Introduction

Due to its many affordances, the use of multimedia as an instructional medium has become increasingly prevalent in foreign and second language (L2) classroom settings (Leveridge & Yang 2012; Sun & Dong, 2004). This is particularly true in the realm of L2 listening comprehension instruction. Multimedia integrated classrooms provide L2 instructors with various methods of presenting and supporting authentic L2 listening material (Vandergrift 2007). One such support is captioning, redundant visual text that matches spoken audio signals in the target language. On one hand, research investigating the use of captioning for L2 listening comprehension has indicated various potential benefits: in the facilitation of immediate understanding of L2 content (Robin 2007; Stewart & Pertusa 2004); enhancing vocabulary acquisition (Chai & Erlam 2008); and assisting L2 beginners when the audio is too fast (Robin 2007). On the other hand, research has also pointed out pitfalls associated with captioning support such as: transferability of skills from a learning context to a real-life context (Vandergrift, 2004); the impedance of schema building (Diao, Chandler, & Sweller, 2007); and their lack of compensation for more difficult vocabulary levels and high rates of speech (Danan, 2004). While inconsistencies in research findings exist, the majority of studies agree that at some point, as learners progress captioning support must eventually be eliminated as this support is not generally transferable to authentic L2 listening environments (Leveridge & Yang, 2012; Vandergrift, 2004).

Despite the extensive use of captioning as a tool to support and facilitate L2 listening comprehension, one of the major drawbacks is that learners may become reliant on the support (Vandergrift, 2004). A study by Leveridge & Yang (2012), which found wide variances in learner perceptions of captioning, addressed the issue of reliance by proposing a framework designed for the timely elimination of captioning, thus avoiding learner dependence. However, learner affective states, subsequent the removal of captioning support, is an area that has eluded empirical investigation. Moreover, captioning support, as

previously mentioned, is prevalent in L2 listening comprehension instruction, thus, learners already reliant, may become frustrated, irritated, or upset, resulting from the removal of this support. These affective states may negatively impact learning, motivation, and willingness to continue learning. Accordingly, the current study aims to satisfy this research gap by examining learner perceptions concerning the removal of captioning support in L2 listening comprehension and the ensuing affective states. More specifically, this study strives to answer the following two research questions:

1. What affective states arise from the elimination of captioning support?
2. Is L2 listening proficiency a predictor of the types of affective states that arise from the elimination of captioning support?

The findings of this study may illuminate affective states arising from learner dependence on captioning support. Instructors and course designers may then weigh the costs of exposing learners to captioning, and prepare learners for possible negative affects. This in turn may circumvent negative emotions connected to the loss of captioning support, allowing the learner to remain motivated with a willingness to continue learning.

1. Literature Review

1.1 Definition and background of Captioning

Captions may be defined as redundant text that matches spoken audio signals and appears in the same language as the target audio. Captions are not to be confused with subtitles, which are textual versions of dialogue, but may not necessarily be in the same language as the audio. Captioning emerged in foreign language classrooms in the 1980s as a method of supporting listening comprehension that: increased learners' attention, reduced anxiety, increased motivation, and provided students with immediate verification of what was heard (Froehlich, 1988). Moreover, studies indicated that learners held positive attitudes toward captions (Froehlich, 1988). However, what did not appear in these studies was how the removal of captioning support affected the learners.

Then, in the late 1990's Guillory (1999) investigated the effects of different modes (audio only, keyword captions, and full captions), of captioning on learner comprehension, full captioning being the most beneficial. This created a rationale for the use of captions. Utilizing captions were deemed easier than listening alone (see Dio et al. 2007; Smidt & Hegelheimer 2004; Stewart & Pertusa 2004), learners became accustomed and tended to rely on captions, experiencing negative affective states when the captions were unavailable. More recently, studies have focused on how captions benefit learners at various levels of proficiency, the findings inconsistent (Winke, Gass, Sydorenko, 2010).

1.2 Affective States & Captioning

As previously mentioned, learners may become overly dependent on captioning support (Vandergrift, 2007). For example, Leveridge & Yang (2012) examined learner perceptions on reliance of captioning support and its subsequent removal and found variances between proficiency levels, i.e. low-proficiency learners became frustrated by the removal of captioning.

The question of transference to a real-life listening context remains. Thus begging the question: When learners, accustomed to captioning support, enter into real-life listening contexts, will they become frustrated and anxious due to the lack of support to which they have become accustomed?

2. Method

2.1 Participants

Participating in this study were 146 students from a high school in northern Taiwan. The students had an average age of 17 and were from three twelfth grade classes. All participants had been enrolled in English as a Foreign Language (EFL) classes for a minimum of five years. While all students were of a similar age and in the same grade, their individual English aptitudes varied considerably. Furthermore, captioning support was a familiar medium, as all students had prior instructional experience in captioned multimedia environments, as it was a standard instructional medium in their classes. All participants reported normal hearing ability and either normal or corrected to normal eyesight.

2.2 Instruments

The instruments employed in this study were as follows: 1) a multimedia system consisting of a computer, projector, screen, and public address system; 2) the intermediate General English Proficiency Test (GEPT); 3) an open-ended question; and 4) semi-structured interviews.

1. A multimedia system consisting of a computer capable of playing DVDs, projector, screen, and public address system were used to present the movies.
2. GEPT: The GEPT, developed in 1999 in Taiwan, provides individual evaluation of English language proficiency (Roever & Pan, 2008). The GEPT covers the testing of four major aspects of English language learning: listening, speaking, reading, and writing. Furthermore, each category is tested separately, thus making it possible to test only specific areas required, as in this case, listening comprehension. As two aims of the current study were to determine if the participants' L2 listening comprehension level were predictors of: 1) perceptions of captioning support; and 2) emotions arising from the addition and/or elimination of the support, thus the listening comprehension section of the GEPT was employed enabling categorization of participant results into one of three proficiency levels: low, intermediate, or high.
3. Open-ended question: An open-ended question was employed to gain insight into learner emotions arising from the use of captioning support. The open-ended question is as follows: How did you feel when the captions were removed or not presented?
4. Interviews: Semi-structured interviews were given to participants who answered the open-ended question in a stronger-than-average manner. The interviews were structured around the same open-ended question.

2.3 Procedure

First, the GEPT was administered and three categories were created: low ($n=54$), intermediate ($n=46$), and high ($n=46$). Secondly, the participants watched the three movies, 1 per week. The first movie was presented with captions, the second with captions for approximately the first half, followed by audio and picture only, and the third movie without captions, audio and picture only. Immediately following the third movie, participants were asked to recall their experience of viewing of the three movies; the different modes of captioning employed, and answer the open-ended question. Participants whom expressed more extreme affective states were interviewed using the semi-structured interview.

3. Results & Discussion

The following five underlying themes from the interview comments regarding the removal or absence of captioning support were identified, the first two themes emerged irrespective of proficiency, while the last three were particular to a proficiency level:

1. 40% of the participants (n=59) indicated that the removal of captioning support increased their mental workload and/or made them feel tired more quickly.
2. Of the participants, 72% (n=105) indicated a negative affective state, i.e. confusion/frustration (69%), insecurity (7%) or anxiety (24%) arising from the removal and/or absence of captioning support. However, the remaining 28% of the participants (n=41) reported they felt “okay” with the removal or absence of the captions or had no feelings on the matter. Of these participants, 6% (n=9) felt confident they could train listening ability when captions were not presented.
3. Low-level learners feel anxious (28%) when captions are removed.
4. The intermediate-level learners indicated equal amounts of both anxiety (17%) and normalcy (17%) when captioning was removed or not presented.
5. High-level learners indicated that they felt a loss of security (13%) when captions were removed.

The first two themes relate to the first research question, while the last three themes relate to the second research question.

The first theme to develop was related the affective states that may arise from the elimination of captioning support. Participants indicated that the absence of captioning support made them feel more tired as it seemed to increase in their cognitive load, or mental processing. Example: “Without captions, I have to concentrate very hard on the audio to gain comprehension.” Example: “I felt sleepy. It is too difficult. Without captions, I must completely rely on the audio. It is tiring to listen to unfamiliar words.”

The second theme to develop was confusion and frustration. Example: “I felt confused without captions. With captions, I have time to think. Without captions, I have no time to stop and think.”

The third theme was more prevalent in both the low and high proficiency groups of learners: anxiety. Low proficiency learners indicated that they became anxious. Because the listening ability of this group is not as well established, as in the intermediate or high proficiency groups, the amount of cognitive processing needed, outweighed the resources available (i.e. vocabulary). Example: “When captions were removed, I had a difficult time understanding anything. I was disappointed because I cannot understand.” High proficiency learners also indicated anxiety, but for different reasons compared to the low proficiency group. Anxiety was reported was because this group lost the mechanism they employed to check for correctness.

The fourth theme was an even distribution of anxiety and normalcy for the intermediate group that indicated a lower degree of anxiety, but an equal amount felt no difference between the non/captioned movies. Suggesting this group may have a stronger vocabulary, and improved listening skills. Even though not as reliant on the captions, some expressed that they would like the support to remain because they could more easily comprehend the movie content. Example: “Without captions, I will be able to train myself how to listen. However, I still want to see the captions in the movie.”

The fifth theme was specific to the high-proficiency group: insecurity. Without captioning support, this group could not check listening accuracy, creating a sense of insecurity. Example: “I feel that there is no difference without captions but I cannot check my understanding and I can’t get some of the words meanings without captions. [Without captioning] I feel a loss of security.” One participant was reading the captions multiple

times as a way of feeling secure in what she had heard. Example: “I can read the captions twice. So I will have a greater sense of security in understanding what is being said.”

The results indicate that the removal or absence of captioning support does induce negative affective states and that proficiency is an influential factor in that various affective states are specific to particular levels.

Conclusion

By presenting learners with three videos, each with different modes of captioning support: the first with full captioning, the second with captioning for the first half only, and the third with no captioning, low-proficiency learners indicated anxious affective states, intermediate-proficiency learners specified either anxious states or contended that there was no difference, while high-proficiency learners indicated a loss of security.

Acknowledgements

We thank all the people who provided assistance for this study.

References

- [1] Chai, J. & Erlam, R. (2008). The effect and the influence of the use of video and captions on second language learning. *New Zealand Studies in Applied Linguistics*, 14(2), 25-44.
- [2] Chang, C. C. Tseng, K. H. & Tseng, J. S. (2011). Is single or dual channel with different English proficiencies better for English listening comprehension, cognitive load and attitude in ubiquitous learning environment? *Computers & Education*, 57(4): 2313–2321.
- [3] Danan, M. (2004). Captioning and subtitling: Undervalued language learning strategies. *Meta*, 49(1), 67–77.
- [4] Diao, Y., Chandler, P. & Sweller, J. (2007). The effect of written text on comprehension of spoken English as a foreign language. *American Journal of Psychology*, 120(2), 237-261.
- [5] Froehlich, J. (1988). German videos with German subtitles: A new approach to listening comprehension development. *Die Unterrichtspraxis/Teaching German*, 21(2), 199-203.
- [6] Guillory, H. G. (1999). The effect of keyword captions to authentic French video on learner comprehension. *CALICO Journal*, 15(1-3), 89-108.
- [7] Leveridge, A. N. & Yang, J. C. (2012). Effect of Medium: A Conceptual Framework for the removal of Supporting Captions for EFL Listening Comprehension in Multimedia Instructional Delivery. Proceedings from the: *15th International CALL Research Conference*. Taichung, Taiwan.
- [8] Robin, R. (2007). Commentary: learner-based listening and technological authenticity. *Language Learning & Technology*, 11 (1), 109–115.
- [9] Smidt, E. & Hegelheimer, V. (2004). Effects of online academic lectures on ESL listening comprehension, incidental vocabulary acquisition and strategy use. *Computer Assisted Language Learning*, 17(5), 517–556.
- [10] Stewart, M. A. & Pertusa, I. (2004). Gains to foreign language while viewing target language closed-caption films. *Foreign Language Annals*, 37 (3), 438–443.
- [11] Sun, Y. & Dong, Q. (2004). An experiment on supporting children’s English vocabulary learning in multimedia context. *Computer Assisted Language Learning*, 17 (2), 131-147.
- [12] Vandergrift, L. (2004). Listening to learn or learning to listen? *Annual Review of Applied Linguistics*, 24, 3–25.
- [13] Vandergrift, L. (2007). Recent developments in second and foreign language listening comprehension research. *Language Teaching*, 40 (3), 191–210.