A framework for implementing synchronized video-imprinted viewing comprehension questions in language learning and testing: A multiphase mixed methods investigation

Author: Juan Carlos Casañ Núñez juancarloscasan@protonmail.com Supervisors: Ana Gimeno Sanz (UPV) and María Virginia González García (UV) Phd Programme: Language and Technology

Introduction

Listening, watching, reading and writing simultaneously in a foreign language is very complex. On the one hand, there is a conflict of visual attention between viewing the video and completing a written activity. On the other hand, paying attention to the image, the audio, and the task simultaneously can lead to working memory overload (Vandergrift & Goh, 2012).

Goal

Develop a framework for using audiovisual comprehension questions imprinted in the video image in the form of subtitles and synchronized with the relevant fragments, for the purpose of language learning and testing (see examples in figure 1, figure 2, Casañ Núñez [2015b] and https://youtu.be/ALw8XJkrbDQ)

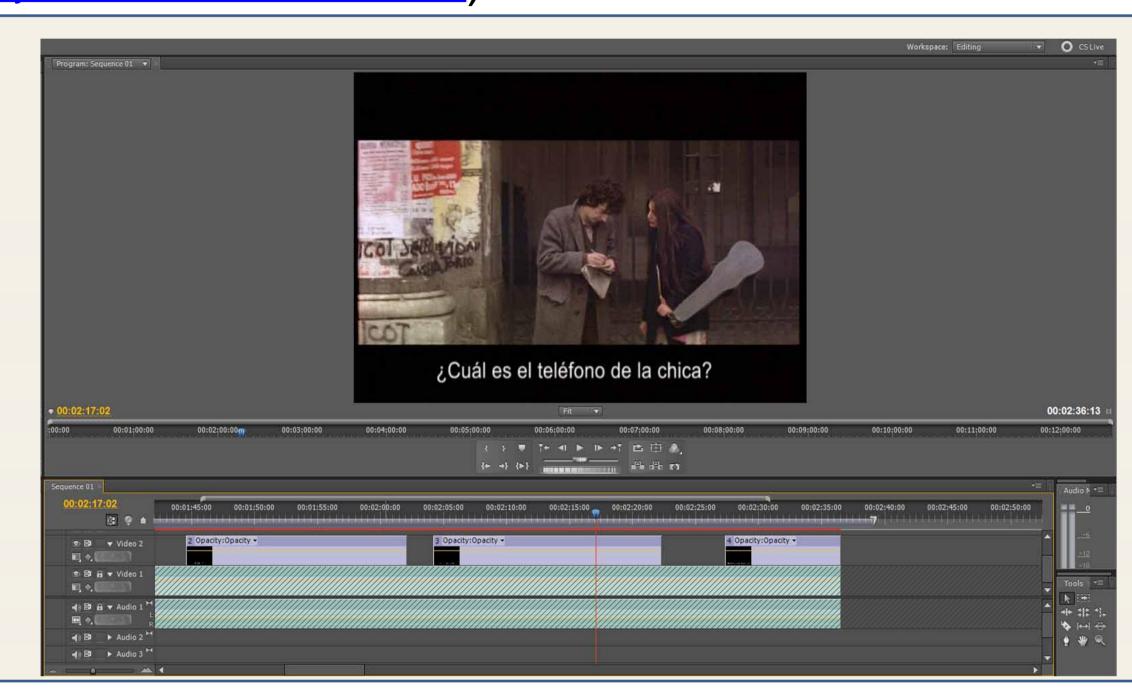


Figure 1. Timeline in Adobe Premiere Pro. Video track 1 and Audio track 1 belong to the film. Video track 2 shows the timing of the imprinted questions. (Casañ Núñez, 2015b, p. 51)

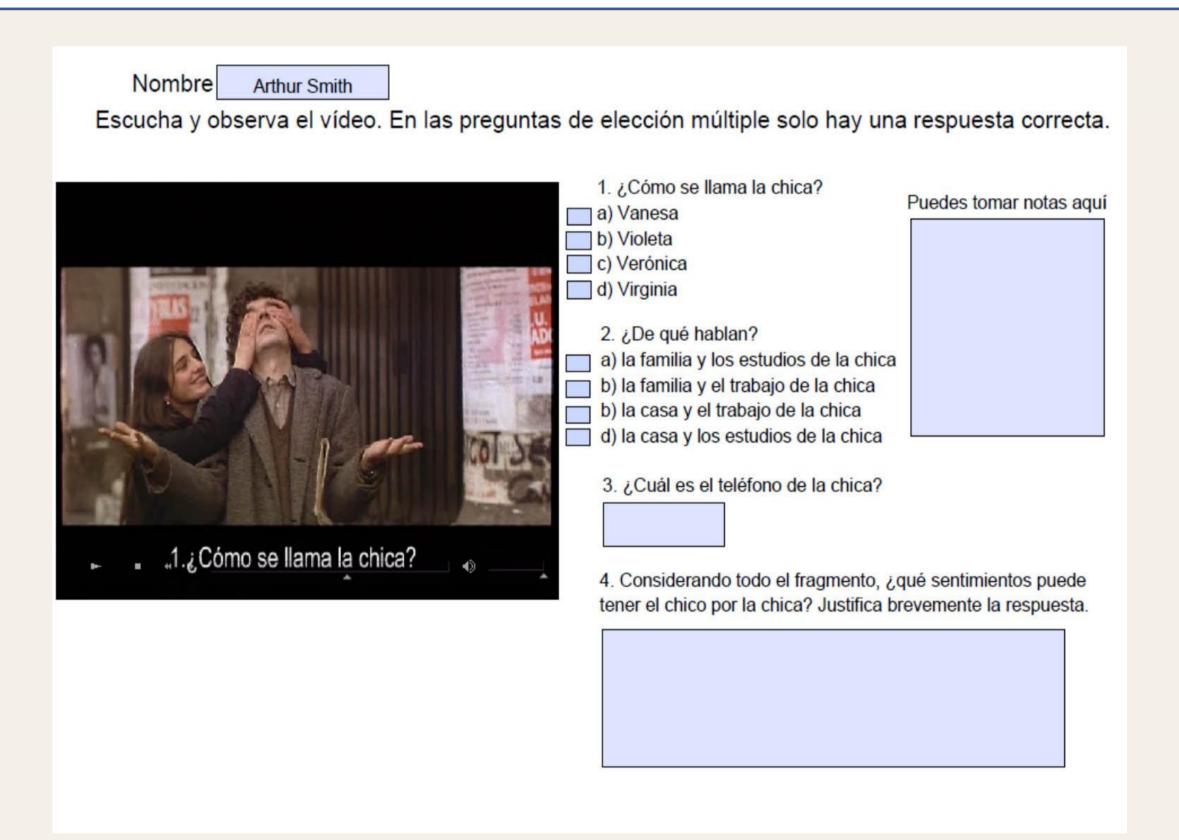


Figure 2. Prototype of an audiovisual comprehension task for computer assisted language learning (CALL). Notice that playback controls are available to learners. "¿Cómo se llama la chica?" [What is the name of the girl?]. From the Spanish film *Ópera prima* by Fernando Trueba (Casañ Núñez, in press-c)

Benefits and applications

This innovative technique may provide some benefits. Among them, it could reduce the conflict in visual attention between watching the video and completing the task, by spatially and temporally approximating the questions and the relevant fragments. The technique is seen as especially beneficial for adult students with a low proficiency language level. In addition, it may be used in other levels occasionally.

It is suitable for paper-and-pencil listening/audiovisual comprehension tasks for language learning or testing and for CALL (see figure 2) or Computer assisted language testing.

Research design

A multiphase mixed methods design (Creswell, 2014, Creswell & Plano Clark, 2011) was employed.

The investigation involved several interrelated studies, with the purpose of (a) ascertaining the opinions of specialists in teaching Spanish as a Foreign Language (SFL), Spanish linguistics and/or the use of technology, SFL teachers, and SFL learners about this methodology, and (b) researching whether the viewing comprehension questions as video captions had an impact on test-takers' performance and visual behaviour in a Spanish language test.

GOAL: Develop a framework for using audiovisual comprehension questions imprinted in the video image in the form of subtitles and synchronized with the relevant fragments, for the purpose of language learning and testing. METHOD: Multiphase mixed methods design (Creswell, 2014; Creswell & Plano Clark, 2011) Objective: Write a working framework Phase 1 **Method**: Embryonic experience with this technique (Casañ Núñez, 2007), literature review (Casañ (Casañ Núñez, Núñez, 2009, 2015a), and language teaching experience 2015a) **Objective:** Estimate the reliability of a questionnaire that would be Phase 2 Phase 6 (Casañ Núñez, administered in subsequent studies (Casañ Núñez, 2017, in press-c) (Casañ Núñez, **Method:** Repeated survey method (Brown, 2001) in press-a) Objective: Objective: Find out what experts think about the framework Develop a viewing Phase 3 Method: Convergent mixed methods study (Creswell, 2012, 2014; (Casañ Núñez, comprehension test with Creswell & Plano, 2011) 2015a) two variants that would be REFORMULATION OF THE FRAMEWORK administered in subsequent studies (Casañ Núñez, 2017, in **Objective:** Find out what Spanish as a foreign language (SFL) Phase 4 press-c) teachers think about this technique (Casañ Núñez, in Method: Convergent mixed methods study (Creswell, 2012, 2014; press-b) Method: Creswell & Plano, 2011) Planning, design and trialling Based on Bachman and Objective: Find out what SFL students think about this technique Phase 5 Palmer (1996) and Bordón (Casañ Núñez, Method: Survey study (2006)2016a) Phase 7 **Objective:** Exemplification of the technique in a pedagogic sequence (Casañ Núñez, Method: Application of the principles of the framework and experience as a SLF teacher 2015b) **Objectives**: Research if viewing comprehension questions as video captions have an impact on test-Phase 8 takers' performance in a Spanish language test. Find out what SFL students think about this (Casañ Núñez, in methodology. press-c)

Method: Multimethod study (Morse, 2003)

NEW REFORMULATION OF THE THEORETICAL FRAMEWORK

think about this methodology.

press-c)

Results

Phase 9 (Casañ

Núñez, 2017)

Phase 10

Overall, experts, SFL students and SFL teachers have positive opinions about this technique (Casañ Núñez, 2015a, 2016, in press-b).

Figure 3. Research diagram

Objective: Research if viewing comprehension questions as video captions have an impact on test-

takers' performance and visual behaviour in a Spanish language test. Find out what SFL students

Method: Multimethod study (Morse, 2003) / partial replication (Porte, 2012) of Casañ Núñez (in

Imprinted questions do not have a statistically significant effect on test takers' performance in an audiovisual comprehension test (Casañ Núñez, in press-c, 2017).

Imprinted questions increase the amount of time that test-takers watch the video in an statistically significant way (Casañ Núñez, 2017).

A framework based on a thorough literature review and empirical research has been written.

Selected references

Casañ Núñez, J. C. (2015a). Un marco teórico sobre el uso de preguntas de comprensión audiovisual integradas en el vídeo como subtítulos: un estudio mixto. *MarcoELE*, 20, 1-45. Retrieved from http://marcoele.com/comprension-audiovisual-y-subtitulos/.

Casañ Núñez, J. C. (2015b). Subtitulación de preguntas de comprensión audiovisual: ejemplificación en una secuencia de *Ópera prima* de Fernando Trueba. *Foroele*, 11, 45-56. Retrieved from https://ojs.uv.es/index.php/foroele/article/view/7095.

Casañ Núñez, J. C. (2016). Desarrollo de una prueba de comprensión audiovisual. *MarcoELE*, 22, 1-70. Retrieved from http://marcoele.com/descargas/22/casan-prueba_audiovisual.pdf.

Casañ Núñez, J. C. (in press-a). Diseño y fiabilidad de un cuestionario sobre la comprensión auditiva/audiovisual. *Bellaterra Journal of Teaching & Learning Language & Literature*.

Casañ Núñez, J. C. (in press-b). Tareas de comprension audiovisual con preguntas subtituladas: valoraciones de cinco profesores universitarios de espanol como lengua extranjera. *E-JournALL, EuroAmerican Journal of Applied Linguistics and Languages*.

Casañ Núñez, J. C. (in press-c). Testing audiovisual comprehension tasks with questions embedded in videos as subtitles: a pilot multimethod study. *The EuroCALL Review*.

Casañ Núñez, J. C. (2017). The effect of viewing comprehension questions as video captions on test takers' performance and visual behaviour in a Spanish language test. Manuscript in preparation.

Creswell, J. W. (2014). Research design: Qualitative, quantitative, and mixed methods approaches (4^a ed.). Thousand Oaks, California, United States of America: Sage Publications.

Creswell, J. W., & Plano Clark, Vicki L. (2011). *Designing and conducting mixed methods research* (3^a ed.). London, United Kingdom: Sage Publications.

Vandergrift, L., & Goh, C. C. M. (2012). *Teaching and learning second language listening*. New York; New York, United States of America: Routledge.

Acknowledgments

Part of this research was possible thanks to one Ibero-American Young Teachers and Researchers grant funded by Santander Universities and four Erasmus teaching staff mobility grants.