

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>)

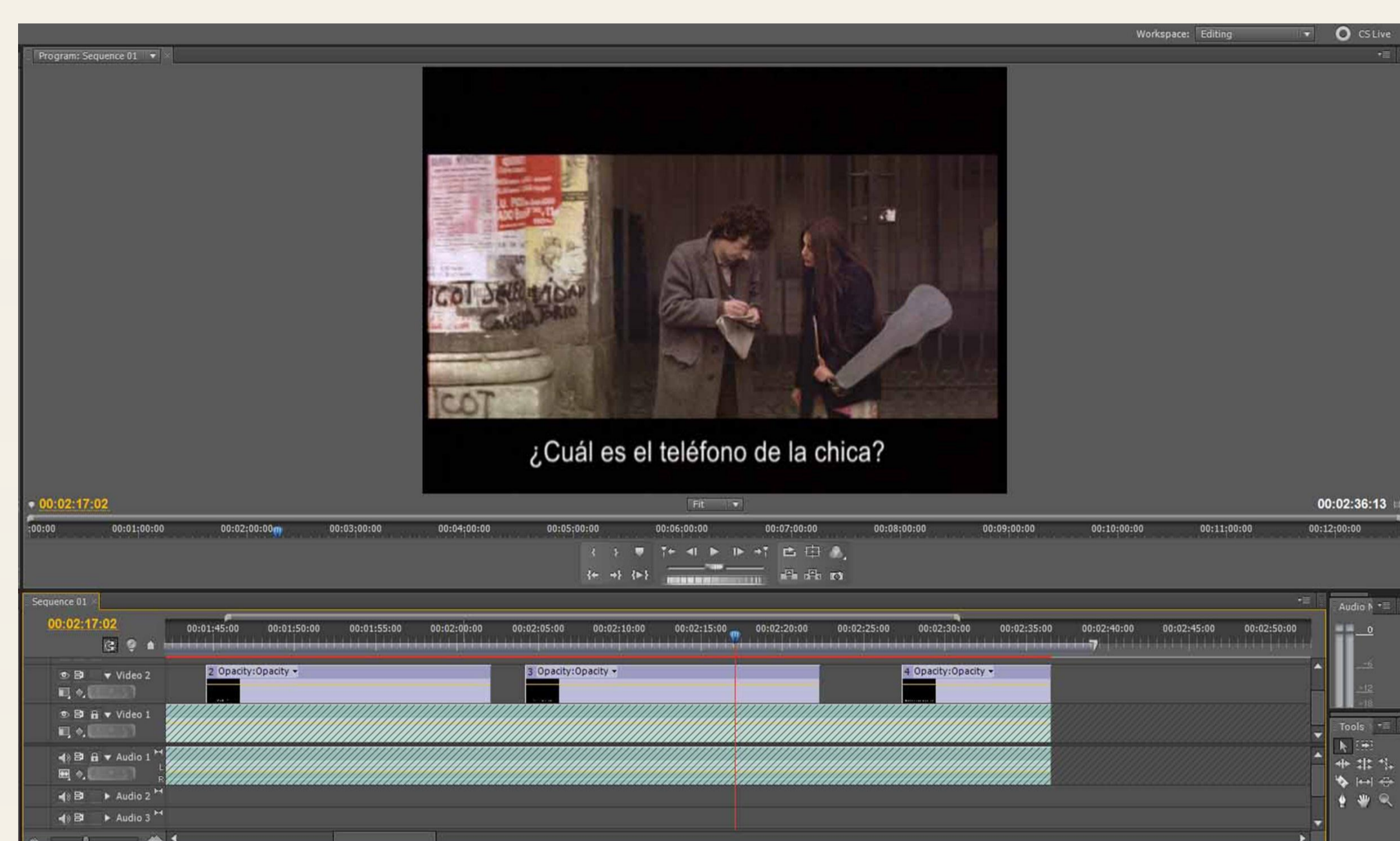


Figure 1. Timeline in Adobe Premiere Pro. Video track 1 and Audio track 1 belong to the film. Video track 2 shows the timing of the imprinted questions. (Casañ Núñez, 2015b, p. 51)

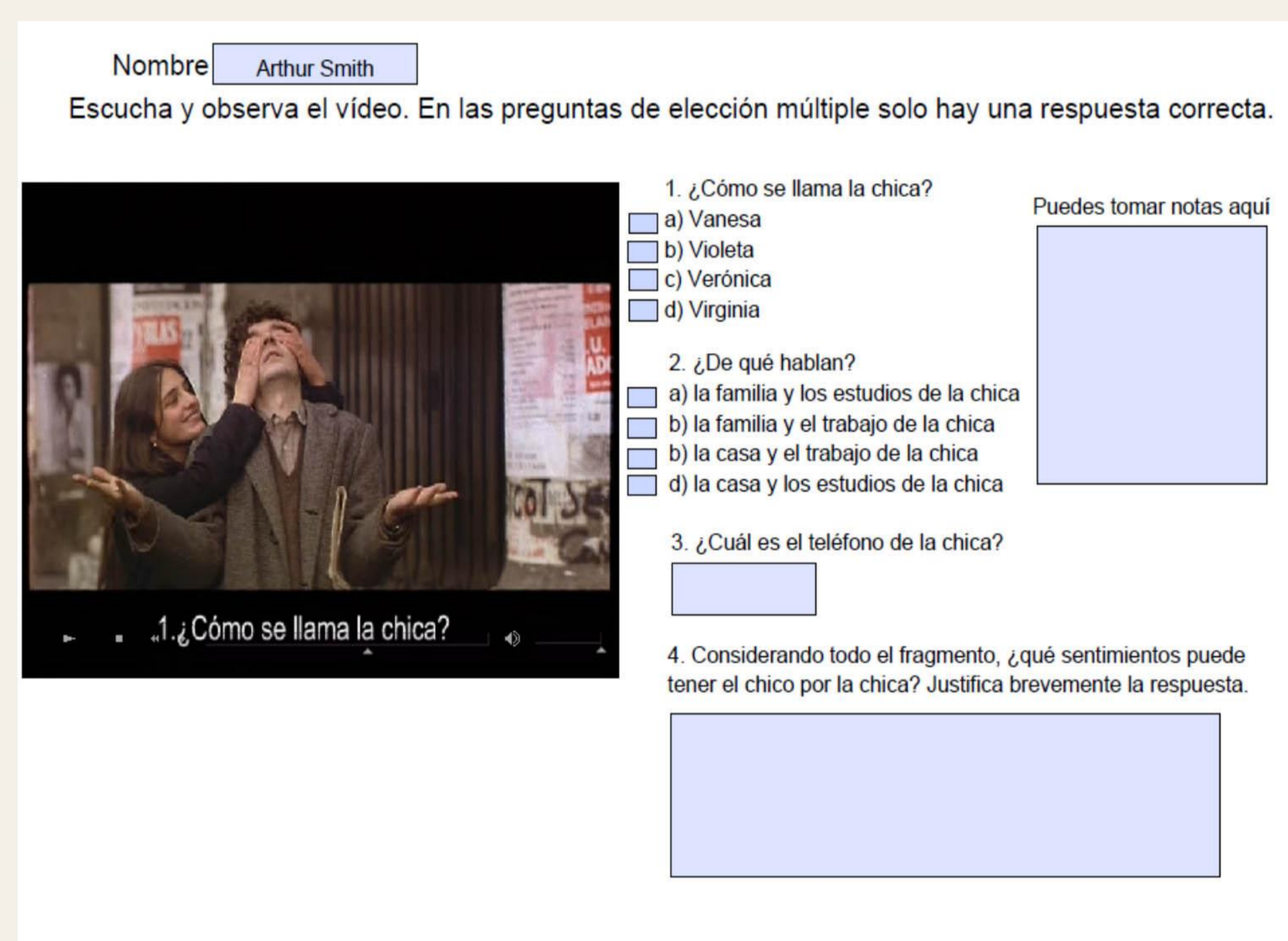


Figure 2. Prototype of an audiovisual comprehension task for computer assisted language learning (CALL). Notice that playback controls are available to learners. "¿Cómo se llama la chica?" [What is the name of the girl?]. From the Spanish film *Ópera prima* by Fernando Trueba (Casañ Núñez, in press-c)

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)

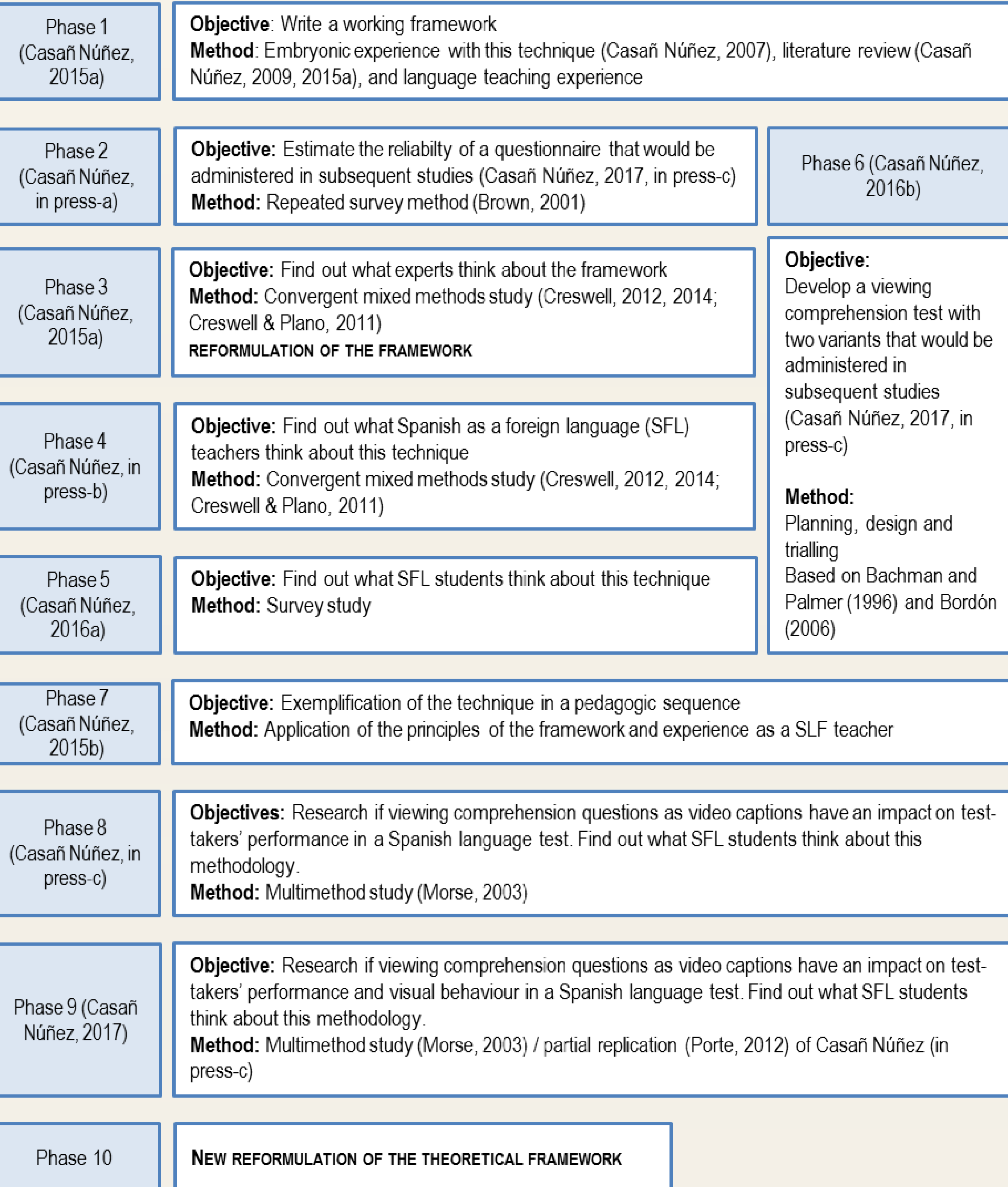


Figure 3. Research diagram

Results

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

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

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Acknowledgments

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