

**MULTIMODAL INPUT IN SECOND LANGUAGE LEARNING  
SYMPOSIUM PAPER ABSTRACTS 2016**

***Does watching subtitled TV series help vocabulary learning? Findings from the SUBTILL Project***

*Imma Miralpeix, Ferran Gesa*

Although multimodal input can enhance the learning of a new language (Mayer, 2005), most of the research conducted on audiovisual materials and their impact on learning focuses mainly on adult populations being exposed to short videos, usually in lab conditions (e.g. Sydorenko, 2010). However, little is known about the effects of sustained exposure to these materials in younger populations and the potential of TV series for classroom use has yet to be systematically examined.

The present study exposed primary and high-school EFL learners to subtitled TV series over a whole academic year by means of a pedagogical intervention. Learners at primary school were from a beginner level while those at high-school were intermediate. Every week, the experimental groups at each level watched an episode subtitled in L1 (primary school) or L2 (high school), while the control groups followed regular classroom instruction. All participants took the same vocabulary pre- and post-tests, which examined a set of target words (TWs). Results showed significant differences between experimental and control groups both in primary and secondary school learners for vocabulary acquisition, although results vary depending on the aspects of word knowledge analysed -form or meaning-.

**Proficiency, language aptitude and modality of input as mediators of vocabulary learning in university students**

*M. Mar Suárez, Ferran Gesa*

It has been shown that memory and sound-symbol association are the aptitude components most closely related to vocabulary learning (Kormos & Sáfár, 2008). Likewise, exposure to subtitled audiovisual material enhances vocabulary acquisition in a foreign language (Montero Perez et al., 2014). It remains unknown, however, what the effects of aptitude and proficiency on vocabulary learning are by viewing captioned TV series. This study aims at filling the existing gap by studying the effects of both proficiency and aptitude on vocabulary acquisition through captioned videos. Sixty-two freshman students with a wide range of EFL proficiency levels (A2 to C1) were randomly divided in two groups (experimental and control). Both groups were pre-taught a series of target words (TWs) in 8 sessions and tested on those words at the end of each session. The experimental group was additionally exposed to an L2-subtitled TV series containing the TWEs. In order to assess the retention of TWs, all learners were tested on both aural and written knowledge of the TWs forms and meanings through a pre- and post-test. Aptitude was measured using the LLAMA test (Meara, 2005) and proficiency was measured using the complete Oxford Placement Test (Allan, 2004) as well as the X-Lex/Y- Lex vocabulary tests.

The results show that proficiency seems to be determinant for the acquisition of vocabulary, as students with higher levels of proficiency show significant differences in the acquisition of the TWE, mostly in the experimental group. In contrast, the only aptitude component related to the retention of meaning of the TWs is phonological memory as measured by LLAMA-D in the students with higher aptitude in the experimental group. Results are discussed in terms of how aptitude, proficiency and both amount and type of exposure contribute to vocabulary acquisition.

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**Does exposure to enhanced multimodal input lead to better vocabulary learning? An eye-tracking study**

*Olena Vasylets, Roger Gilabert, Marina Ruiz Tada, Ferran Gesa*

Previous studies have shown that watching an L2 video with full captions (i.e. an L2 audio accompanied by the L2 on-screen text) helps in the comprehension of video content and leads to superior vocabulary learning as compared to a non-captioned video (Montero et al., 2013). The aim of our study is to explore if we can make captions even more effective through the highlighting of the target words. We report the results of two eye-tracking experiments in which we investigate the effects of such textual enhancement on L2 learners' processing and learning of idiomatic expressions (Experiment 1) and content English words (Experiment 2). In Experiment 1, Group 1 (N=10) watched a 20-minute video in which the target idiomatic expressions were visually enhanced; Group 2 (N=10) watched the video in which the captions had not been manipulated. All the participants were eye-tracked while watching the video. Results revealed that the subjects in Group 1 showed more noticing and more learning gains of the target expressions. In Experiment 2, the participants formed 3 groups: Group 1 (N=10) were eye-tracked while watching a 25-minute video with twelve target content words enhanced in the captions; for Group 2 (N=10) captions had not been manipulated; Group 3 (N=10) was a control group (no captions, only L2 audio). Before the eye-tracking session, a pre-test was administered to all participants to test the knowledge of the target words. After watching the video, post-tests were given to measure various aspects of the target word knowledge. The tests included: (1) word form recognition, (2) meaning recall, and (3) meaning recognition. Also, the participants completed a content comprehension test. Results showed that making the words salient in captions brought about more noticing and significant learning advantages. These advantages, however, were limited only to receptive vocabulary learning. We discuss our findings in light of the theorizing of multi-modal input learning (Mayer, 2009; Paivio, 1986), theories of vocabulary learning (Hulstijn, 2003; Schmitt, 2000) and input enhancement (Sharwood Smith, 1991).

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**Aptitude, memory and attention in L2 vocabulary learning through captioned video**

*Roger Gilabert, Joan C. Mora, M. Mar Suárez, Ferran Gesa*

Previous research suggests that exposure to multimodal input, such as the simultaneous exposure to visual, textual and auditory information through L2 captioned video enhances L2 vocabulary learning (Montero et al., 2013). Individual differences in aptitude (Grañena et al., forthcoming), working memory (Serafini & Sanz, 2015), attention control (Segalowitz & Frenkiel-Fishman, 2005) and inhibition (Linck et al. 2014) have been shown to influence L2 processing and acquisition, but no research to date has investigated their impact on the effectiveness of bimodal input exposure in L2 vocabulary learning for instructed EFL learners.

The present study investigates the role of aptitude, working memory, attention and inhibition in L2 vocabulary learning through bimodal input. Three groups of bilingual Catalan-Spanish EFL learners (N=214) pooled from three educational levels (primary, secondary and university) were tested three times during a nine-month pedagogical intervention. Experimental participants (N=118) received bimodal input exposure to target vocabulary through L2 captioned videos, whereas controls (N=96) were exposed to the same vocabulary items through tasks that did not provide bimodal input. Two aptitude tasks, a reading span task, a novel attention switching task combining visual, auditory and textual information, and an inhibitory control flanker task were used to assess their aptitude, working memory capacity, and attention skills.

Data analyses involving measures of vocabulary gains and scores on the cognitive tasks at the end of the first 3-month treatment period revealed a moderate but significant contribution of working memory to vocabulary learning for the learners in the experimental group, but no contribution of aptitude, inhibition or attention control. Individual data analyses of two sub-samples of these participants (N=42) identified as the higher- or lower-scorers in the cognitive tests in every group revealed that in all three groups participants with stronger memory obtained much larger vocabulary gains. Additionally, their eye behavior was analyzed and measures of skipped subtitles, fixation counts, fixation duration, re-visits and visit duration were obtained. No clear patterns in eye-behavior by any of the measures were identified.

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**Effects of familiarity with subtitles on watching subtitled audiovisual material. Insights from eye-tracking**

*Carmen Muñoz, Radha Chandy*

This presentation contributes to the exploration of the factors that may have an influence on viewers' behaviour when watching subtitled material. Two such factors, participants' age and proficiency level, were shown to affect the number of fixations and the percentage of skipped subtitles in particular (see Muñoz, 2016 and Chandy, 2016). Familiarity with subtitles was explored in two eye-tracking studies by means of participants' answers to a set of questions concerning their viewing habits and attitudes towards subtitles. In both studies participants watched two clips with L2 soundtrack, one with L1 subtitles and the other with L2 subtitles. It was found that differences in mode preference (dubbed, subtitles in L1, subtitles in L2, non-subtitled) reflected participants' proficiency and comprehension abilities and that familiarity with different modes was associated to differences in viewing behaviour in terms of number and length of fixations and subtitles skipped. For example, those participants who were more familiar with dubbed audiovisual material presented fewer and shorter fixations in both the L1 and L2 conditions.

**Processing of function words in L2 captioned video and individual differences in executive control**

*Joan C. Mora, Eva Cerviño-Povedano*

The low perceptual salience of function words in spoken English pose processing and pronunciation challenges for English learners of syllable-timed languages like Spanish that lack syllable reduction (Gómez-Lacabex et al., 2007). Research investigating input modality in language learning has shown the benefits of watching subtitled videos for vocabulary acquisition and listening comprehension (Montero Pérez et al. 2013), but little is known about the effect of subtitling on the processing of L2 function words (Krejtz et al., 2015), and on L2 pronunciation learning in general. This study investigated the effects of bimodal input through subtitled video on Spanish EFL learners' processing of English function words and explored inter-learner differences in reading behaviour as a function of L2 proficiency, speech segmentation skills and executive function control. Participants (N=35) watched 6 short film clips in English with intra-lingual subtitles (and answered comprehension questions) under three conditions: with on-screen image + audio + text, with audio + text and with text only. We used eye tracking to monitor learners' reading behaviour of the subtitled text and obtained measures of fixation duration on selected function and content words across the three conditions. An elicited imitation task (Ortega et al., 2002) provided samples of spoken function words and a measure of learners' speaking proficiency. In addition, we assessed learners' L2 vocabulary breadth (X/Y\_Lex, Meara, 2005) and their speech segmentation skills through a word-spotting task (McQueen, 1996). Individual differences in executive control were assessed through a flanker task (Costa et al., 2009) and a novel attention switching task combining visual, auditory and textual information modelled after Monsell (2003), which provided individual measures of inhibitory and attention control, respectively. Preliminary results show that bimodal input conditions lead to more target-like processing of function words and proficiency is inversely related to fixation duration in function words. The outcome of the speech segmentation, inhibition and attention tasks is currently under analysis. Findings so far suggest that bimodal input exposure enhances the processing of subtitled text according to the rhythmic structure of the presentation language and underscore the potential of intra-lingual subtitling for L2 pronunciation development.

**MULTIMODAL INPUT IN SECOND LANGUAGE LEARNING  
SYMPOSIUM PAPER ABSTRACTS 2016**

**The impact of reading modality on reading fluency and comprehension in English as a foreign language: the case of children**

*Àngels Llanes, Elsa Tragant, Àngels Pinyana, Eva Cerviño-Povedano*

Reading-while-listening, that is, simultaneously reading and listening to a text, has been shown to be an efficient procedure for FL reading partly because learners with varied abilities to process a L2 may approach texts according to their own strengths (Dörnyei, 2005). Reading-while-listening can also be a way to increase the quality and quantity of L2 input yet little research has been conducted about this mode of reading with children. To this end, the present study, involving the reading of graded readers on natural and social sciences in intact classes, is meant to measure the impact of an independent reading program on primary school children aged 10/11 who are learning English in a primary school in Barcelona. In the study, which is a follow up study of Tragant, Muñoz and Spada, 2016, a reading-while-listening group is compared to a Reading-only group and a control group. Measures of reading fluency and comprehension are obtained from an on-line fluency test, a paper and pencil test and eyetracking methodology. Results show the Reading-while-listening group was most successful in improving reading fluency.

**Reading-while-listening in primary school: linguistic and non-linguistic outcomes**

*Raquel Serrano, Anna Vallbona, Elsa Tragant, María Àndria, Anna Pellicer-Sánchez*

Graded readers for EFL children can be a rich source of L2 input yet there is a dearth of research that evaluates programs where children have access to large quantities of such materials (Horst, 2005; Nakanishi, 2015). The present study reports on primary students' perceptions and levels of engagement (non-linguistic outcomes) after having participated in two different reading programs for an extended period of time. It also measures vocabulary gains (linguistic outcomes) in one of these two programs. Perceptions are obtained from questionnaires and interviews and vocabulary gains from a 50-item vocabulary matching test. Results show that student choice, variety of materials and the Reading-while-listening mode (as opposed to the reading-only mode) seem to contribute positively to students' perceptions. They also show that both the Reading-while-listening and Reading-only modes lead to significant gains in vocabulary learning. The paper will conclude with some challenges the authors have encountered in conducting longitudinal classroom research.

## MULTIMODAL INPUT IN SECOND LANGUAGE LEARNING SYMPOSIUM PAPER ABSTRACTS 2016

### **Reading only vs. Reading-while-listening: An eye-tracking study**

*Ana Pellicer-Sánchez, Àngels Pinyana, Raquel Serrano*

Eye-tracking studies shed light on how students process written input. By means of this technology the present study examines the reading behavior of two groups of Catalan/Spanish EFL students that read the same text in two different modes: “reading only” and “reading-while-listening”. Although there is research examining how reading comprehension, fluency or vocabulary learning are promoted under these two modes (e.g., Webb & Chang, 2012), little is known about actual online reading behavior when students read only as opposed to when they read while listening.

This particular study examines online processing as well as reading comprehension in the case of a group of primary school students and another group of university students. The primary school learners (11-12 years old) read an English graded reader (300 headwords) under the two modes (half of the book “reading only” and the other half “reading-while-listening”). Half of the participants started in the first mode and finished in the second mode and the other half followed the opposite order. The same counterbalanced procedure was followed with the adult learners, but in this case, they read two different texts (around 600 words each), which had been previously piloted to ensure a similar degree of difficulty. Texts were presented across several screens. Apart from online measures of reading behavior, we also used an offline reading comprehension test and a vocabulary knowledge test (to examine the role of previous vocabulary knowledge). The results of our analyses suggest that all the students (regardless of age) spend more time reading in the reading only mode, but this increase in time does not necessarily lead to better comprehension.

### **Watching cartoons with L1 or L2 subtitles: A classroom-based study with young learners**

*Montse Casulleras, Imma Miralpeix*

Due to the potential that audiovisual materials seem to offer for L2 learning (Danan, 2004), they can be a good tool to be used in formal settings to make of the classroom a better lexical environment. There is a lot to be researched about the experience and effects of watching subtitled TV series regularly in class with young learners (Matielo et al., 2015), as very little attention has been paid in the literature so far on children with very low proficiency levels (e.g. d’Ydewaelle and Van de Poel, 1999).

In this study, 11-year-olds learning English in a semi-private school watched one episode a week of the animated TV series ‘Curious George’ -with subtitles either in English (N=50) or in Spanish (N=49)- over a period of 5 months. These students were tested on comprehension and vocabulary recognition (i) immediately after watching each episode and (ii) in two special episodes without subtitles (middle and end of treatment). They also took a delayed vocabulary test. Although there are not always significant differences between the groups, the L1-subtitling group consistently scores higher in comprehension, while the L2-subtitling group is better at L2 word-recognition. The possible effects of individual differences and other language skills on the results were also explored and aptitude was found to be closely related to comprehension in both groups.

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**Pragmatic instruction through audiovisual subtitled input in children and adult EFL classrooms**

*Júlia Barón, Carmen Muñoz*

The present study aims at analyzing the effects of pragmatic instruction through audiovisual subtitled materials. The participants of this study were 40 EFL learners with a B1 proficiency level: 20 children (ages 11-13) and 20 adults (ages 35-50). Both children and adults were distributed into Experimental and Control groups, and they all received pragmatic-focused instruction (on greetings, requests and invitations) and were enrolled in class discussions to raise pragmatic awareness. In the Experimental group, the participants received pragmatic instruction and had as support audiovisual subtitled materials. Those who were in the Control groups received the pragmatic instruction without the audiovisual subtitled support. To examine pragmatic development, an Oral Discourse Completion Test was administered at the beginning and at the end of the instructional period. In order to follow the development of pragmatic awareness, classroom observations during the class discussions were carried out. The results suggest that the Experimental groups developed both pragmatic competence and pragmatic awareness, and that children from the Experimental groups seemed to improve in request mitigation, one of the most difficult pragmatic aspects to teach and learn.