



## Speech Recognition For Online Language Learning: Connecting CALL-SLT and DALIA

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### Abstract

In this paper, we show how speech recognition can contribute to the development of a multimedia course for foreign language self-learning that focuses both on receptive and productive skills.

Specifically, we describe how we merged two different existing e-learning projects, DALIA[1] and CALL-SLT[2]. DALIA is a project for self-learning and blended learning which targets several European languages and proficiency levels. Using the Moodle platform, it offers a large set of exercises based on lexicon, grammar, and oral/written comprehension, intended to teach receptive skills. CALL-SLT is a web-based spoken translation game configured to teach productive competences in specific domains. The student is presented with a set of meanings in the form of L1 glosses (for example, SAY AGE OF\_YOUR\_MOTHER 40) which they are asked to verbalise in the L2. The system uses two main components: a grammar-based speech recognizer that recognizes what the student said and an interlingua-based machine translation system that checks if the meaning of the recognized sentence corresponds to the meaning of the L1 gloss. Meanings can be easily organized into lessons that focus on different linguistic aspects.

This paper will describe in detail the methodology used to merge these two approaches. It explains how we developed CALL-SLT lessons for Italian students learning French, based on the already validated communicative situations and exercises offered in DALIA, and how we integrate these lessons on the Moodle platform. The emphasis will be on readability and learning value of the linguistic input (glosses), online help and level of difficulty. A first pilot evaluation will evaluate some of the functionalities. This study constitutes a preliminary step towards evaluating how CALLSLT helps to improve productive skills within self-study and blended learning.