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► **To cite this version:**

Itziar Aldabe, Bertol Arrieta, Arantza Díaz de Ilarraza, Montse Maritxalar, Maite Oronoz, et al.. IRAKAZI: a web-based system to assess the learning process of Basque language learners. Proceedings of EuroCALL2005, EuroCALL, 2005. artxibo-00080509v2

**HAL Id: artxibo-00080509**

**<https://artxiker.ccsd.cnrs.fr/artxibo-00080509v2>**

Submitted on 22 Jun 2006

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# **IRAKAZI: a web-based system to assess the learning process of Basque language learners**

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**Keywords:** Intelligent Computer Assisted Language Learning (ICALL); Natural Language Processing (NLP); interlanguage; error analysis; learner corpora.

## ABSTRACT

IRAKAZI is a teacher oriented web-based system designed for the study of Basque learners' learning process. The system involves a wide background in NLP tools, error detection and ICALL environments and it is easily transferable to other languages. IRAKAZI is composed of three modules:

In the *knowledge base* module, developed as a MySQL database, teachers record specific data about learners (age, language background, language level, learning context, etc.) and store students' deviations. This way, they collect learner corpora to study Basque learners' interlanguage levels and to investigate which can be the most suitable strategies to help students improve their language knowledge. Besides, we have developed ERREUS (Arrieta *et al.*, 2003), a database to store an exhaustive description of errors which includes technical and linguistic information for automatic error treatment. Both sources of knowledge have been linked. This way, the deviations added in IRAKAZI are actually stored in ERREUS. And therefore, they share some data, giving us a double perspective: the psycholinguistic and computational approaches of each error instance.

The *consulting tools* module includes a Java interface where NLP tools have been adapted, tools such as a morphological proposer, monolingual and multilingual dictionaries, a morphological analyzer to detect both correct and incorrect words, a verb conjugation tool, a lexical database, a declension tool, and a KWIC (Key Word In Context) application.

The user-friendly *interface* is based on Zope technology. It has a public site for teachers to consult learners' progresses and to study the characteristics which will help to define interlanguage levels. And a private site for experienced teachers to add and update the *knowledge base*.

Soon, IRAKAZI will be linked to IDAZKIDE (Díaz de Ilarraza. *et al.*, 1999), a student oriented ICALL environment for Basque learning. We are also developing a tool for automatic generation of language exercises to be integrated in the same environment. Our aim is to develop a complete and helpful ICALL environment for both Basque teachers and learners.