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## The internationalisation of higher education in Brazil: analysis of a Spanish-Brazilian scientific cooperation project in CAL

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### Abstract

Over the past few years, the internationalisation of Higher Education has become a priority in Brazilian educational policies. The importance of internationalisation has become apparent thanks to numerous initiatives, ranging from the increase in funding for graduate and postgraduate research stays abroad to projects of scientific cooperation between universities in different countries. In this context, this paper explores a scientific cooperation project developed by two universities in Brazil and Spain: the Universidade Estadual de Campinas (UNICAMP) and the Universitat Politècnica de València (UPV), relating to the field of Computer-Assisted Learning (CAL). First of all, the internationalisation of the Brazilian Higher Education will be discussed, and the different initiatives - such as the *Ciência sem Fronteiras* (Science without Borders) Programme launched by the Brazilian *Conselho Nacional de Desenvolvimento Científico e Tecnológico* (CNPq) - will be presented. Following that, the paper will focus on the original proposal for the ongoing cooperation project between the UNICAMP and the UPV and on the results obtained until now. Next, the initiative will be analysed with special attention to the importance and the impact that internationalisation has made on Brazilian higher education. Finally, the authors will further explore the ways in which cooperation projects such as the one dealt with in this paper contribute towards the improvement of education. This improvement is mainly due to factors such as: fostering the integration of Information and Communications Technologies (ICT) into teaching-learning practices; investing in teacher training in their home countries and abroad; and encouraging the development of high-quality multimedia materials and authoring tools.

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### 1. Introduction

This paper describes a scientific cooperation project between a Spanish university, Universitat Politècnica de València (UPV); and a Brazilian university, UNICAMP. The cooperation focused on Computer-Assisted Learning (CAL) and, most specifically, on computer-assisted language learning (CALL). The main goals of this project were to foster the internationalisation of Brazilian universities and to support research in higher education by stimulating international scientific cooperation. Among the aims of internationalisation is connecting universities to the real world and vice-versa, this being particularly relevant in the case of Latin-American countries such as Brazil.

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Therefore, this cooperation should involve mobility of both academics and students of the universities involved in the cooperation projects.

The internationalisation of education is rapidly growing worldwide, and nowadays over 3 million students are partially or fully completing their undergraduate or graduate studies abroad. Moreover, it is believed that there will be an increase of 100 % on that figure just in the following decade. In this regard, several initiatives of the Brazilian government, aimed at fostering and supporting this mobility, have been put into practice. One of these initiatives is the Programme *Ciência sem Fronteiras* (Science without Borders), launched by the Brazilian *Conselho Nacional de Desenvolvimento Científico e Tecnológico* (CNPq) and aimed at promoting the consolidation, expansion and internationalisation of science and technology. These are achieved by means of exchanges and mobility with a view to helping countries to share their views, ideas and findings so as to develop competitive education systems which benefit from innovation and scientific-technological advances (Rousseff et al., 2011).

This paper will first describe the cooperation project between the two aforementioned universities, the *Advances in Computer-Assisted Learning in Brazil and Spain* project. Following that, the different actions taken since 2008 will be dealt with, as well as the results and the impact of these actions. Finally, the authors will reflect on the achievements and current challenges.

## **2. The research groups involved: CAMILLE (UPV, Spain) and LANTEC (UNICAMP, Brazil)**

The Spanish research group Computer-Assisted Multimedia Interactive Language Learning Environment (CAMILLE) of the Department of Applied Linguistics at the UPV, led by Dr. Ana Gimeno Sanz, has more than 20 years of experience in the field of Computer-Assisted Language Learning (CALL). During those two decades, it has developed educational software and resources, first in CD-ROM and then online, aiming at fostering the integration of these tools into teaching practices. Among its past and current partners are researchers and universities from the United Kingdom, Ireland, Portugal, the Netherlands, Belgium, Czech Republic, Slovakia and Brazil, among others. One of the main achievements of CAMILLE is *InGenio*, an authoring tool and content manager which facilitate the creation and online delivery of interactive language learning courseware (Gimeno Sanz et al., 2010).

As for the Brazilian research group LANTEC, of the Faculty of Education at the UNICAMP, led by Dr Sérgio Ferrerira do Amaral, it was created in 2004 and since then it has been researching in the interrelated fields of Education, Science and Technology. In addition, it has looked at the development, use and assessment of multimedia resources in educational settings, both face-to-face and online. At the same time, it has worked on the development and critical dissemination of knowledge and contents ranging from science to culture and technology; as well as in the development of methodologies and applications which enable the introduction of digital interactive technology in the educational process as well as in teacher training. It is currently carrying out several cooperation projects with Spain, Portugal and the United States. According to Amaral (2008), technology has brought about a new way of communicating: the digital interactive language, which in turn is introducing changes into education and culture. These changes should be explored and borne in mind in all educational settings, and doing that is one of the main goals of LANTEC.

Currently, both the CAMILLE and the LANTEC research groups are involved in research and development in the field of Information and Communication Technologies (ICT) in educational settings with a view to enriching the teaching and learning processes in higher education settings.

## **3. The *Advances in Computer-Assisted Learning in Brazil and Spain* project**

The main goal of this project was to reflect and to share, in a dynamic and interactive way, the experiences, examples of good practice and advances in computer-assisted learning in both Spain and Brazil. The different ways to integrate ICT into teaching practices were discussed from both theoretical and practical perspectives. In this way, the knowledge of different experts about the real needs of both teachers and students was shared by means of scientific symposiums, technical meetings, workshops and training courses, as well as the publication of papers and

books edited in Brazil and Spain. These publications reflect and disseminate the research outcomes of the different actions taken by both research groups thanks to the funding of the Ministries of Education of Spain and Brazil. The research work carried out focused on finding appropriate ways to integrate ICT into teaching and learning practices, and in fostering both autonomous and self-access learning through the use of multimedia resources.

In the different scientific events which were held, the advances in the field of CAL were discussed, with a special focus on the state of the art in Europe and, more specifically, in Spain; as well as in Latin America and, more specifically, Brazil. In the case of Spain, the CAMILLE research group contributed with the expertise of its researchers, pioneers in the field, while the LANTEC research group contributed with examples of good practice and methodologies developed by specialists in the application and use of ICT for educational purposes. The structure of the scientific events was as follows: First, the theoretical basis of the pedagogical development and use of authoring tools was presented. Then, the hands-on interactive workshops took place. Following that, there was a round table and a debate on the different initiatives, as well as suggestions and new proposals. After some time collaborating, it was agreed by the two institutions that the most relevant findings and conclusions should be presented and discussed in detail in an Annual Symposium on Advances in CAL.

This symposium aims at exploring and analysing how ICT can be integrated in a pedagogically-sound and effective manner into teaching practices, both theoretically and practically. In this way, it is hoped that normalisation, understood as “the stage when the technology becomes invisible, embedded in everyday practice” (Bax, 2003; Bax and Chambers, 2006), is achieved. The theoretical and practical sessions were key for the improvement of the use of ICT for teaching and learning, since they enabled researchers and practitioners to exchange knowledge and expertise. These were also shared through academic publications.

#### 4. Results

The high quality of the academic production and the organisation of scientific events of different kinds had a positive impact in the interdisciplinary research works carried out in different fields of knowledge within CAL and in the integration of ICT into teaching practices, as well as in the training of teachers and researchers.

Since this project was launched in 2008, over 40 research papers have been published and compiled in four books, belonging to the collection *Spanish Brazilian Conference on Computer Assisted Language Learning*. These papers and the book collection can be considered as significant contributions to the field, given that they cater for the need of more research work in the field of CAL in order to prove its efficacy. This need for more research has often been pointed out by researchers and scholars (Jenks & Springer, 2003; Son, 2001), and it has also been said that “the world of multimedia CALL development and use is in need of meetings [...] where we can explore new ways of making sound pedagogical use of ICT and exchange views and expertise with fellow specialists” (Gimeno Sanz, 2008: 8).

At the same time, the pieces of research which resulted from the project deal with the subject matter thoroughly and contribute in systematic manner towards the quality of teaching training and teaching practices.

The different academic events organised, as well as the training courses and workshops, were considered as great opportunities to share and acquire knowledge and know-how, responding to a common demand of these type of learning and training environments for teachers and practitioners alike. In this way, over 300 teachers and researchers benefited from these sorts of initiatives within the project. Another achievement of this project was the involvement and participation of a growing number of graduate students from both institutions.

#### 5. Conclusions

Overall, the goals of the project were achieved, and the level of satisfaction of all participants was very high, showing how both the internationalisation of universities and the role of CAL are becoming increasingly important. Indeed, both transmitting knowledge across different countries and fostering teaching and learning with technology were considered a priority.

It is hoped that the scientific cooperation project between Brazil and Spain will continue in order to be able to keep on exchanging knowledge and examples of good practice. It is also hoped that, in spite of nowadays' challenging world economic situation, education will still be considered a priority in the near future. Only by giving education the importance it deserves will teachers have access to high-quality training, and only in this way will teachers and practitioners be able to develop and use different authoring tools in their classes in such a way that technology achieves normalisation and serves a high-quality education.

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