

Toward implementing computer-assisted foreign language assessment in the official Spanish University Entrance Examination

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Abstract. In 2008 the Spanish Government announced the inclusion of an oral section in the foreign language exam of the National University Entrance Examination during the year 2012 (Royal Decree 1892/2008, of 14 November 2008, [Ministerio de Educación, Gobierno de España, 2008](#)). Still awaiting the implementation of these changes, and in an attempt to offer the Government a cost-effective technological solution, the CAMILLE Research Group at Universidad Politécnica de Valencia set about creating an online language examination platform complying with the official examination parameters based on the *InGenio* Learning Management System. Once the system had been created, the researchers implemented several test exams and conducted a pilot study with 183 high school students. The quantitative analysis of the study shed light on the learners' attitudes toward using such a system in the context of a high stakes examination.

Keywords: oral assessment, Spanish university entrance examination, *InGenio* learning management system.

1. Introduction

Over the last few years, the use of technology in education has brought about changes in teaching and learning materials and methodologies. Assessment too has

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been affected by these changes, and among the official exams that are currently working on offering a computerised version is the Spanish University Entrance Examination (in Spanish, *Prueba de Acceso a la Universidad - PAU*). It is a high stakes exam that has a considerable impact on the academic and professional future of Spanish students. Consequently, there is also a washback effect that leads students and teachers alike to focus only on what is assessed by the exam (Saif, 2006), that is, grammar, vocabulary, reading comprehension and writing, leaving out listening comprehension and speaking. Therefore, the inclusion of oral assessment in the PAU foreign language exam would be beneficial for pre-university students as more attention would be paid to oral skills which are currently being neglected (e.g. listening comprehension and speaking). The inclusion of these two skills was announced by the Spanish government by means of a Royal Decree (Ministerio de Educación, Gobierno de España, 2008).

As a response to the changes to be introduced in the new PAU and so as to facilitate the simultaneous examination of thousands of Spanish students in a cost-effective way, the CAMILLE Research Group at Universidad Politécnica de Valencia launched a government-funded project aimed at examining the feasibility of a computerised PAU exam. To achieve this goal, an online language examination platform complying with the official examination parameters and based on the *InGenio* learning management system was developed. The system is known as PAULEX. Once the system had been created the researchers implemented several test exams and conducted a pilot study with 183 high school students to test the affordances of the platform in terms of the creation, management, delivery and correction of the PAU foreign language exam.

Some of the changes that the government would like to implement in the oral section of the exam are an opportunity to develop online tools that can optimise the performance of such an exam. A similar thing has already happened to a greater or lesser extent with other high stakes language exams, such as the Test of English as a Foreign Language (TOEFL) and the Cambridge First Certificate in English Examination (FCE). This opportunity could materialise, for example, in the form of virtual interviews to assess oral skills as an alternative to face-to-face interviews so as to grant anonymity. Also, a significant number of computer-based tools can be used to optimise other aspects of the PAU exam, from designing the actual exam to delivering and correcting them. Technology today makes it possible to achieve this without threatening security. Two of the most prominent examples that demonstrate the validity and feasibility of a large-scale computerised or online test, at least as far as official language tests are concerned, are the aforementioned TOEFL and FCE computerised/online tests.

Among the advantages of computerising the PAU exam is the protection of both the annual exams to be taken and the completed ones, as well as the possibility of programming automatic backups. In addition, an electronic format would make it easier for raters and subsequent exam reviewers to immediately, safely and efficiently access student exams, in addition to a record of the changes and modifications made by each user. With regard to the speaking section, which is to become part of the final construct of the PAU foreign language exam once the announced changes are implemented (Ministerio de Educación, Gobierno de España, 2010), the use of an online version would facilitate the simultaneous examination of the approximately 19,000 students who take the PAU exam annually in the Valencian Community in a more efficient and cost-effective way.

2. Method

2.1. Context

Participants consisted of a total of 183 Secondary Education final year students (2nd year of Bachillerato) – 52.46% male and 47.54% female – from 3 public and 3 private high schools in the Valencian Autonomous Region in Spain. Their ages ranged between 16 and 19 and they all intended to take the PAU exam. Of these, 97.3% (178) were Spanish nationals, whereas 2.7% (5) were not. Except for 2 of them (1.1%), the rest owned a personal computer and 100% of them reported using the Internet on a daily basis from 1 to 2 hours.

2.2. Procedure

Participants filled in two questionnaires. The pre-treatment questionnaire was aimed at compiling qualitative data and it included demographic information: age, gender, experience in the use of Information and Communications Technology (ICT), etc. Using the PAULEX platform, students sat an exam in the Virtual Learning Environment (VLE) which was an adaptation of the English paper-based exam of the 2007 official PAU exam in the Valencian Region. The items of this exam were adapted to the online environment and new items were added for the assessment of listening and speaking skills. Once students had submitted all their answers, they filled in a post-treatment questionnaire which comprised 16 close-ended questions, based on a 4-point Likert scale, relating to the usability of PAULEX and the participants' overall level of satisfaction, and 6 open-ended questions relating to the usefulness of such an online exam and their expectations regarding the computerisation of the PAU English language exam.

The exam tasks included watching several video clips and answering multiple-choice listening comprehension questions and “validating” answers before sending final responses to the server for correction. As for the speaking section, this was assessed by means of an activity based on an appealing image concerning a current issue. Students were asked to observe the image for a couple of minutes and then answer a question relating to the topic depicted in the image, giving their opinion and ideas about it. Once they had thought out what they wanted to say, participants recorded a short speech (no longer than 4 minutes) with the platform’s built-in media player.

3. Discussion

During the test the vast majority of participants showed an exemplary attitude and expressed their satisfaction toward the new exam format, a fact that came as no surprise bearing in mind that they belong to a generation of digital natives (Prensky, 2001) who are accustomed to working and interacting with electronic resources. On the other hand, several interesting aspects were observed during the experiment. The students were given 60 minutes to complete the simulation instead of the 90 minutes officially allocated. This reduction was necessary so as to avoid interfering with their daily school duties and to limit the experiment to the time allotted to their regular English classes.

In spite of the time reduction, all the students were able to complete the test within the allotted time, completing all the activities which assessed the different skills, including listening comprehension and speaking. Students browsed through the different parts of the exam, wrote or chose their answers and then validated them, section by section. The students’ answers were then stored on a server to avoid loss of information in case of system failure or errors during the course of the trial. All in all, the online format was very well received by students, who made numerous positive comments regarding its practicality.

Table 1. Statistical data describing overall satisfaction

	N	Min.	Max.	Mean	Standard dev.
I think it is a good programme.	183	1	4	3.15	.553
It is easy to use.	183	1	4	3.10	.579
The programme is fun to use.	183	1	4	2.77	.712
The programme works just as I expect it to.	183	1	4	2.93	.700
I would recommend a friend to use it.	183	1	4	2.97	.670
The programme fulfils my expectations regarding what an online test should be like.	183	1	4	3.21	.612
N valid responses	183				

Table 1 summarises the overall satisfaction as reported by the students who participated in the survey. As we can see, all of the items enquired about resulted in a favourable attitude.

4. Conclusions

The changes in the new PAU foreign language exam require solutions for the implementation of a cost-effective and feasible way to assess oral skills. The results of the survey and the solutions proposed can be considered a valid alternative for foreign language assessment in the Spanish University Entrance Examination, including the evaluation of oral skills. Moreover, these results pinpointed the fact that it is indeed feasible to implement the assessment of oral skills in the PAU foreign language exam. Moreover, this computerised version can be easily updated and adapted to the specific characteristics and requirements of the new PAU exam in terms of content, usability and security, among others.

As for the students' opinions, they were optimistic and willing to switch to the online format. All of this suggests that the PAULEX platform meets a number of conditions that make it suitable for the preparation and implementation of the new PAU exam and, specifically, its foreign language section. However, for the successful large-scale implementation of this platform, more research is needed and further studies should be conducted with a larger sample which might lead to more conclusive results: the empirical study described in this article was conducted with only 183 students as opposed to the total number of 19,053 students who sat the PAU exam in 2015 in the Valencian Community, according to the data provided by the [Valencian Regional Government \(2015\)](#).

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