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## DESIGNING A VOIP BASED LANGUAGE TEST

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### Abstract

Assessing speaking is one of the most difficult tasks in computer based language testing. Many countries all over the world face the need to implement standardized language tests where speaking tasks are commonly included. However, a number of problems make them rather impractical such as the costs, the personnel involved, the length of time for interviews and many other factors. Additionally, reliability as compared to face-to-face tests is continually challenged by issues such as comfort with the interface, navigability and, among others and more important, the lack of visual interaction and the high anxiety created by interacting with a interlocutor with more than a limited interactional activity. This paper addresses a new approach to language testing by the use of VOIP devices. It also addresses its benefits and the way to implement it within the Spanish framework of nationally organized standardized tests.

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### 1. Introduction

Assessing speaking and writing have been traditionally considered difficult skills to assess in foreign language learning. It is not because they are specifically harder but because they are visually more productive and complex. Although there is much evidence to re-consider this opinion, this judgment is usually supported by those who have no clear and deep knowledge of the complex processes that intervene in second language acquisition. It is certainly true that according to many researchers like Stephen Krashen (1985) or Rod Ellis (2005) input precedes to output but

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this perspective has been challenged by the Social Constructivist Theory (Vygotsky, 1978, 1985) who claims that input and output are continuously interacting in the Zone of Proximal Development (Kinginger, 2001). This position has been supported by those who believe that tests are not just a way of externalizing the speaker's internal knowledge. For instance, current research run at Penn State University (Poehner, 2008; Lantolf & Poehner, 2011) in the United States suggest that dialogue between interlocutors exist both in written and speaking grounds either in face-to-face oral exams, in paper-and-pen tests or even in computer-based assessments. Although the way these interactions and the role of feedback varies accordingly especially in computer based computers where Lantolf and Poehner consider support to change a response in multiple choice test not just as a guessing effect but as a part of a socio-constructivist interaction in the ZPD. What seems self-evident is that two things are totally necessary at this point: 1) Revise our perspective of what a language test is and 2) revise the degree of interaction in communicative testing. This paper will partially address both aspects in the Spanish University Entrance Examination in order to consider the effect of VOIP applications in language testing.

## **2. What is a language test? Key issues in the Spanish Entrance Examination**

Technology has made us revise the paradigms of learning especially languages. However, whether learning has changed dramatically due to the inclusion of video repositories and podcasts, language testing has followed quite a different way. In many cases, language tests are nothing but a traditional technological application of pen-and-paper older tests. This is based on three key issues:

- a. Lack of a new definition of what communicating in a language implies;
- b. Lack of a clear image of what role of feedback and interaction is;
- c. Lack of consideration of how technology (especially web 2.0) can currently be used in communication.

The Spanish University Entrance Examination has been mostly the same for the last thirty years. Small variations can be found in different school districts. It generally includes four tasks: two reading tasks (True/False and two open questions), four questions on grammar and vocabulary and finally a writing essay. Two regional boards also a listening task (one multiple choice selection question). However, none of the Spanish regional educational boards includes speaking tasks. The reasons are varied but the most significant is the high cost of delivering oral interviews whether individual or in pairs. Some Chinese regions address this problem by only allowing the top 10% of the testees to proceed to the oral interview (nevertheless, the number of test takers is immense!). In Spain, given the current constraints, it is almost impossible to organize these interviews nationally. The main key issues that need to be reviewed are the following:

- a. Cost of delivery – cost of moving teachers to different schools.
- b. Time
- c. Technology implementation

The Ministry of Education has funded a number of research projects to develop computer based language tests that could facilitate the delivery of speaking interviews including those delivered through mobile phones, desktops and tablet PC's (Figure 1). However, these projects will have to face a number of challenges to be implemented:

- a. The initial cost of computer based tests is usually high
- b. Students and teachers need to become fully familiar with the test format thus they need materials to train with
- c. Security is a must because a large number of pirate attacks are done against high-stakes test delivery institutions to obtain the different tests that they administer

Regularly these three issues are solved by formal institutions but in the particular case of language testing, two more should be considered: d) the connection between candidate-administrators-raters, and e) the particular specifications of the speaking test.

These challenges were addressed by the Spanish OPENPAU (University Entrance Examination) project. Additionally, they faced the need to incorporate a speaking test. Between 2011 and 2013 the researchers worked mostly on two devices: mobile phones and Tablet PC's (Figure 1). However whether the results have been positive so far (Garcia Laborda, Magal Royo, Litzler & Gimenez Lopez, 2014), a serious constraint is funding. The software

is extremely expensive and requires specific equipment that might not be present in a large number of schools in the country.

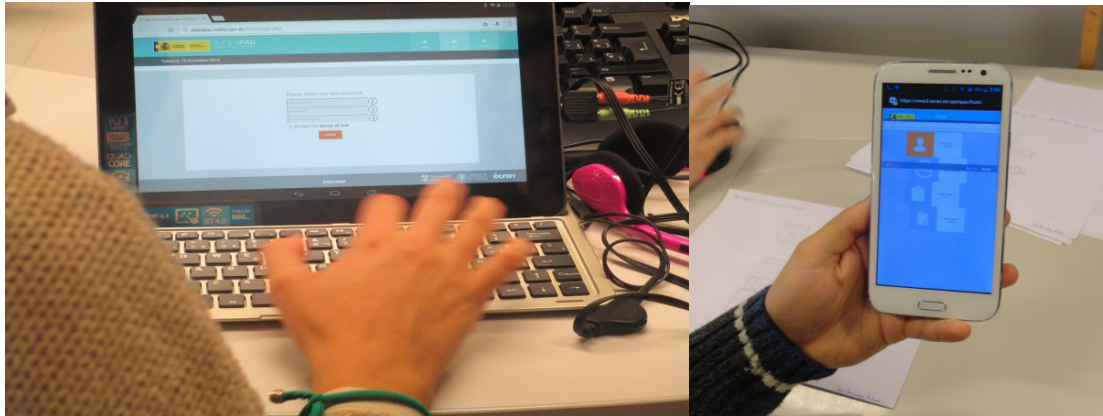


Figure 1. Interfaces of mobile and tablet PC based OPENPAU University Entrance Examination foreign language section

### 3. What does the country actually need?

Maybe the most significant need is an inexpensive speaking test. Speaking tests are usually costly, especially when done at large scale, because they require a number of interviewers and raters for many days. The average time of many speaking tests whether delivered individually or in pairs is about ten minutes so delivering the test in an average school can take from two to three days. That cost needs to be reduced because it implies testing fees and tester’s allowances (salary, food, travel and so). These costs were highly reduced by the use of mobiles and tablet PC’s but using this devices also requires the high expense to buy the equipment on the first year.

In 2014, the research team began to consider the possibility to use a Voice Over Internet Protocol (VOIP) device (Figure 2).

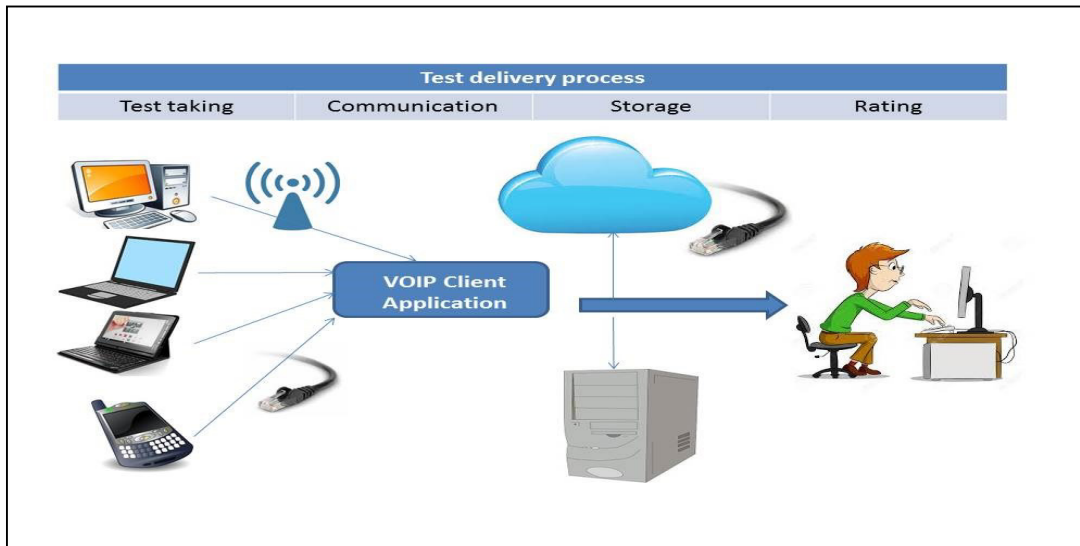


Figure 2. Test delivery process through a VOIP application.

These applications offer immense benefits. While the students can do the written test with the rest of the class, the speaking test can be delivery shortly after the written test either to part or all the students. The benefits of using such a delivery method are:

- a. Reduced cost: One or no raters would be necessary, only ID controllers.
- b. Standard digital equipment is sufficient
- c. Quick response and feedback
- d. Students can or not belong to the same institution and other groupings are also possible
- e. It can be delivered individually or in groups (pairs / trios)
- f. Technically reduces the anxiety of semi-directly delivered speaking tests
- g. The communication is human-human and not machine-human
- h. Security is enhanced by the fact that the questions are not recorded previously
- i. A great deal of interaction among interview participants can be achieved
- j. Body language can also be recorded and is the adequate to the communicative situation
- k. It permits the incorporation of test writing along with the image (Figure 3)



Figure 3. A simulation of a VOIP application for language testing.

#### 4. Conclusions

Traditionally, speaking tests tend to be very expensive to deliver due to the human resources costs. One significant way to reduce the expenses is by using computers in their delivery. However, specifically design software is usually expensive and requires certain specifications in both the guest and the host equipment. Therefore, the use of VOIP non-commercial system reduces the costs. As for security, a number of things can be done like private-pay channels on skype and similar solutions. Nevertheless, the possibility of cheating is almost non-existing and the interviews can be recorded through image-casting applications similar to screen-o-matic (<http://www.screencast-o-matic.com/>), for instance. Obviously, this paper has presented evidence that serve to enhance validity and reliability for the test but this is just a beginning of a much more complex research.

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