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Structural Analysis Of A Tablet PC Based Language Test

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Abstract

Ubiquitous language learning and testing has become a new challenging trend. Budget constraints in Europe and the rest of the world have made this way of delivery very attractive for materials designers as well as language testing organizations. Ubiquitous testing has a very especial interest in low and medium stakes language testing in which mobile devices are supposed to serve both for delivering tests as well as for pre-test training. However, although the number of publications in language teaching increases rapidly, language testing through mobiles devices has had a limited interest in research. Purpose of Study: This research under the OPENPAU project intends to address the two main issues mentioned before emphasizing the design aspects. To do so, this paper presents the principles under which the mobile applications were designed, the mobile tool and the interface design. Sources of Evidence: To do this study we used the description of the ergonomics, and we also considered the students' needs and how those needs were incorporated in the interface design of the platform. Analysis and results: The study indicates that interface design is linked to issues of needs, technical constraints, purpose and budget. Overall, the paper evidences the tablet PC's have a tremendous potential to implement high-stakes tests in Spain at the moment dues to their versatility and limited cost.

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Keywords: Testing; computers; ubitiquity; educational change.

1. Introduction

Testing and assessment have become one prevalent element in education. There are probably two main reasons why: first, national accountability of educational success or failure make necessary the design and use of control

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tools as tests; and second, educational processes in and out of the class are usually recorded and measured through testing. In relation to those tools, educational boards also feel that testing students is not usually cheap and the number of places worldwide where politicians do not impose limitations when not reductions in budget are few. Given this situation, computer based testing has had a rapid development in the XXI century. Spain has laid behind most of its counterpart countries in the European Union in this sense, while many tests are currently delivered through computers, Spain remains to be one of the few which despite of some weak efforts in Valencia, Madrid and Catalunya, remains without serious projects to implement this type of assessments. Recently, the Ministry of Education, Culture & Sports passed a new educational law which considers testing as an intrinsic and cornerstone part of the educational system but postponed its implementation until 2017. Although meny believe this is a flaw in the reform, at least, this gives time to have a serious preparation and planning towards the test implementation after the compulsory and post-compulsory secondary education. This paper deals with mobile computer based testing especially with tablet pc's. Up-to-day there are just very few tests delivered through tablet pc's. Even mobile tests are seldom and never used for high-stakes testing. García Laborda et al. (2014), suggest that mobile devices are not only more versatile or can do exactly the same things as desktop pc's but can also be used everywhere. That means, that they can also be used for pre-test training and also that in disfavored schools or contexts they can be taken from one school to another if necessary. Additionally, their prices can compete with other means including the traditional pen-and-paper. The OPENPAU research team has been working in the use of tablet pc's along with other mobile devices for over two years to implement the University Entrance Examination.

2. Theory of testing

For this project we began by using the socio-cognitive theory of language testing (Weir, 2005). In the technical section, the focus was given to the delivery means (figure 1).

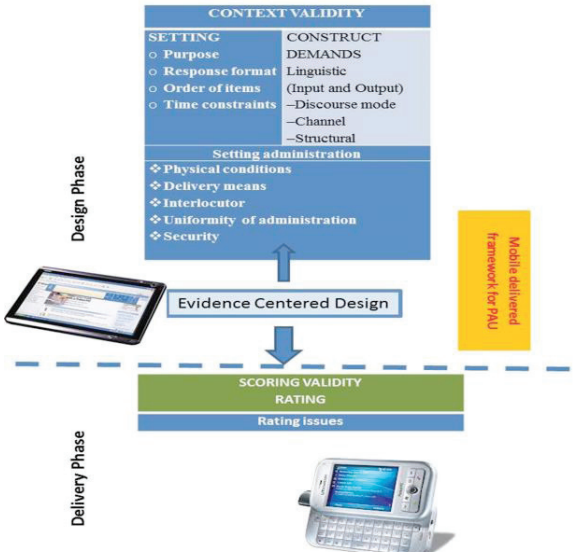

Fig. 1.Socio-cognitive variation and its connection to mobile devices.

Although delivery was considered by Weir (2005), it seems self-evident to study whether there is a need to establish a delivery validation since the results of tests can vary significantly. This validation should also include the ergonomic design. In the following figures the readers will be able to see two interfaces for the tablet pc delivered test.

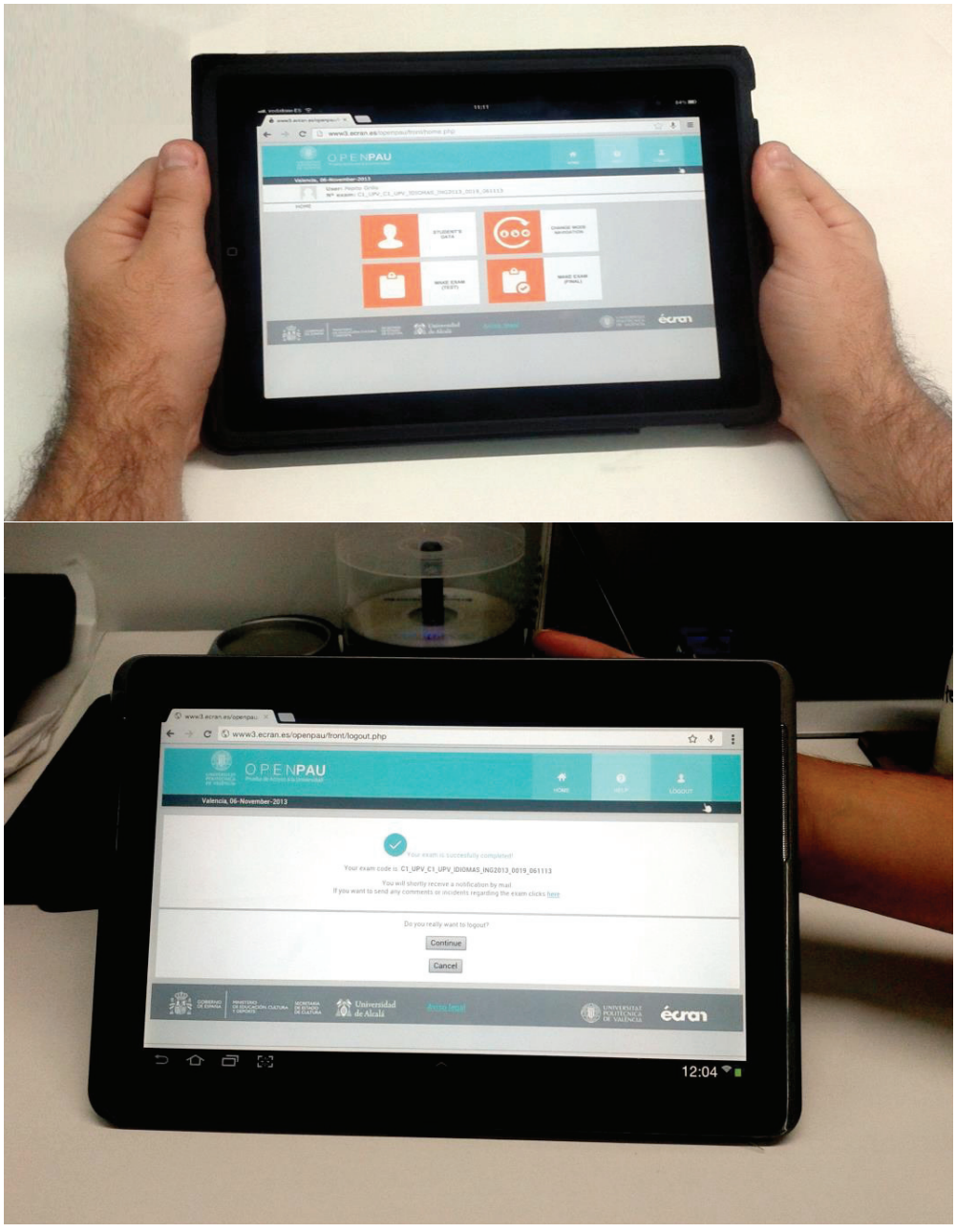

Fig. 2A- B =Interfaces in a tablet delivered test.

Although visual ergonomics play an important role in testing, these is especially relevant in this case because students need to evidence their knowledge in a still unusual means. Tablets as a delivery system can have a detrimental potential on the raters so we believe that raters should not operate with tablets but regular PC's although in the OPENPAU platform raters can also use the tablets. Tablets, however, require extensive training due to

visualization and the in-built keyboard. At this point, we would recommend tablets with large screens and possibly an external keyboard for the composition section.

Overall, the delivery is similar to that of other devices which has been mostly described by Chapelle, Enright, & Jamieson (2008) and the novelty is mostly related to a new type of test taker who actually is very familiar with this type and might be able to perform on reduced screens as working with a regular PC (figure 3).

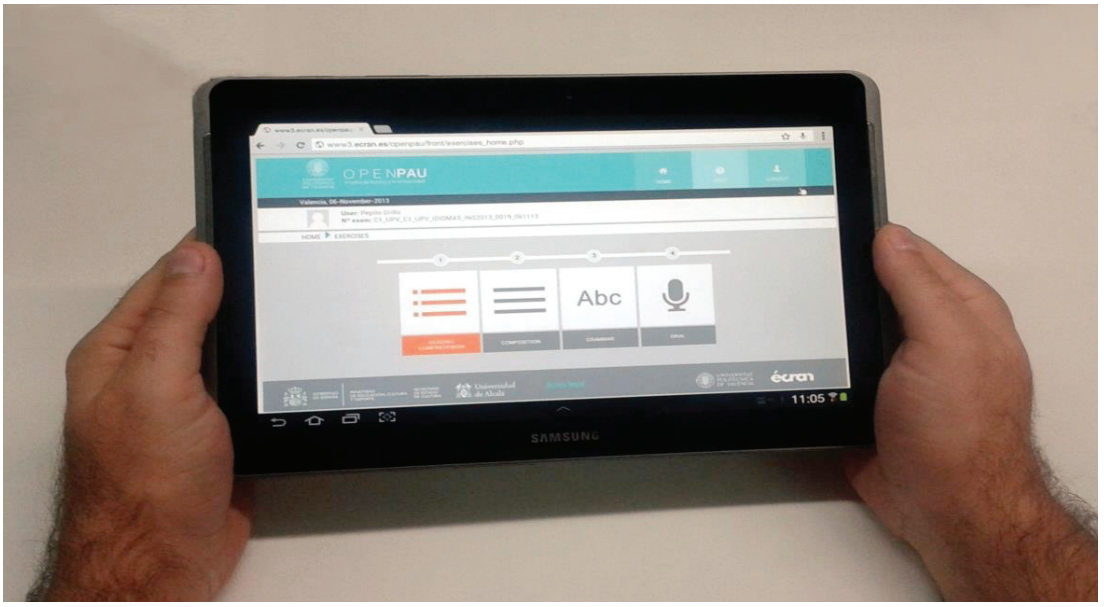

Fig. 3.Sections of the language test delivered through a tablet PC.

3. Discussion and conclusions

The study indicates that interface design is linked to issues of needs, technical constraints, purpose and budget, and is clearly connected to Weir's (2005) and García Laborda et al.'s (2010) papers. As we observed, the visual differences between tablet PC's and other types of computers are limited and these devices can be most appropriate for young candidates. If the budget is limited, these low cost devices can be an adequate response to the test administrators and students alike. Thus further research in this sense is more than welcome.

All in all, this delivery means can reduce costs, facilitate the delivery and the validation may lead to similar results as other delivery means like regular desktop computers. As a consequence, the researchers of the OPENPAU project evidences the tablet PC's have a tremendous potential to implement high-stakes tests in Spain at the moment dues to their versatility and limited cost.

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