Results of usability tests

Information and Communication Technologies (ICT) allow access to as bank services, independently of place and time. However, the lack of fit of ICT requirements to the needs and characteristics of older persons has provoked their exclusion from digital society: **e-exclusion**. Therefore, it is key to ensure **usability** of banking interfaces.

9 experts and 50 older persons from Spain and Portugal have been involved during the usability tests of prototypes of ATM, web, mobile and TV interfaces. On the one hand, the skills of experts have covered from older persons to ICT and usability fields. On the other hand, the sample of older persons has combined profile with low and high knowledge/use of ICT and it has been balanced in gender. The **methodologies** used has been: a) heuristic tests with a checklist, and b) usability tests by measuring times, errors, think aloud and observation protocol and the use of innovative methodologies such as physiological measures, eye tracking and user movements analysis to record quantitative data without disturbing user interaction.

In general, **the level of satisfaction of the users during performing all tasks is really high** and **most of users are able to perform all tasks with all banking interfaces**. Users with low technological level have more problems for all interfaces and tasks, and need help to do some tasks. Low "tech" users feel unsafe when perform the tasks, and they need help with more frequency. The comparative between countries show that level of performance is very similar, although Portuguese users have performed more successfully the task, especially for the online banking.

In relation to **ATM interface**, all profiles have been able to perfectly use the ATM. However, low-tech profiles felt unsafe, taking into account the "real use" of the interface and its risk of robberies. Only some problems in relation to understanding have been.

In relation to **web interface**, the need of help for the low "tech" profile has been considerable higher that for high "tech" profile. Analogously, to previous interface, some low "tech" users felt unsafe. Specifically, make a transference has been really difficult. Moreover, a low percentage of high "tech" profile has had some problems to finish the tasks. However, most of users of both profiles have been able to perform all tasks of web interface, taking into account that ICT are felt as unsafely and that 50% of low "tech" users have never used a mouse, the results are really positive.

In relation to mobile **interface**, most of users have been able to finish the tasks, only a low percentage of low "tech" users have need support in some tasks. The main problems are related with the size of elements. It should be highlighted that most of users are not used to interact with a Smartphone to access to this kind of services.

Based on results of usability tests and IBV knowledge, a **set of recommendations** have been gathered to improve the interfaces such as: improve informative menu of the ATM, reduce cognitive load of online banking (e.g. personalize it for each user) or improve feedback of buttons of the mobile interface.