

# Field versus laboratory usability testing: a first comparison

---

*Aydin Oztoprak & Cigdem Erbug  
Middle East Technical University,  
Ankara, Turkey*

## **Abstract**

Whilst testing the usability of a product in a usability laboratory, usability researchers generally try to extract usability information from a representation of 'context in use'. However, there might be cases where it is difficult to simulate the real-world usage due to lack of contextual information (e.g. lack of information on low-socio-economic status, users' living conditions, etc.), or physical limitations (e.g. difficulty in representing the actual physical environment, etc.). This set of facts requires testing in natural settings. Discussion is focused on the relative advantages and disadvantages of each setting, along with the technical infrastructure.

Gaining insight and experience in remote testing rather than searching for statistical significance was the major goal of this study. Even though this was an initial inquiry of an exploratory study, it was found that usability testing and evaluation of a product, with users' own tasks and goals, in actual use context, reveals implicit usability problems in the interface.

## **Introduction**

In recent years, remote usability testing has been widely utilized in testing of software interfaces as an alternative to laboratory testing. Advantages are that contextual usability information is gathered, costs are lower than laboratory tests, and higher quality and more relevant usability data are collected using a more representative sample of users (Hartson & Castillo, 1998, Brush, Ames & Davis, 2003, Ames, 2003, Tullis et al. 2002, Dray & Siegel, 2004, Hartson et al. 1996, Rowley, 1994, Gough & Phillips, 2003, Kantner, Sova & Rosenbaum, 2003, Petersen, Madsen & Kjaer, 2002, Wichansky, 2000). Moreover, remote usability testing gives a more realistic test setup as the participants remain in their normal setting (Brush, Ames & Davis, 2004) and helps usability practitioners in overcoming the 'homogeneous subject pool' problem emerged at many institutions by running tests with the same participants over and over (Hartson et al., 1996).

Even though laboratory testing is widely and effectively utilized in the evaluation of software interfaces, it has some limitations. Laboratory based usability studies capture a snapshot of the use in a simulated use environment. Simulating the user