

Ultra-Portable Laptop Study - Synopsis

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This document contains an Executive Summary of a recent study conducted by Perceptive Sciences on the usability and consumer preferences based on use of three ultra-portable laptops.

Study Objective

This study assessed the out-of-box usability of the Apple MacBook Air, the Lenovo ThinkPad X300, and the Toshiba Portégé R500 series. In addition to powering up each laptop, participants conducted 8 tasks designed to explore the usability of the various devices' ports, keyboards, trackpads, buttons, display, and audio features. All preferences and ratings expressed in the data from this study reflect only the judgments of the participants themselves.

Participants

There were 20 total participants recruited and remunerated for this study. All participants were selected to be representative users/buyers of these devices and were current laptop owners. None of the participants owned or had experience using the devices tested. Half of the sample were university students, and half were business travelers (i.e. travel at least once monthly or more for work). The majority of participants were aged between 18 and 34. There was an approximate balance of males and females. The sample consisted of approximately half "PC users" [i.e. familiar with PCs (11)], and half "Mac/Both users" [familiar with only the Mac (2) or comfortable using both Macs and PCs (7)].

Design

Due to time constraints each participant experienced two of the three devices. Accordingly, participants were randomly assigned to 1 of 3 conditions: MacAir/Lenovo (n=8), MacAir/Toshiba (n=8), and Lenovo/Toshiba (n=4). The order in which participants experienced the devices was counterbalanced within each condition, so that of those in the MacAir/Lenovo condition for example, half worked with the MacAir first then the Lenovo, and half worked with the Lenovo first then the MacAir. Order was counterbalanced in the other conditions as well. We also insured that in each condition there was an approximate balance of PC and Mac/Both users. This allowed us to compare the influence of previous computer experience/familiarity on the usability metrics and user preferences. In most cases, PC and Mac/Both users were in good agreement unless noted explicitly in the findings.

Method/Procedure

Each participant completed the same sequence of 9 tasks with each computer (see below for the complete list of tasks used in this study):

- set-up and power on computer #1, followed by tasks 2-9,
- set-up and power on computer #2, followed by tasks 2-9.

Throughout the entire testing epoch, participants were instructed to think-aloud while working with the devices. Following each task, participants provided ratings of ease-of-use, confidence, and satisfaction with how long it took them to complete each task, as well as several other task-specific questions. Once participants had completed all 9 tasks on both machines, they completed a post-session comparative assessment of the specific pair of machines they had worked with. These questions polled users for their preferences along a number of key dimensions: which was **easiest to use**, which had **better quality**, which was the **most fun to use**, which seemed to offer the **most functionality/features**, which is **best-suited for business use**, which seemed **most durable**, **which would you purchase** if price were no option, and which machine is the **better overall value**.

In addition to post-task and post-session ratings and preference choices, we collected usability data for each task, including time-on-task, success rates, and frequencies of errors. We also recorded spontaneous comments, issues, work-arounds, and trouble spots that arose during participants interactions with the various machines.

Task List.

1. Set-up and power on the device (from out-of-box to first boot up).
2. Connecting the device to a wireless network.
3. Sending an email.
4. Connecting a flash-drive and copying over a file to a newly created folder.
5. Listening to an MP3 file and adjusting the volume (evaluating onboard speakers and headphone audio quality).
6. Ejecting the flash-drive and deleting the folder/file.
7. Viewing a movie trailer and adjusting the display.
8. Connecting the machine to a projector and projecting the desktop onto a screen.
9. Shutting down the machine.

If you are interested in more details about the findings and methodology of this study, feel free to contact us at info@perceptivesciences.com

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