

13<sup>th</sup> International Educational Technology Conference

## Do undergraduates use their personal computers to support learning?

KwongNui Sim\* & Russell Butson

*University of Otago, Dunedin 9016, New Zealand*

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### Abstract

Computer activity data was extracted from the personal laptops of eighteen third-year students who self-reported as being skilled computer users. The analysis of the data revealed that non-academic use of students' personal computers was significantly higher compared with academic use. This was the case concerning the discrepancies between what students' self-reported as their level of use compared with their actual use. The findings illustrate that personal computers were not as crucial to undergraduate academic study as expected. In addition, the findings offer important insights into the benefits—in understanding actual practice—of using data-capturing techniques aimed at gathering naturally-occurring data.

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Selection and peer-review under responsibility of The Association of Science, Education and Technology-TASET, Sakarya Universitesi, Turkey.

**Keywords:** academic work; actual practice; e-learning; higher education; non-academic work; personal computer; self-report of practice; study habit

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\* Corresponding author. Tel.: +6434798492; fax: +6434798362.

E-mail address: [russell.butson@otago.ac.nz](mailto:russell.butson@otago.ac.nz) & [kwongnui.sim@otago.ac.nz](mailto:kwongnui.sim@otago.ac.nz)

## 1. Introduction

The use of Information and Communications Technology (ICT) has grown enormously in the last 10 years with computers and smart devices becoming indispensable to our daily lives. Personal computers are seen as vital for those wishing to engage in higher education (Charter Colleges and Universities Participating in the National Higher Education ICT Initiative, 2003). While this is a claim that few of us would refute, we have very little research on how students are using their personal computer devices to support their academic practice (Sharpe, Benfield, Lessner & DeCicco, 2005). Furthermore, much of the research pertaining to student learning is based on perception data rather than data concerning their actual practice. This scoping study thus sought to address this gap by exploring the possibility of capturing naturally occurring data from students' personal computers through installing software that tracked predefined aspects of use (e.g. Library database, Learning Management System, Word, etc).

## 2. Method

Participants were selected based on a set of criteria. Approval was then gained from the participants regarding the installation of the software on their personal computers, and data was extracted at the completion of the first quarter of the semester. The idea of naturally-occurring data, gathered as a result of students using their computers, was seen as an accurate method of revealing application types used and their computer technology engagement when studying over the first six weeks of the fieldwork period. In this way we were able to focus on the context(s), the extent to which software applications and web services were used to support undergraduate academic practice with personal computers - at what times and for how long. This approach offered what appeared to be an ideal way to capture students' actual use of their personal computers, as opposed to the traditional approach of soliciting post-event recollections through surveys and interviews.

### 2.1. Participants and Recruitment

Forty third-year students enrolled in undergraduate degree programmes were randomly selected for participation. Thirty students who showed their interest were invited to undertake a short questionnaire to gain some understanding of their perceived use of, and abilities with, computer technology. The questions appear in Table 1.

Table 1. The five questions in the questionnaire

1	Is access to a computer really important for your university study?
2	Which of the following best describes you? a. I love technologies and am among the first to experiment with as well as use them before most people I know. b. I usually use new technologies when most people I know do and sometimes I will be one of them. c. I am sceptical of new technologies and use them only when I have to.
3	Please indicate the ratio (within 10) of how much you use computers in your studies compared to other aspects of your life.
4	How do you rate your ability to use computers?
5	What is your skill level for the following? - using the university library website - spread sheets - presentation software - graphics software - computer maintenance - internet information searching - evaluating the reliability and credibility of online sources - using digital information from various access

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