Chapter 11

The Effect of Using Mobile Devices on Students’ Performance in Writing

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ABSTRACT

The number of projects exploring the potential of mobile device-facilitated learning is steadily growing in higher education, prompted, in part, by the use of mobile technology in the workplace. The use of mobile devices has expanded from short-term trials on a small scale to large-scale integration in educational settings from primary to higher education. With this increase, the use of textual-based communication has also increased. Hence, the mode of writing faces a new environment from printed text to the digital. However, there remains a lack of analysis that brings together the findings of the impact of using mobile devices on students’ performance in academic writing. Consequently, the aim of this chapter is to provide an overview of how mobile devices impact students’ performance in writing along with recommendations for possible future pedagogical uses of mobile technologies. The chapter builds on a pilot study conducted in spring 2014 at a university in Dubai, UAE, which explored the effect of using the iPad on learners’ writing performance.

INTRODUCTION

This chapter discusses the importance of mobile technology in higher education due to the rapid growth in its use in recent years. Since its establishment in 1998, a university in the United Arab Emirates has pursued a policy of technology integration into its curricula through the development of its electronic learning infrastructure. In spring semester 2011 mobile learning (m-learning) technologies, iPads in particular, were introduced to faculty members and students in the Academic Bridge Program (foundation courses) and the University College at this university. Consequently, the use of mobile technologies in the classroom has grown rapidly, but there is a lack of comprehensive data, which could begin to show the academic impact of these devices on students’ performance. Hence, the introduction of these
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devices provides opportunities for research on emergent m-learning technology and pedagogy. Also, the implications of this study are pertinent to how this institution’s administrators and educators organize courses, programs, and educational activities to meet the needs of m-learning.

This chapter presents and discusses the findings of a research project, which originated from a pilot study conducted in spring semester 2014 at this university. The pilot study aimed at academic writing undergraduate course. The pilot study revealed that despite the positive perceptions of the students toward the use of the iPad for writing, the teacher assessment scores did not indicate any statistically significant difference in the students’ overall grade assessment with or without the iPad. In fact, the results in the pilot study were slightly in favor of pen and paper rather than the iPad. This may be attributed to the following factors:

Time restrictions imposed in performing the tasks in this pilot study, i.e. only 30 minutes. This did not allow the participants to take advantage of the full potential of the iPad features such as using online dictionary for defining concepts and terminologies. Students needed significant more time to exploit the features offered by the learning technology.

The iPad does not allow opening more than one application/page at a time, which restricted text manipulation. This may have affected the final result. In a recent study Patronis (2014) reported that the majority of the students preferred using a print book to the e-reader, as it is easier for taking quick and making notes in class. Respondents reported that writing in a sustained way was quite burdensome on the iPad, even with the external keyboard. The features of iPad applications for word processing are not as sophisticated as word processing on the laptop (Patronis, 2014).

On the basis of the findings of the pilot study, the recommendation was made to extend this study to allow the use of any mobile device (including portable laptops, iPad and smart phones) for collaboration in and out of the class rather than restricting their use in class only under time constraints. This agrees with the findings of scholars who are considering the adoption of mobile devices for teaching purposes in the educational settings due to their portability and accessibility (Rochechelle, 2003).

Using existing evidence and consistent with the primary objectives of the pilot study, the method in this current post-pilot study focuses on the use of mobile devices and their impact on students’ collaborative writing performance. In fall 2014 semester, 190 male and female students enrolled in 9 sections of composition III were invited to participate in the study. Only 155 students took part in the study. The student participants were assigned reading and writing activity where the same groups used a traditional bound print text and pen in one occasion and mobile devices to access equivalent digital text through Edmodo open source in another. This chapter presents and discusses the results of the analysis of students’ survey responses and their writing scores.

The present study addresses the following research questions.

- To what extent does the use of mobile devices impact students’ writing performance?
- Is there any evidence of improved writing accuracy whilst using mobile devices? (e.g. documented increase in grades)?
- What are students’ perceptions of the use of mobile devices for academic writing scores?

In addressing these questions, two sets of statistical data from students at a UAE university in the University College were gathered for the purpose of this chapter. These were a) standardized teacher assessment grades and b) a survey questionnaire.