

Factors contributing to technology-enabled distractions in the classroom: a case study of students at the Polytechnic of Namibia

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Abstract

Classroom access to computers and the Internet may be indispensable for teaching and research both for the student and the teacher. Yet, these technologies can also be an impediment to learning as students may engage in actions unrelated to classwork such as texting, web browsing, e-mailing, online gaming, online shopping or a myriad of other activities. This paper examines the extent of this behavior by college students and the factors that may contribute to this behavior. The factors that were studied include the student's addiction to the Internet, learning style, classroom environment, and other individual student factors (gender, age, etc.). Data for this research were gathered using a questionnaire from 213 Polytechnic of Namibia students. The results show that the level of Internet addiction, the degree of mismatch between learning and instructional styles, and some individual factors have significant impact on the degree to which students engage in distractive activities. The paper also discusses the pedagogical and classroom management implications both for educators and administrators.

Keywords: Internet addiction, digital distraction, learning style, technology use in class, technology-enabled teaching

1. Introduction

Numerous studies have emphasized the benefits of laptops, tablets, mobile devices, and the Internet in the classroom (Maki, Maki, Patterson and Whittaker, 2000; Saunders and Klemming, 2003; Wen, Tsai and Chang, 2004). These studies focus on information technologies' abilities to engage students, facilitate faculty-student and student-student interactions, and create active learning opportunities (e.g. Driver, 2002; Fitch, 2004). On the other hand, critics argue that much of this research evaluates success via student perceptions (e.g. satisfaction) rather than using objective measures of learning (Fried, 2008). They assert that the technology is likely to cause cognitive overload and attention distraction in the classroom. Several studies have found that the use of digital technologies (e.g., computers, mobile phones, Internet) in the classroom is negatively associated with course performance and self-reported understanding of course material (Fried, 2008; Junco and Cotton, 2011; Kraushaar and Novak, 2010; Martin, 2011; Wurst, Smarkola and Gaffney, 2008). For example, Martin (2011) reports that holding business statistics classes in a computer equipped classroom had a negative effect on student performance. In addition, research studies by Wood, et al. (2012) found that students not using any digital technologies in the classroom outperformed students with technology use.

There is mounting evidence that students are often using laptops, mobile phones, Internet, and other digital technologies during classroom lectures for activities that are irrelevant to the class. These distractions take the form of playing computer games, texting, e-mailing, checking social networking sites (e.g., Facebook, twitter), surfing the web, or shopping online (Akst, 2010; Burns and Lohenry, 2010; Campbell, 2006; Heffernan, 2010; Rajeshwar, 2010). University lecturers and professors claim that they are finding it increasingly difficult to compete with the colorful and entertaining contents on the Internet. As the result, many universities are reacting to this troubling phenomenon by restricting computer, mobile phone, and Internet access in the classrooms (Melerdiercks, 2005; Adams, 2006). However, simply blocking access to technologies without carefully studying the root causes of technology-led distraction in the classroom seems irresponsible and inconsistent with the push of many educational institutions to embrace information technologies in teaching/research and learning.

There is currently a paucity of studies in this area, and existing studies provide limited explanation of the psychological motivations behind technology-enabled distraction witnessed in the classroom. We believe that a systematic study of this subject is warranted as more and more mobile technologies are being introduced to students and educators. Studies of this nature may reveal underlying psychological and cognitive issues of university students and identify structural problems in classroom management and pedagogical approaches. The findings could help educators rethink and redesign their course content and delivery approaches to better fit the changing classroom environment. Also, this research will help us validate our research model and allow us to make recommendations to university educators and administrators on how to effectively reduce digital distraction in the classroom while amplifying the benefits of technology in teaching, learning, and research.

First, this research study is designed to gauge the extent to which students are distracted in the classroom by vital technologies. Second, the study seeks to identify factors/variables that contribute to this behavior. This study posits that the level of in-class digital distraction of a student is influenced by the extent of student's addiction to the Internet, student's learning style, teaching styles, and other individual (e.g., age, gender, etc.) and contextual factors (e.g., subject matter, peer behavior, not getting caught, etc.). The data for this research is collected at the Polytechnic of Namibia during the Fall semester of 2012.

2. Research Model

The following model that shows the relationships between the relevant variables (factors) is proposed.

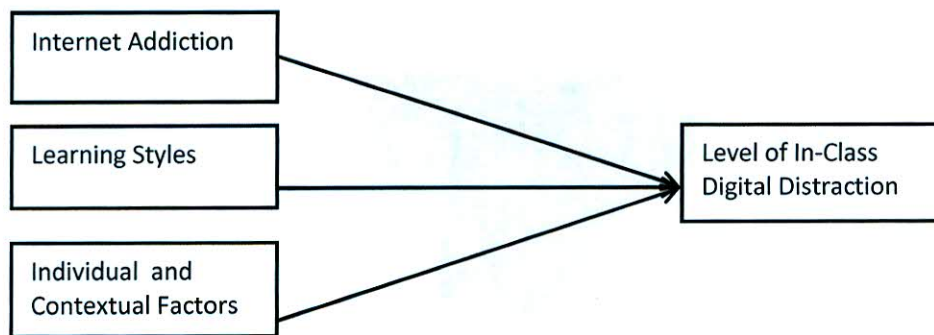


Figure 1. Technology-Enabled Distraction Research Model

2.1. Internet Addiction

As society becomes increasingly dependent on information technologies devices, tools, and services, many individuals develop problematic behaviors related to compulsive and excessive technology use. Internet addiction (or Internet dependency) refers to an excessive and uncontrolled need to use the Internet that has the potential to negatively affect one's effectiveness, health, happiness, and relationships. Gencer and Koc (2012) report on a study of Internet abuse among teenagers and Acier and Kern (2011) provide a perspective on problematic Internet use as perceived by addiction counselors. Further, Davis, et al. (2002) found that problematic Internet use went beyond merely spending too much time on the net and that it led to diminished impulse control, loneliness/depression, distraction, and using the Internet as a tool for social comfort. Diminished impulse control is manifested by obsessive cognitions about the Internet and inability to reduce Internet use. Distraction involves using the Internet to procrastinate or avoid stressful events, tasks, or thoughts. This rationale leads us to believe that digital distractions in the classroom could be partially driven by students' addictive behaviors to technology and the Internet. Therefore, we argue that one's Internet addiction level affects the level of digital distraction exhibited in the classroom.

