Chapter 7
Digital Distractions, Note–Taking, and Student Learning

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ABSTRACT

This chapter examines the distractive potential of digital devices and summarizes existing scholarly work in this area. The chapter begins with a background on the overall problem of distractions caused by digital devices and how this problem has changed over time. This is followed by a detailed accounting of the digital distractions research, emphasizing the role of message relevance in this process, as well as discussion of research that has examined the interplay between note-taking and digital distractions. The last major section summarizes scholarly work and additional sources that provide examples of how mobile devices, and technology more broadly, can be used in the classroom to help support student learning.

INTRODUCTION

Scholars from a variety of disciplines have studied the myriad ways in which technology can influence learning. From computer labs to iPads in the classroom and bring your own device initiatives, educators have grappled with how to use technology to help students learn. Although technology, more specifically digital devices, can certainly be used to enhance education or student engagement (for particular examples, see Blessing et al., 2012; Nielsen & Webb, 2011; Tyma, 2011), multiple studies have demonstrated that these devices can function as digital distractions that can hinder student learning (see Rosen, 2017). This problem is further exacerbated by the extreme popularity of mobile devices, with over 80% of U.S. adults owning a smart phone (Pew Research Center, 2021), and many U.S. students likely bringing those devices with them to class. Furthermore, we still do not know what the long-term implications of everyday multitasking (e.g., checking email or responding to a text while also listening to music or surfing the web) are (Carrier et al., 2015) and this likely extends to digital distractions as well. However, we do know that student use of digital devices in the college classroom can have negative effects on learning and this chapter will help to summarize some of the research examining these effects. Ultimately, the goal of this chapter is to provide readers with an in-depth understanding of the

impact that digital distractions have on student notes (quantity and quality) and student learning, while also discussing productive ways of using technology to support learning. This focus will allow readers to more fully understand the potential consequences of digital distractions in the classroom and to understand the current literature examining this important issue. In particular, the following topical areas will be emphasized in the sections that follow:

- Distractions in the Classroom
- Distractions and Note-Taking
- Moving From Distraction to Engagement

BACKGROUND

The distraction caused by digital devices in the college classroom is the combination of an old and a new problem. Students have always had something that could serve as a potential distraction from class content. Even something as simple as a lawn mower outside, people loudly talking near a classroom door, or perhaps another student in class, all can serve as a distraction, not to mention internal distractions from one's own thoughts, feelings, or physical state. Juxtaposed against this old problem is the relatively new occurrence of students bringing and using mobile devices in the classroom. Although it might be hard to imagine a time in which we did not constantly have our mobile devices with us, the distractions caused by mobile devices in the learning environment only really became a problem after the turn of the century. In 2000, roughly 53% of American adults owned a mobile phone and, a decade later in 2011, smartphone ownership was only at 35% (Pew Research Center, 2015). Even though mobile phones were readily available in the 1990s, it wasn't until 10–15 years later that a large majority of the U.S. adult population owned one and it wasn't until the mid-2010s that smartphone ownership had hit the same levels (see Figure 1).

Figure 1. U.S. adult mobile phone ownership (2002-2021)
Source: "Mobile Fact Sheet." Pew Research Center, Washington, D.C. (April 7, 2021) https://www.pewresearch.org/internet/ fact-sheet/mobile/#mobile-phone-ownership-over-time. Copyright 2021 Pew Research Center.
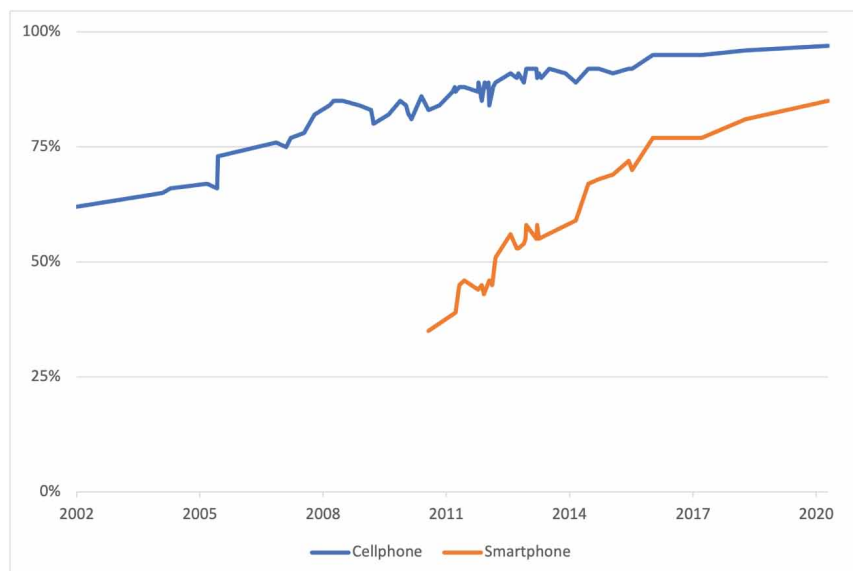
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