



# What's going on? Age, distraction, and multitasking during online survey taking



Lara Zwarun\*, Alice Hall<sup>1</sup>

Department of Communication, University of Missouri – St. Louis, 1 University Blvd., St. Louis, MO 63121, USA

## ARTICLE INFO

### Article history:

Available online 20 October 2014

### Keywords:

Multitasking  
Distraction  
Computer  
Survey  
Data collection

## ABSTRACT

Nearly 6000 adults from 7 countries participated in an online survey about what other activities they engaged in while taking the survey and how distracted they felt. Younger people were more likely than older ones to engage in electronic and non-electronic multitasking. Engaging in a wider range of tasks was associated with feeling more distracted. However, once the variety of tasks was taken into account, interruptions associated with checking or talking on one's phone made participants feel less distracted. The relationship between age, multitasking, and feeling distraction was curvilinear, with middle-aged respondents being more affected by multitasking than either younger or older survey takers. The findings suggest that people of all ages are often deliberate multitaskers who choose their distractions intentionally, at least some of the time. This bodes well for researchers seeking to administer online surveys, because it suggests that survey takers will set themselves up with the type and amount of distractions they are comfortable with. The finding that a high degree of electronic multitasking may decrease the perception of distraction should be followed by experiments verifying if this perception corresponds to actual task performance.

Published by Elsevier Ltd.

## 1. Introduction

As portable, network-connected devices such as tablet computers and smart phones become more prevalent, media multitasking has become a subject of increasing interest. Media multitasking refers to engaging in multiple tasks within the same time period, where at least one task involves a form of mediated communication. Devices like laptops, tablets, and smart phones make it easier for individuals to switch back and forth between tasks on one device (e.g., reading a text message while playing a video game on one's phone), across multiple media devices (e.g., watching a television while updating one's social networking status on a mobile phone), or between mediated and non-mediated environments (e.g., reading email while cooking dinner) (Jeong & Fishbein, 2007).

A commonly expressed concern, both in the academic literature (Bowman, Levin, Waite, & Gendon, 2010; Waite, Levine, & Bowman, 2009) and the popular press (e.g., Richtel, 2010; Stross, 2012) is that multitasking negatively affects concentration, engagement, and task performance. Individuals who are multitasking are thought to be less efficient and less thorough in completing the tasks that they are engaged in, although there is some speculation that these

effects may affect different age groups unequally (e.g., Carrier, Cheever, Rosen, Benitez, & Chang, 2009). This possibility has wide-ranging implications for contexts where the ability to focus matters, such as education, where multitasking could inhibit academic success (Levine, Waite, & Bowman, 2007; Waite et al., 2009), or consumption of entertainment media, where it could interfere with the ability to become involved.

Another context in which the effects of multitasking might be consequential is in the case of online survey-taking. This form of research administration has become increasingly popular in both industry and academia (Groves, 2011). Yet little attention has been given to how often research participants combine computer-based surveys with other activities, when such multitasking might be most common, or how participants' attention and performance might be affected by it. The current study therefore sought to address these questions. It investigated the relationship between the amount and type of multitasking computer users engage in while responding to a survey using a large, international sample. It examined the relationship between different forms of multitasking and the participants' subjective sense of being distracted from the task. It also examined the relationship between multitasking and the participants' age, given previous research suggesting possible differences across generations. In pursuing these objectives, it helps identify correlates of multitasking, provides valuable information for those interested in how individuals combine activities online,

\* Corresponding author. Tel.: +1 314 516 6725.

E-mail addresses: [zwarunl@umsl.edu](mailto:zwarunl@umsl.edu) (L. Zwarun), [halla@umsl.edu](mailto:halla@umsl.edu) (A. Hall).

<sup>1</sup> Tel.: +1 314 516 6662.

and assists researchers in designing and interpreting their survey research.

## 2. Literature review

### 2.1. Multitasking

Combining media with each other and with other tasks is a fact of life for many people (e.g., [Foehr, 2006](#); [Jeong & Fishbein, 2007](#)). Even when one's intention is to concentrate on one medium, such as by watching a television show or taking a survey on a computer, environmental distractions can intrude, as when people are chatting or music or a video is playing in the background. Having one's attention drawn from the task at hand to these types of environmental distractions represents a type of multitasking. The portability of the electronic devices such as smart phones, tablet computers, and laptops that are increasingly used to access both mass and interpersonal media may make some forms of environmental distractions more likely. Being able to watch entertainment programming or download files from a server while in a coffee shop or an airport lounge, for example, might increase the likelihood of environmental distractions compared to a time when devices like the telephone or the television were essentially tethered to a wall in one's home or office.

In addition, one can also multitask more intentionally without involving a second media activity. An example of non-media multitasking would be interrupting the media activity one is engaged in by having a conversation with someone in the room or going to the bathroom. Finally, a third type of multitasking does not necessarily entail leaving the device one is using at all: electronic media multitasking represents consuming two media at once. Examples include dividing one's attention by watching television and taking an online survey simultaneously or task-switching among different activities – such as checking email, word processing, updating one's social networking status, and taking an online survey – in a short time period. Like environmental distractions and non-media multitasking, electronic media multitasking is also common. In a study of 8–18 year-olds' media use, [Rideout, Foehr, and Roberts \(2010\)](#) found that about a quarter of the time the participants used media was spent with two or more media concurrently. Data released by [Nielsen Company \(2009\)](#) found that, on average, 28% of U.S. users' time on the internet at home was spent in front of a television set as well. Moreover, this type of media multitasking is a global phenomenon. For example, in a study of Korean smart-phone users, [Park \(2013\)](#) found that almost three-fourths used some sort of second screen (e.g., a tablet, a smart phone, or a laptop) while watching television. A study of Dutch teens and adults reported that 22% of the time spent with media was spent with two or more media concurrently ([Voorveld & van der Goot, 2013](#)). There is also evidence that media multitasking in the form of task-switching is common. One recent study that tracked how often a sample of U.S. college students changed tasks while at their laptop computers found that the median time spent on one application was only 19 s ([Yeykelis, Cummings, & Reeves, 2014](#)). Clearly, many people around the world are engaged in more than one thing at a time as they consume electronic media.

### 2.2. Multitasking and distraction

While many appear resigned to the inevitability of multitasking, it may come at the price of impairing performance on some types of tasks. Common sense suggests that environmental distractions, like background music or conversation, might distract attention from the task at hand and cause people to feel more distracted from it. If this were true, one would expect people using technology in pub-

lic spaces to report feeling more distracted than those in private, who presumably can control background interruptions to a greater extent. However, at least one recent study found the opposite. [Zwarun and Hall \(2011\)](#) asked a sample of participants to watch an online video in a place of their own choosing and then complete measures of the amount of multitasking they did and how distracted they felt. Participants reported being more distracted in a private versus a public setting. The researchers suggest that those who watched in public, who typically used headphones, were able to create a private “bubble” and isolate themselves from their surroundings in a way that was more difficult in private, where they may have felt more of an obligation to respond to their environment. One can ignore a stranger sitting at the next café table. It is more difficult to ignore one's spouse or partner on the sofa. We sought, therefore, to see whether this finding holds with a larger, more representative sample and with a different kind of activity, online survey taking, leading to the following question:

**RQ1:** Is there a relationship between setting and distraction?

It also seems logical that engaging in electronic multitasking might increase one's sense of distraction while taking an online survey, given the dispersion of one's attention across activities. However, not all types of secondary media are likely to be equally distracting. In a qualitative study of young people's motives and strategies for multitasking, [Bardhi, Rohm, and Sultan \(2010\)](#) found that they reported seeking to leverage media “synergies” in ways that limited their demand on cognitive resources by, for example, pairing media that required a relatively large number of cognitive resources, such as studying, with those that did not, such as listening to music. Furthermore, multiple studies ([Carrier et al., 2009](#); [Foehr, 2006](#); [Wang, 2013](#)) have found that media differ in how likely they are to be combined, suggesting that some seem to complement each other more than others. [Wang \(2013\)](#), for example, found users were relatively unlikely to pair two media that gave the user relatively little control over the rate of information flow and that shared information modalities (e.g., both were visual). She argued that combining media that present the same forms of information, particularly when the user has little control over the pacing, increases the demands on cognitive resources, making combining them less appealing. This leads us to question which types of activities are most likely to contribute to a subjective sense of distraction when combined with completing an online survey.

**RQ2:** Which types of electronic multitasking activities are most closely associated with feeling distracted?

When individuals switch between one task and another, the tasks take longer to complete than if they were done sequentially ([Bowman et al., 2010](#); [Monsell, 2003](#)). One explanation for this is that each time someone changes tasks, they have to invest time and mental resources to re-orient themselves to the task immediately at hand ([Monsell, 2003](#)). Carrying out two tasks simultaneously (e.g., doing homework while watching TV) may also negatively affect performance. The secondary task increases the cognitive demands placed on an individual. If the combined demand exceeds the cognitive resources available, it can reduce the individual's subjective sense of being able to attend to the task as well as the depth or thoroughness with which the information is processed. Multitasking while watching an online video, for example, has consistently been found to be associated with a greater sense of distraction and less engagement with the narrative ([Zwarun & Hall, 2011, 2014](#)). This leads to our prediction that the more demands one places on oneself by engaging in multiple activities, the less ability one will have to concentrate on any one of

متن کامل مقاله

دریافت فوری ←

**ISI**Articles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات