

Internet Multitasking in the Workplace: Motives and Coping Strategies

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ABSTRACT

The rise of the internet and the availability of media and other digital solutions have given way to internet multitasking: the combination of any activity with at least one internet induced activity. This is not only visible in everyday life; it has become the standard on the job. However, when cognitive activities are undertaken multitasking is not feasible. It interrupts the normal workflow, results in less concentration and it decreases the ability to filter out irrelevant information while it increases task completion time. Consequently, these effects can even negatively impact stress and anxiety levels. This study set out to research the motives for internet multitasking in a cognitive context where the negative effects are most severe. Furthermore, research is conducted on strategies to manage internet multitasking in this specific context. Data is collected by means of 14 semi-structured interviews with Dutch knowledge workers. Results show seven motives for internet multitasking in a cognitive context; curiosity, reachability, fear of missing something important, habit, relaxing and seeking information. Additionally, coping strategies to manage internet multitasking in the cognitive context have been uncovered. These can be divided into three categories; technological tools, planning strategies, and work environment strategies. Motives and strategies seem to be linked and strategies are advised to be used complementary. Future research is invited to study motives and strategies in different contexts and for different job types. Furthermore, strategies remain an underexplored part of the literature on internet multitasking and offer an opportunity to further develop these strategies in the future.

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Date: 18-10-2019

Keywords

Internet Multitasking, Media Multitasking, cognitive context, workplace, motives for internet multitasking behaviour, strategies for managing internet multitasking, coping strategies.

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ACKNOWLEDGEMENTS

I would like to thank my first supervisor dr. Matthias de Visser for his valuable feedback during this thesis trajectory. Our discussions on internet multitasking and its facets have been both challenging and amusing. The directions of these discussions have helped me to expand this research beyond theory.

Furthermore, I would like to express my sincerest gratitude to Wouter Rietveld BSc. who has been an ongoing support and critic during the creation of this research. Your questions and out-of-the-box thinking have helped me to improve this thesis.

Finally, I would like to thank my parents, Wijnand ten Vregelaar and Marjo ten Vregelaar, and my sister Sophie ten Vregelaar, for their ongoing support during my years of study. Thank you for providing me with valuable advice and for teaching me to balance focus and fun.

1. INTRODUCTION

The rise of the internet and thereafter the increasing use of mobile media technologies and the availability of media have led to a dramatic increase in internet multitasking (Carrier, Cheever, Rosen, Benitez, & Chang, 2009; Rideout, Foehr, & Roberts, 2010). Information and communication technology (ICT) are now an integral part of everyday life. Consequently, internet users are constantly connected to all types of online content and computer-mediated communication (CMC) since the internet allows users to communicate independently from time and place (Vorderer & Kohring, 2013). People nowadays not only check emails as soon as they are received, listen to the radio or watch TV, as happened 20 years ago, they also check their social media and other online communication sources instantly.

Internet multitasking has been increasingly reported among the majority of teenagers since the beginning of the century (Rideout et al., 2010). More users engage in internet multitasking, as more media devices are available and more people have access to the internet (Kononova & Chiang, 2015). Internet multitasking can be defined as “*any combination of Internet use with other media or non-media activities*” (Reinecke et al., 2017, p. 6). This includes both work and non-work-related activities. Internet multitasking has also become a constant inevitability in the workplace as it is increasingly easy to access information (Appelbaum, Marchionni, & Fernandez, 2008; Parry & le Roux, 2018).

Studies on the use of ICT in the workplace among information workers have consistently found high levels of multitasking with both work-related and non-work-related activities. Knowledge workers switch between online and offline activities approximately every three minutes (Mark, Iqbal, Czerwinski, & Johns, 2014). This means that besides their main task knowledge workers also check their email, answer their phones and instant messages whenever they are received, and react to the questions and demands in these messages. These developments disrupt the normal workflow and attentional state and increase task completion time (Appelbaum et al., 2008; Mark et al., 2014). Furthermore, this multitasking behaviour results in partial attention and has a negative effect on stress levels, concentration and creativity. Additionally, multitasking in the workplace results in feelings of always having to be on and never being finished (Appelbaum et al., 2008).

Research on the topic has shown both positive and negative results in relation to

internet multitasking (van Der Schuur, Baumgartner, Sumter, & Valkenburg, 2015). While multitasking with traditional media, such as radio or television, can be ignored as background noise (David, Kim, Brickman, Ran, & Curtis, 2015) it is the type of activities, such as social media, or text messaging, common and popular activities for internet multitasking, that ask for active engagement.

In many contexts, internet multitasking does not impact behaviour negatively. Internet multitasking becomes problematic when a cognitive activity or cognitive context is considered which applies to many workplaces nowadays. Cognitive activities are driven by cognitive needs such as reading or studying (Jeong & Hwang, 2016). As a result, active engagement in activities such as social media or text messaging disrupts work, causes disorientation, and loss of efficiency on the primary cognitive task (David et al., 2015). Other serious negative effects associated with internet multitasking in cognitive settings are unsatisfied cognitive needs (Wang & Tchernev, 2012), decreased comprehension of studied material and decreased memory of this material (Lui & Wong, 2012; Rosen, Carrier, & Cheever, 2013), susceptibility to distractions from irrelevant information (Ophir, Nass, & Wagner, 2009), and deteriorating cognitive functions (Wang & Tchernev, 2012).

Consequently, these effects of multitasking during cognitive activities negatively affect psychological well-being, hinder career advancement and career success, and interfere in daily life (David et al., 2015; Reinecke et al., 2017). Internet multitasking diminishes concentration and the ability to filter out irrelevant information. More specifically, the multitasking aspect of engaging with the internet has been found to be positively related to stress and has significant indirect effects on anxiety, burnout and depression (Becker, Alzahabi, & Hopwood, 2013). These results do not only apply to the generation of digital natives (born after 1980) but apply to the population in general (Reinecke et al., 2017).

A further concern is the belief among multitaskers that they possess the ability to use more than one source of information or can execute more than one task simultaneously (Judd & Kennedy, 2011). For example, surveys and interviews of students and faculty at a Canadian university showed that students, in general, held a strong belief in their media multitasking capabilities (Gabriel et al., 2012). However, research shows little evidence that people can process various types of information

simultaneously (Judd & Kennedy, 2011; Vorderer & Kohring, 2013).

If internet multitasking is harming work performance, deteriorates cognitive functions and negatively affects our psychological well-being, why do people increasingly engage in internet multitasking behaviour in the workplace? Can we manage the negative effects of internet multitasking during cognitive activities?

Research on motives to multitask yield, among others, motives for control, connection, entertainment, and addiction (Kononova & Chiang, 2015; Wang & Tchernev, 2012). Multitasking is found to be habitual and has the potential to turn into deficient self-regulation regarding media use, thereby negatively influencing other tasks or obligations (David et al., 2015). Studies on motives are not widespread and do not consider these motives in a cognitive context. However, to deal with the negative effects of internet multitasking in this specific context, it is necessary to understand which motives drive this behaviour in this context.

Potential coping strategies for dealing with multitasking in a cognitive context such as the workplace are limited (Guinness, Beaulieu, & MacDonald, 2018), and focus on listening to music, restricted use of smartphones, and technology breaks (Rosen, Lim, Carrier, & Cheever, 2011). As people are commonly multitasking in the workplace and technology invites them to do so increasingly, it is difficult and probably impossible to go back to unitasking. Even if technology is out of sight, it stays in mind. There are no neurological differences between actual task switching or thinking about task switching (Dumoutheil, Gilbert, Burgess, & Otten, 2010).

This paper fills the gap in research on motives for internet multitasking in a cognitive context, and potential strategies for dealing with internet multitasking in the workplace. This paper aims to answer the following two research questions:

1. *What are motives for internet multitasking in a cognitive context?*
2. *Which coping strategies can be used to manage internet multitasking in a cognitive context?*

To answer these questions, it is important to understand what reasons people have for engaging in multitasking as well as potential coping strategies or interventions to manage internet multitasking.

This study adopts an evidence-based approach, using semi-structured interviews

with knowledge workers. This paper contributes to the literature on internet multitasking in several ways; by specifically studying a cognitive context while focusing on motives and potential strategies to manage internet multitasking, currently underrepresented in the literature. On a practical level, this study provides an understanding of motives and potential strategies for multitasking in a cognitive context. The results have the potential to help employers and employees to manage their way of work to reduce the negative effects of internet multitasking in the workplace. As online activity increases, and it is difficult if not impossible to avoid internet multitasking, it is important to understand and use strategies to deal with internet multitasking.

This paper starts with a theoretical framework which provides in-depth information on the factors being studied. Thereafter, the methods section contains a description of the methodology used for this research. In the next chapter, the results of the data analysis are presented and in Chapter 5 the implications of the analysis are discussed, Chapter 6 concludes this research paper.

2. THEORETICAL FRAMEWORK

2.1 Internet Multitasking

2.1.1 Defining Internet Multitasking

Internet multitasking has been defined in literature many times. In general, multitasking can be considered the human ability to manage the competing demands of several tasks. It can be defined narrowly or broadly, meaning the ability to manage more than one task at the same time, or the ability to quickly switch between different tasks (Spink, Cole, & Waller, 2008). This research focuses on the broader definition of multitasking. On the individual level, this means that “*multitasking processes involve a person’s allocation of his or her own scarce cognitive resources among several tasks*”(Waller, 1997, p. 225). Multitasking then involves two different phases; 1) attending to individual tasks and then 2) switching between these tasks while managing this process (Rubinstein, Meyer, & Evans, 2001; Shin, Webb, & Kemps, 2019).

Prior research has focused on media multitasking referred to as the simultaneous use of two or more different media stimuli (Ophir et al., 2009) or the combination of media and non-media activities (Reinecke et al., 2017). In research, the definitions media multitasking and internet multitasking are used interchangeably.

However, to encapsulate both media activities and activities using the internet, this paper proposes to use internet multitasking instead of media multitasking. To gain a complete understanding of the multitasking phenomenon,

Furthermore, this research focuses on user-generated conceptions of multitasking (Ophir et al., 2009) which are based on self-identified situations involving two or more simultaneous goals, stimuli, or responses (Meyer & Kieras, 1997).

To summarize, this research refers to internet multitasking as the conduction of two or more relatively independent tasks. At least one of these tasks uses media or any form of the internet (Jeong & Hwang, 2016). Focus is used to differentiate between one task and the next. To illustrate, this means that working on a task and using the internet to find information for this task, is not considered internet multitasking since the focus stays on this single task. However, when the internet is used to find information for a different task or when it is used for entertainment, the focus moves from the first task to a different task. This switch is considered multitasking. Internet multitasking can be conceptualized as multidimensional behaviour since its diverse tasks require different types and amounts of cognitive resources (Wang, Irwin, Cooper, & Srivastava, 2015). Therefore, a shift in focus is required to consider tasks, of which at least one utilizes internet, internet multitasking.

2.1.2 An overview of Internet Multitasking

In general, research on internet multitasking has focused on three areas; cognitive control, socioemotional functioning, albeit less present, and learning or academic performance. Cognitive control allows people to stay concentrated as it enables individuals to filter irrelevant information or switch effectively between tasks (van Der Schuur et al., 2015). Studies on cognitive control find that internet multitasking is negatively related to cognitive control in everyday life and it is negatively related to processes based on task performance and attention spans. Most research is measured via self-reports (van Der Schuur et al., 2015).

Few studies have been conducted on internet multitasking and socioemotional functioning. These studies show that internet multitasking is negatively related to emotional well-being (e.g. David et al., 2015; Reinecke et al., 2017; Yang, Xu, & Zhu, 2015). Time management, an important aspect of self-regulation, is found to moderate the relationship

between well-being and multitasking. Individuals with high levels of time-management negatively associate media multitasking to well-being. Time management makes individuals sensitive to the negative effects of internet multitasking on well-being. Simultaneously, time management enables individuals to stay on task and finish goals (Yang et al., 2015).

Furthermore, internet multitasking is significantly related to increased perceived stress among the general population and over the life span entirely. This could be due to goal conflicts between internet multitasking and other tasks and the perceived feelings of failure of self-control (Reinecke et al., 2017). Becker et al. (2013) found internet multitasking to be a unique predictor of self-reported symptoms associated with depression and social anxiety. Media use did not affect social anxiety, but the multitasking aspect of internet multitasking does.

An important link exists between internet multitasking and learning or academic performance. Research from functional neuroimaging shows that learning becomes more difficult when the brain is distracted by one or more other demanding tasks or activities. These findings suggest that learning during multitasking does not decrease the overall level of learning but it does restrict the flexible application of the acquired knowledge in other situations (Foerde, Knowlton, & Poldrack, 2006). Most research on academic performance and internet multitasking show that multitasking negatively impacts academic outcomes, study attitude and behaviour, and perceived academic learning (Lau, 2017; van Der Schuur et al., 2015).

When activities have been repeated over time and become routine, the brain automatically enables these activities and multitasking becomes possible (Just, Keller, & Cynkar, 2008). Thus, learning and performing non-routine work tasks combined with multitasking might best be avoided if learning is to be effective. Paradoxically, common daily activities and technological developments influence people into different behaviour.

2.2 Internet multitasking in a cognitive context

2.2.1 Existing theories on cognition and internet multitasking

This research specifically focuses on a cognitive context since the negative effects of internet multitasking are most pronounced and least desired in these settings. This context is

related to consolidating information, knowledge, and understanding (Wang & Tchernev, 2012). Research has shown that media multitasking negatively affects cognitive outcomes while it has positive effects on attitudinal outcomes such as sensitivity to persuasion (Jeong & Hwang, 2016). Within the literature on internet multitasking, four theoretical perspectives have been used to explain the processes and performance of media multitasking.

Most theories focus on the effect of cognitive load on task performance. Some tasks require a higher cognitive load, such as learning new skills, whereas tasks that are more familiar and automatic require lower cognitive loads due to repetition (Ang, Zaphiris, & Mahmood, 2007). Cognitive load can be defined as “*the amount of mental energy required to process a given amount of information*” (Feinberg & Murphy, 2000, p. 354).

First, cognitive load theory includes working memory, the ability to temporarily retain information to easily access it (Baumgartner, Weeda, van der Heijden, & Huizinga, 2014). Working memory has difficulty understanding and processing information that is simultaneously presented as this creates heavy cognitive loads (Cain, Leonard, Gabrieli, & Finn, 2016). Therefore, internet multitasking, which includes two or more tasks simultaneously can create an overload on working memory which negatively affects concentration and consequently task completion (Ang et al., 2007).

Second, central bottleneck theory postulates that cognitive systems have underlying limitations which restrict the brain from processing more than one task simultaneously. This results in sequential processing (Wang et al., 2015).

In contrast, the third theory, the theory of limited capacity, or limited resource theory, posits that capacity, or energy, is needed to complete any task. For example, storing, retrieving or encoding information. If the mental capacity of two tasks being handled simultaneously exceeds the available capacity performance is expected to decrease. This view focuses on the limited availability of capacity instead of the inability of the human mind to engage in tasks simultaneously (Wang et al., 2015). This third theory is similar to cognitive load theory.

Fourth, Salvucci, Taatgen, and Borst (2009) combined three theories into the Unified Theory of the Multitasking Continuum. This theory posits that knowledge is processed by

different but interacting modules (Anderson, 2007). These modules include a declarative module that manages factual knowledge, instructions and episodic information; a goal module which tracks progress; a module for problem representation needed later in a process; and a procedural module connecting these modules together and overseeing the flow of knowledge between these modules. Modules can work separately and simultaneously but each module can only handle one task at a time.

The second part of the theory is adapted from the Theory of Threaded cognition (Salvucci & Taatgen, 2008) which posits that multiple tasks can be performed concurrently. However, tasks do compete for resources or modules and can interfere with others if they need shared resources. Consequently, when tasks require more than one module, threaded cognition theory says that one thread is postponed resulting in slow processing (Rosen et al., 2011). Finally, Memory for Goal Theory (Altmann & Trafton, 2002) which explains what happens to tasks when multitasking is required, is incorporated. The new task goal needs to be activated above the already active task which is then deactivated and fades. As a result, when the new task is completed it takes the individual more time to reactivate the old task which means additional time for task completion.

Considering those four theories, all theories focus on the number of cognitive resources that are needed to perform a task. According to cognitive load theory and the theory of limited capacity, internet multitasking creates a cognitive overload resulting in lower concentration and impacting task completion. However, central bottleneck theory and the unified theory of the multitasking continuum posit that the brain cannot process simultaneously, implying that multitasking is not possible, and tasks are postponed until there is enough mental capacity to fulfil another task.

2.2.2 Cognitive effects and internet multitasking

Research has divided internet multitaskers into heavy and light multitaskers. Heavy multitaskers have been theorised to have a broader scope of attention and wider attention distribution compared to light multitaskers. This means that people with a habit to multitask heavily are more easily distracted and have difficulty filtering irrelevant information (Ophir et al., 2009). Furthermore, heavy multitaskers show greater impulsivity and less self-control (Shin et al., 2019). Consequently, increased internet multitasking is associated with lower

performance on several cognitive tasks. Conversely, no differences have been found in performance when interfering in working memory between heavy and light internet multitaskers (Edwards & Shin, 2017; Shin et al., 2019).

Consumption of several types of media forces individuals to divide their attention between several types of information sources. This can negatively impact the processing of (media) content as well as reading (Lee, Lin, & Robertson, 2012). The brain experiences a “response selection bottleneck” when it needs to respond to several stimuli at the same time. The hippocampus is involved when individuals learn without distraction. However, when people learn while multitasking this is not the case. Multitasking increases the time to complete a task, and more importantly, it results in more shallow thinking instead of deep, contemplative analysis and thought, important in a cognitive context (Carr, 2010). Consequently, learning with distractions alters the brain’s learning processes (Poldrack & Foerster, 2008).

Multitasking affects learning adversely. This means that learning while multitasking does happen but is less flexible, and it is more difficult to retrieve information from memory (Judd & Kennedy, 2011; Rosen, 2008). The brain could be trained to learn to prioritize and switch tasks. However, at the same time, multitasking has been linked to the release of stress hormones and adrenaline (Carrier, Rosen, Cheever, & Lim, 2015). Multitasking inhibits filtering out distracting information (Cain et al., 2016; Ophir et al., 2009) and may result in long-term health problems such as loss of short-term memory (Rosen, 2008). Therefore, achieving processing efficiencies while pursuing tasks that require active learning seems unlikely (Carrier et al., 2015; Judd & Kennedy, 2011).

Chronic multitasking results in difficulties with keeping information in mind and retrieving knowledge from memory (Ophir et al., 2009; Uncapher, Thieu, & Wagner, 2016). Staying focused and switching effectively between tasks become more difficult with frequent media multitasking (Baumgartner et al., 2014; Ophir et al., 2009). Furthermore, internet multitasking is known to be damaging to cognitive performance (Wang et al., 2015) and cognitive functions (Ophir et al., 2009) even temporarily lowering IQ by 10 points (Baron, 2008).

A meta-analysis conducted by Jeong and Hwang (2016) found that internet multitasking negatively affects cognitive

outcomes by reducing attention, understanding and performance. Moderator analyses have shown that these negative effects vary by user control, task relevance, and task contiguity, the physical proximity between different tasks.

There are situations in which multitasking does not impair performance. These situations involve automated tasks or background noise such as studying and listening to music or reading and drinking coffee (David et al., 2015; Lee et al., 2012; Sana, Weston, & Cepeda, 2013). Multitasking is detrimental when people pair two cognitively demanding, unautomated tasks (Aagaard, 2015; Kirschner & Karpinski, 2010; Lee et al., 2012). Interruptions during high workloads are more disruptive than when workloads are lower (Salvucci & Bogunovich, 2010).

When individuals pair tasks with few common modalities, such as a visual task and an auditory task, they are more in control, especially when background media is low. Consequently, individuals are more likely to engage in internet multitasking (Wang et al., 2015). Furthermore, the degree of control over tasks moderates the size of multitasking effects. When people have high control over their tasks they can switch back and forth with minimal information loss and are less likely to experience cognitive overload. This process is similar to sequential multitasking. Dual multitasking occurs when control over tasks is low resulting in information loss (Jeong & Hwang, 2016).

2.3 Motives for internet multitasking

Why do individuals go online multiple times a day? According to the literature the answer has an individual and social aspect. Certain behaviour can often be explained by a combination of individual situations and the social context of these situations. People are not always aware of why they do what they do and the reasons behind behaviour lie within themselves. These reasons can be called motivations, intentions, or plans (Vorderer & Kohring, 2013).

One argument to clarify the online behaviour of individuals lies within ostracism, a sense of being excluded or ignored by others. This sense results in individuals experiencing fear. This fearful reaction can be explained by a survival instinct left over from our ancestors who depended on ostracism to survive. This means that individuals do not actually respond to what happens in the current moment, they react to a real danger that was life-threatening a

long time ago (Williams, 2001; Williams, 2007). In line with feelings of being excluded, are the motives fear of missing out and social pressure. Fear of missing out describes the feeling of apprehension when others are having rewarding experiences while the individual is absent (Przybylski, Murayama, DeHaan, & Gladwell, 2013). Social pressure describes the need for individuals to answer immediately because others could be waiting for a response (Reinecke et al., 2017).

Another reason for online behaviour lies in expectations. Meaning that online behaviour suits the communication requirements of the present (Vorderer & Kohring, 2013) and allows individuals to stay connected to others and socialize (Bardhi, Rohm, & Sultan, 2010; Kononova & Chiang, 2015; Kononova & Yuan, 2017). Connection is found to be the strongest predictor of internet multitasking (Kononova & Chiang, 2015).

Emotional needs are fulfilled by internet multitasking and individuals feel entertained, stimulated or relaxed at the expense of cognitive needs (Bardhi et al., 2010; Hwang, Kim, & Jeong, 2014; Kononova & Chiang, 2015; Kononova & Yuan, 2017; Wang & Tchernev, 2012). This effect is strengthened by the knowledge that internet multitasking can be self-reinforcing. This means that people develop habits that increase internet multitasking behaviour while also being gratified by this same behaviour (Kononova & Yuan, 2017; Wang & Tchernev, 2012). What can be observed is the “myth” of multitasking. This is caused by the feelings of efficiency due to multitasking and this includes positive feelings associated with this behaviour which overshadows the negative effects of internet multitasking. Therefore, internet multitasking is emotionally satisfying and simultaneously cognitively unproductive (Wang & Tchernev, 2012).

Information is another motive to engage in internet-based multitasking, specifically with Facebook, and texting or Instant Messages (IM) (Kononova & Yuan, 2017). The internet allows individuals to seek knowledge online, thereby satisfying the need for information (Hwang et al., 2014). Additionally, sensation seeking is positively related to multitasking (Jeong & Fishbein, 2007) and is even found to influence the needs for convenience by engaging in multiple activities simultaneously as well as relationship maintenance by staying connected (Chang, 2017).

Passing time or escaping to divert from primary tasks are other motivations to internet

multitask (Baron, 2008). More specifically, the motive to pass time and stay connected to others is stronger when people multitask with texting or IM while working on a cognitively demanding task thereby increasingly interrupting work and study-related activities (Kononova & Yuan, 2017). Furthermore, efficiency, control, (Bardhi et al., 2010; Baron, 2008; Kononova & Chiang, 2015; Kononova & Yuan, 2017) and addiction are reasons for internet multitasking. Efficiency is defined as the perceived feeling individuals experience when combining activities. Control means to oversee media use. Addiction relates to habitual needs of internet multitasking but goes beyond the user's control of multitasking (Bardhi et al., 2010).

Research on motives for internet multitasking is not widespread in the literature (Bardhi et al., 2010; Kononova & Chiang, 2015) and findings are not specifically linked to contexts in which it occurs (Kononova & Chiang, 2015; Xu, Wang, & David, 2016). Nevertheless, generic motivations for multitasking exist. Therefore, this paper aims to understand what specific types of motivations apply to knowledge workers who engage in internet multitasking behaviour in the workplace.

2.4 Coping Strategies for internet multitasking

Specific strategies for internet multitasking in a cognitive context are not widespread (Guinness et al., 2018) or are based on anecdotal material. A study by Wijekumar and Meidinger (2005) on the effects of instant messages on learners' cognitive schemas found that students that possess high metacognitive skills show strategies to manage instant messaging. For example, turning off sounds, or waiting for a break before checking their messages. These students maintain two types of IM groups, one for social reasons which are ignored when learning, and one for task assistance used while learning. This method seems to assist in faster problem-solving. This same method of training metacognitive strategies to better manage internet multitasking behaviour has also been suggested by Rosen et al. (2011) and Patterson (2017).

Furthermore, a “technology break” could be another strategy to deal with internet multitasking. This strategy aims to ensure that students know they will get a break after a certain period in which they can check their devices and connect to their world. The first anecdotal results of this look promising (Rosen

et al., 2011). In general, technology breaks are found to reduce the frequency and time spent on internet multitasking. However, results are still tentative (Guinness et al., 2018).

Other strategies considered in the literature are postponed responses to interaction mechanisms such as email or text messages by putting a phone away. In this same manner, closing extra windows on devices helps to create a distraction-free environment (Rosen et al., 2013). This also involves turning off social media applications and phone alerts (Baron, 2008). Furthermore, Appelbaum et al. (2008) suggest a strategy of dealing with interruptions by colleagues in the workplace via negotiation. This involves postponing reactions to the interruption and finishing up the primary task.

Bardhi et al. (2010) describe four coping strategies to deal with internet multitasking behaviour: limiting the number of media platforms used, restricting the number of subjects opened, forming media hierarchies, and forming media synergies. The first two mechanisms serve to restrict the multitasking behaviour thereby enabling an individual to better process the content. The other two strategies are developed as people become more adept at internet multitasking based on skill and competency development. They can better prioritize their tasks and divide their cognitive resources while strategically pairing demanding and non-demanding tasks. This strategizing is also described by Wang et al. (2015).

A literature review conducted by Parry and le Roux (2018) considers three types of interventions for internet multitasking: awareness of media use, restriction, and mindfulness. Awareness of media use focuses on creating consciousness of the internet multitasking behaviour. For example, via pop-up alerts or an activity diary to alter behaviour. Restriction interventions aim to block access to media by device separation or restriction to certain activities or stimuli. Finally, mindfulness interventions focus on being in the current state. This empowers an individual to develop the motivation to stay on task and to deliberately work towards goals since mindfulness creates greater control over actions. Results across these interventions vary and more research is needed across contexts and types of media used.

To summarize, research on motives for internet multitasking is quite generic. Research has not yet considered internet multitasking in a cognitive context or business environment. Furthermore, in-depth research into strategies to manage internet multitasking is lacking, especially the focus on a cognitive context. This

study aims to add to the literature on internet multitasking by researching motives for internet multitasking in a cognitive context and by studying strategies to manage the effects of internet multitasking in this specific context.

3. METHODS

3.1 Research Design

To further the academic field of internet multitasking it is necessary to gain insight into what motives drive individual behaviour on a deeper level and in a work-specific context. Additionally, research on strategies for internet multitasking is not widespread. Therefore, an exploratory study is a good fit to gain an overview of what happens in practice to further academic research. This information can best be collected via interviews as this type of research method is fit to better explore attitudes, values, beliefs and motives of individuals (Smith, 1975). More specifically, data is collected via the use of semi-structured interviews. Most studies on internet multitasking use quantitative research methods such as surveys or experiments (van Der Schuur et al., 2015). However, data collection via interviews has some advantages.

First, interviews have the potential to overcome the lower response rates of questionnaires (Austin, 1981) as interviews are scheduled and planned with an interviewee who consented to the interview beforehand. Furthermore, interviews allow for evaluation of the validity of the participant's answers by observation of non-verbal indicators such as emotions and body language. This is especially appropriate when discussing sensitive issues (Gorden, 1969). This is important as this study asks interviewees about their motivations and feelings and this can be sensitive information. Interviews prevent participants from formulating answers assisted by others as the interviewee and interviewer sit together during an interview without external influences. Finally, interviews allow for comparability by guaranteeing that all questions are answered by all participants (Barriball & While, 1994).

3.2 Data collection

To answer both research questions data collection is done via the use of semi-structured interviews. This method of data collection allows the researcher both structure to collect information from interviewees and it leaves room for conversation and open responses (Longhurst, 2003) to go further into depth when the situation requires this.

14 interviews were conducted, and this sample size is established based on two arguments, the idiographic aim of this research and saturation. First, the idiographic aim means that the researcher allows each individual voice a locatable place and each case can be intensively analysed. A small sample size guideline between three and sixteen participants is then considered sufficient (Flowers, Larkin, & Smith, 2009). Furthermore, Crouch and McKenzie (2006) argue a small number of cases, less than 20, since this facilitates a close association between the researcher and respondents and it enhances the validity of the in-depth inquiries.

Second, the saturation argument yields a similar sample size. Saturation is the point after which no new concepts are explored in the data and no new categories can be distilled from the analysis (Hennink, Kaiser, & Marconi, 2017). In this research, saturation occurred after analysing seven interviews and after the analysis of 12 interviews, all codes were developed. The codes that were created after seven interviews and before 12 were not novel, but variations on already existing themes. This is in line with the saturation study by Guest, Bunce, and Johnson (2006) who posit that, in the majority of cases, saturation occurs between six and 12 interviews. Hennink et al. (2017) argue that nine interviews are sufficient to capture a large and diverse set of issues from the data. However, they also posit that more data is needed to develop a richer understanding of the data. Considering these arguments, 14 participants were interviewed in this study. All interviews were conducted in Dutch.

The following inclusion and exclusion criteria are specified for this study to create a sample boundary (Robinson, 2014); all participants are Dutch citizens and knowledge workers from different companies. Knowledge workers engage in work that demands and allows for cognitive activities such as learning, researching, and analysing. In other words, unautomated work tasks. All interviewees are familiar with jobs that require higher cognitive skills.

This is established at the start of the interview when the interviewee is asked if he or she does consider one or more core job tasks as cognitively demanding. This means that the tasks can be difficult, and they demand high levels of concentration and focus. When the interviewee considers tasks to be cognitively demanding, the interviewee is asked to give at least two examples. This allows the interviewer to check if the interviewee and the interviewer have the same type of tasks in mind. If this is

the case the interview proceeds. If not, the interviewer and interviewee can discuss other work tasks. If none of the tasks are cognitively demanding, the interview stops. However, this did not happen in any of the conducted interviews.

Furthermore, all interviewees must be familiar with the concept of (internet) multitasking. Participants are chosen based on their experience of the research topic (Cameron, 2005). As this study aims to collect data on motives and strategies of internet multitasking, it is important that the participants have experience with this behaviour to answer the interview questions. Interviewees are interviewed at their place of work or any other place they might go to get some work done. Data were collected anonymously to ensure the privacy of the participants. Data were collected in a time frame of three weeks. The identity of the participants is only known by the author.

The sample is heterogeneous when it comes to demographic characteristics such as age, gender, and type of work. The sample is intentionally heterogeneous because any commonality found across the participants is more likely to be generalizable to a wider population. A heterogeneous population helps extend commonalities to a wider cognitive context (Robinson, 2014).

Table 1 shows an overview of the number of participants interviewed, the time in minutes it took to conduct all the interviews, and the job categories included in the research. This sample is chosen as all these job categories include knowledge workers. However, tasks may differ and ways of working in teams and companies can vary. Consequently, motives for internet multitasking or strategies to manage these can be different. Therefore, a diverse sample of knowledge workers can incorporate those differences and offer a broader overview of what happens in practice among different jobs and in different teams and organizations.

As ethics considerations are an important part of research (Robinson, 2014), this research, including its methods, have been accorded by the ethics committee of the University of Twente. This means that this study fulfils all guidelines to ethically study the earlier stated research questions. Furthermore, before deciding to participate in this study, prospective interviewees were informed of the research aim, their privacy rights and anonymity protection, the voluntary nature of participation, and data management. All interviewees consented to participation in this study.

Table 1: Sample overview

Number of participants	Total time used in minutes	Job category
6	110 minutes	Management consulting
4	143 minutes	Accountancy
2	30 minutes	Tax
1	20 minutes	Business Development
1	17 minutes	HR
14	320 minutes	

3.3 The research context

The interviews are specifically focused on a cognitive context. This means that every interview starts by establishing the type of work the interviewee engages in daily. The interviewee is then asked to explain which of these tasks are cognitively straining. Based on the answers these tasks are chosen to keep in mind during the interview when answering questions. Specifically, the participant imagines these tasks and answers are based on these cognitive tasks. These situations sketch an environment where the brain needs to focus and cannot automate. Consequently, these situations recreate the circumstances where the negative effects of multitasking are found to be strongest.

Measures of media and internet use are tied to these situational contexts to keep retrospective self-reports of media use manageable (David et al., 2015). Furthermore, focusing questions around these established work tasks allows for a better comparison of the results and more valid answers as all respondents view the same type of situations when answering questions even though they have different types of jobs and work for different organizations. This diminishes variations in understanding and recollection. The interview protocol can be found in Appendix 8.1.

3.4 Operationalization

3.4.1 Operationalizing internet multitasking in the interview setting

This study aims to examine what motives lead to internet multitasking behaviour in a cognitive specific context. Furthermore, this study aims to research which coping strategies individuals might have to manage this behaviour. The

definition of internet multitasking in this study is explained to the respondents as follows: combining two or more activities simultaneously or quickly switching between two or more activities. At least one activity uses internet and activities can be work-related but non-work-related activities are also included as the interruption results in the same effects in the brain. With the scenario and this definition in mind, the interview focuses on two subjects.

3.4.2 Motives for internet multitasking

To understand the motives for internet multitasking in the established scenario it is important to understand which activities the interviewees combine. More combinations are possible. Second, why do they engage in this behaviour? Different combinations may have different motivations. A combination of motivations is also possible. Examples of motives for internet multitasking, based on the theoretical framework, are used as a guideline in the interviews when needed. However, these examples are discussed with the interviewee after the first initial response to diminish the risk of biasing the respondent.

3.4.3 Strategies for internet multitasking

To research the strategies interviewees use to manage internet multitasking, it is vital to understand the effects positive and/or negative they might experience when internet multitasking. Furthermore, do these effects lead individuals to use strategies to manage this behaviour and what kind of coping mechanisms do they operate regarding the scenarios? Research on this topic is lacking so questions are used to ask respondents which strategies they may use to manage their multitasking behaviour in this fixed setting.

3.5 Data analysis

Interview audios were recorded since permission was given by interviewees. This allowed the researcher and interviewees to have an open conversation without interference due to long notetaking. Short notes were taken when necessary. Recordings were transcribed shortly after the interviews were conducted and interviewees read these transcripts to check the correctness of their statements (Fereday & Muir-Cochrane, 2006). Interviewees verified the correctness of their statements and no adjustments to the transcripts were made.

Thematic content analysis is a method to code written, verbal or visual communication data. This method was used after semi-structured interviews had been conducted and

the recordings had been transcribed to analyse the data. Content analysis can be used to categorise and distil coded text when content, words or phrases, are similar (Burnard, 1991; Elo & Kyngäs, 2008). Coding enables a deeper understanding of the collected data by subdividing and categorizing this data (Basit, 2003). ATLAS.ti coding software was used to code and analyse the collected data digitally as this is more efficient given the number of transcripts (Basit, 2003).

The starting point of the coding scheme is based on the theoretical framework and research questions, so this deductive coding approach is based on a priori knowledge. Inductive coding was applied during the coding process when patterns emerged based on interviewee input (Miles & Huberman, 1994). The overall process was both iterative and reflexive and stages were reread before further analysis on new data commenced to ensure that emerging and developing themes were grounded in the original data (Fereday & Muir-Cochrane, 2006).

The validity of the coding system is enhanced by an independent researcher who read through the codes and generated categories. Those categories were compared with the categories of the author and based on discussion and consensus minor adjustments were made to the eventual coding scheme (Burnard, 1991; Fereday & Muir-Cochrane, 2006). The final coding system can be found in Appendix 8.2. The coding and categorization process then commenced and resulted in a distilled and categorized overview described in the Results section of this paper.

4. RESULTS

The qualitative data is coded and analysed using ATLAS.ti. Codes have been merged where appropriate. 52 codes remain divided over 9 categories as depicted in Table 2 in Appendix 8.2. The analysis is done by means of several tools; code-document tables to analyse the frequency of the codes and co-occurrence patterns to create an overview of which aspects emerge together.

The results of this analysis are described in different sections. The first section focuses on internet multitasking behaviour of interviewees in the workplace. The second section describes the findings on motives for internet multitasking. Then, the effects of internet multitasking are discussed where after the final section describes strategies operated to manage internet multitasking. Examples and

citations are provided to give an impression of the interviewees' experience.

4.1 Internet multitasking in a cognitive context

In general, interviewees recognized multitasking, and specifically internet multitasking, on the job. Three interviewees indicated that they never engage in internet multitasking when conducting cognitive demanding tasks because they cannot combine those tasks and therefore do not engage in more than one activity at the same time. All other interviewees do, and frequencies range from once or twice per hour to almost all the time.

Most interviewees report that they get most distracted by emails (n = 13, 92%), especially on-screen pop-ups, and calls or other phone interruptions (n = 14, 100%) from clients or colleagues as well as other digital interruptions such as WhatsApp messages (n = 4, 29%) and face-to-face interruptions from colleagues (n = 9, 71%). Other digital distractions such as social media are almost never described. This could be due to the work specific context.

Several contextual findings have been discussed by interviewees. First, work disruptions are mostly triggered by contextual activities such as clients or colleagues who ask for help, this happens via phone, email or face-to-face. Interviewees also describe that they feel that reachability via phone and email is part of their job. The majority of the studied sample works with external clients and part of this job are the billable hours that are spent on these clients. This might affect the perception of reachability on the job.

Other external distractors are colleagues talking to each other and the interviewee listening in or talking to colleagues him or herself.

"Email is part of the daily job, so email is always on to send emails to clients or colleagues."

"When I do my normal tasks, I keep an eye on my email, that is a distraction."

"[I am busy and a client calls] it is important, so I answer the phone. I resolve the question quite easily. However, the client keeps talking so I decide to work on my other task while pretending to listen, but I have no idea what he says."

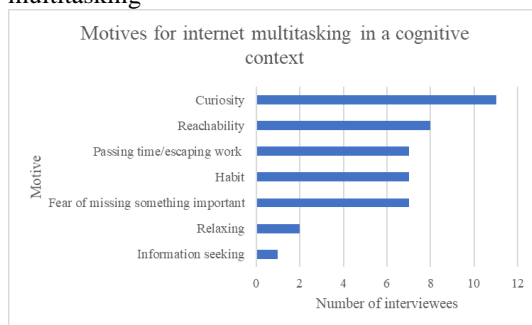
Surprisingly, when work pressure is high, many employees indicate that they do not feel the need to engage in multitasking because this is distracting, and they cannot finish their work in time. This pressure makes them stay on the specific primary task.

“If you work hard you are less easily distracted.”
“If I have a quieter day, I might go look on Facebook, but if I am busy than I do not do this at all.”

4.2 Motives for internet multitasking in the workplace

Seven motives, as depicted in Figure 1 and published in Appendix 8.3, have been distilled after careful analysis. They explain why interviewees decide to engage in internet multitasking behaviour. It is noteworthy that all motives have something in common, all were communication interruptions through either phone, computer or face-to-face demands. Interviewees leave their phone and email on during their primary task and then get distracted and have one or several motivations to indulge this distraction into internet multitasking behaviour. Or colleagues walk in and disrupt the workflow by due to various work demands.

Figure 1 An overview of motives for internet multitasking



The most described motives are curiosity (n = 11, 79%) and reachability, or social pressure (n = 8, 57%), caused by the feeling that others are waiting for an answer. When employees notice an incoming message, email pop-up or a call they get distracted and curious. They want to know what is happening. Furthermore, several interviewees always feel the need to be reachable by both colleagues and clients. The social pressure of leaving others waiting for an answer on an email or other message makes interviewees act immediately. Surprisingly, most interviewees who describe reachability and social pressure also describe that they put these perceptions on themselves. In most cases, it is the employee who perceives reachability, this is not explicitly instilled on them by the employer, colleagues or clients. It is this perception that leads to always being on.

“[internet multitasking] It’s because I am distracted and curious.”

“I do not want to shut myself off from others due to a deadline because I am a contact person for clients

and employees and the work of others could be delayed due to my unavailability.”

“I just do think it appropriate if a client can reach me when need be.”

“Email is difficult for me because clients always expect immediate answers to their questions. It is not a chat.”

Interviewees have discussed reachability, together with the fear of missing something important, several times. In many cases reachability leads to the fear of missing something important. The desire to be up to date on client and company affairs is a consequence of the social pressure and makes many interviewees switch between their phone and email during their primary task.

“Shutting off my email is inconvenient for me because I might miss something important.”

“You can shut your email off, but it is also convenient, there might be something happening.”

Other motives that have been described are passing time/escaping work and habit. First, passing time and escaping work as reasons for internet multitasking are described by interviewees when tasks are remarked as “difficult”, “less pressing” or “boring”. Another reason to pass time or escape work is a lack of inspiration. Interestingly, if the task is stimulating or when work pressure is high multitasking respondents are less distracted and inclined towards internet multitasking.

“Maybe I do not feel enough pressure, even though my task is challenging. In these moments internet multitasking happens more frequently.”

“If I am working on less pressing, and less interesting tasks I am more inclined to go on the internet.”

Second, habit or automatism means that the interviewee could not specifically indicate why internet multitasking is triggered. It just happens because they always work a certain way and have become accustomed to this manner of working. Furthermore, when activities such as email or phone are combined with the main task, some interviewees decide to handle new tasks immediately since they feel distracted and would feel better if this task can be marked as complete before continuing with the primary task. This involves switching between the task they are already working on and this new task.

“The pop-ups make me read messages anyway; at that moment my thoughts are already distracted, and I have already partly switched. Then it is easier for me to just finish the request belonging to the distraction.”

“Sometimes I think: “It probably does not take long”, and then I handle it, so it is finished.”

Finally, the motives that have been described a few times are information seeking and relaxing. Information seeking is job-related and indicates that the interviewee searches for information that is job relevant but is found in emails from clients or colleagues. This also implies a distraction component as email and phone also invite the employee to have a further look and satisfy their curiosity. Ultimately, even if tasks are interesting and challenging, the brain needs a break occasionally, so when interviewees need relaxation, internet multitasking, as well as walking around or getting something to eat or drink, happen more frequently since distraction is sought.

“[phone during work] I think everyone does it occasionally. It is also a sort of break, a moment of relaxation.”

“Sometimes it is nice to just do something else and then I get my phone.”

“If I have no idea what to do, I get a lot of tea, I walk to the toilet, eat something or check my email or private email.”

“Sometimes I decide to take a walk, but walks are short so most of the time I decide to look at my phone, what else?”

4.3 Effects of internet multitasking in the workplace

The effects of internet multitasking that have been described by interviewees are depicted in Figure 2 and published in Appendix 8.4. The motives that have been described most frequently are less efficiency when working (n = 9, 57%) and restarting tasks (n = 8, 64%). Less efficiency means that it takes interviewees more time to finish their primary and secondary tasks. This is also due to restarting processes when internet multitasking and this entails doing double work.

“I notice that I can do more work at home in 6 hours than I might do when I work 8 hours at the office.”

“At the end of the day, the task I planned and wanted to finish is not done.”

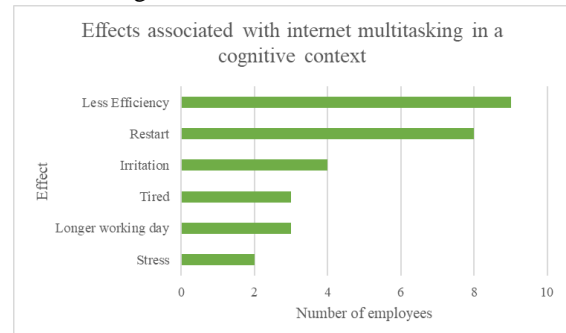
“It takes time to go back to the primary task and get into the flow again.”

“What was I doing and where did I leave my work? It makes me redo parts of my work.”

Other reported effects of internet multitasking in relation to the behaviour are feelings of irritation or tiredness. It takes employees more time to finish work which leads to irritation. Additionally, combining multiple tasks is cognitively demanding which leads to feeling tired. As a result, interviewees describe longer working days due to unfinished work, working during evenings and weekends, and stress as a further result of internet

multitasking. However, stress has been described a few times by interviewees.

Figure 2 Effects associated with internet multitasking



“[cognitive work and internet multitasking] I am mentally tired in the evening. I cannot think quickly anymore.”

“Taking yourself out of the [concentration] loop and going back in makes you feel irritated and tired and it is inefficient.”

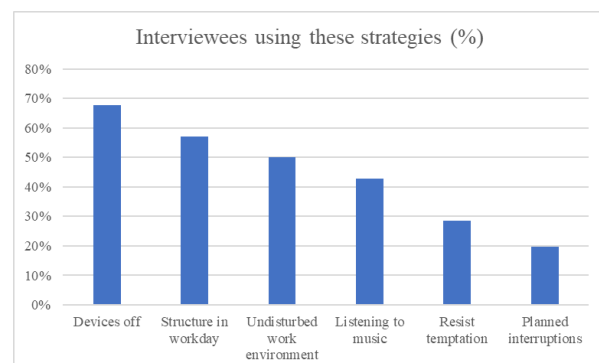
“Sometimes in the evenings, I realize that I could have finished my tasks already if I would not have been distracted so much. In that sense, I see it [internet multitasking] as negative.”

“It [internet multitasking] takes a lot of time and sometimes it feels like I have accomplished nothing during a workday. That can be difficult.”

4.4 Strategies to manage internet multitasking in the workplace

Many strategies have been opted to prevent internet multitasking behaviour or to diminish its effects. These results have been merged into six categories as depicted in Figure 3 and published in Appendix 8.5. In general, these categories are focused on the digital devices themselves as well as the work environment and the way the specific job is or can be structured by the employee.

Figure 3 Internet multitasking strategies



First, shutting off devices as a strategy to manage internet multitasking is described most by interviewees. This is done by either putting phones in silent mode or offline mode and/or shutting off email and pop-ups specifically.

"Sometimes tasks really need to be finished and then I shut off my email and I notice how well this works."

"I shut off my email, otherwise every pop-up distracts me."

"I put all my WhatsApp group chats on silent mode, so I do not get distracted."

"You can put our internal office phones on 'unavailable' which means that colleagues cannot reach you."

However, even though employees are conscious of the effects their phones and email have on their job, many indicate that shutting off a phone or email is not an option for them. Or they would like to do this, but currently do not because they do not think of this option when working. None of the respondents gave a specific reason for why shutting off their email is not an option. However, this might be related to motives such as reachability, fear of missing something important, or curiosity.

"You could entirely shut off your email, but that is quite rigorous."

"Shutting off email is an option, but also a difficult one."

"Shutting off my phone is not an option."

"Not my phone, I never do that."

Second, many respondents described the creation of structure in a workday and the use of a to-do list. Interviewees indicate that this creates an overview of the tasks that need to be done which means that employees are less likely to strain from tasks and more likely to finish tasks before starting other tasks. The to-do-list also assists in getting ideas out of the mind and on paper which leaves room for the current task while it enables the worker to remember the action point later when the primary task is finished.

"I am most concentrated in the morning, so I work on the most difficult tasks in the morning and then I shut all systems off. I work on easier tasks in the afternoon and then I am reachable."

"Structure in my workday helps me to stay on task and it helps to keep an overview of priorities."

An undisturbed work environment is the third strategy which many interviewees describe. Interviewees report that working at home is a good strategy to stay on task in relation to cognitive tasks. If this is difficult, finding a quiet spot on the job or closing the office door are alternatives to create an undisturbed work environment. Listening to

music to create a flow and shut out background noise is also frequently used as a strategy to create a quiet work environment.

"If I am truly busy and I want to work undisturbed on a single task, I work at home."

"If I have to work on tasks that need concentration, I shut off my systems and I listen to music."

"Sometimes I decide to sit alone."

"Sometimes I (partly) close my door so I am not distracted by what happens outside my office and I am less easily disturbed."

Furthermore, planned interruptions of internet multitasking are described as strategies. One interviewee plans email breaks and only checks emails several times a day during those breaks. Another variant of the planned interruptions strategy is planned work breaks that allow for digitally induced checks, so work does not get interrupted. Several other respondents have opted this strategy during their interview but do not currently use this themselves. Another aspect of planned interruptions that has been suggested several times is the usage of a work phone and private phone. Especially since this would allow workers to split their work messages from their private affairs. This would increase the threshold to check all kinds of private messages, such as WhatsApp or social media, during work time. This decreases interruption and would allow the employee to choose when to check private messages.

"A private and work phone allow me the choice to leave the private phone in my bag, so I am less inclined to look at it. Now my phone lies on the desk and I see it all the time."

"You could choose a work phone, that would mean I would not see all these private WhatsApp messages, that would be better."

Finally, resisting the temptation of internet multitasking and disrupting a workflow, have been described by interviewees. More specifically, this means that employees are aware of disruptions, but they decide not to act. However, there can be argued that this is not a real strategy albeit an ineffective one, as it does not mitigate the disruption of the workflow and consequently the negative effects of disruption and switching such as less concentration and a longer task completion time remain. For this reason, resisting temptation is not considered a satisfactory coping mechanism for internet multitasking in the workplace.

In general, interviewees describe that they do not use these coping strategies every day. Work pressure is a great stimulator for the use of one or more of these strategies. Some interviewees have no reasons for why they use

these strategies selectively on one day and not on the next. They tend to explain this through habit or their general feelings of well-being.

4.5 Employer intervention

Interviewees discussed their opinion on employer intervention tools regarding internet multitasking on the job. None of the interviewees work in a company where policies or guidelines yet exist regarding internet multitasking on the job. Most interviewees are interested in the idea of an intervention initiated by the employer. Nevertheless, most also indicate that this should be optional as multitasking behaviour on the job is the responsibility of the employee first and foremost.

“I think multitasking is an employees’ own responsibility. However, I do believe the employer and employee should discuss its impact on the job.”

“I think employees should be mature enough to cope with internet multitasking.”

Most interviewees do recognize the usefulness of intervention and ideas are mostly focused on time management training or a training focused on structuring a workday. Creating awareness of the effects of internet multitasking in a cognitive context and hands-on tips and tricks are also welcome. Finally, several respondents have opted a voluntary software programme on their devices which might help them shut off systems and stay on task.

“[course in inbox and time management] this is the responsibility of the employer. If employees become sick it impacts the employer.”

“[employer intervention] I think it should be about creating awareness of how you spend your time on the job.”

“I could imagine learning about tooling and time management.”

“Offering training would be okay because I think there are many practical tools that could help.”

5. DISCUSSION

This paper aims to research motives for internet multitasking in a cognitive context and it seeks to understand strategies to manage internet multitasking. 14 interviews were conducted with Dutch knowledge workers.

5.1 Understanding the motives for internet multitasking in the workplace

The body of literature on motives for multitasking has produced diverse motives for

internet multitasking. Some of these motives have been found in this research as well, other motives are not discussed by interviewees. Several motives are new and have not been found in the literature before. Table 3 provides an overview of which motives have been reported again, which motives were not, and which motives are new.

Table 3: A theoretical overview of motives for internet multitasking in a cognitive context

Motives for internet multitasking from the literature	Reported in this study?
<i>Fear of being excluded</i> (Williams, 2007)	<i>No</i>
<i>Fear of missing out</i> (Reinecke et al., 2017)	<i>No</i>
<i>Social Pressure</i> (Reinecke et al., 2017)	<i>Yes</i>
<i>Connection to others</i> (e.g. Bardhi et al., 2010; Kononova & Chiang, 2015; Kononova & Yuan, 2017)	<i>No</i>
<i>Relaxing</i> (e.g. Bardhi et al., 2010; Hwang et al., 2014; Wang & Tchernev, 2012)	<i>Yes</i>
<i>Habit</i> (Kononova & Yuan, 2017; Wang & Tchernev, 2012)	<i>Yes</i>
<i>Efficiency</i> (Bardhi et al., 2010; Baron, 2008; Kononova & Chiang, 2015)	<i>No</i>
<i>Information seeking</i> (Hwang et al., 2014; Kononova & Yuan, 2017)	<i>Yes</i>
<i>Sensation seeking</i> (Jeong & Fishbein, 2007)	<i>No</i>
<i>Passing time/escaping work</i> (Baron, 2008)	<i>Yes</i>
<i>Control</i> (Bardhi et al., 2010; Baron, 2008; Kononova & Chiang, 2015)	<i>No</i>
<i>Addiction</i> (Bardhi et al., 2010)	<i>No</i>

As depicted in Table 3, five motives have been found in this research on motives for internet multitasking in a cognitive context, which have also been found in earlier studies on motives. Seven motives have been reported in non-context specific research on internet

multitasking but are not found in this specific research. These motives include fear of being excluded, fear of missing out, connection to others, efficiency, sensation seeking, control, and addiction.

Two new motives have been distilled from the analysis on motives for internet multitasking. These motives are curiosity and fear of missing something important. Fear of missing something important differs from fear of missing out when it comes to focus. Fear of missing out is focused on the apprehension that others are having rewarding experiences while the individual is absent (Przybylski et al., 2013). In comparison, fear of missing something important emphasizes the feeling that tasks and demands by colleagues or clients could be happening and the individual is not aware of these demands.

Social pressure which has been reported in earlier research is incorporated in the motive reachability in this study. This motive is expanded since reachability, mentioned by interviewees many times, is the effect of social pressure and it explains the behaviour that follows this feeling.

5.1.1 Linking contextual factors from the workplace to motives for internet multitasking

Interestingly, the seven motives for multitasking found in this study do not appear individually but can be found together, simultaneously or sequentially. These seven motives can potentially be linked to three context-specific categories; company culture, job type, and motivation. These contexts trigger motives for internet multitasking behaviour.

First, it is proposed that company culture implicitly decides which behaviour and what decisions are accepted as the underlying values influence the behaviour of employees (Schein, 1985). This means that company culture can be a deciding factor in employee decisions to be reachable by clients and colleagues via phone and email. Several interviewees feel the pressure to be reachable and are afraid of missing something important. If employees perceive this as the way of working, even if this is not explicitly communicated, they act in accordance with these cultural expectations.

Second, knowledge workers in this research serve external clients and work together with colleagues on bigger projects. Consequently, work makes them feel responsible and it makes the interviewees conscious of the part they play in the tasks they

conduct. They feel that reachability via both phone and email is an integral part of their daily job. This makes many employees feel they should be reachable for both clients and colleagues. In this same manner, they fear to miss information which might antagonise clients or colleagues. Thus, the combination of company culture and its expectations of reachability together with job type reinforce the feelings of reachability and the fear of missing something important.

Finally, motivation or the lack thereof can trigger internet multitasking as the interviewees may want to pass time and/or escape work. Challenging work makes employees stay on task while difficult tasks with little pressure or a lack of inspiration, increase internet multitasking behaviour which has been suggested in earlier research by Judd and Kennedy (2011). Furthermore, compared to reachability and fear of missing something important, a lack of motivation and passing time, more often lead to non-work-related internet multitasking. For example, checking private emails and WhatsApp messages or just browsing the internet.

All three contexts invite curiosity. Curiosity is natural human behaviour. According to the Cambridge Dictionary (2019), curiosity means: “*an eager wish to learn or know about something (without a particular reason)*”, but gets stronger when the threshold is lower as is the case with distractions by phone and email many times a day. Curiosity is crucial in multitasking, individuals with higher levels of curiosity are more prone to influences of external stimuli which lead to multitasking (Manyangara & Toms, 2010). There exists a link between the motive habit and curiosity. Many interviewees have indicated that they multitask out of habit. They have become accustomed to a certain way of working and this involves internet multitasking. However, often it is the habit of internet multitasking that leads to further curiosity. Due to the combination of motives reachability, the fear of missing something important, and habit, email pop-ups, phone calls and message notifications are always on. Furthermore, little motivation leads to passing time and curiosity increases this behaviour.

Curiosity did not come forward in earlier research while it is the most reported motive for internet multitasking in a cognitive context. A possible explanation could be that interviewees are not aware or could not explain the underlying motive for curiosity in this research. Another possibility is that curiosity fits this context as employees are constantly

exposed to various distractions that trigger curiosity and makes them switch. There can be argued that it is more likely a combination of these arguments. Employees are exposed to all kinds of distractions which trigger their curiosity, but it is not just this curiosity but other motives such as a wish to pass time, relax or be reachable that underly this curiosity. In any case, here is an opportunity for further research to provide an answer to the relationship between curiosity internet multitasking.

Surprisingly, besides the motives discussed in this paper, work pressure seems to play a mediating role. When pressure on the job is high interviewees describe that the need to multitask disappears since they indicate this as distracting, and it increases their task completion time. Multitasking while under time pressure is detrimental to task performance since it raises stress levels. Pressure makes interviewees stay on the primary task since it becomes more difficult to multitask when time pressure increases (Wang et al., 2015). It seems that the seven motives for internet multitasking described earlier, become less important or disappear entirely when work pressure increases.

To conclude, new motives have emerged and several other motives for internet multitasking apply to the cognitive context as well. However, these motives seem to diminish when work pressure is high. Motives can be linked to the context categories of company culture, job type, and motivation.

5.2 Coping strategies to manage internet multitasking in the workplace

During the analysis of the strategies to manage internet multitasking, effects associated with multitasking came forward such as less efficiency, restarting work or working double, and tiredness, emphasizing the need for coping strategies.

Various strategies were distilled from the analysis. Turning devices off, planned interruptions and listening to music, are not new strategies and have been suggested and discussed in earlier research (e.g. Baron, 2008; Guinness et al., 2018; Rosen et al., 2013; Rosen et al., 2011). New strategies that were not reported in earlier research are structure in a workday and an undisturbed work environment. These strategies are argued to be workplace specific since they are fitted to triggers that arise on the work floor when working on cognitively demanding tasks. Examples are interruptions by colleagues or clients, pop-ups or calls. The new

strategies assist in creating a workplace that is suited to fend off those triggers.

These various coping mechanisms can be divided into three categories; technological tools, planning strategies, and work environment strategies. Technological tools include turning devices off and listening to music. Planning strategies involve structuring a workday and planning interruptions while the work environment strategy focuses on the creation of an undisturbed work environment.

5.2.1 Technological Tools

Turning off devices and listening to music are technological tools to cope with internet multitasking in the workplace. Turning off devices means that employees do not receive email pop-ups or notifications, no phone calls, and no digitally induced messages. This is effective in managing digital interruptions that could lead to switches between tasks. However, face-to-face induced interruptions that lead to task switches remain unmanaged.

Listening to music is another technological strategy that is used to shut out other distractions and thus stay on task. Surprisingly, research shows that background music, even light classical music, negatively impacts concentration (Chou, 2010) and immediate recall on memory (Furnham & Bradley, 1997). Huang and Shih (2011) on the other hand found that music increases the attention of an employee if the chosen music is liked by this employee. Interviewees in this research might find listening to music effective compared to other alternatives which could lead to disruption of the work task. In this light, listening to music could be effective as music blocks out other notification noises and background noises. At the same time, it is proposed by interviewees that wearing earphones, subtly lets co-workers know that you do not want to be disturbed. This could be a possible explanation for the perceived effectiveness of listening to music as experienced by interviewees. The alternative is less effective. In any case, here is an opening for future research to consider the effects of music on internet multitasking in the workplace.

5.2.2 Planning Strategies

Planning strategies emphasize the planning element in a workday which leads to better on task and single-task work. Structuring a workday means creating an overview of the tasks, appointments, and other work-related activities that an employee would like to finish during a certain workday. This could include the allocation of time slots. Interviewees

indicated that providing structure is an effective tool. It helps them to stay on task instead of working on less prioritized tasks due to lack of overview, switching between different types of tasks and incoming requests or starting a search for flat out distraction. However, its main problem lays with consistency. All interviewees that indicated to make use of this strategy also explained that they employ it irregularly, it is not embedded in their standard way of working. Explanations included their mood or work pressure, but answers remain unclear. This means that there could be an opportunity for employers to stimulate planning behaviour. Nonetheless, future research is necessary as the drawbacks of this strategy remain unclear.

Planned interruptions involve the creation of set times at which an employee checks his or her emails, calls, and other messages or has face-to-face conversations with colleagues. This way an employee can stay on task at other times. Limiting the frequency of checking email during a workday reduces stress levels (Kushlev & Dunn, 2015). It is imperative to this strategy that the employee feels the freedom to be offline. This means a transition from “always being on” to the formation of timeslots in which they are reachable. To make this work, clear communication is needed between an employee, his or her employer, colleagues and clients. Expectations of this way of working may need to be managed. For example, by means of automatic emails or voicemails that communicate the timeslots in which an employee is available.

In line with this strategy, new agreements have arisen in previous months in The Netherlands that describe the right to be undisturbed in an employees’ free time (Metselaar, 2019). This same agreement has appeared in France, where a new law was adopted that explicitly states that employees have the right to shut off their phone after work and they are not required to react to emails from their employer, colleagues, and external clients (Giesen, 2017). Similar laws are pending in Belgium and The Netherlands. This shows that governments and unions can play a vital role in the shaping of a future proof healthy work-life balance. These agreements could be taken as examples by companies to create companywide agreements on reachability during and after the workday. These agreements could also be communicated to clients. Versions of these agreements have been adopted by Daimler, Volkswagen, and Deutsche Telekom who limit email for their employees during evenings, weekends, and holidays. Employees are offline once they leave the office (Thompson, 2014).

Another version of such an agreement has been tried by The Boston Consulting Group. They have experimented with members of a team who all had to be completely off one day a week. More specifically, clients and colleagues could not reach a consultant on that specific day. No clients were lost after the experiment and none of the team members lost their jobs. They did gain more work enjoyment, better communication within the team, more learning and a higher quality product for the client (Perlow & Porter, 2009). In this case, it is the employer that is advised to initiate these agreements as employees might not feel comfortable to make the choice to be undisturbed themselves. Offering employees options to choose from to plan their interruptions shows a company’s acceptance of these choices and its willingness to work on strategies with employees.

5.2.3 *Work Environment Strategies*

Finally, in the category work environment strategies, an undisturbed work environment such as working at home, working in your own office or closing the door to your office can help create an environment where interruptions from colleagues and background noises are limited. This finding fits the current trend to change back the open office spaces within companies to smaller or single offices. Research has shown that open offices satisfy communication purposes. At the same time, individual and shared room offices are better for productivity, concentration and privacy (De Been & Beijer, 2014). The background noise of open offices, even when not too loud, distracts employees. Complex tasks require peace and privacy and its these tasks that fare worst in an open office plan (Van Der Voordt, 2004). Considering the cognitive tasks of knowledge workers and the fact that many work in open office plans, employers could try to create a mixed office. This involves open offices and flexible workplaces, as well as single offices or smaller shared rooms, when tasks are complex (Van Der Voordt, 2004). This way, employees can shape their work environment to their specific needs.

5.2.4 *Other Strategies*

Besides the strategies found in this research, strategies focused on turning devices off (Baron, 2008) or planning interruptions (Appelbaum et al., 2008; Rosen et al., 2013) have been described in the literature in similar ways. Additionally, software tools such as alerts on multitasking (Parry & le Roux, 2018), have been opted in earlier research as potential

instruments to cope with internet multitasking. These tools have been discussed as possible coping mechanisms by employees. However, as none of the employers offer such tools to interviewees this has not come forward in this research. Nevertheless, software tools could offer possibilities to function as coping mechanism in the workplace.

Furthermore, new trends are emerging fitted to the workplace that contribute to innovative coping strategies for internet multitasking. First, considering technological tools, other digital tools emerge that assist in controlling the work environment. For example, tools that block specified websites for a set amount of time or they limit the daily use of certain sites. Moreover, software exists that limits the use of potential distractors and only opens programmes on computers that are directly focused on writing reports. In this same manner, certain digital tools can assist in structuring an inbox (Gazzaley & Rosen, 2016). Various digital options exist to remedy different types of distraction. Some of these software tools, for example, tools focused on blocking certain pages or programmes, have been discussed by interviewees as well. In general, many feel that tools could offer the possibility to stay focused. However, the choice to use certain technological tools should be made by the employee. Imposing tools on workers may be counterproductive.

Second, focusing on planning strategies, planned breaks have been opted to give the brain a moment to relax and reset, so performance remains stable. Planned breaks differ from planned interruptions as interruptions function to check on emails, calls, and notifications whereas breaks do not include technology. Planned breaks are brief pauses from the primary task but do not include a switch to a different task. Planned breaks are focused on walks, eating or a short conversation with a colleague. Especially, when the primary task is boring and motivation declines, brief mental breaks help with staying focused via deactivation and reactivation of goals. Brief breaks allow for a reduction of fatigue and stress (Ariga & Lleras, 2011). These same short breaks have been described by interviewees. They argue that no knowledge worker can work for eight hours straight and when tasks are boring, or inspiration is lacking short breaks are sometimes sought.

Finally, regarding work environment strategies, putting the phone out of sight and a clean desk are ways to control the workspace to cope with multitasking. The simple presence of a phone within sight, without it being used, is a

distraction and can result in decreases in task performance (Thornton, Faires, Robbins, & Rollins, 2014). Therefore, to keep focus, it seems wise to put a phone out of sight when working on cognitive tasks. Another factor that could contribute to better focus on the task is a clean desk. Clear away all non-essential materials that might distract from the task at hand. Only materials that are needed to complete the primary task stay on the desk (Gazzaley & Rosen, 2016).

To summarize, coping mechanisms for internet multitasking have been described in the literature and by interviewees, and have been combined with emerging trends in the workplace. Strategies can be divided in three categories; technological tools, planning strategies, and work environment strategies.

5.3 Combining motives and strategies in the workplace

Motives and strategies seem to be associated and could supplement or overlap each other. This means that various motives have been associated by interviewees with the same or similar coping strategies. This implies that motives and the right strategy are not necessarily a sequential process. More than one motive can underly internet multitasking behaviour and more than one strategy can be operated to manage a specific motive or motives. The motives found in this research have been linked to the strategies discussed in this paper. This is illustrated in Figure 4 and published in Appendix 8.6.

Figure 4 Linking motives and strategies

		Motives for internet multitasking in the workplace				
		Curiosity	Passing time/escaping work	Habit	Fear of missing something important	Reachability
Technological Tools	Devices off	✓	✓	✓	✓	✓
	Listening to music	✓	✓			
	Software plug-ins	✓	✓	✓	✓	✓
	Structure in a workday	✓				✓
Planning Strategies	Planned interruptions	✓	✓	✓	✓	✓
	Planned breaks	✓	✓	✓		
Work Environment Strategies	Undisturbed work environment	✓				
	Clean desk policy	✓	✓			
	Phone out of sight	✓	✓	✓		

To illustrate, the three strategies shutting off devices, planned interruption, and structuring a workday seem to work together. Shutting off devices can lead to feelings of unrest and might not be practical from a work perspective. Interviewees have described

motives of reachability and fear of missing something important. Adding the strategy of planned interruptions could be a compromise since it does enable workers to regularly check their email, phone, and other messages, without it disrupting the workflow during a specific task. Designing these interruptions into a structured workday complements these two strategies.

Figure 4 shows that motives are associated with more than one strategy. This implies that strategies for internet multitasking could be building blocks in the sense that they strengthen the effect of managing internet multitasking. To provide another example, an undisturbed work environment helps by taking away distractions that could trigger curiosity and aids the employee by making him or her unavailable to colleagues. However, it does not aid cognitive work if the employee is triggered by notifications, emails, and phone calls. Adding the strategy to put devices off helps with this trigger and is complementary to battle curiosity and stay on the primary task.

Figure 4 depicts the combinations of motives and strategies to deal with internet multitasking in the workplace. Motives can be combined as can strategies to create a satisfying way of working that assists an employee with an uninterrupted workflow. In the long-term, the usage of strategies could lead to a change in work habit that might result in less internet multitasking and lengthier on-task focus.

5.4 Theoretical implications

The literature on internet multitasking has focused on motives for internet multitasking. However, these motives were not fit to the workplace where many tasks are cognitively demanding, and the effects of internet multitasking are negative in a cognitive context. Moreover, research is unclear on what strategies can be operated to manage internet multitasking. Strategies tailored to the cognitive context were non-existent.

This research set out to study the motives for internet multitasking in the workplace by means of semi-structured interviews, to gain a deeper understanding of multitasking behaviour. This resulted in the replication of some motives and the addition of new motives. This research found three context-specific categories, company culture, job type, and motivation that influence the motives for internet multitasking in the workplace. These results offer a better view of what happens in the cognitive context when people multitask,

and it paves the way for the design of strategies to manage this behaviour.

Additionally, this study provides an overview of coping strategies to manage internet multitasking in a cognitive context. Several strategies reported in earlier research were replicated in this research. However, new strategies are uncovered, and these initial results seem context specific. Furthermore, this research found a link between motives for multitasking in the workplace and fitting strategies to cope with the effects of this multitasking. These combinations are a starting point for further research to explore new combinations of motives and strategies to cope with internet multitasking in the workplace.

5.5 Practical implications

The results from this study offer an approach for practice. None of the employees in this study work for companies that provide guidelines or policies for internet multitasking on the job. Most interviewees are aware of the negative effects of internet multitasking. However, results indicate that workers want to use strategies for multitasking on the job, but this does not always happen, high work pressure is the exception. The fact that individuals know strategies to manage internet multitasking but only operate these when convenient, is interesting.

This offers a chance for managers to assist employees with internet multitasking mechanisms. Many interviewees have argued that it is the responsibility of the employee to deliver high-quality work on time. However, many also describe that part of the responsibility falls to the employer as internet multitasking may only increase in the future, disrupting work and affecting performance. Therefore, the employer is advised to initiate the design and use of coping mechanisms as well as guidelines, this sets an example for employees. An employer might use this opportunity to show employees what type of work environment is expected within the company or team. Strategies and belonging guidelines could serve as an example that an “always-on” mentality is not necessarily expected and that shutting off devices or not being reachable are acceptable. This could encourage employees to use the strategies which they otherwise might not use due to fear of being judged.

The design of the strategies and policies for internet multitasking used in companies or work teams are best designed together with employees. Eventually,

employees will work with the strategies and creating support and understanding helps this process. The introduction of coping strategies is advised to be combined with the use of policies that support the strategy. Policies can send a message on what behaviour is acceptable in the workplace. An example of an agreement to design with employees could be the reachability policy. When are we reachable on the job and after the job and when can we be offline? How are we going to implement this within our company and how do we communicate this to clients and colleagues? This policy helps employees to schedule planned interruptions as the design of the policy shows what can and cannot be done. At the same time, this allows the employee to shut off devices at set moments and/or use software to block external digital triggers. Additionally, as this is designed in accordance with the employer or manager and the employee, the threshold to use the strategy of planned interruption is lowered.

Furthermore, the context for the strategies may differ per company or even per team and should be considered. For example, strategies may be chosen or fitted to the company culture, job type, or motivation. To take responsibility, a manager can assist employees first with information on the effects of internet multitasking in a cognitive context. This creates awareness of the behaviour itself and its effects on the cognitive tasks of employees, as earlier suggested by Parry and le Roux (2018). These could be combined with training in time management to practice structuring a workday as opted by interviewees. Time management makes people aware that internet multitasking negatively affects well-being. Additionally, time management assists workers to stay on task to finish work goals (Yang et al., 2015).

These coping strategies to manage multitasking on the job during cognitive tasks are best used at the leisure and responsibility of the employee as the severity of effects and number of motives might differ per person and/or task. Furthermore, various scenarios are possible, depending on company culture, job type, and motivation. Different motives and different strategies make it challenging to provide a one size fits all framework. At the same time, various coping strategies offer the employee the freedom and responsibility to use the information, technology, resources and training provided to them by the employer. This approach also aligns with the earlier described statement that interviewees do not always use the strategies. However, awareness, tools, and training, could be the right steppingstones for employees to work more consciously and

effectively on their cognitive tasks. Ultimately, using the strategies to cope with internet multitasking may slowly result in better focus on the primary task, a longer work cycle, and fewer breaks. A new work habit might emerge because of the use of these strategies.

Finally, finding a balance in the use of these strategies for internet multitasking in the workplace is crucial. Internet multitasking has many negative consequences, but working in a company, with colleagues and clients is also stimulating and rewarding. Only working in a secluded environment without email, phone or colleagues does not benefit an individual or a company. Therefore, a balance should be found between working without distraction and working together with colleagues and clients. The effects of internet multitasking while working on cognitive tasks remain. Nevertheless, if a balance is stricken on the job between working on cognitive tasks in a secluded anti-internet-multitasking environment, other parts of the workday can be spent in the more distracting, but rewarding and fun, company of colleagues and clients. An example of balance could be as follows, an employee uses the first hours in the morning to focus on cognitive tasks in a single office while using other coping strategies such as devices off and planned interruptions. As the structure in the workday allows, in the afternoon the employee moves to the open office space and works on less demanding tasks, team tasks, or meetings.

Thus, coping strategies and policies to manage internet multitasking in the workplace are best balanced to create a healthy workplace. In this workplace, focused work on complex tasks is facilitated as well as social connections to colleagues and clients to create a stimulating and rewarding work experience for employees.

5.6 Limitations and Future Research

This research focused on the motives for and strategies of internet multitasking in a cognitive context. An opportunity arises to further study motives for internet multitasking in different contexts and among different job types. Additionally, the interaction between motives could be studied, for example, the relation between curiosity and habit. However, understanding is not equal to solving and this is where strategies to manage internet multitasking come in. Interviewees have indicated that they do not always use strategies to manage internet multitasking and they have no explanation for this. This leaves the chance

to study the behaviour of employees more closely when it comes to operating strategies for multitasking.

This study has researched the cognitive context and the sample consisted of Dutch knowledge workers, many of whom work with billable hours. It could be interesting to research motives and strategies when workers do not have to account for every hour they work. Furthermore, future studies could account for the degree of teamwork and client work against individuality as responsibility for others might make a difference. This same argument can be made for company culture as it is interesting to find out the effects of different company cultures on motives and strategies for internet multitasking.

The focus in this research lay not on the effects of internet multitasking in the workplace and the effects thereof were described little. Effects are also anecdotal and are not measured quantitatively. However, interviewees have remarked on the effects of internet multitasking in the workplace. This might be a starting point for future research to further consider the effects of internet multitasking in the workplace. For example, quantifying effects such as stress, tiredness, or loss of concentration enable research of the relationship between the effects of internet multitasking and the behaviour itself in a cognitive context. Besides motives, effects could also assist in designing strategies to cope with internet multitasking.

Research is conducted by means of semi-structured interviews. Therefore, results are based on employee experience, self-knowledge, perception, and recall ability. Interviewees can also be prone to answer politically correct. These factors can influence the results of this study. Nevertheless, the interview was designed with neutral wording as not to bias interviewees. Additionally, in accordance with Alshenqeeti (2014), the interviewees were well informed before the interview started, they got the chance to ask questions, they could add to their earlier given statements, and their data is anonymous to make them feel more at ease to share sensitive information. Nevertheless, future research could employ other ways to study motives and strategies. For example, via observation studies to complement and check the answers given in the interviews. Another option is quantitative research which allows for the testing of uncovered motives and strategies on a broader scale, in a different context, and with a new sample.

Finally, this study offers a starting point to further study the interaction between motives for internet multitasking and strategies to cope

with this. Future research could develop and design strategies to manage internet multitasking in a cognitive context based on the interactions. This can be done by combining practice and theoretical knowledge into a multifaceted solution since the solution should be hands-on and easily implementable. Employees are busy and if the threshold for using strategies is too high multitasking may be chosen over the use of coping strategies. Testing the effectiveness of strategies is a logical next step.

6. CONCLUSION

This study set out to answer two research questions based on internet multitasking in a cognitive context. Which motives and which coping strategies exist for internet multitasking in this specific context? After careful analysis of the results seven motives are uncovered; curiosity, reachability, passing time and/or escaping work, habit, fear of missing something important, relaxing, and information seeking. Findings on strategies for internet multitasking yield three categories of strategies; technological tools, planning strategies, and work environment strategies. Motives and strategies interact, and different combinations yield different results. Moreover, strategies are likely to be complementary as the combination of more than one strategy leads to better coverage of the motives that lead to the multifaceted concept which is internet multitasking.

As stated in the introduction, it is difficult to go back to unitasking in the current, quickly changing, digital environment as technology invites us to multitask. However, one could argue that it might not be feasible to go back since technology offers tremendous opportunities. Therefore, finding a balance between working with technology and its distractions and working without these distractions to manage internet multitasking in the workplace could be a compromise. Research is invited to further understand, design, and develop those coping strategies.

7. REFERENCES

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8. APPENDIX

8.1 Interview protocol

Leg kort uit dat dit interview gefocust is op multitasking, specifiek multitasking met internet of media. Dit betekent meerdere activiteiten tegelijk doen of snel switchen tussen meerdere activiteiten. Benadruk de anonimiteit van de data.

Doorloop het consentformulier en teken deze met de interviewee. Vraag naar de leeftijd van de interviewee.

Situatieschets

- Welke functie heb je binnen dit bedrijf?
- Welke werkzaamheden voer je uit binnen deze functie?
- Doe je ook werk dat cognitief veeleisend is? Denk aan werk dat concentratie vergt (e.g. analyses, rapportages, probleem oplossen).

De vragen die verder gesteld worden tijdens dit interview zijn specifiek gefocust op de voorbeeldsituatie(s) die we net hebben besproken. Zou je de volgende vragen willen beantwoorden met deze voorbeelden in gedachten? Deze voorbeelden vormen nu de primaire taak of hoofdtaak.

Internet Multitasking

- Komt het voor dat je de hoofdtaak uit het voorbeeld combineert met andere activiteiten? Bijvoorbeeld 1 of meerdere activiteiten tegelijk of snel wisselen tussen de hoofdtaak en 1 of meerdere andere activiteiten?
 - Wat is de frequentie hiervan? Bijna altijd, regelmatig, zelden, bijna nooit.
- Zijn dit digitale activiteiten die gebruik maken van internet?
 - Zo ja, welke activiteiten zijn dit?
- Welke apparaten gebruik je hiervoor? De computer, telefoon, laptop, iPad?
- Kun je aangeven waarom je besluit om 1 of meerdere activiteiten te combineren met je hoofdtaak? Meerdere redenen kunnen mogelijk zijn.
 - *De angst er niet bij te horen.*
 - *Constant in contact staan met anderen*
 - *Entertainment/verveling*
 - *Uit gewoonte/verslaving*
 - *Zoeken naar informatie*
 - *Sensatie zoeken*
 - *Tijdverdrijven/tijdelijk ontsnappen*
 - *Efficiëntie/controle*
- Zijn er motivaties die je nog niet hebt genoemd, maar die herkenbaar zijn uit vergelijkbare situaties?
 - Zo ja, welke en waarom?

Effecten van Internet Multitasking

- Kun je aangeven wat het directe effect is op jou van internet multitasking? Denk hierbij aan gevoel of emotie, positief of negatief.
- Merk je op de lange termijn/in het algemeen ook effecten van multitasking?
 - Zo ja, welke? Positief negatief?
- Verdere opmerkingen over de effecten van internet multitasking op het werk?

Coping Strategies

- Heb je manieren gevonden om internet multitasking tijdens deze hoofzaak te kunnen managen?
 - *Geluid uitzetten van device/apps*
 - *Intervallen/pauzes voor technologie*
 - *Telefoon weggelaten*
 - *Uitstellen van reacties*
 - *Limiet op het aantal platforms dat wordt gebruikt*
 - *Limiet op het aantal onderwerpen*

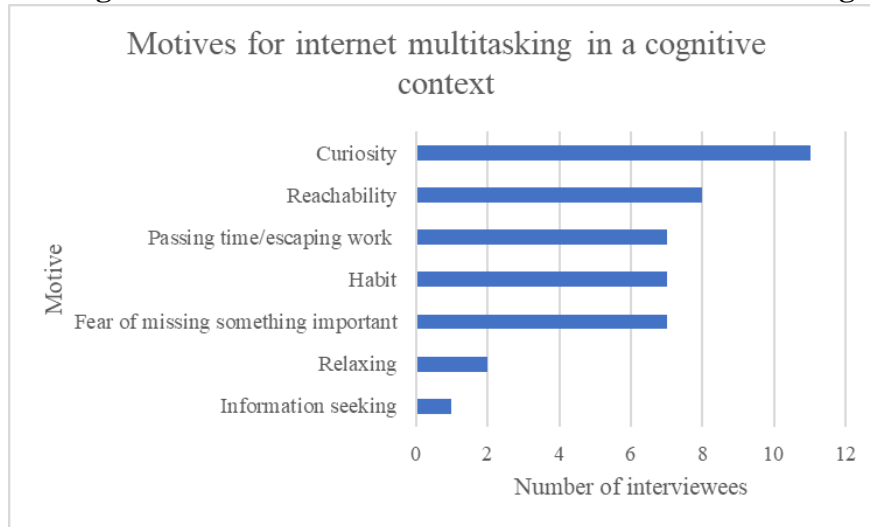
- *Pop-ups voor excessief gebruik*
- Zo nee, zou je dit willen leren?
 - Waarom wel, waarom niet?
- Zo ja, wat doe je? Hoe gaat dit in zijn werk?
- Vind je deze strategieën in de praktijk effectief?
 - Zo ja, waarom? Zo nee, waarom niet?
- Zijn er in het algemeen tijdens je werk strategieën die je toepast om internet multitasking te kunnen managen?
 - Zo ja, wat doe je? Hoe gaat dit in zijn werk?
 - Vind je deze strategieën effectief in de praktijk?
 - Zo ja, waarom? Zo nee, waarom niet?
- In het algemeen, vind je dat een werkgever de werknemer tools of trainingen kan aanreiken om de werknemer te helpen gefocust te blijven werken?
 - Zo ja, waarom? Zo nee, waarom niet?
- Overige opmerkingen die ze kwijt willen over dit onderwerp.

Dit is het einde van het interview. Dankjewel voor de tijd en moeite die je hebt genomen om deel te nemen aan dit onderzoek. Je eerlijkheid en openheid worden enorm gewaardeerd. Zou je de eindresultaten willen ontvangen? Laat in dat geval je emailadres bij me achter.

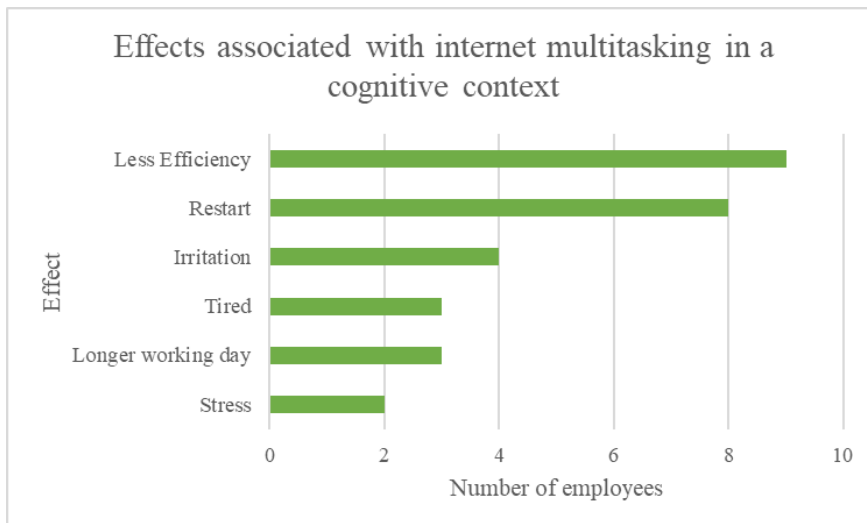
8.2 Table 2 The final coding scheme

Category	Number of sub-codes	Sub-codes
Internet Multitasking	2	Frequency multitasking Internet multitasking
Motive	7	Motive: curiosity Motive: fear of missing something important Motive: habit Motive: information seeking Motive: passing time/escaping Motive: reachability Motive: relaxing
Context	10	Context: client wants information Context: drinking tea Context: feeling well/motivated Context: walking Context: work pressure Context: IM not possible for me Context: IM other's opinion Context: finding food Context: listening to others talking Context: talking to others
Effect of internet multitasking	6	Effect: irritation Effect: less efficiency Effect: longer working day Effect: restart Effect: stress Effect: tired
Multitasking strategy	9	Strategy: devices off Strategy: idea not currently used by interviewee Strategy: conscious of IM impact Strategy: effectiveness Strategy: listening to music Strategy: planned interruptions Strategy: undisturbed work environment Strategy: resist temptation Strategy: structure in workday
Type of device	2	Email Phone
Employer intervention	5	Employer intervention: mandatory Employer intervention: new idea Employer intervention: own responsibility Employer intervention: yes Employer intervention: not mandatory
Type of job	5	Job: accountant Job: business developer Job: consultant Job: Fiscalist Job: HR manager
Not a multitasking strategy	2	Not a strategy: email distraction Not a strategy: phone distraction

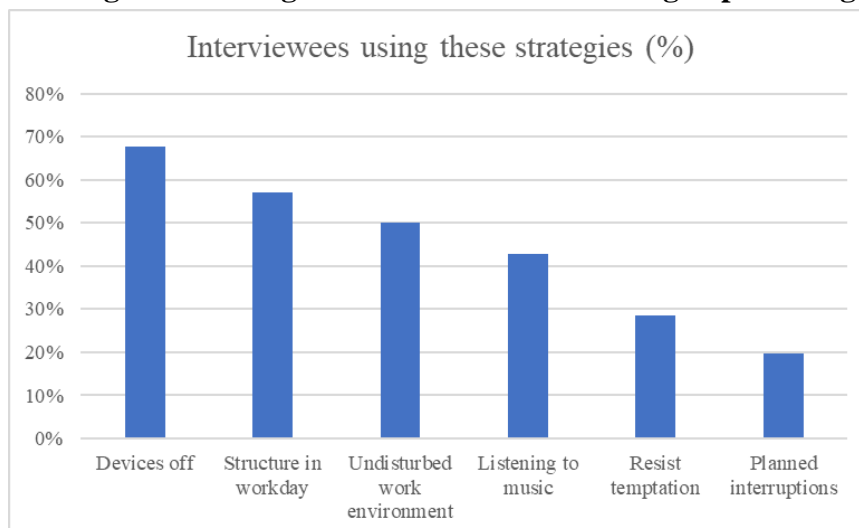
8.3 Figure 1 An overview of motives for internet multitasking



8.4 Figure 2 Effects associated with internet multitasking



8.5 Figure 3 Strategies for internet multitasking in percentages



8.6 Linking motives and strategies

Motives for internet multitasking in the workplace

		Curiosity	Passing time/escaping work	Habit	Fear of missing something important	Reachability
Technological Tools	Devices off	✓	✓	✓	✓	✓
	Listening to music	✓	✓			
	Software plug-ins	✓	✓	✓	✓	✓
Planning Strategies	Structure in a workday	✓				✓
	Planned interruptions	✓	✓	✓	✓	✓
Work Environment Strategies	Planned breaks	✓	✓	✓		
	Undisturbed work environment	✓				
	Clean desk policy	✓	✓			
	Phone out of sight	✓	✓	✓		