Numériser l’école?
État de la littérature spécialisée comme soutien à la prise de décision

Die Schule digitalisieren?
Stand der wissenschaftlichen Literatur zur Unterstützung der Entscheidungsfindung

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PER EdNum
Usages
Science informatique
Education numérique

"In a world of Big Other […] the agency […] is gradually submerged into a new kind of automaticity – a lived experience of pure stimulus-response" (p. 82)

SURVEILLANCE CAPITALISM

"there is no escape from Big Other. There is no place to be where the Other is not" (p. 82)

SURVEILLANCE CAPITALISM
“[online] it is easier to be who you want to be”

“This is facebook worthy”

“Instead of friends, we need an audience”
The Extended Iself: The Impact of iPhone Separation on Cognition, Emotion, and Physiology

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This study uniquely examined the effects of self, cognition, emotion, and physiology when iPhone users are unable to answer their iPhone while performing cognitive tasks. A 2 × 2 within-subject experiment was conducted. Participants (N = 40 iPhone users) completed 2 word-search puzzles. Among the key findings from the study were that when iPhone users were unable to answer their incoming iPhone during a word-search puzzle, heart rate and blood pressure increased. Self-reported levels of anxiety and information overload increased, and self-reported extended self and cognition decreased. These findings suggest that cognitive and physiological responses are associated with iPhone separation. The findings also indicate that answering iPhone during cognitive tasks had no effect on any of these factors. Implications of these findings are discussed.

Keywords: Cell Phone Separation, Extended Self, Cognitions, Arousal, Physiology

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Group 1
Possession —> separation

Group 2
Separation —> Possession

Figure 1: Depiction of dependent variables as a function of time

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The brain in your pocket: Evidence that Smartphones are used to supplant thinking

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ABSTRACT

With the advent of Smartphone technology, access to the internet and its associated knowledge base is at our fingertips. What does this mean for business organizations? Do better smartphones mean better business? This paper explores the implications of smartphones on decision-making processes, particularly in the context of the extended self. The extended self, defined as the part of an individual’s mental self that includes all aspects of the self that the individual perceives as an integral part of their identity, is shown to increase when individuals use smartphones. The implications of these findings are discussed.

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Rapide
Inconscient
Automatique
Décisions quotidiennes
Sujet aux erreurs
Fehler vorbehalten

Schnell
Conscient
Mühsam
Komplexe Entscheidungen
Zuverlässig

System 1
System 2

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In-class multitasking and academic performance

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ABSTRACT

The widespread of student-owned information and communication technologies (ICT) in today’s college classrooms presents individual opportunities for new classroom learning pedagogy. Specifically, multitasking with these technologies can interfere with the learning process. Indeed research in cogni- tive science shows that there are clear performance drawbacks when cognitive tasks are completed at the same time. This study examined the frequency with which students multitask during class and how it correlates with standardized test performance. Of particular interest was to examine the effect of multitasking on memory recall and academic performance as academic performance in all three grade levels (elementary, middle, and high school) were examined. Specifically, we were interested in testing a hypothesis that the effect of multitasking during class but reported multitasking with either ICT (i.e., smartphones, text messaging, and Facebook) were negatively related to GPA. © 2012 Elsevier Ltd. All rights reserved.

➡ (2016) More frequent media multitasking correlates with poorer working memory performance and lower standardized test scores

➡ (2013) Frequent Facebook users exhibit poorer performance on a free recall task

➡ (2013) Taking a digital photograph reduces recall accuracy for details of specific images

➡ (2011) When people assume that they have future access to information, they exhibit lower rates of recall, but remember where that information can be accessed

➡ (2015) Frequent media multitaskers exhibit poorer working-memory performance and increased attentional impulsivity

➡ (2012) More smartphone usage correlates with more intuitive, less analytic thinking

➡ (2014) Frequent media multitaskers report problems with everyday executive functioning

➡ (2014) Enforcing mobile phone bans in school is associated with better academic performance

➡ (2009) Higher rates of instant messaging are correlated with lower academic performance

➡ (2011) Negative correlation between electronic media usage and academic performance

➡ (2012) Text messaging and Facebook use during class are negatively correlated with GPA

<table>
<thead>
<tr>
<th>Number of Studies</th>
<th>Mean Effect Size</th>
<th>Number of Studies</th>
<th>Mean Effect Size</th>
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<td>Elementary Reading</td>
<td>16</td>
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<td>Study-Weighted Mean</td>
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“Making learning conditions more difficult, thus requiring students to engage more cognitive effort, often leads to enhanced retention” (p. 552)

“Voir, percevoir ou utiliser un prolongement de soi-même sous une forme technologique, c’est nécessairement s’y soumettre” (p. 66)

“Eine Erweiterung von sich selbst in einer technologischen Form zu sehen, wahrzunehmen oder zu nutzen, bedeutet notwendigerweise, sich ihr zu unterwerfen”

**THE MEDIUM IS THE MESSAGE**


“Idéalement, l’éducation est une entreprise de défense civile contre les retombées des médias” (p. 226)

“Im Idealfall ist Bildung ein Zivilschutzunternehmen gegen die Einflüsse der Medien”

**THE MEDIUM IS THE MESSAGE**


WE SHAPE OUR TOOLS AND AFTERWARDS OUR TOOLS SHAPE US (P. XXI)


**Numérique**

= **Outils**
**We will need an informed population to navigate this futures…**

A citizenship educated in ethics, society and civics is therefore essential (p. 11)

2017
- Alternance & contextualisation des outils/envir. numériques
- Projet pédagogique clair AVANT d’avancer le projet numérique
- Faire attention aux techno. comme soulagement de l’effort cognitif
- Citoyenneté numérique comme priorité

- Wechselnde und kontextualisierte digitale Werkzeuge/Umwelt
- Klares pädagogisches Projekt VOR der Weiterentwicklung des digitalen Projekts
- Achtung wenn Technologien nur kognitiv entlasten
- Digitale Citizenship als Priorität


At schools, students should be "asked to leave behind the neurochemical high of skimming, surfing, texting, and Snapchatting, and engage the frontal lobes of their brains" (p. 58)