



The affordances of reading/writing on paper and digitally in Finland



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ABSTRACT

The aim of this study is to investigate the impact of digital technologies on reading and writing in Finland. The perceived affordances of reading and writing on paper and digitally are compared by analysing written essays collected from 25 communication students in 2013. Research design is replicated from a study of Fortunati and Vincent that concerns Italian students. Results show that Finnish students perceive more positive than negative affordances regarding reading on paper, while reading on screen attracts fewer virtues. In this respect, results are in line with the Italian study. Unlike in Italy, students in Finland value writing on a keyboard especially because it enables editing the text quickly and efficiently and thus increases textual productivity. The study shows that Finnish students take some affordances of digital writing for granted and do not recognise their non-digital alternatives. This implies that they are perhaps more embedded in the digital world than Italian students. The Technological Frames approach is utilised to expound these country differences.

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1. Introduction

Fortunati and Vincent (2014) show that Italian college students describe many affordances of reading/writing on paper compared with reading/writing digitally. On the whole, they describe Italian students having a favourable picture of paper-based communication. Without a comparative study from another country, it is difficult to evaluate how much of their results are determined by the national culture and for instance by the timing and intensity of digitalization in the Italian education system. This study will investigate the impact of digital technologies on reading and writing in Finland and hence allows this comparison.

Besides many cultural differences between Finland and Italy, the rationale behind the country comparison lies in the unsynchronised adoption of digital technology. The adoption of information and communication technologies (ICTs) has followed different trajectories and occurred at a different pace globally (Hilbert et al., 2010; Cruz-Jesus et al., 2012). The 2003 Programme for International Student Assessment (PISA) survey shows that 50 per cent of 15 year-olds in Finland had used a computer more than five years in the early 2000s. In Italy, the same figure was just above 20 per cent (OECD, 2005, p. 19). Today, these students are around 25 years old, and on behalf of their age belong to the target group of this study. Another study shows that as early as 1998, already 100 per cent of Finnish primary and secondary school students used computers as part of their studies. In Italy the corresponding figure was 79 per cent (Kankaanranta and Puhakka, 2008). Given their longer experience of using a computer it could be hence supposed that Finnish students have become more rooted in the world of digital reading and writing.

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Literature shows how the uses of new technologies become stabilized-for-now (Schryer, 1993) when they are entrenched in daily practices. This study begins from the theory of Technological Frames developed by Orlikowski together with Gash (Orlikowski and Gash, 1994; Orlikowski, 2000), while trying to understand how some of digital reading and writing practices may become reinforced and institutionalised in one country but not in another. Technological frames have resemblance to cognitive schemas (Neisser, 1967; Barlett, 1932). Different technological frames imply different ways of making sense of a technology and divergent manners of acquiring knowledge of this technology. Technological frames guide people's interpretations and expectations related to the new (Davidson, 2006). Orlikowski and Gash (1994) claim that the frames are primarily held and applied by individual actors. They also point out that social cognitive studies clearly show that these frames arise from education, work experience and interactions within relevant communities and social groups (such as classmates or a work organisation). These wider, pre-existing cultural systems, which are likely to be different in Italy and Finland, provide orientation and guidance for the use of new technologies.

Another important feature in Orlikowski's thinking is that technologies should be studied in practice, not as artefacts in isolation from their actual usage. Orlikowski (2000) maintains that in daily practices people "recursively instantiate and thus reconstitute the rules and resources that structure their social action" (p. 409). Such repetitive habitual use of a technology reinforces the same *technology-in-practice* over time to the extent that it may become taken for granted (Orlikowski, 2000, p. 410) or institutionalised (Berger and Luckmann, 1967). Orlikowski's notion, technology-in-practice, owes much to Giddens' structuration theory that aims to bridge the gap between human agency and social structures. Furthermore, it is closely linked to sociological theories of everyday life as a series of practices. These sociology-as-practice scholars argue that customary practices, such as routines and bodily movements, influence people's behaviour more than values and attitudes (Reckwitz, 2002; Warde, 1995).

By investigating reading and writing technologies in practice and their recurrent uses, the study aims to evaluate if these practices differ in the two countries. If the digital technologies have become a more inseparable part of students' lives in Finland than in Italy, reading and writing digitally should be portrayed as relatively routinised practices in student responses. The article begins by introducing the concept of affordance and the media richness theory, which will be linked to the theory of technological frames. Then, research questions are posited for the study. Research material and methods are illustrated before presenting the findings. Lastly, results are presented and discussed in light of theories and literature. The article ends with some theoretical conclusions.

1.1. The affordances of paper vs. digital reading and writing

A technological frame guides what affordances are actually perceived in a technology. The term "affordance" is applied here by referring to the perceived properties of a technology that enable communication and social action (Dourish, 2004; Hutchby, 2001; Hutchby, 2001). Sociological studies have taken this notion from Gibson (1986), who proposes that "the affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill" (p. 127). In this definition, Gibson brings out the polarity of affordances: while positive affordances are potentially advantageous, negative affordances shall be seen as defects.

The functional value of the affordance thus depends on the perception of an observer that is, in turn, guided by the observer's technological frame. Hence, affordances studies typically begin by analysing how an observer describes the physical properties of the object (Arminen, 2002). For example, paper may be described tangible, thin, light, flexible, while a laptop is portable, affords moving pieces of text and images, as well as other technical aids such as grammar and spelling check (Sellen and Harper, 2002). By comparing two countries, this study may also reveal if some affordances remain "unnoticed" (because the non-use or the habitualised use of a technology) in one country but are perceived in the other.

Prior research on reading and writing digitally has largely concentrated on office work as Fortunati and Vincent (2014) correctly maintain. For example, Sellen and Harper (2002) examined the myth of the paperless office in their seminal study. They found many affordances explaining why paper persists in office work (e.g., people's aptitude for using two hands, their need to annotate while reading and to spread the pages of the article). The focus of this study is instead on a less-studied social group, students, who know from experience how arduous reading and writing tasks are. For students, seemingly small changes in reading and writing practices might have profound ramifications (Cull, 2011), for instance, in terms of time use and a better availability of electronic books. Being part of the same social group, the technological frames of reference through which they assess the affordances of reading and writing on print and digitally, can be supposed to be rather congruent within both countries.

Sociolinguistics and communication sociologists have vividly studied the shift from paper and pencil to keyboard-to-screen communication. Regarding writing, for instance, Thurlow (2006) brings out an important issue: while it is perhaps true that text-messaging and typing damage formal writing, the criticism often targets old linguistic practices that are actually no longer used. Other studies have specified that the impacts of digitalization on writing are perhaps not particular devastating. It has been argued that texting would have a negative impact only on formal writing, while the impact on informal writing would be positive (Rosen et al., 2010; Massey et al., 2005). Baron (2008), while studying American college students, found that in general Instant Messaging and mobile phones, as well as Facebook and blogs, have surprisingly little influence on students' writing.

Drawing from these studies, Fortunati and Vincent (2014) build on Ronald Barthes and make a distinction between writers with a lower case W – amateur writers with a less engaged approach to writing – and Writers with a capital W – who are

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