Anticipatory Skills for Adapting the Publishing Sector

R2.2 ANALYSIS ABOUT HOW DIGITAL BOOKS ARE CHANGING THE READING AND WRITING BEHAVIOURS AND HOW THESE CHANGES IMPACT ON THE PUBLISHING SECTOR

WP2 DEFINING SECTOR SKILL SHORTAGES/NEEDS AND ECVET STRATEGY

ASAP
MAIL

ASAP
SOCIAL NETWORK

ASAP
WEBTV

ASAP
MOOC

Project information

Project acronym:	ASAP
Project title:	Anticipatory Skills for Adapting the Publishing Sector
Agreement number:	2016 – 2992 / 001 – 001
Sub-programme or KA:	KA2 Sector Skills Alliances
Project website:	http://www.erasmus-asap.eu
Authoring partner:	Federation of European Publishers
Version:	3.0 (final)
Date of preparation:	28.02.2017

Document history

Date	Version	Author(s)	Description
13.01.2017	1.0	Enrico Turrin	Analysis of status quo, first draft
20.01.2017	1.1	Enrico Turrin	Completed draft
15.02.2017	2.0	Enrico Turrin	Editing, adding summary and table of contents
28.02.2017	3.0	Enrico Turrin	Final formatting

R2.2 Analysis about how digital books are changing the reading and writing behaviours and how these changes impact on the publishing sector

Introduction

Popular technology writer Nicholas Carr recently suggested that we are at a turning point in the history of modern literate society as books and book reading are in their "cultural twilight". Robert Darnton, historian and Director of the Harvard University Library, has stated that readers today "feel the ground shifting beneath their feet, tipping toward a new era that will be determined by innovations in technology". "The explosion of modes of communication," Darnton asserted, "is as revolutionary as the invention of printing with movable type".

After looking into the consequences of the digital transition on the book publishing industry, the ASAP project explores the effects of these changes on the two extremes of the traditional book value chain: authors and readers. On the one hand, the digital switch affects the relationship between authors and readers, and between those and the rest of the value chain. On the other, it has consequences on both the way in which writers write and on the way readers read.

There is not a lot of research published on how the digital media are changing reading and writing behaviours and styles. Nonetheless, this analysis – like deliverable R2.1 – builds upon existing researches, statistics and studies, as well as the experience of the Federation of European Publishers, to analyse the effects of ebooks and online reading on the readers' habits and on the writing activity and how these trends in turn impact the value supply chain of the publishing sector.

The report, in conjunction with deliverable R2.1 *Analysis of the status quo and of the strategic prospects with regard to the publishing sector (difficulties, challenges and opportunities)*, sets the scene for the evaluation of the competences and skills gap; both reports have thus been kept very synthetic, focusing in particular on the aspects more relevant for the subsequent work of the project.

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EXECUTIVE SUMMARY

Since technology provided for a satisfactory digital reading experience, an ebook market has started developing, and many readers have gone digital, although data indicate that the penetration of ebook reading is far from having replaced reading in print. It is also as yet unclear whether digital reading has all in all increased reading levels.

The appeal of ebooks to consumers depends on the array of advantages they present, from the ease of purchasing to their availability anytime, anywhere, on any device, from the additional functionalities to the possibility to carry hundreds or thousands of them at a time. There are however also some downsides, mostly related to the incapacity to fully reproduce the print experience.

Research on the effects of digital on reading is growing; while opinions differ, it appears safe to say that there are differences in the way people approach and react to digital reading, from an emotional and cognitive point of view. A majority of the studies so far seem to indicate that reading on paper is more advantageous under several respects. Of course, this is not an absolute statement: it all depends on what one reads and why, and on what is measured; the final answer is still elusive. At the same time, surveys tend to highlight a preference of people for print books, especially when studying.

The consequences for publishers will depend on their ability to enhance the discoverability of their books online, and to embrace the new consumer-centric paradigm, to respond to different needs, to serve new markets and possibly reach new readers and offer new products and services. The shift to digital publishing could boost book consumption; a lot will however depend on readers' willingness to pay for digital content.

Digital technology also affects the way people write; again, surveys and studies highlight several pros and cons. For writers, while there is still a lot of scope for debate and speculation, digital technologies represent an opportunity to gain flexibility and a powerful tool to facilitate a number of tasks, but they also present some risks; the overall effect is difficult to measure.

Certainly, the digital medium brings authors closer to their readers and offers the chance to exploit the potential of technology to produce innovative solutions, while at the same time creating new challenges, such as digital piracy. Possibly, the main effect of the digital transition on the authors-publishers relationship is the possibility it gives authors to publish their work independently (self-publishing), a route that is being taken by many authors, with all kinds of results, amidst concerns for a possible loss of quality in the absence of the editorial filter.

Publishers, who are dealing with the economic and legal issues related to the digital transition in their relationship with authors, are finding ways to take advantage of the surge in self-publishing, which can be an opportunity to discover new talents and offer specific services to authors.

DIGITAL READERS

It can be argued (see R2.1) that the digital book market took off when ebooks became sufficiently able to provide a good reading experience, akin for many respects to the paper experience; in other words, when they became a viable alternative to the ways in which people accessed information and content from printed books. Once passed a certain minimal threshold of usability, readers of ebooks were also able to reap a whole range of additional benefits inherent in the switch to digital.

And data show that readers have certainly embraced the digital revolution in the book sector, with significant proportions of book lovers accessing works on the wide range of devices available. Still, some deem that the phenomenon hasn't gone as far as expected.

To understand what is going on among readers, we must look more closely at the advantages and disadvantages of digital reading, and also at the consequences of the digital switch for readers. But first, we'll take a glance at the extent to which book readers have gone digital and how.

Some data on digital reading

We have seen in deliverable R2.1 that the digital share of the book market in the US and the UK has reached significant levels (above 25% and close to 20%, respectively). This indicates a fair degree of penetration of digital reading among the population; indeed, recent data show that in 2016, for example, 28% of Americans read an ebook. But there is interest in ebooks also in less developed markets: again in 2016, 21% of French people read an ebook, completely or partially, and so did at least 10% of Italians, while already in 2015, 25% of Germans were reading digitally. The seemingly limited impact on turnover may depend on the difficulty in capturing sales data, on people reading ebooks available for free

US digital readers use mostly multipurpose mobile devices – tablets and smartphones – to read ebooks: 15% and 13% of the population, respectively, in 2016; the share, steadily growing, goes along the increasing ownership of such devices. Dedicated e-readers seem stable and are used by some 8% of the people. A recurrent survey among professionals in the UK revealed that tablets had overtaken dedicated readers already in 2014, while in 2015 it was the turn of smartphones to take the lead, with more than two in five (44.6%) respondents saying they commonly read on a mobile phone. In France, however, ebook readers still prefer dedicated devices: 82% use them, compared to 18% for tablets and 10% for smartphones. In Italy, habits are more in line with the anglophone world: 65% of digital readers prefer the smartphone and 28% the tablet, while 7% use a dedicated e-reader. Altogether, the trend is not surprising, given the advance of smartphone technology, especially around screen size and resolution, and the diminishing appeal of dedicated e-readers, with more and more people opting to carry a single, multi-use device instead.

It is not yet clear whether – as was expected some years ago, when surveys showed that digital readers read more – ebook reading has all in all increased the levels of readership. What seems safe to say for the time being is that ebooks have appealed mostly to strong readers. The French survey revealed that 58% of digital readers read as much as before,

21% read more and 21% read less; 64% buy as much, and 16% buy more. 30% bought a print version of an ebook they read.

It is nonetheless clear – as seen in R2.1, too – that print books are not going away any soon; readers' attitude reinforces the notion. In 2016, some 38% of people in the US read print books but did not read books in any digital formats, while just 6% read digital books but not print books. 72% of the French surveyed last year said they did not envisage reading a digital book. Basically, while ebooks are on the rise, print books continue to be more popular than digital books, and most digital readers declare their intention to keep reading on paper, too. We'll now have a look at the elements of the ebooks' appeal to users.

Pros and cons of digital books

The digital transition has brought about a long list of potential benefits for readers: while the emergence of online bookstores (already in the print world) increased the international availability of a wider range of works, the arrival of e-books added the advantages of instant delivery and lower prices; ebooks can indeed be downloaded in a matter of seconds on all kinds of devices, from anywhere (as long as an internet connection is available, of course) – in other words, they're available ATAWAD (anytime, anywhere, on any device).

Users can take notes, add bookmarks and often these can be synchronised between devices. E-readers, though probably on the verge of decline, have in the meantime become cheaper, due to growing competition; they have also become technologically more refined, and services have constantly improved (e-ink, touchscreens, illumination for night reading, huge storage capabilities, social networks connectivity, and so on). Ebooks, moreover, are often available at a lower price than print books: 20-30% differences are quite common, but these can get to 50-70% and beyond (especially for self-published titles), while many works in the public domain are available for free.

Other advantages of ebooks include: being able to search the text; adjusting the font size and other accessibility features (text-to-speech, etc.); carrying around hundreds or even thousands of books without volume or weight; enhanced and interactive content; and many more possibilities opened by digital technologies. Interestingly, ebooks also allow to conceal more easily the tiles one is reading, which could explain the digital success of certain genres, notably erotica.

A field in which ebooks seem to have huge potential for generating benefits is education: besides making schoolbags greatly lighter, digital textbooks can include animated graphs and figures, media overlays, videos, sounds and images of chemical reactions, self-correcting exercises, and more, to make studying more interesting and (possibly) effective, especially in technical subjects such as chemistry, mathematics or physics. Moreover, high levels of personalisation of education become possible.

Sure enough, there are also a few downsides with ebooks, which explain in part the relatively lower-than-expected levels of adoption. For a start, despite the decrease in prices, reading devices can be considered too expensive, in particular because they require

a significant upfront investment, that can be offset by the lower price of ebooks, but this applies mostly to people who read a lot of books. The devices can come across also as complicated or inconvenient, and are definitely delicate compared to print books.

The increasing shift to reading on multi-purpose devices will attenuate these factors, but won't do much about other common issues, such as the need for recharging, the fact that some screens are not easily readable in sunlight, the tendency of screen reading to cause eye strain and in general to provoke fatigue more than reading on paper.

Some people, moreover, still find ebooks too expensive; this is often dictated by the perception that immaterial content should be available for free or nearly so. Many are instead unwilling to abandon the paper experience: readers cannot in fact replicate with ebooks the emotional experience of print books, which involves several senses – sight, touch, hearing and also smell; this also relates to the experience of visiting a brick-and-mortar bookstore, and seeking advice from a bookseller. Finally, there are still doubts about the durability of digital data in general, and thus also about the possibility for ebooks to be preserved indefinitely. Digital supports have changed every few years, and some older ones can no longer be read by any kind of equipment, whereas many printed books are still usable after decades, and sometimes centuries.

Students have reported preferring to study on paper, because of some of the reasons already highlighted (greater ease to read printed pages, as well as to highlight and annotate), and also because a device's ability to display only one page of one book at a time is considered an important limitation. Ebooks, from this perspective, would be more adapted for reading novels, and many reference works such as practical guides, travel guides and dictionaries, but for textbooks, they would be useful rather for quick consultation than for intensive studying. This introduces the issue of the effects of going digital on the reading as such.

Effects of reading in digital

As mentioned above, readers are approaching ebooks with a functional attitude: preferred, for example, when the purpose is to get a book quickly, to read while travelling or commuting and to have a wide selection of books to choose from, as well as when a text is needed for reference, ebooks are not seen as not suitable for all purposes. To better understand these phenomena, some research has gone into the impact of ebooks on the educational process, on reading habits related to types of books and preferred devices; further investigation is however warranted.

For a start, according to several studies, reading helps relaxation and, if done before bedtime, can improve the quality of sleep; this does not seem to hold with digital reading, as looking at a screen just before sleeping tends to have the opposite effect, and delay the falling asleep (likely due to the shortwave light emitted by the devices, which affects the secretion of melatonin). Also, having print books in the house has been proven as an important incentive for small children to pick up reading as a habit; this may not occur as naturally with ebooks.

Going more into detail, several studies look at the differences between digital and print from an emotional and cognitive perspective, often focusing on different age groups. One such study from 2016 started from the observation that reading is seen by many parents as an opportunity for closeness with their children, nurturing and bonding, and is consistently associated with positive feelings and emotional responses. In this framework, print books are appreciated for their physicality: touching and turning the pages together is enjoyed by both parents and children, parents find passing the book around is good when reading to more than one child, and larger formats and plenty of illustrations allow for better sharing, especially for younger children. Parents, moreover, feel involved and necessary to the reading experience and welcome some time off-screen for their kids.

Ebooks and book apps, on the other hand, while useful as entertainment, and also for soft learning and laying the foundations of a kid's digital literacy, are more adapt to become babysitters, as digital reading tends to be more of a solo experience for children, a substitute for parents. When reading digitally to children, the interactive elements can interrupt the story, and the device can become a distractor for the reading experience. Children sometimes do not want to be read to from a device; many are used to using digital entertainment on their own and have a proprietary feeling about devices. In the digital world, they may also feel more the need to have physical things like books, which in addition allow collecting and sorting.

The study looks also at the unconscious response to different types of reading: researchers observed that print books enable better eye contact, and that with digital reading both parent and child tend to be focused on the screen, when a parent is reading a print book children tend to turn towards them; when reading to multiple children, parents can show the pages to them, which does not seem to happen with devices. Print books enable closer physical contact between parent and child. All in all, the study suggests that most parents and children prefer reading print books, and have an overall more positive emotional reaction to it. Finally, physical response observations suggest a certain calming effect for children of being read to in print.

Some research, however, suggests that babies learn faster using tablets than books, implying that parents should give their children tablets as soon as they are born (that was the conclusion of a researcher in 2015). This is because children's visual system at a very early age is attracted by movement, making tablets, with their moving pictures and sounds, very appealing. The two aspects, however, may not necessarily be incompatible.

As the focus age increases, evidence of the effects of different types of reading remains mixed. A large study conducted in 2015 on the impact of ebooks on reading attitudes, behaviour and attainment in UK schools showed that using ebooks increases boys' reading progress and makes them keener, more confident readers. In particular, it seems that using ebooks to read can help boys to make significant progress with their reading and get especially the most reluctant readers to enjoy reading more. Technology could thus increase reading enjoyment, help children who struggle to read and transform children's attitudes towards reading.

Yet another study, from 2017, maintained that printed books are actually much better for childhood literacy development than ebooks and electronic devices. The research associates paper book reading more strongly with literacy benefit than screen-based reading. It observed that children tend to read less when given access to more digital devices, underutilising devices for recreational book reading. Young readers often report more distractions with multipurpose devices like phones and tablets. The previous year, another study showed teenagers were still drawn to physical books despite a growth in digital reading products.

While not yet overwhelming, a certain corpus of research in the area is thus building up, as the question becomes increasingly relevant for parents, teachers, politicians: better to read on paper or on screen? And, more broadly: what's the impact of the use of digital devices on reading and learning? It seems so far that a majority of the studies indicate that reading on paper is more advantageous. Of course, this is not an absolute statement: it all depends on what one reads and why, and on what is measured; the final answer is still elusive.

A literature review conducted already in 2005 about the effects of hypertext features on cognitive processing during text navigation and comprehension found that the increased demands of decision-making and visual processing in hypertext impaired reading performance, due to cognitive load. Structured hypertexts (mostly hierarchical) were however found to often result in better comprehension and memory. Effects were stronger both in positive and negative for subjects with lower working memory capacity and prior knowledge. In addition, structural features designed to reduce cognitive load were surveyed: complex graphical overviews did not reliably enable learning and navigation, whereas navigational support from restricted access and visible link types were helpful. All in all, the review uncovered very little support for the idea that hypertext will lead to an enriched experience of the text; however, as few of the studies reviewed considered affective factors such as engagement or enjoyment, and none explored long-term comprehension and memory, the researchers recommended further exploration in these areas.

A study in 2010 found that students took significantly longer to read a passage when they used instant messaging during reading (not including time taken to IM) than in other conditions, suggesting that students who think they are accomplishing more by multitasking will actually need more time to achieve the same level of performance on an academic task. A 2012 report comparing parent-child co-reading on print, basic, and enhanced ebook platforms, found that: the enhanced ebook was less effective than the print and basic ebook in supporting the benefits of co-reading, because it prompted more non-content related interactions; children who read enhanced ebooks recalled significantly fewer narrative details than children who read the print version of the same story, whereas they performed nearly equally across all book formats when asked to explain a critical element in the story; print books were more advantageous for literacy building co-reading, whereas the ebooks, particularly if enhanced, were more advantageous for engaging children and

prompting physical interaction, thus being especially valuable to prompt less motivated young readers.

Another study in 2013 found that readers using an e-reader were significantly worse than paperback readers at recalling when events occurred in a mystery story. Building upon an earlier study comparing reading an upsetting short story on paper and on a tablet, which we found that paper readers did report higher on measures having to do with empathy and transportation and immersion, and narrative coherence, the research found that in fact the performance was largely similar, except when it came to the timing of events in the story, as digital readers performed significantly worse on the plot reconstruction measure. Researchers suggested that this could be due to the haptic and tactile feedback of an e-reader not providing the same support for mental reconstruction of a story as a print pocket book does; the physicality of the printed page offers more fixity and solidity to the reader's sense of unfolding and progress of the text.

A comprehensive review in 2013 observed that the matter was by no means settled, with most earlier studies concluding that people read slower, less accurately and less comprehensively on screens than on paper, and more recent ones producing more inconsistent results: a slight majority has confirmed earlier conclusions, but almost as many have found few significant differences in reading speed or comprehension between paper and screens. Recent surveys also suggest that although most people still prefer paper – especially when reading intensively – attitudes are changing, as tablets and e-reading technology improve.

Still, evidence from laboratory and surveys indicates that modern screens and e-readers fail to adequately recreate certain tactile experiences of reading on paper and prevent people from navigating long texts in an intuitive and satisfying way, thus possibly inhibiting reading comprehension. Compared with paper, screens may also drain more of people's mental resources while reading and make it a little harder to remember what's been read. Moreover, people's attitudes change toward different kinds of media: knowingly or not, many people approach computers and tablets with a state of mind less conducive to learning than the one they bring to paper.

The human brain may perceive a text in its entirety as a kind of physical landscape: when reading, people construct a mental representation of the text in which meaning is anchored to structure. Paper books usually have more obvious topography than onscreen text, whereas most screens interfere with intuitive navigation of a text and inhibit people from mapping the journey in their minds, in some cases – according to a few studies – impairing comprehension. Surveys also indicate that screens and e-readers interfere with two other important aspects of navigating texts: serendipity and a sense of control. It seems moreover that the sensory experiences typically associated with reading matter to people more than one might assume.

Although many studies conclude that people understand what they read on paper more thoroughly than what they read on screens, the differences are often small. Some

experiments, however, suggest that researchers should look not just at immediate reading comprehension, but also at long-term memory. There, as well, paper seems to have some advantages, possibly because screen-based reading is more physically and mentally taxing than reading on paper.

This is accompanied by multiplying reports that students prefer to read on paper, such as an international survey from 2016 in which 92% of the respondents selected paper over an array of electronic devices. The main reasons for this were the lack of distractions that are available on computers, as well as the headaches and eye strain that can result from staring at a screen, and in general the aspects of the print reading experience that computers just can't replicate (yet, maybe).

Another broad survey in the US the same year showed that paper use was on the rise in the classroom. Some results: 82% of college students always or often use paper to study for exams, with those who always use paper tools up over the previous year; 64% of kindergarten through 12th-grade teachers responded they feel students comprehend and engage more when reading on paper; 57% of parents say their children remember assignments better when they write them down on paper.

Finally, this year, a Danish researcher concluded that there is no evidence that the digitisation of education tools, materials and approaches leads to increased learning. Denmark has invested a lot recently in the digitisation of education, since the early stages. The researcher, after examining Danish policy papers from the last 40 years promoting large-scale digitisation to analyse political arguments for digitisation, expressed concern about what he sees as a willingness to invest huge amounts of government money without any certainty of an effect: he says the main argument for digitisation has been what he calls the "estimated potential" of digitisation, assumed but not yet realised nor academically established benefits.

Professor Anne Mangen, from The Reading Centre of University of Stavanger, Norway, author of several studies on these topics (including some of those quoted above), is now chairing a new European research network doing empirical research on the effects of digitisation on text reading, called Evolution of reading in the age of digitisation (E-READ). According to the network, research shows that the amount of time spent reading long-form texts is in decline, and due to digitisation, reading is becoming more intermittent and fragmented, while there is empirical evidence that screen devices might negatively impact cognitive and emotional aspects of reading. The network aims to provide research and evidence-based knowledge to publishers on what kind of devices should be used for what kind of content; what kinds of texts are likely to be less hampered by being read digitally, and which might require the support of paper. While the 2013 study included only two experienced e-reader users, Prof. Mangen is cautious about assuming that the digital natives would perform better.

It is possible, as suggested by the abovementioned 2013 review, that any discrepancies in reading comprehension between paper and screens will shrink as people's attitudes

continue to change. Perhaps today's children will grow up without the older generations' apparent subtle bias against screens. Attitudes toward ebooks may transition in a similar way to what happened with music.

What is certain is that more research is needed, and, to some extent, only time will tell. We'll need to see what happens with the truly digital natives. With this in mind, we'll try and assess now what all this means for publishers.

The consequences for publishers

The immediate consequences for publishers of readers' attitude towards ebooks will of course depend on the impact this has on the book market. We have already observed that there is an interest by consumers in digital books; the more publishers are able to elicit this interest by exploiting the advantages of ebooks, the more their investment in digital will be justified. At the same time, the more technology reduces the negative aspects of reading in digital, the better it will be for digital publishers.

Publishers will need to struggle for the discoverability of their books online, and embrace the new consumer-centric paradigm. Potential benefits will depend on their capacity to respond to different needs, to serve new markets and possibly reach new readers and offer new products and services.

The shift to digital publishing could boost book consumption; granted, the novelty of the experience may wear off, but evidence so far just leaves all options open. People who read ebooks may even tend to make their acquisition an impulse purchase: the reduced price, the large number of choices and the simplicity of the buying process might encourage readers to acquire more books than in the case of printed editions. Moreover, due to the (moderately) reduced production costs, publishers may be able to gain higher margins through the sale of ebooks.

A lot will also depend on readers' willingness to pay for digital content. If study so far have revealed that a majority of consumers are willing to pay for the ebooks they read, this is another issue in evolution, for which a final answer hasn't been found. If an increased appetite for digital books were accompanied by a higher incidence of piracy, for example, the consequences for publishers would be definitely negative.

Given the permanence of paper and the advantages it might retain in certain areas, publishers may also further explore the possibility to create whole new experiences, evolving screen-based reading into something else entirely, for example by producing ever more sophisticated interactive fiction and nonfiction in which one's choices determine what one reads, hears and sees next.

The interplay of all these elements – and the degree to which ebooks substitute print books – will determine the impact of digital reading on publishers.

DIGITAL WRITERS

The digital transformation of book publishing of course influences also the initial point of the value chain: the authors. While it is a field which has probably not been explored as much as other parts of the book ecosystem, authors can be expected to feel the effect of the digital switch, both in the way they write and in the way they interact with such ecosystem, with other players and with the readers.

We will therefore look at how digital technology is affecting writing as a human activity, and also at how it is redefining the relationships between the authors and the other players of the book value chain, and therefore the impact on writing as a creative profession.

Digital writing

Just as with reading, a lot of attention has been dedicated in the digital age to how technology affects the way people write, and with similar mixed conclusions. From a cognitive point of view, some research indicates that there may be certain advantages to handwriting that are not fully retained with keyboard writing, for example at the level of word recall. This could be related to the fact that, when handwriting, people have to actually shape each letter from scratch. This effect, however, may vanish with people who have been writing on a keyboard since a very early age. At the same time, given that there is a demonstrated connection between handwriting fluency and reading, and with fine-motor skills development, as well as with the capacity of recognising different scripts and characters and with cognitive development in general, some researchers urge maintaining the teaching of handwriting at early ages, despite some calls for doing away with it. The methods used in beginning reading and writing might in fact have huge implications for children, education and society as a whole.

From the point of view of student writing, surveys also highlight several pros and cons. According to teachers, positive effects of digital technologies include the fact that students write more often across a variety of formats, and also get more feedback from their peers; digital tools also appear to encourage creativity and personal expression and inspire more collaboration. At the same time, digital tools may be making students less willing to put efforts in their writing assignments, bringing them more easily to take shortcuts and write fast and carelessly; some students in particular are blurring the line between formal and informal communication, increasingly using shortened forms of expression typical of texting and online communication. This in turn could reduce the students' willingness and ability to write longer texts addressing complex topics. Online tools also increase the possibilities for distraction, which can affect the quality of writing.

In addition, the use of technology – most notably the possibility it offers to easily copy and paste the work of others – seems to be weakening the students' understanding of fairness in using other people's work, copyright and proper citation requirements. All in all, however, there is no consensus on whether there has been a decrease of quality in writing across the board.

What this all means for professional writers has not been deeply observed yet, and is a subject for study and discussion, as well as speculation and debate. For the time being, some hints can be taken from how authors recount their experiences with the switch to digital; these seem to indicate that digital technology can affect writing in many ways, including structure, research and editing, order and rhythm.

Digital technology provides writers with a powerful tool to cut and paste, create multiple drafts, indexing, saving their texts, so that reviews, corrections and improvements are made much easier, while at the same time the need for starting a draft from scratch is hugely reduced, and the chances of losing one's job entirely are also much smaller (though this depends on the use is made of technology – depending on a single device without backups can be as dangerous as carrying around the only typed copy of a manuscript).

Technology provides authors also with a great deal of flexibility in their work: the possibility to switch paragraphs, add them or remove them in no time and without effort make writing a much more fluid activity. The ability to take notes digitally, to store them and search them through, as well as to search through virtually everything an author may have written and stored, adds to this increased suppleness of writing with digital devices. Whether this just frees the author, or risks causing a degree of laziness as well, and of distraction, will depend a lot on how individual people react. The same goes for the potential that the increased ease of producing written material has to induce a proliferation of sub-standard reading material (as we will see in the next section), not least because it makes the writing process maybe even too fast, reducing the room for thought and introspection. And still, we would be hard pressed to state that the quality of literature is decreasing because of technology.

Still on the advantages of technology, the internet has notably made researching on any kinds of subjects extremely easier for writers, who can find all kinds of information, be it to faithfully recreate the setting of a story or to correctly place it in historical terms, to get their facts right when certain scientific notions are interwoven in the narrative, and so on. Also, technology can help those with physical impairments to write, for example via speech-to-text and other input methods.

We can say all in all that technology can empower authors in a number of ways, with many possible positive effects, but also some risks. The overall impact, however, depends on many variables, and is ultimately also up to criteria that are hard to measure objectively. The field remains an interesting one to explore. In the next section, we will rather look at how technology affects the place of authors in the book value chain.

Authors in the digital world

A changing environment: challenges and opportunities

As digitisation brings along the fragmentation of uses and multiplication of value chains, the managing of a book is sometimes replaced by the handling of individual content elements within it, which of course affects the way IP transactions are carried out. In traditional publishing, an author signs a fixed contract to produce an entire book, receives an advance

and – if the book sells sufficiently – subsequent royalties. The work may be sub-licensed as a whole, for example for translation, for which the author may receive a further royalty.

This model may be less appropriate in the online platform world, where certain types of content creation could well move from the concept of assigning copyright to the notion of licensing a certain, limited use. The potential benefits to authors and artists include the ability to retain control of their material, determine how it is used by whom, and (potentially) to earn more if their content is exploited successfully in multiple formats. By treating their intellectual property as an asset to be managed, controlled, licensed and remunerated, many artists might be able to benefit from a bigger audience for their work and a larger commercial market.

Just as publishers experiment with the potential of technology to innovate the book, the emergence of new reading devices can prompt an interesting evolution in writing itself. Also for authors, creating long-term value will not come from simply reformatting print content into digital; opportunities will lie in experimenting with a wide range of new formats, such as non-linear, hybrid, interactive and social content, including multimedia elements, and so on.

As we've seen already, the digital shift is placing the reader even more at the centre of inventiveness. The digital switch allows authors to involve readers directly in the creative process: some experiments already actively engage readers in writing collaborative texts, with varying degrees of involvement – from consulting the audience on a certain number of choices (narrative, stylistic, etc.) so as to help shaping themes and stories, to actually having a series of contributors participate in the drafting, and choosing the best for inclusion in the final text.

And without going as far, the digital world has also introduced a feedback mechanism, whereby authors can communicate directly with their audience, and readers can communicate with one another. Social networks, both generic and, all the more, those focusing on books and reading, allow for a greater level of interaction between authors and their readers than ever before, as well as bringing together communities of readers.

The increased threat of piracy in the digital environment, of course, threatens the income of authors as much as that of publishers.

Self-publishing

Arguably, the main effect of the digital transition on the authors-publishers relationship is the possibility it gives authors to publish their work independently, without having to go through the sometimes too strict selection process specific to traditional publishers and editors. In the past few years, the proliferation of sophisticated publishing technologies has lowered the threshold of publishing: cheap (or even free) tools and programs abound by which authors can rapidly generate ebooks. The costs – both initial investment and running costs – are nowhere near those of a professional publisher.

Everyone has a chance to self-publish his/her own work and become an author. These authors come into contact with their audiences directly, sell books, and can become best-selling writers. The ubiquity of digital devices and increasing popularity of ebooks – even discounting for a hypothetical loss of impetus of lately – provide opportunities for success in this field.

There have been several cases of unknown writers who resorted to e-book distribution platforms and were very successful. Kerry Wilkinson became the bestselling e-book author on Amazon.co.uk for the last three months of 2011. In the US, two other independent writers, John Locke and Amanda Hocking, sold more than one million books on the Kindle. And what is possibly the most well-known self-publishing success, E.L. James' 50 Shades of Grey trilogy, started out as an erotic fan-fiction of the Twilight series.

Granted, the absence of editorial filtering means that any author can try to sell any book even if it is of poor quality and is not worth buying. Whereas self-publishing does not necessarily mean lower quality, there is a risk that self-published books may have in general an issue of reputation, which would affect the chances of success of some works. On the other hand, the low prices of most self-published books provide an opportunity to reach a wider public, enhancing the chances for good authors to be discovered and become known.

Moreover, authors that sell their works directly on online platforms receive a higher share of the books' price (for example, usually they get 70% from Amazon), which in some cases may result in higher earnings, even at significantly lower price points. Low costs, in turn, mean lower risks in case of failure.

Although there is not threshold in self-publishing, for a publication to gain market recognition, the quality of the content should be high. In professional publishing, editors are responsible for checking works, while with self-publishing, all these tasks revert to the authors themselves.

Self-published authors also need to take into their hands marketing activities; many of them sell their works to niche markets through reputation marketing and sometimes spread to the mainstream. Many successful authors even become publishing agents or self-publishers to offer their services to other authors.

Self-publishing platforms often offer services to some degree akin to the tasks performed by publishers. These can include print-on-demand capabilities, which allow self-published authors to offer even printed books. In addition, self-published authors are reportedly using more and more the services of independent editors.

Despite what technology offers today, some authors may not be able to manage on their own the technical complexity of producing digital books (that is, that go beyond creating a pdf file from a word processor); this is another area in which they could resort to third party service providers. In all these cases, profits will of course be reduced accordingly.

All in all, self-publishing to some extent can turn authors into entrepreneurs. Just as for publishers, for them as well the key issue is how to be discovered by readers. Some

legitimate questions may rise, however, about whether the creative process might be diluted if artists must worry about IP licensing, contracts and finance, as well as whether authors might end up transferring control of their content from traditional gatekeepers like publishers, who are closely aligned with the creative process, to new technology company gatekeepers who are more concerned with the needs of end consumers and may treat creative works opportunistically, as a commodity.

Meanwhile, many authors keep attempting this path, with all kinds of results. According to surveys in the UK, self-published authors appear more content than their traditionally published counterparts, but their sales remain small: the latest Digital Census revealed that three in five reported fewer than 1,000 e-book sales to date. Also, the survey indicated a trend of diminishing enthusiasm for self-publishing, as apparently more authors are realising they will not make their fortune there. In brief, going it alone sure is a hard way to make a living.

The consequences for publishers

The impact on publishers from the digital transition among authors manifests itself in multiple ways. As authors embrace digital technologies, publishers can have an easier time innovating their products, because of the expertise already available from the beginning of the creative process. At a minimum, receiving manuscripts in digital form speeds up the subsequent stages of production.

On the other hand, the characteristics of the ebook market are redefining the relationship between authors and publishers. For a start, while now copyright contracts include digital rights, publishers have had to renegotiate and integrate existing contracts for older publications; in some cases, authors decide to handle their digital rights separately from the print ones, assigning them to different publishers or managing them autonomously (a famous case being that of J.K. Rowlings for the Harry Potter series). The way authors are remunerated has also been called into question, and often authors ask for higher royalties given the lower prices of ebooks.

Coming to the consequences of the surge of self-publishing, although this new model is appealing for unknown writers (and not only) and might be seen as a threat for the industry, its potential for disruption should not be overestimated, as the importance of publishers cannot be ignored. After their success with Amazon, the authors mentioned in the previous section went on to sign deals with important publishing houses; E.L. James in particular saw her sales climb from hundreds of thousands up to over 100 million after signing with Penguin Random House. Publishing companies offer professional editing and marketing services that enhance the quality of the works and can boost sales. In addition, several publishers are now offering services to self-published authors, who have difficulties handling the digital complexity or want to avail themselves of the work of professional publishers in specific individual areas (editorial, marketing, etc.). Moreover, the self-publishing market can be an opportunity for publishers to discover new authors, while reducing the risks related to it.

Finally, as with all other aspects of the digital transition, this is another area in which things are still evolving; it's early to tell where the current trends will lead.

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