

Affordances of writing in digital media in and out of school – Comparing Norwegian 5th-graders’ practices in 2005 and 2017

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Abstract

At present, young Norwegians are spending more time than ever in front of a computer screen (Statistisk sentralbyrå, 2015; Medietilsynet, 2016). How is this use of digital media affecting their writing *in* and *out of* school? In 2017, 5th graders in a school class in Oslo were interviewed about this. In this article, the interview findings are compared with findings of an ethnographic study of media use and writing conducted in the same primary school in 2005. In 2005, the students’ use of digital media *out of* school fostered some extensive writing, yet in 2017 this was no longer the case. Still, certain 2017 students did follow up writing *in* school with a similar kind of extensive writing *out of* school. However, the main findings indicate a style of development whereby school-based writing has become more loosely connected to digital writing *out of* school. In the analysis, the concept of affordance is used to explain this development. In the article’s final part, implications for writing pedagogy are discussed.

Keywords: *Digital media; in and out of school; literacy; writing practices*

Responsible editor: Gudrun Kløve Juuhl and Maja Michelsen

Received: November, 2019; Accepted: May, 2020; Published: December, 2020

Introduction

National surveys show that in the last decade young Norwegians have tripled the time they spend before a computer screen (The Norwegian Media Authority, 2016; Statistics Norway, 2015). The question raised in this article concerns how this increase has impacted their writing practices *in* and *out of* school. The article presents a qualitative study conducted in 2017. Interviews with 14 students of a 5th-grade school class in Oslo were performed about their writing practices and experience of writing on their own in digital media. The writing practices they report are compared with findings

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Citation: H. Skaar. "Affordances of writing in digital media in and out of school – Comparing Norwegian 5th-graders’ practices in 2005 and 2017" *Nordic Journal of Literacy Research*, Special issue: *Barn og unges tekstspraksis på fritiden*, 6(3), 2020, 70–90. <http://dx.doi.org/10.23865/njlr.v6.2034>

of an ethnographic study regarding 5th-graders' writing and media use conducted in the same school 12 years earlier, in 2005.

While analyzing the findings according to a socio-cultural approach to writing, the concept of affordance is used to show how the communicative templates offered by digital media are both shaping and shaped by users' individual practices over time. The outcome is that digital writing spaces emerge, change, or disappear. To illustrate the related implications, the students' digital writing practices on a particular website in 2005 are described in detail. The digital writing practices reported in the interviews with the 2017 students are then compared against practices from the 2005 case. This comparison reveals the possibility–preference dynamic encapsulated in the notion of affordance. Overall, the findings show this dynamic is creating a bigger gap between writing *in* and *out of* school.

This is relevant with regard to educational policy decisions aimed at completely integrating digital media into students' everyday life *in* and *out of* school. At present, Norwegian primary schools are in a process of introducing iPads as a learning aid for every single student. The Norwegian Directorate for Education and Training is supporting ever more Norwegian municipalities in their efforts to distribute tablet computers to all students in as many primary schools as possible. The goal is to «improve the academic and personal outcomes acquired by the pupils from their schooling» (Krumsvik et al., 2018, p. 153). Studies of the learning outcomes of tablet use show mixed results (Haßler et al., 2016; Krumsvik et al., 2019). One may assume that using iPads as a learning aid makes students spend more time in front of a screen, but the important question here is how that time is actually spent. Writing is a case in point. For students to progress as writers, they must believe in the utility and usefulness of the written mode itself. Writing understood as a social practice depends on a cultural context to be experienced as meaningful. Students regard presenting, shaping, developing, exploring, and confirming themselves socially in digital media as meaningful. However, use of the written mode to accomplish this is not necessarily following suite. The 2017 students reported greater use of digital media *out of* school, but were no longer engaging in the same digital writing practices identified in the 2005 ethnographical study. The affordances of digital media made them opt out of writing. Possible implications for writing pedagogy are raised in the final part of the article.

Theory

Affordances of writing in digital media

This article compares how school-based writing practices relate to the communicational affordances of writing in students' everyday use of digital media at two points in time. Gibson's initial theory of affordances explained people's actions on the basis of how they perceived objects in their environment (Gibson, 1986). In his view, objects are defined in interaction with users. Digital media may be considered

as objects with which users interact based on the affordances they perceive in a given social and cultural context (Graves, 2007; Hutchby, 2003). Digital media restrict or limits this interaction, while the malleable nature of digital media means that at the same time users are constantly switching between digital media in the pursuit of their communicative goals (Carmen, 2007; Creer, 2018). For example, the affordances of a social media website fuel a dynamic in which communicative patterns are gradually altered. The ways the communicational affordances of writing are perceived depend on, and contribute to, users' knowledge and communicative experience, i.e. their digital literacy and writing skills. In this article, the concept of affordance is used to describe this dynamic whereby the communicative templates available to students in digital media are shaped by, but also shaping, students' writing practices. Comparing the students' practices in 2005 and 2017 illustrates this very point. In 2005, students who excelled in writing more easily achieved their goals of everyday communication *out of school*. This gave them an advantage of being able to digitally interact at leisure with their classmates. In 2017, the communicational templates had altered so that the students were allowed to communicate without using the written mode. The move from writing to other modes of expression was well underway in 2005, but in 2017 many students barely included writing in their digital communication *out of school*.

Writing as a social practice *in* and *out of school*

Ever since Emig (1977) distinguished school-sponsored writing from self-sponsored writing, calls have been made to give the latter greater attention in school to stimulate students' engagement in writing. Several studies show that students are more motivated when writing about subjects they are interested in and wish to explore (e.g. Black, 2005; Curwood et al., 2013). Accordingly, researchers argue that making students' *out of school* culture relevant *in school* also means empowering them and giving them a chance to flourish (Hull & Nelson, 2005; Hull & Schultz, 2002; Street, 2003; Street 2012).

In a socio-cultural perspective, writing is researched as a practice closely interwoven with the writer's social and cultural background, interests, and identity (Barton, 2007; Barton & Hamilton, 1998; Barton et al., 2000; Collins & Blot, 2003; Lankshear & Knobel, 2011; Mills, 2010). School-based writing can be situated in practices students understand and identify with, or in practices they do not understand or from which they feel alienated. Above all, writing depends on language. Language is both a key prerequisite for the ability to write and reflects the writer's social and cultural identity (e.g. Heath, 1983). Therefore, researchers have put forward knowledge of, and identification with, school-based language as a pivotal explanation of why students fail or succeed as writers at school.

In a social semiotic perspective, the use of signs in itself implies a learning process (Hodge & Kress, 1988; Kress, 2010) and the notion of literacy is understood in line with this (Jewitt & Kress, 2003; Kress, 2017; Olin-Scheller & Wikström, 2010). When students use digital media, they engage in a multimodal discourse which alters

their literacy as a social and semiotic practice (Kress & van Leeuwen 1996, 2001; Lewis & Fabos, 2005). This article explores what happens to students' writing when it becomes embedded in digital media *in* and *out* of school.

The 2005 ethnographic study

The 2005 ethnographic study was based on data gathered in two observation periods of computer use in a primary school classroom in Oslo (see Appendix 1). The first observation period was at the end of 5th grade, with the second period coming 1 year later (Skaar, 2007, 2008, 2009). The students' writing was explored by focusing on "particular aspects of their everyday life and cultural practices" (Heath & Street, 2008, p. 121). I observed their activities once a week over the 3-month period. In addition to observing quotidian classroom life, the material included short interviews aimed at charting the students' use of computers *out* of school. The students described their use of interactive games, how they chatted on MSN, and their use of the social networking website Piczo.

Piczo was launched in the USA in that year and was soon very popular among young people. Producing webpages for Piczo emerged as the most telling part of the material concerning the students' perceived affordances of digital writing in their everyday life out of school. In the interviews, all Piczo users in the class thought that using the Piczo website was more interesting, engaging, and exciting than school-based writing and interaction. The students explained this with the richer possibilities for digital design available on Piczo plus the fact that "Piczo has nothing to do with school". On Piczo, they "can do what they want". The regulations Piczo imposed formally (e.g. that a user be 13 years of age or that pornography or other inappropriate material is not allowed) did not influence the students' actual use of the site.

After my initial interviews (with all but two students in the class) had shown that 11 students had made their own Piczo webpages, I started to focus on the differences in these 11 students' use of Piczo. To fill in the picture, I also interviewed one class teacher about the students' use of Piczo. The interviews with the students and the teacher varied in length from 2–3 to 25 minutes.

The most engaged students were those who allowed the Piczo pages to play a part in their social interaction both online and offline. The students who shared Piczo pages with classmates used the interactive possibilities on their webpages more persistently than those who just gave out their email and msn-addresses with a general call for response. The latter kind of online interaction tended to fade away quite soon.

A central finding while exploring the Piczo practices was that skilful writing and skilful design are correlated. In my own evaluation, the most skilful designs were produced by students who were good writers. Accordingly, those who found it difficult to write were not compensating for this with a skilful design.

My judgements were supported by the class teacher's assessment of individual students' writing skills. My evaluations of the students' designs were in fact also

confirmed by comments left by peer visitors to the pages. In the eyes of an 11-year-old, being a good copycat can bring much more impressive results than any meticulous construction of personal writing. Nevertheless, the study showed that most students experience skilful design as much more than merely being a good copycat. Hostile and insulting comments flourished in any comment box, but at the same time good design systematically attracted praise:

“Nice site, Kim; P you have worked really well on this one!!!! Keep going :-D
Hugzy from Vera :p.”

“Nice site :-P (Actually one of the best I have visited).”

Those who were not successful with their design were also made aware of this:

“Delete this site, you are wasting Piczo’s memory.”

“Fuck, you should delete this shit.”

Although the study showed a clear correlation between mastery of writing and mastery of design, skilful making of Piczo pages also required practice. This practice was stimulated by interaction with visitors to the pages. Constant redesigning was linked to an interest in the feedback visitors were giving on the elements found on the pages.

Observation of the students’ Piczo pages revealed differences that enabled them to be roughly subdivided into three groups (an internal analytic generalization, see Schröder et al., 2003, p. 148). Arin, Safdar, and Tom were typical members of each of these three groups. A brief description of their use of the Piczo pages can clarify and contextualise their characteristics.

[Arin: Piczo literacy as a school-literacy replicate](#)

In Arin’s opinion, he had learned more about computer use from his father than from his teachers. Arin was the first in the class to prepare a Piczo page. His older sister taught him how to do it and he then shared this knowledge with several classmates.

Arin designed and used his Piczo pages according to the appropriate behaviour guidelines given on the Piczo site. He presented himself with a picture taken in the schoolyard after he had been playing in the snow. In written text, he emphasized sports and training as his interests. Generally speaking, the literacy shown on Piczo was consistent with the literacy he revealed at school – a literacy highly valued by both schoolmates and teachers.

His writing on the webpages was correct and informative, while the semiotic resources copied from other pages and commercial sign providers were mainly of the humorous kind. He included pictures of his classmates and friends along with basically respectful and positive comments. His polls and rating lists were about the music and design he had chosen for his website. In the interviews, he expressed agreement with the class decision not to rate classmates or friends. In the comment boxes on his pages, he received positive and encouraging comments, adding that it was not necessary to delete unpleasant posts. He wrote back on request, but not very

eagerly. The interactive possibilities seemed to interest him less than actually constructing the pages. In the final interview he said that he had not lost interest in his Piczo pages, but his other activities had slowed down lately, as confirmed by a glance at his pages.

Safdar: Make-believe Piczo literacy

Unlike Arin, Safdar used his Piczo pages to present a different literacy from that he revealed in the classroom. In his Piczo self-presentation he was basically pushing himself into the realm of adolescence. Video clips of rap and hip-hop artists presented ‘cool’ and highly eroticised messages, both visually and verbally. The friends he presented were generally not from the class and many of the girls looked older than he did. In his comments, in an innocent way he dropped hints that gave his relationship with these girls a romantic/erotic dimension.

Safdar did not write much on Piczo and most of his sentences were grammatically incorrect. He preferred bullet-points and lists of words and seemed to avoid syntactic constructions.

Safdar counted his visitors on the opening page and was proud to say that the number was always rising. In the interview, he also (understandably enough) seemed embarrassed when asked about the erotic content on his page. He claimed that he likes the male, not the female, dancers in the video clips. He said he preferred the Piczo pages to the school’s use of computers, but also that he now found the Piczo site boring. He did not know why this was the case.

Tom: Dynamic integration of Piczo and school literacy

Tom started with several different Piczo sites by himself, but then became more interested in setting the sites up together with friends. He was thereby operating on several pages at once: his solo site, two different sites with three girls from the class, and a site with a friend from 7th grade. Eventually this last site occupied him the most. The site was constantly being reconstructed during which especially the interactive possibilities were investigated. Typically, while Arin announced his romantic attachments with great caution and Safdar was more ostentatious, Tom was using Piczo to take on the role of matchmaker. Below the heading “Are you single?”, he announced:

“Hi! If you are single, this is perfect for you. Maybe you always wished to have a sweetheart of your own age. Here you can tell what kind of sweetheart you want and I will fix it for you. You can also write down who you like.”

By using the formulation “of your own age”, Tom was hedging against sexual predators. When asked about his offer to be a matchmaker, he said no response had been received yet. It seemed as if the matchmaker role was more a pretext for the last sentence of the invitation. At any rate, this sentence covered the actual use of the page. Everybody used nicknames while discussing the social worth of their schoolmates. Some comments about other students were positive, but many were quite insulting.

Tom and his friend were themselves very explicit in their likes and dislikes. An early version of their page opened like this:

“Hi folk! Hi this page is not for you that like ***! He has got a big ****, just so you know. ... We love Paul Frank and summer, fruit, clothing and Louis Vuitton.”

This quotation shows a mixing of persons, objects and brands typical of the way Tom and his friend gave themselves an identity on their Piczo pages. In later versions of their pages, Tom and his friend named themselves “The Crew”. They not only advised their visitors about which clothes to wear or body lotion to use, but also who they should include/exclude from their social life at school. Their use of commercial semiotic resources in advanced combinations (music, video-clips, pictures, writing etc.) showed awareness of how brands and other commercial semiotic resources could be made socially significant in their local group of peers. Trademarks (e.g. Nike, see Elliot & Leonard, 2004) held a symbolic value that was freely available to any Piczo user. Buying trainers was not necessary. On the other hand, material confirmation of the Nike-affinity might very well be requested offline, implying that the online–offline networking dynamic depended on more than just successful use of the freely available reservoir of signs and symbols on the Internet. Tom and his friend knew how to make the link. Typically, visitors were offered a chance to test their social status in polls measuring preferences for e.g. Adidas or Puma. Likewise, visitors were invited to measure the status of their social background by revealing how they pronounce “Adidas” (different forms of pronunciation in Norwegian imply different social backgrounds).

Tom was one of the most enthusiastic Piczo users in the class. He told me that he kept on with it because he felt he was “getting better and better at making homepages and making them look nice”.

The 2017 interviews

Method

The ethnographical study described above was followed up with a qualitative interview study. Participants were recruited from a 5th-grade classroom located in the same primary school where I had conducted the ethnographic study 12 years earlier. The class teacher and 14 students (7 girls and 7 boys) from the same school class participated. With the 2005 study as a backdrop, semi-structured interviews were conducted to learn how the students’ writing had changed over this time period. Now, 12 years later, with a different teacher and in a different school class, in a sense everything had evidently changed. However, the ethnographic study’s findings were the starting point for further exploration, while the previous findings also served as an analytical contrast with the writing practices revealed in the 2017 interviews.

All 21 students in the class were asked to participate. I received informed written consent from the parents of 14 of them. In line with directives of the Norwegian

National Committees for Research Ethics (Forskningsetiske komiteer), those seven students without written parental consent were not interviewed. Two of the interviews were conducted individually, while four were performed in focus groups (see Appendix 2). The interviews were made between May and November 2017 and lasted 40 to 60 minutes. Unlike the open-ended ethnographic research carried out in 2005, all interviews were conducted and analyzed with an explicit focus on the writing practices the students reported (see Appendix 3). I started with the teacher interview which gave a description of the students' writing and use of digital media in school together with the students' use of digital media and writing activities *out of* school. After the initial individual student interview, I switched to focus group interviews due to my observation experiences gathered in class in May and June 2017. Overhearing the students discussing amongst themselves added to the information I had received from the teacher in ways I did not experience in my initial individual student interview. Therefore, I thought introducing this peer dynamic into the interview situation would be useful.

In the interviews, all students showed they were open and willing to respond to the questions posed. Kvale suggests the subjectivity problem inherent in qualitative research should be addressed by posing a leading question in an overtly subjective manner (Kvale & Brinkmann, 2009, p. 189). I believe assuming this position made me come across as a person clearly representing the school system, not some kind of outsider. In my view, this made the students less likely to underreport their *out of* school writing in the interviews. This is noteworthy considering the modest writing they actually reported.

I started analyzing the transcribed interviews by coding the students' reported use of digital media. The next step was to identify the writing practices involved in this use. These codes were condensed into two themes: extended and minimal writing (Kvale & Brinkmann, 2009, p. 205). Then I coded the reasons students gave for including/not including writing in their use of digital media, i.e. the explanations the students gave for using, avoiding or replacing the written mode with other modes of communication in and out of school. These codes were condensed into four themes: fun, work, cost, and convenience. The bridging of the *in* and *out of* school writing practices in 2005 and 2017 was then compared. At this juncture of the analysis, the theoretical concept of affordance was introduced to explain the differences in writing practices among the students at the two points in time.

Methodological limitations

Although observations and collected student texts underpinned the 2017 interviews, difficulties emerge from comparing natural-occurring data with self-reported data from semi-structured interviews (Kvale & Brinkmann, 2009; Silverman, 2009). In relation to this methodological limitation, I stress that the comparison of the two sets of findings is merely based on a contrast, in that the 2005 material provides the background against which the 2017 material is interpreted. In any circumstance,

this presupposes a certain epistemological position with regard to interviewing as a method. While accepting the objections made against in-depth interviews understood as objective accounts of realities outside the interview situation, the analysis assumes that interviews can provide “evidence of the nature of the phenomena under investigation, including the contexts and situations in which it emerges, as well as insights into the cultural frames people use to make sense of these experiences” (Miller & Glassner, 2011, p. 56). In sum, interviews not only reflect the interviewer–interviewee interaction in the actual interview situation, but also the outside world. The comparison relies on this assumption.

Findings

In school access to digital devices was quite similar in 2005 and 2017, only supplemented with a digital blackboard at the latter point in time. Moreover, the routines for handling the students’ personal digital devices were still the same. Cell phones were collected in the morning and kept from the students during the school day in 2005, as were smartphones in 2017. At neither time were personal digital devices brought into the classroom for use, although the class teacher advised that the school was planning to buy iPads for all students in the near future. In his opinion, this would most likely be followed by a switch from paper to digital textbooks. But not yet.

On the contrary, students’ use of digital devices *out of school* showed a huge increase over the same time period. The class teacher describes the arrival of smartphones in the market after 2008 as a significant shift:

Before smartphones, phones did not capture the same interest. Those old phones were only for making calls, texting and so on, but now the new smartphones had become a full-fledged multimedia device ... it was mainly cheap phones, and phones for children, to start with ... now it’s lots of iPhones ... not the brand new models ... anyway ... because they are on I-messenger, or other Apple-stuff like ...

The class teacher believed that about 90 percent of his students owned an iPhone. Only 1 of the 14 interviewees reported using an android phone instead of an iPhone. At this point in time, all students stated they had experienced outdated PCs, Macs, TVs, and game consoles being replaced by newer versions at home. Moreover, most of these 11-year-olds had already upgraded their smartphones with a newer model two or three times:

I feel my cell is good enough [an iPhone 5S] ... which I got for Christmas. My cell didn’t have any memory left ... a no-good Samsung ... I believe it was like the second Samsung model or something ... I believe I had like four gigabytes on that phone ... like for memory ... and the system took hold of like three giga. (Girl, 11 years old, 2017)

Consequently, a new communication structure was in place. In 2005, the students communicated with each other by email, text message, MSN and on the Piczo pages.

By 2017, the development of new digital devices, applications and websites had expanded the communicational channels available to the students.

Table 1. Digital devices, applications, and websites used for writing by the 5th graders

2005	2017
In school: PC, laptop word, email, elogg, Internet	In school: PC, laptop, smartboard word, PowerPoint, email, Internet
Out of school: PC, laptop, TV, cell phone, Xbox, PlayStation SMS, MSN, email, Piczo	Out of school: PC, laptop, TV, Smartphone, iPad, TV, Smart TV, Xbox, PlayStation, Wii, AppleTV, Wiiyou, Nintendo DS SMS, email, Snapchat, Instagram, Facetime, WhatsApp, Facebook, Musicly, iMessenger, Spotify, YouTube, Fifa, Futdraft, Minecraft, Fortnite, Moviestar planet, Duolingo, Paper 53

Extended writing *in* school

In school, written texts of one page or more in length were typically produced as Word documents in the PC room. In some cases, the teacher’s instructions had guided the students’ writing more closely in 2017 than in 2005. For example, one student described a practice in which the teacher made a template for the students to fill with written text and pictures. This may be understood in light of the direct instruction approach to writing (“writing frames”) that has been pursued in the Norwegian classroom for a decade or more by the Norwegian Centre for Writing Education and Research (www.Skrivesenteret.no).

While writing in the PC room, the “copy and paste” function was balanced against the instruction to ‘write in your own words’:

When we make texts and stuff ... when we are to make a fact-based text ... we use Google to find information ... I google to do any search on something ... but we take only what is needed, and like transform it into our own words ... if not, it becomes ... what is the word for it ... copying. (Boy, 10 years old, 2017)

In 2005, the students described their production of factual texts in a very comparable way. The texts they produced also looked quite similar, as did their production practices.

Minimal writing *out* of school

Out of school, the 2017 students described digital communication with their use of several applications, games, and websites. All the students described this form of digital communication as an important element of their everyday life. Time spent on the Internet had surged, especially due to students’ use of smartphones. Simultaneously, new writing practices had emerged. Writing of text messages was complemented with

chatting in a greater variety of channels than 12 years earlier. Two girls described how in certain instances their interest in drawing had a connection with writing:

I make small cartoons, like, and then I write a little bit [inside talk bubbles].
(Girl, 11 years old, 2017)

This interest was supported in their out-of-school use of digital media:

I love drawing very, very, very much and sometimes I write on the clothing of the persons I draw ... I have an app to do drawings [named Paper 53] and I put them out on public stream. (Girl, 11 years old, 2017)

However, in 2017, 11 of the 14 students reported practically no extended writing at all *out of school*. Their actual writing was restricted to text messages:

Interviewer: What do you write (out of school)?
Girl: "Can you please send me a picture of the math homework?" or "Do you want to meet in the school yard?"
Interviewer: Do you write anything else?
Boy: What do you mean?
Interviewer: For example, does anyone in class have a blog?
Boy: No, no one is blogging.
(Girl and boy, 11 years old, 2017)

When prompted again minutes later with the same question, the girl responded "We have already answered. Do you want us to make things up?"

Concordantly, in no circumstances did the class teacher think the students engaged in much writing *out of school*. In his assessment, their typical activities were googling for information online, reading blogs, and watching YouTube channels. The vast majority of students confirmed this in their descriptions of their own digital media use *out of school*.

The students communicated via a much larger number of digital channels in 2017, but the writing they describe while doing this rarely extended past a couple of words or sentences:

Interviewer: Would you describe your communication on a PC and an iPad as writing?
Student: No, not really or ... I write and I don't ... It like depends where I'm on ... if it's text messaging or Snapchat, then one is writing.
Interviewer: Are you on Facebook, for example?
Student: No, my mama and papa won't allow that before I'm 13.
Interviewer: So, what are you on?
Student: Snapchat, Instagram, Houseparty, Musicly [lip syncing to music].
(Boy, 11 years old, 2017)

All but three of the girls described short exchanges in the form of two or three words as their most typical writing practice out of school. Generally, students wrote more frequently using considerably more digital communication channels in 2017, but their writing practices outside school were less in synch with their school-based writing than in 2005.

Writing is no fun

Writing could not compete with the entertainment and fun the students experienced while engaging in other digital activities. Writing in itself was never a reason for participation, but quite often writing was a derivative of other digital activities. Typically, students described using applications and programs where writing is supplemented with, or replaced by, communicational modes that provide more fun:

(On Viber) ... you can put a filter ... like ... in front of your face and then you can send this to others and stuff ... it's a bit different in a way It's like WhatsApp only stuff can be sent like ... you can like take a picture of yourself ... and then put onto it stickers and stuff (Boy, 11 years old, 2017)

Writing in the form of chatting typically formed a subordinate part of other digital activities like playing games or participating in social media:

- Student: The reason I don't send that many text messages is that I use social media, Snapchat and the like, I use them ...
- Interviewer: So, you use Snapchat ... and therefore you write?
- Student: Yes, then one writes ... and also Instagram and the like because chatting is an option [on Instagram].
- Interviewer: Have you uploaded pictures on Instagram?
- Student: I have not uploaded pictures. I couldn't bear it.
- Interviewer: When others upload pictures, do you make a comment?
- Student: No, I only «like».
- Interviewer: You don't talk?
- Student: [I chat on Instagram] but not in the comment boxes, like. There is a separate chatting thing.
- Interviewer: Why do you choose Snapchat at one point in time and Instagram at another?
- Student: Because someone else is on there [the one I choose].
(Boy, 11 years old, 2017)

In their prolonged social interaction, online writing is never described as a prior activity and is also kept to a minimum.

Writing is too much work

Many students opted out of writing to save work. They found using other modes of communication faster and easier. Although digital communication was more common in 2017 than in 2005, it implied only minimal use of writing, sometimes only “likes” and “strikes”. (This means you and your Snapchat friend have snapped each other every day for over 3 consecutive days. Emojis are often used for striking.) Tagging pictures and linking videos had become more common than writing:

- Student: I don't actually chat that much with others on Insta[gram], I mostly use Snap[chat]. But if I watch a funny video, you know, and a friend has not seen it yet ... I can tag him ... like I tag his user, so that he can see it too.
- Interviewer: In this kind of message, what's the most extensive you have written?

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Student: Eh ... two sentences.
(Boy, 11 years old, 2017)

Writing a diary had been a fad among girls in the class, but that was during the previous school year:

Interviewer: Some time ago, some people were writing diaries. Do you?
Girl: Well, I did, but got tired of it and threw the diary in the bin.
[girl and boy are laughing]
Interviewer: When did you write this diary?
Girl: In 4th grade, I believe ... and I finally tore it into pieces and threw it in the bin because I got tired of it. [the boy laughs]
(Girl and boy, 11 years old, 2017)

Writing is costly, but sometimes convenient

Students described how costs, features, and access to friends decided which channel to use at any given time: “Someone in my class told me that texting costs one (Norwegian) crone per message and therefore I had to download Viber in order for us to text, and ... so I did” (boy, 11 years old, 2017). Generally, the students were communicating through free-to-use channels like Snapchat, Facetime, WhatsApp, and also the optional chatting functions available in online games and social networking sites (e.g. Fortnite or Facebook). However, phone calls and texting were sometimes found to be a more convenient option, for example to communicate with parents.

School-based writing spilling over into leisure time

A couple of girls described being involved in practices which connected writing in and out of school. When interviewed, the students were in the middle of working on a fantasy story in school which had inspired them to write *out of school*:

I started writing a story at school and thought it was so fun to do it [that I keep on by myself at home] ... because I had so much in my head that I wanted to get out ... and now the story is like 3 pages long. (Girl, 11 years old, 2017)

Moreover, another girl made the in–out of school connection explicit, although in a way she might have anticipated would please the interviewer:

Whenever we went on an excursion or something in second and third grade we wrote about it in a log [book] at school afterwards ... Maybe we got inspired [to keep a diary at home] but it's like ... I don't know, maybe it is not all the same. (Girl, 11 years old, 2017)

Notably, in these cases school-based writing impacted writing out of school, not the other way around:

When I'm bored, I sometimes write small stories ... descriptions ... it's sort of practicing, kind of, because now we are working a lot with fantasy [at school]. It's because I want to do well at school, but also because it's so fun to come up with your own stuff. (Girl, 11 years old, 2017)

Eager writers

In both 2005 and 2017, a couple of girls stood out for having a particularly strong interest in writing. In 2005, the most eager writer told us she had written “a lot of books and I want them to become movies. Not cartoons...». She was fond of expressing herself in several formats, digitally and longhand, in addition to being in a group that stood out for integrating extensive texts in a skillful design on their Piczo pages.

Further, one of the girls in the 2017 class wrote much longer written assignments than her classmates. She also described how she wrote letters longhand to her great grandfather because she knew he was not online. She stressed that he would then be able to “hold on to it [the letter]”. A similar appreciation of the written word was not voiced by any other student in her class. No one else wrote letters, although some stated they had written postcards to their grandparents during the summer holidays.

Conversely, many students described writing in longhand in 2005. One student explained his choice of writing technology as: “writing longhand is better if you are to write to someone, but for school-based assignments digital writing is better” (boy, 11 years old, 2005). In any case, the letter writer was going against the grain in 2017. She produced extensive written texts both longhand and digitally, regardless of any interest and support from her teacher and classmates. Like the most eager writer in the 2005 class, she stood out for writing extensively in several different formats. For example, she described how in many instances her texting was more extensive:

Among the girls in class, it happens that someone is ill, for example ... and then one is expected to say something ... like ... depends what it is ... if it has been an extensive explanation of something [in class] for example ... it might be that we are sending a long message back [to the sick classmate]. (Girl, 11 years old, 2017)

These two girls may be characterized as “deviant cases” (Silverman, 2009, p. 472) in the datasets. Their writing was driven by a genuine interest in expressing themselves and carried out by use of whichever technology they found apt and accessible, both *in* and *out* of school.

Changes in the perceived affordances of writing

Although the website’s name suggested pictures were the primary mode, the 2005 students did not perceive Piczo as a place where writing could be opted out of. The typology of the students as Piczo users shows that even students who were struggling with writing felt they had to present themselves in writing on their pages. Other than writing, a variety of tools and modal resources were available. However, the students experienced self-produced writing to be an inevitable anchor for the pictures and other modal resources they had assembled, e.g. by using copy and paste (Barthes, 1977). When the students assessed how to best express themselves, the road back to the static homepage of the 1990s was short enough to make writing the chief mode on the pages they produced. Other modes were perceived to hold a subordinate position under the hegemony of the written mode.

In 2017, the affordances of the written mode are perceived differently. In their descriptions of *out of* school communication in digital media, extensive writing is only mentioned by 3 out of the 14 students. This is reflected in the digital media in use. Software producers have developed communicative templates in which copy and pasting, linking, or tagging prefabricated modal resources, as opposed to the production of written text, has become the dominant communicational practice. At this point in time, when students engage in digital communication they understand the affordances of writing in light of the affordances of the huge variety of other tools and modes available. The ‘school-based replicate’ is no longer seen as necessary in *out of* school communication, nor the ‘dynamic integration’ of *in* and *out of* school writing. The 2017 students describe how they want their digital communication to be fun, effortless, and cost-free. The path of least resistance has gained ground, and the writing process is opted out of by the great majority of students who were interviewed. Writing has been replaced by readymade resources of the kind used by students constructing a ‘Make-believe Piczo literacy’ in the 2005 ethnographic study.

To sum up, the 2017 students’ use of communicational templates not requiring extensive writing reflects an overall development in which the conditions for writing outside the classroom have changed significantly. The communicative templates have altered in ways that make students’ ‘school-based literacy’ unnecessary and, if this is the student’s preference, at the same time allow ‘make-believe literacy’ to take the front seat in *out of* school communication. Writing has become subordinated to other modes. In their digital media use, the students can successfully participate without integrating extensive writing into their textual production at all. Consequently, *out of* school writing practices have moved further apart when it comes to school-based writing.

Discussion

With reference to Geertz (1973), Graves uses the concept of affordance to explain how a technology “exerts its own pull” within a given culture (Graves, 2007, p. 335). He understands an emerging digital genre as “a set of affordances, the communicative template that results when culture renders technological possibility” (p. 338). In other words, the notion of affordance conceptualizes how technology depends on culture to be brought into use in specific ways.

This study has shown the affordances of digital technology to affect writing *in* and *out of* school differently at the two points in time investigated. One way of seeing this widening gap between writing practices *in* and *out of* school is by distinguishing the writing *process* from the written *product*. The writing process is at the core of the school-based writing culture. Therefore, technology is used in school to facilitate writing without any intent to do away with the writing process. The affordances of e.g. keystrokes, spell-checks, word lists, templates, and translation programs all make the digital writing *process* easier, but engagement in this process is still the rationale for making a student produce written texts. *Out of* school, the affordances of digital

technology and media are not to facilitate the writing process but more direct and effortless access to the *product*, i.e. the text, either written or in other modes. Therefore, the writing process is not evaluated in the same way.

In school, the writing *process* is still appreciated in 2017. Thus, writing practices, although gradually facilitated by the use of new digital tools, have remained relatively stable. *Out of* school, extensive writing is no longer necessary to communicate or produce a compelling self-presentation.

UNESCO defines writing as a basic skill and an important part of the literacy schools should provide all students with (UNESCO, 2005). In the Norwegian national curriculum, writing is considered to be highly functional for the learning of any school subject (Norwegian Directorate for Education and Training, 2013). In Norway, initial literacy education that teaches students to read and write is finished by 4th grade. Some problems occurring at the end of this phase, when students are expected to read to learn, are referred to as “the 4th grade slump” (Chall & Jacobs, 2003). Students have acquired the basic skills but, as texts become more advanced, some struggle to understand what they are reading. Likewise, some students lag behind when a difficulty emerges in relating transcription to discursive content, the ability to write about something (see e.g. Roessingh et al., 2016). This explains why stimulating 5th-grade students’ motivation for extensive, elaborate, and thoughtful writing is so important.

As writers, young people cannot escape the affordances of digital media. They can be kept from bringing them in for use, but awareness of their existence will not disappear. We should note how this awareness came to light in the interviews with the 5th graders in this study. Importantly, the affordances of digital media very powerfully affected their understanding and evaluation of writing on an overall level.

The communication templates are the same for all age groups, 5th graders and adults alike. The writing culture within each group decides on how the technology is brought into use. For most of the 5th graders, the willingness to engage in the writing process was abandoned when affordances allowing them to opt out became readily available. At this stage, a strong writing culture seems to need some kind of vertical support (parents or teachers) because the horizontal influences (of peers) point in the direction of communicational templates rendering the writing process superfluous.

Notably, the findings presented in this article are based on two small samples of 5th graders, who in no circumstances can be called advanced writers. They are starters who need to experience the advantages of extensive writing to become devoted writers. It should be noticed that their *out of* school writing was friend-based. Students become part of a variety of cultures for writing as they grow up, and interest-based writing is normally developed at later stages (Ito et al., 2010; Juuhl, 2014). Therefore, future research should investigate whether writing practices *in* and *out of* school reveal a similar pattern in larger and more diverse populations of students.

If so, a further increase in young people’s use of digital media *out of* school should not be expected to exert a pull towards more extensive writing. On the contrary, it

might in fact call for educators to make greater efforts to ensure students understand the rationale for, and value of, thoughtful, elaborate, and extensive writing. Pedagogically, one should emphasize the need to support the process of writing top-down, which might then lead to peer-based dissemination of writing practices which are still believed to foster reflection, learning, and personal growth.

Author biography

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Appendix 1

Data collection and analysis in 2005

Data	No. of informants	Volume	Analytical Procedures
Piczo pages (A commercial social website)	13/22	13 pupils producing between 5 and more than 100 pages	Pages downloaded, content (images, icons, audio, animations, videos and written text), contrasted with content on the eLogg pages
eLogg pages (A school-based social website)	21/22	21 pupils producing between 7 and 18 pages	Pages downloaded, content (images, written text), contrasted with content on the Piczo pages
Interviews	20/22	Informal interviews in front of the pupils' own webpages 4 hours of video recording	Informal interviews Video-recorded, transcribed, and interpreted
Classroom observations	22/22	26 observation sessions 60 pages of field notes 12 hours of video recording	Interpretation of video recordings and field notes relevant for contextualizing textual production on the Piczo and eLogg pages
Non-digital text production in the classroom	22/22	19 jotters, tests, writing, and drawings	Compared with texts on the Piczo and eLogg pages

Appendix 2

Data collection and analysis in 2017

Data	No. of informants	Volume	Analytical Procedures
Interviews	14/21	5 semi-structured focus group interviews with students and the class teacher 5 hours of recording	Interviews, transcribed, coded, condensed, and interpreted
Classroom observations	21/21	10 observation sessions 20 pages of field notes	Interpretation of field notes relevant for contextualizing the school-based writing described in the interviews
Non-digital text production in the classroom	21/21	24 jotters	Used as a background for interpreting the student interviews

Appendix 3

Interview guide

1. Access to digital media

- Which digital media (such as a cell phone, PC, iPad, Smart TV) do you have access to at home?
- Which digital media do you have access to at school?
- What kind of digital media devices do you own?

2. Use of digital media at school

Communication:

- Do you ever use your cell phone at school?
- Do you talk to each other through a PC/tablet when you are at school?
- Do you send something to each other in class?
- Do you write or send something to someone else through social media while at school?

Reading text:

- Are you online (for example, through Google) when you're at school?
- Are you on social media when you're in school?
- Do you watch films on a tablet/PC at school?
- Do you read books on tablets/PC?

Writing text:

- Do you write on a PC/tablet at school?
- In which subjects do you write?
- What are you writing?
- How much/often do you write?
- Do you make audio or movie recordings?

3. Use of digital media outside the school

Communication:

- What do you use your cell phone for?
- Do you talk to others through a PC/tablet or other media?
- How do you communicate with others on your PC/tablet? (font, images, video?)
- Do you communicate with someone in the class?

Reading text:

- Which sites do you visit?
- Are you on social media?
- What do you like to see, hear, or read online?

Writing text:

- Do you write anything on the Web/social media?
- Who are you writing to?
- Do you create webpages yourself?
- Do you have a blog?