

# Screen-based reading practices – results of the *Study on children's and adolescents' reading habits and attitudes*

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This article focuses on how digital technologies are used in the reading practices of adolescents. The results presented here are drawn from a study of young people's reading habits. One of its aims was to determine students' online reading habits. Selected results are presented from the qualitative and quantitative stages of the study. The quantitative stage was conducted in November 2013 with 1721 students completing primary school and 1816 students from lower secondary school. The paper reviews its key findings about how students read books: offline or online, printed or on-screen, whether they look for information about books on the internet and whether they use the internet as a source of reading material.

**KEYWORDS:** readership; sociology of education; sociology of culture; primary school; lower secondary school; media literacy; media education.

This article is about the ways information and communication technologies are used by adolescents in their reading practices, and is based on the results of the *Study on children's and adolescents' reading habits and attitudes* (*Badanie czytelności dzieci i młodzieży*). One of the aims of the research was to answer the question: To what extent are reading practices performed that are closest to reading books while using electronic media: mainly the computer screen, but also electronic readers, mobile telephones and other internet resources. The study focused on book reading as an indicator of the receipt of longer and more complex texts. The subject of the analysis were read texts, including the electronic substitutes of books and longer written works (e.g. articles,

poems), which may also exist in print version. All electronic versions of texts available on the internet or saved in digital formats, e.g. as postscript files, e-books, hypertext, were taken into account.

## Theoretical context

One of the manifestations of the written word is the diversity of the internet's offer. The internet is difficult to use without having mastered literacy skills. However, the proportions of text to image and sound vary, depending on the individual ways this medium is used. Young people brought up in an environment surrounded by new information and communications technologies have certain common characteristics, e.g. the inclination to multitask (listening to music,

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surfing the web, doing homework, watching TV), which entails specific cognitive consequences (Roberts, Ulla, Foehr and Rideout, 2005). Different methods of using the internet provide teenagers with daily access to a variety of communication tools (e.g. Federowicz, 2014; Filiciak, Danielewicz, Halawa, Mazurek and Nowotny, 2010), which are also often used by them to create (Alvermann, 2007; Black, 2008; Livingstone, 2008) or experiment with virtual identities (Kirwil, 2011). As a result of such behaviours, they are building new social capital (Lenhart, Purcel, Smith and Zickuhr, 2010).

However, the generation of "the children of the Web" is not homogeneous. The results of research (e.g. Livingstone, Haddon, Görzig, Óafsson et al, 2011; Wilder and Dressman, 2006) suggest that young people recreate their off-line habits on-line, including the ones present in their social environment. In effect, the intensity and ways of using the internet, digital competencies, communication and actions initiated through computer networks are very diverse, dependent on the children's and adolescents' age, gender and parents' socio-economic status or local culture, as well as on how long they have been using computers (Brown and Marin, 2009; Czapiński and Panek, 2014; Ellison, Steinfeld and Lampe, 2010; Federowicz, 2014; Lenhart, Madden and Hitlin, 2005; Livingstone, Bober and Helsper, 2005; Sijko, 2014; Siuda et al 2013).

The methods of using the internet in the context of reading practices can be viewed from a variety of perspectives. Information and communications technologies, especially since Web 2.0 solutions have become widespread, the ability to create and send messages, have indirectly transformed the process of reading (Gwóźdź, 2008; Jung, 2010; Kress, 2007). What is more, new opportunities for the social circulation of books have been developed. New methods of distributing and sharing texts, frequently depending on the appropriate hardware,

software, are worth noting. By using mediated social networks, electronic forms of communicating content can be instantly distributed, commented and even processed at the same time (Jenkins, Ford and Green, 2013). In this way, new forms of text circulation emerge, assuming new social functions, and the text recipient has the opportunity to become its co-author. A reader can post opinions about a book s/he is reading or write its sequel in an internet forum. Readers of popular texts do not have to be passive, they can reinterpret texts, maintaining distance, irony and a sense of humour towards them. These possibilities enable readers to become involved and create new types of active reading communities.

In an analysis of reading practices, another question arises: How do electronic texts or books change the process of reading? There are many consequences of the transition from reading in print to reading an electronic version, they are the effect of fusing computer and information skills with the literacy skills of readers (Fedorowicz, 2014). The evidence of the effects of this change is diverse. The first ones demonstrate that irrespective of the form of the text, reading on a screen is slower, readers rather select brief messages, read only extracts, and often stop reading. As a consequence, reading is not as careful, and there is poorer understanding of the content (e.g. Carr, 2011). Methods of attracting attention, e.g. on internet websites, are varied and depend on how the sites are designed (Nielsen and Pernice, 2010). On the other hand, arguments about the new functions of digital text are raised, for example, they enable the development of many acquired skills. Surfing the web can exercise and develop the brain, cognitive skills, interpersonal communication, which has been shown e.g. by the publications of Clay Shirky (2010) or Don Tapscott (2010), devoted to the generation raised in an information technologies and internet environment.

From the perspective of reading – the subject of this study – the results of empirical studies on the new forms of using the written word and their presence in different media (e.g. Knobel, 2007) are significant. It is not possible to separate literacy from technological, economic and social changes. Cultures dominated by writing for centuries are becoming more image-oriented, and the printed book is losing primacy to the screen as an increasingly important means of communication. Gunther Kress (2007), searching for the essence of changes in the forms of communication, indicated the distinctiveness of the logic of spoken and written messages in relation to messages based on an image, which is not organised by narration, but by space. Reading a text requires a linear order, reading an image gives you the possibility to choose the order of reading its different elements. Kress specified the most important consequences of this transition from a piece of paper to a screen: interactivity and interpersonality (social impact), and additionally: multimediality and hypertextuality (semiotic meaning) and remediation. Hypertextuality shows the non-linear, heterogeneous and multi-thread nature of the digital text, whose form enables the reader to e.g. navigate the screen, change the thread and independently choose the contents being read (Nielsen and Pernice, 2010). Remediation (Bolter, 2014; Bolter and Grusin, 2000) means the mutual penetration and impact of different communication means on each other.

In this communication melting pot of many forms of writing, new contexts appear, providing the possibility of creating senses requiring new skills of “reading” the content – often ignored by school (Alvermann, 2010; Livingstone et al, 2005; Nowak, Winkowska-Nowak and Rycielska, 2009). A proposal has been made to integrate literacy skills taught at school with the everyday out-of-school practices of students.

The presented study focused not on the process of reading on the screen itself and its consequences, but on the reading practices of electronic texts (Bolter, 2014). The ways of using new communication technologies for the social circulation of books were emphasised. The following segments of reading practices using information and communication technologies to read and circulate books were analysed: (a) searching for information about books (information about new releases, authors, reviews); (b) treating the internet as the source of access to electronic versions of texts being read (downloading full contents or extracts, e-books, articles, books, using electronic libraries from the Web) – which requires the use of a screen, and (c) buying books through the internet. Adolescent readers also described how they read books: in electronic format reproduced on a screen (computer, mobile telephone, reader, tablet) or in print. Separately, students stated the frequency of reading other types of texts: press, magazines, comic books, news articles etc. in both of the above forms. Information on reading practices collected among the students related to two contexts: required reading for school and reading for pleasure.

### Methodology

The aim of the *Study on children's and adolescents' reading habits and attitudes* was to identify the reading experiences and attitudes of Polish students, differences in the ways they read for personal pleasure and school, and the motivations related to this. The study subjects were twelve- and sixteen-year-olds (Zasacka, 2014), which enabled us to observe changes in reading attitudes in adolescence, as well as present the dynamics of forming literacy skills and reading for pleasure. The analysis of the results enabled us to determine the social

reach of books in the studied groups of adolescents, and to indicate which students are beyond the reach of books. The analysis of the responses allowed us to describe student reading practices and their social and demographic diversity.

The study consisted of two stages: qualitative and quantitative, and was carried out among students completing primary and lower secondary schools. At the qualitative stage, conducted in December 2012 and January 2013, 48 individual in-depth interviews were carried out: 24 with 6<sup>th</sup> grade primary school students and 24 with students in the third year of lower secondary school. The study participants were young book readers from various social and cultural backgrounds: those attending small rural schools, schools in small towns and one school in a large city. The quantitative stage was based on an auditorium survey of students from one primary school 6<sup>th</sup> grade class and one third-year lower secondary school class chosen from a random selection of schools for the study. The survey was conducted November 4–29, 2013 at 202 schools throughout Poland: 100 primary schools and 102 lower secondary schools – 3537 students in total, including 1721 primary school students and 1816 lower secondary school students. The response rate at the level of the school sample was 84%. It was slightly lower in the primary schools (83%) than in the lower secondary schools (85%); additional samples were not used. The results were weighted to reflect the share of particular variables (size of the place of residence) in the population and adjust for the fact that not all students from the drawn sample participated in the study. All rates of responses provided in this article take into account the analytic weights and should be treated as representative for the population of 6<sup>th</sup> grade primary school students and 3<sup>rd</sup> year students of lower secondary schools.

### **Twelve-year-olds in the Web**

On the basis of the analysis of the results obtained in the quantitative part of the study, different forms of using a computer and the internet were observed among the students graduating from primary school.

Almost all of the homes (98.4%) of the students participating in the study had computers. However, not all students had their own exclusive hardware. Only one in three declared this, of whom 28% were rural dwellers and 38% lived in cities of 100 000 residents. These results coincide with the observations of studies carried out in the last two years on representative samples of Polish households with school aged children (Czapiński and Panek, 2014; Sijko, 2014). The highest number of children with their own computers are from households with parents who completed higher education and have a rich collection of books. Almost all twelve-year-olds (97.5%) have access to the internet at home and this is where they use it most frequently. These children (like the lower secondary school students) use the internet not only through a computer, but also through mobile phones, television sets, game consoles (Kirwil, 2011) and other portable devices, such as smartphones. The latter, “smart” devices have been made available to children only recently. Research shows that in 2010, only 5% of Polish children were connected to the internet through smartphones (Kirwil, 2011).

Generally, almost all sixth-graders use a computer; only 4% of them do not use it at all. During their free time on a weekday, they most frequently spend 1–2 hours in front of the computer (44%; Figure 1); only every fifth student spends less than an hour in front of the screen. Quite a large group, constituting 32% of total respondents, use a computer intensively, spending more than 3 to 5 hours a day in front of it (36% of boys and 26% of girls). There is also a group of

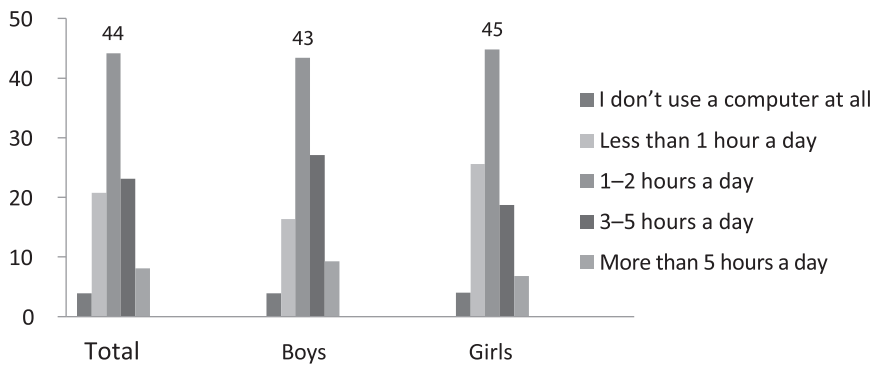


Figure 1. Distribution of responses (%) of twelve-year-olds to the question: "How much time on a weekday in your free time do you spend using the computer (including playing games and surfing the internet)?"

*N* = 1696, boys: *n* = 888, girls: *n* = 808. The number of students answering particular questions varies because persons who did not respond to the question were not considered.

addicts who devote over 5 hours a day to the computer. This is a relatively small group – 8% of the total of twelve-year-olds from different social backgrounds (9% of boys and 7% of girls).

The vast majority of twelve-year-olds (more than 70%) use a computer regularly, i.e. at least once a week. They visit social networking sites and listen to music. At least half of them regularly communicate via electronic mail and instant messengers and watch films. A large part (62%) of students use the computer to do their homework.

The differences in computer use between boys and girls are not large; however, a certain trend is observed, which perpetuates among older teenagers. Girls more frequently listen to music and are more active on social networking sites, whereas boys more frequently communicate via e-mail, participate in online forums and watch films on their home screen (Lenhart et al., 2005; Zasacka, 2012). However, there is one practice typical for boys – online games; 73% of boys and only 43% of girls regularly spend their free time playing online games.

It is worth noting that among twelve-year-old computer users, there is a group

creatively engaged in circulating online material (sound, visual, print). As many as 27% of respondents declared that they create their own websites, have their own blogs or moderate blogs, and as many as 16% do so regularly. Even a larger group (31%) publish their own films or music productions online. There is also a category of young writers – as many as 16% of respondents produce their own texts from time to time, which they publish online, and every tenth twelve-year-old declared that they do so at least once a month. It should be added that girls are more active in this kind of writing.

### On-screen reading among twelve-year-olds

Students answered questions on the frequency of reading different types of texts on the screen of a computer (or other device), including texts published in the internet. This is how they most frequently read information and articles for their out-of-school interests (Figure 2), but also for school learning (Figure 3).

Every second student of primary school regularly reads online texts containing information not related to school, and 57% – materials needed for school learning.

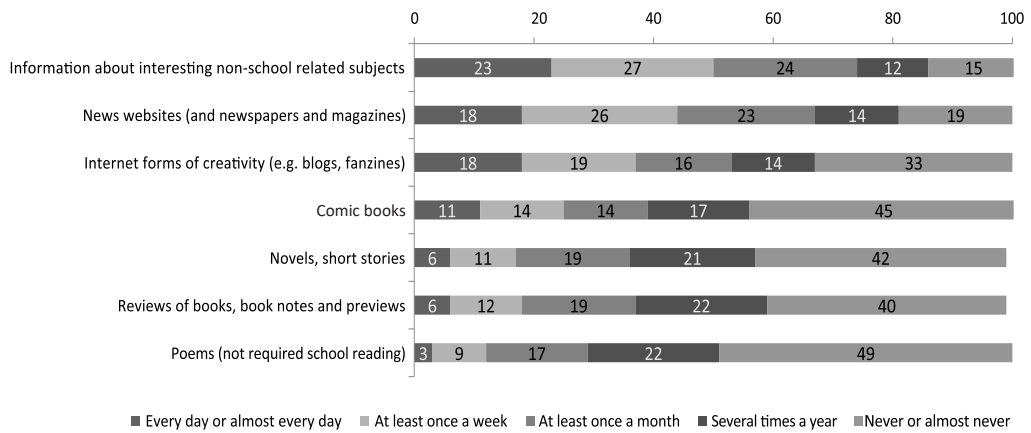


Figure 2. Distribution of responses (in %) of twelve-year-olds to the question: "How often do you read on the screen or in the internet?" (practices not related to school learning;  $N = 1669$ ).

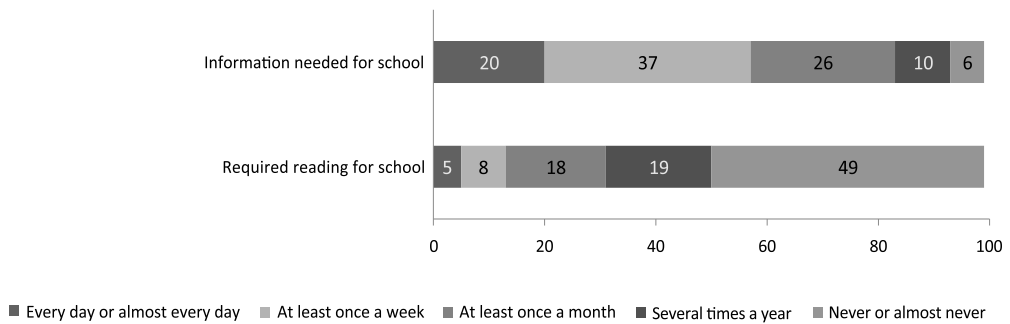


Figure 3. The frequency of twelve-year-olds reading electronic editions of texts needed for school ( $N = 1669$ ).

Girls and boys coming from different social backgrounds search for needed information online with similar frequency. Moreover, the typically "literate" (relating to the text) manner of using the internet is also significant: almost every second student (44%) regularly reads news and press websites available online. A large group (as many as 37%) regularly read the works of other internet users e.g. blogs and fanzines – girls prevail among these respondents. However, remediated texts also available in print version (fiction, poems, and even required-reading books) are read on the screen much less frequently. Comic books stand out as the most

frequently read type of publication in this group, with boys more frequently engaged in this. 30% (only 19% of girls) of them declared that they regularly read comic books online. Comic books are a special genre of publications, they are often more easily accessible in the internet (particularly in foreign languages) than in print form.

The respondents also stated the form in which – traditional or on-screen – they had read two recent books in their free time, and how they read the most recent book required for school (Figures 4 and 5). A small number of books were opened on the screen – they were more frequently books read in free time



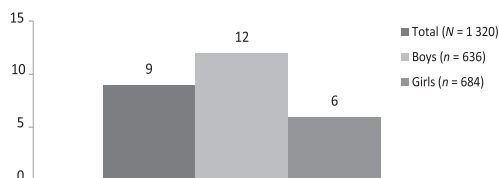


Figure 4. The frequency of reading electronic books (e-books) in the free time of twelve-year-olds (%).

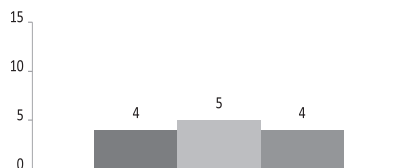


Figure 5. Distribution (%) of responses of fifteen-year-olds to the question relating to reading the last required-reading book on a screen (on a computer, laptop, reader, mobile phone).

(Figure 4). Usually, these were non-fiction books on a subject relating to the respondent's interests or self-help books.

Only 9% of twelve-year-olds declared that at least one of the books selected for leisure reading was read on the screen. Such reading practices were more frequent among boys (12%) than girls (only 6%). The frequency of adolescents reading e-books decreased with an increase in the educational level of parents: the highest number of readers of electronic books were respondents with a family member having completed only basic vocational education. In the households with the largest book collections, books were read on screen least frequently. This means that easier access to traditional books encourages reading on paper. If children have a choice, print or electronic version, they choose print. Moreover, developed reading habits as part of the lifestyle at home support the choice by teenagers of the traditional, print format of reading. Reading studies conducted among Poles over 15 years of age indicate that reading literature on new media by adult readers is still a marginal practice

(Dawidowicz-Chymkowska and Michalak 2015). People reading e-books also read print books. These are mainly people having completed higher education.

A small part (4% of the total) of sixth-graders read the last required-reading book on a screen (Figure 5), whereas a much larger group (13%) declared that they regularly (i.e. at least once a week) read required-reading books on the computer, online (Figure 3). A significant differentiation exists. As in the case of books read in free time, children from families with higher cultural capital are more faithful to traditional books. Every third student whose father had basic vocational education and every fifth, whose father had higher education, declared that they regularly (at least once a week) read required-reading books on a screen.

### Fifteen-year-olds in the web

Almost all students of the last year of lower secondary school, like their younger colleagues, have a computer at home. However, a significantly higher number of them (43%) declared that they are its sole users. These are more frequently boys (46%) than girls (39%). In rural areas, only every third student has a computer of their own. A small number of them (3%) do not use or have no access to the internet at home. Compared to students of primary schools, students of lower secondary schools use devices much more frequently, enabling the use of this medium.

This information is consistent with the results of the International Computer and Information Literacy Study – ICILS (Sijko, 2014) and the results of the research conducted as part of the Programme for International Student Assessment – PISA (Federowicz, 2014). The results of PISA 2012 showed that Polish adolescents use mobile phones with internet access (69%), video game consoles (36%), tablets (13%) and book readers (17%). The results of ICILS showed that in 2013,

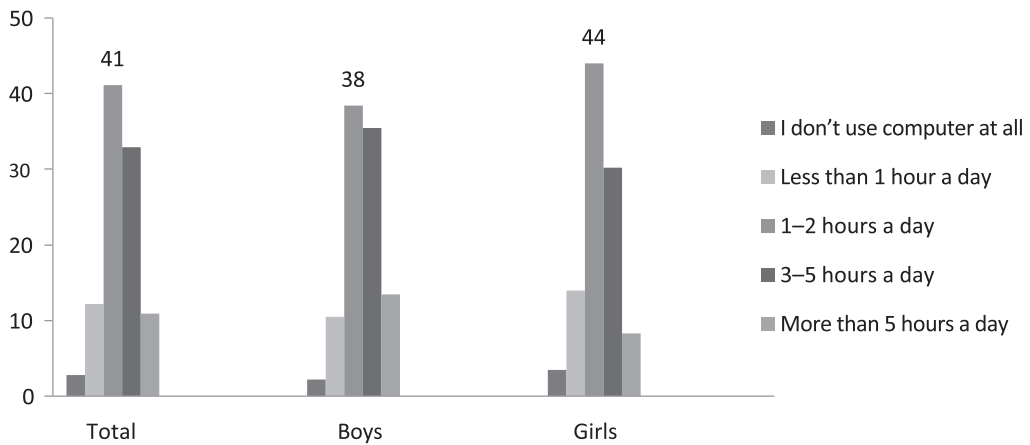


Figure 6. Distribution (%) of responses of fifteen-year-olds to the question: "How much time on a weekday in your free time do you spend using the computer (including playing games and surfing the internet)?"

the most popular access tool to the internet among lower secondary school respondents (at an average age of 14 years) was a mobile phone (63%); video game consoles (12%) and television sets (1%) also appeared.

Lower secondary school students, three years older than sixth-graders, are also more familiar with the computer. They use it more often and more intensively, and in different ways. The largest percentage – 41% of fifteen-year-olds – spend an average of 1–2 hours in front of the computer on a weekday, in their free time (Figure 6). Compared to their younger colleagues, the group of students spending more than five hours in front of the computer is larger – as many as 13% of boys and 8% of girls. Every third fifteen-year-old boy uses the computer intensively, devoting from three to five hours a day to this; among girls, this rate is 30%.

Lower secondary school students use the computer mainly to listen to music. This was found for almost all girls (94%) and 85% of boys; regularly (at least once a week), older teenagers view profiles on social networking sites, and as many as 83% of them do their homework on the computer. It is likely that they perform all these activities

simultaneously (cf. Feierabend, Plankenhorn and Rathgeb, 2014). Additionally, the majority of lower secondary school students (over 60% of internet users) use electronic mail and instant messengers.

Fifteen-year-olds sit in front of the computer screen to watch films as often as twelve-year-olds. However, they less frequently spend their free time to play computer games – especially girls. This type of computer use is by far more attractive to boys, although it is less frequent than among twelve-year-olds. There is a group of internet authors who produce and publish their own written works online. Thirteen percent of students in the last year of lower secondary school declared that they write their own literary works at least several times a year, with a higher number of girls in this group. The size of the group of creative internet users publishing their own materials in the Web did not increase with age.

### On-screen reading among fifteen-year-olds

Lower secondary school students read news websites and online editions of the press more frequently than their younger colleagues. They often search the internet



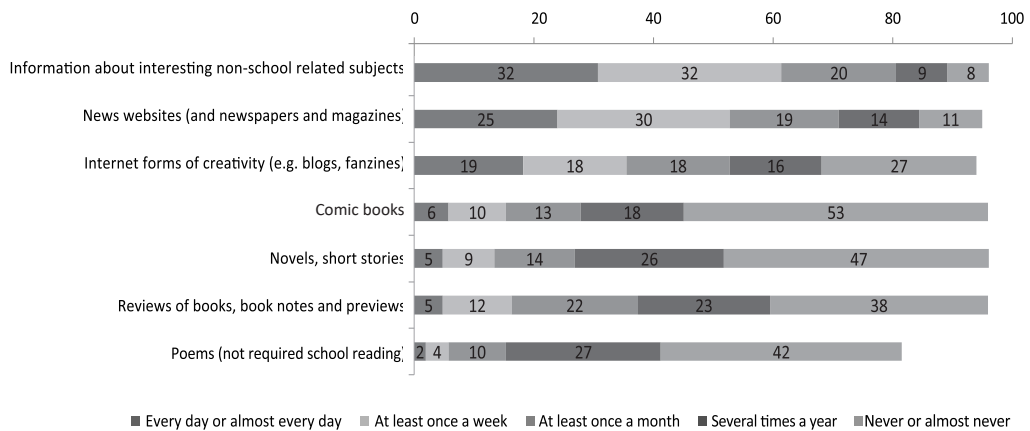


Figure 7. The percentage distribution of responses of fifteen-year-olds to the question: "How often do you read on a screen or in the internet?" (practices not related to school learning;  $N = 1129$ ).

The number of students answering particular questions varies because persons who did not respond to questions were not considered.

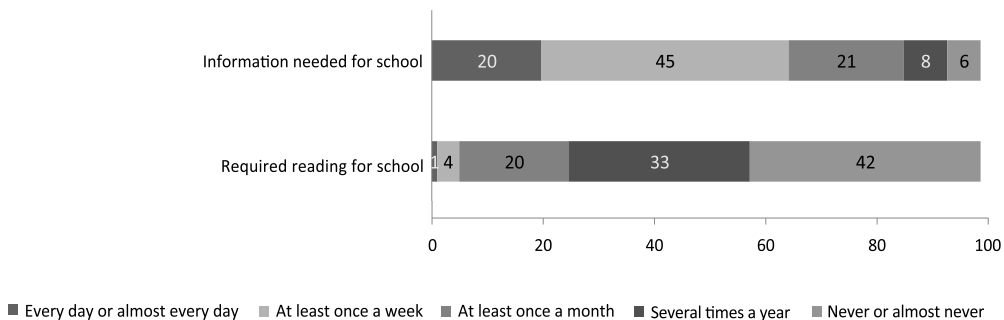


Figure 8. The frequency of reading electronic editions of texts needed for school by fifteen-year-olds ( $N = 1794$ ).

for information and articles developing their out-of-school interests (Figure 7; cf. Sijko, 2014). It is noteworthy that as many as 75% of fifteen-year-olds quite frequently read news websites. This finding requires additional in-depth research on the quantity, quality and subject-matter of this regularly read information. Students from different social backgrounds search for needed information online with similar frequency. However, the influence of cultural capital (expressed by the size of the home book collection)

on boys in undertaking such activities is visible: those who come from homes with a large home library more frequently read news texts in the internet.

The written works of internet users (fanzines, blogs) are as popular among fifteen-year-olds as among twelve-year-olds. Such works are more frequently read by girls: 47% of them declared that they do so regularly (at least once a week), among boys – 29% of them indicated a similar level of regularly reading this form of writing.

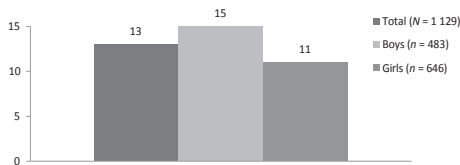


Figure 9. The frequency of reading electronic books (e-books) in free time by fifteen-year-olds.

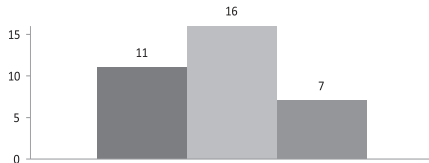


Figure 10. The percentage distribution of the responses of fifteen-year-olds to the question on reading the last required-reading book on a screen (of a computer, laptop, reader, mobile phone).

A small number of students read poetry in the internet – 80% of girls and 86% of boys declared that they do so at least several times a year. Also, this age group rarely selects the print version of poetry spontaneously for reading (Zasacka, 2014). The interest in comic books (published in the internet and in print) decreased – only 16% declared that they read comics regularly. Like sixth-graders, lower secondary school students eagerly read book reviews and pre-views – as many as 39% of them declared that at least once a month they view websites containing such information. It is noteworthy that students from families with the highest cultural capital, i.e. those whose parents completed higher education, and have home libraries with at least 200 books, more often express interest in such websites.

Fifteen-year-olds, like twelve-year-olds, were asked to answer a question about the format of the last two books read in their free time. Among 13% of respondents who answered the question, boys more often than girls selected the electronic version of a book – 15% of boys and 11% of girls (Figure 9).

As in the case of primary school students, reading electronic books (on the screen of a computer, reader, tablet, mobile phone) is more varied than reading other types of digital texts. The greatest differences are associated with the level of parental education – the higher the education, the lower the probability that children will read books on a screen. As many as 17% of children of fathers with basic vocational education read electronic books in their free time, and only 9% of children of fathers with higher education do the same. Furthermore, the size of the home library is negatively correlated with reading e-books: every fourth student with a very small home library (to 10 books) and only every tenth student with a home library of over 200 volumes, have read on a screen in their free time. E-book readers are more frequently found among those who read the least in their free time – these are boys living in small towns (as many as 22%; cf. Zasacka, 2014). The lack of books at home or small home libraries favours the search for texts to be read in the internet. Students in homes with large book collections more frequently select the print version of a publication – they more willingly remain in the area of the traditional, un-remediated culture.

Among the books read on the screen, non-fiction publications relating to hobbies, interests, as well as self-help books and comic books were indicated more frequently than other types of publications. Extracts were often read. Reading books only in their electronic version is also still a marginal reading practice of this age group.

Lower secondary school students read required-reading books on a screen slightly less often than the books read in their free time. There are many more boys in this group – 16% of them read their last required-reading book on a screen, whereas only 7% of girls did so (Figure 10). Students of different backgrounds read required-reading books on a screen, however, those who received

a minimum grade of “good” in the Polish language are found less often in this group.

### Reading on a screen and reading on paper

The results of the quantitative segment of this study confirm the statements made during the interviews by students of primary and lower secondary schools. Respondents claimed that they use the internet mainly to communicate with their peers (social networking sites, instant messengers, electronic mail). It also serves as a support for homework and learning (among others, searching for abstracts of required-reading books, models of composition, and solutions for doing assignments in different subjects). They treat the Web as an additional way of securing required-reading books when lacking the print version and want to quickly access a text assigned by the teacher. Below are the statements of a female lower secondary school student, illustrating this type of use:

R: For example, when they are available at *Wolne lektury* [Free books website], I don't have to buy a required-reading book, and I can read it on the website. And, when I'm in a hurry, this is a fast way of finding a book which I have to read for school.

I: Do you read it then on the tablet?

R: Yes, then I read it on the tablet. Because it's more comfortable on the tablet than on the computer, maybe it's also ok on the notebook, but still I prefer the tablet. It reminds me more of a book than a laptop or computer.

[girl, grade 3, lower secondary school, large city]

And a second example of a statement from a girl attending a rural primary school, who continuously uses the school library:

[...] I rarely read in the internet; if I don't have an opportunity to go to the book store, if the required-reading book isn't available in the library, then on Chomikuj [a popular Polish file-sharing service], for example, *Sposób*

*na Alcybiadesa*, I read three chapters before I got it from the library.

[girl, grade 6, primary school, rural area]

The respondents most frequently admit that they prefer traditional reading – irrespective of the environment in which they are brought up, age or previous reading experiences. They think that this form is more comfortable, helps to relax, does not strain the eyes so much; they also like holding a book in their hands and turning the pages. Even those who use the computer every day, i.e. the majority of adolescents (especially older ones), prefer reading print books.

A traditional one [book]. Yes, for sure, because when you touch the page, it's as if you are feeling the essence of the book.

[girl, grade 6, primary school, rural area]

I said that I like holding a book in my hands, it's relaxing, because I'm not sitting in front of a screen, and it's only then that I can feel differently.

[girl, grade 3, lower secondary school, rural area]

Students only sporadically declared that they use devices or software enabling them to read the electronic versions of books on readers or smartphones. They were mainly concerned with the availability of the book in the internet. However, this is mainly the opinion of adolescents living in large cities, whose parents completed higher education. Those who read books on a screen emphasise that they more frequently read only extracts of works with such media, compared to the way they read print versions, which was confirmed by the survey results.

### The Web as the source of circulating books among adolescents

Despite its undisputed popularity, the internet is still a rarely used source of obtaining (downloading or purchasing) books

that are read in free time by sixth-graders, whereas lower secondary school students do so more frequently. The students explained that they search for books in the internet or buy them in online bookstores when books are not easily available or they were unable to find them in the library or bookshop.

[...] So then I rather order it online or ask for it to be ordered in Empik [a bookstore]. Or sometimes I look for something when I have to read it quickly. And sometimes e-books, but only when I really don't have the time to read the book for the next day of classes. However, I don't really like e-books.

[girl, grade 3, lower secondary school, large city]

More frequently – by far the older group – students search for information on books: reviews, descriptions of new releases, tips relating to the selection of books worth reading (Figure 11).

The internet is the third most frequently selected source of information and

recommendations of books read that are not required for school – as many as 28% of lower secondary school respondents used it immediately after peer recommendations or independently viewing books in the library or a bookshop. The analysis of the diverse ways information is obtained about publications by gender showed that girls are decisively more willingly guided by peer opinions about books, whereas boys prefer to search independently, including among the information available in the Web. Fifteen-year-olds much more frequently use online resources than twelve-year-olds, who, apart from peer recommendations, also rely on the opinions of parents and other adults. Only 13% of twelve-year-olds (this practice is not differentiated by gender) used the information available in the internet when selecting a book that was read in free time.

Students were often unable to precisely describe how and when they had found information on books of interest to them. They

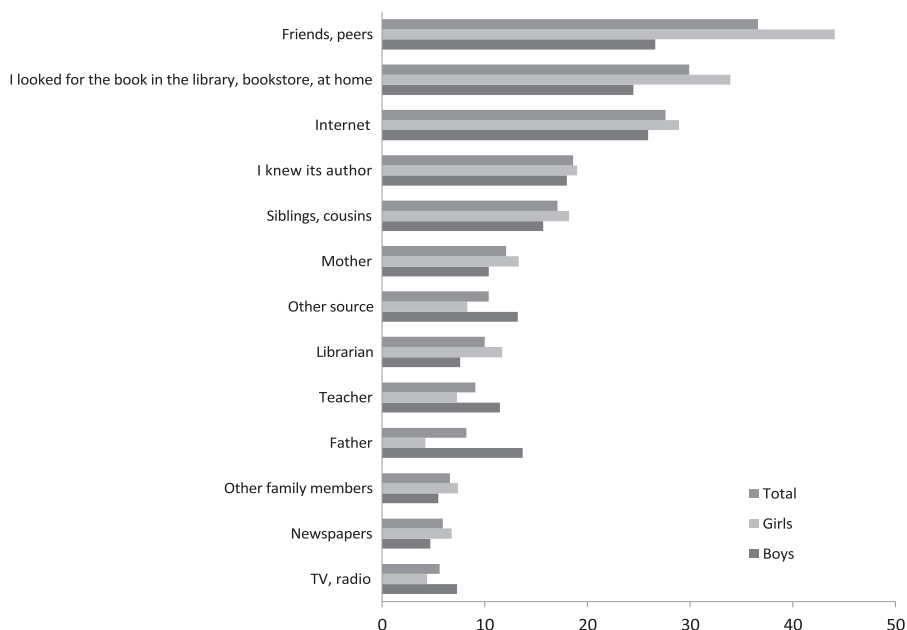


Figure 11. The sources of information of fifteen-year-olds on books read in free time ( $N = 1109$ ).

specified their first steps, indicating Google or Wikipedia, but also forums, publishers' websites or popular bookshops. The studies *Children of the web* (Siuda and Stunża, 2012) and *Children of the web 2.0* (Siuda et al, 2013) also showed that children limit themselves to the results provided in a search engine (and none of the respondents continued on to the second page of the search results), Wikipedia as well as websites answering questions, e.g. *Zadane.pl* or *Zapytaj.pl*. Some students, apart from reviews, willingly read book extracts, descriptions or summaries posted on the websites specified above, enabling them to initially assess the attractiveness of a book (and often this is the only assessment they make).

### Summary and conclusions

Computers are common equipment in Polish households, although most frequently they are used by several household members, especially in rural homes, as well as in families where parents have an educational level below secondary education. About 2–3% of students lack access to the internet among the twelve- and fifteen-year-olds participating in the study. Internet use is a part of the daily life of contemporary adolescents. As they get older, this medium is used more intensively, serving to prepare for classes with increasing frequency.

Students who often use a computer when doing homework, search (and thus read in) the internet for information useful in learning and their personal interests. They read literature and published books much less frequently on a screen. Fifteen-year-old respondents, compared to twelve-year-olds, read e-books both in their free time as well as for their school assignments.

Girls more frequently reach for print books, whereas boys more willingly choose electronic versions, especially of the books read in their free time. However,

respondents generally preferred reading traditional versions of books. They view this as a more convenient and relaxing way of experiencing the literature. It is worth noting that adolescents from homes with greater cultural capital, measured by the level of parental education and the size of the home book collection, less frequently declared that they read electronic books. The presence of reading practices in the home environment fosters the choice of reaching for a traditional book.

Among twelve-year-old internet users, there is a group creatively engaged in circulating online material (sound, visual, print). As many as 27% of adolescents declared that they produce their own websites, have their own blogs or moderate blogs. Over 12% of students publish their own written work in the internet. These are people for whom this new media environment is a natural place for self-presentation, communication, as well as creativity. Their work and its impact is undoubtedly an interesting subject for further, in-depth analysis on participation in culture and the information and communication skills of young internet users.

This active and creative type of presence in the Web occurring during leisure time could be developed to become part of school classes. In the case of Polish language lessons, during which the computer is a most rarely used teaching tool (Sijko, 2014), the integration of out-of-school forms of using modern media in educational tasks and aims could contribute to the development of not only reading and language competence, but also of the ability to develop and present one's own statements. It should be remembered that texts written by non-professionals are among those most willingly read by children and adolescents in the internet. This area is almost completely absent in the Polish language curricula (Siuda and Stunża, 2012). If included as a topic covered in classes, it would become more attractive. This would

also influence a change in the didactic strategies of teachers. Apart from transferring knowledge, they could support students in developing their own interests and undertaking creative activities, encourage them to more actively read the literature present in the media, as well as to raise the information and communication competence of their students.

Comic books, as a popular – especially among twelve-year-old readers – and spontaneous reading choice (read on paper and on-screen) could be more frequently used during Polish language lessons, particularly in primary school. This would enable non-school and school reading interests to be brought closer together and to use the internet as a way of accessing them for this purpose.

Although the group of students reading literary works and e-books on-screen is relatively small, searching in the Web for information on publications, which they would like read in their free time, is much more popular among adolescents. This relates mainly to fifteen-year-old boys, for whom the opinions and information found in the internet are especially important. In this case, an important area of future research is tracking the types of online communities with threads about how the literature being read is received and their forms (e.g. discussion forums, fan clubs), or the ways in which common meanings are developed. Ways of activating internet users in their response to literature users may be an important way of making Polish lessons devoted to discussions of required reading more attractive. They can also foster involvement in school reading and support students' internal motivations (Jacobs, 2013).

Electronic libraries, which are a rich source of digital copies of books, are still not very popular among students. This is an important conclusion for teachers and librarians, who should encourage students to use the electronic versions of

publications, recommend their reliability and trustworthiness. If the books or literary works discussed during Polish lessons are not available in the school or public libraries, or their numbers are insufficient, the resources of digital libraries can support the educational process.

The results of the *Study on children's and adolescents' reading habits and attitudes* showed that students – especially of lower secondary schools – willingly search the internet for information and opinions on the books they read. Teachers should guide their book searches, recommend valuable, interesting links. This is another opportunity to combine personal reading interests with the process of teaching in school. Students, who have thus far used the advice of peers and electronic media to select their leisure time reading, could find the teacher to be a guide to texts available in the Web. Teachers' advice could be valuable for those students who only seek such information to a limited extent, especially when reading habits are not well-developed in their environment, home libraries are small and not much time is spent on conversations about books.

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