Reading engagement and school achievement of lower secondary school students

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The article focuses on the value of reading and the enjoyment of this activity by students of lower secondary schools. The subject of the analysis is the relationship of different factors on attitudes towards reading: gender and the social status of students’ families. The aim of the analysis is to learn if reading books and engagement in reading could overcome the negative influence of low social and cultural capital and gender on reading performance and educational outcomes. The study is based on the results of three editions of the national study on reading habits and attitudes among students of lower secondary schools conducted in 2003, 2010, 2013 and two editions of the PISA international survey from 2000 and 2009.

Keywords: reading attitudes; engagement in reading PISA; lower secondary school; educational outcome; reading performance; social and cultural capital; young adults; sociology of youth; sociology of education.

Reading longer, complex texts during time off from school contributes to the cognitive and emotional development of students, and thus their achievement of educational progress. The analysis of survey results of reading habits and attitudes among lower secondary school students and the PISA survey enables us to study the empirical evidence on the basic conditions of reading practices and their impact on the development of reading and interpretation skills.

Reading as part of the toolkit

The article focuses on fifteen-year-olds who have already undergone the socialising processes of childhood. Attitudes towards reading are one of the effects of the processes that take place in the early stages of development. It should be added that rather than a permanent and refined set of attitudes, maturing adolescents have predispositions and the conditions for developing them in adulthood. Therefore, in analysing the reading attitudes of fifteen-year-olds, the dispositions specific to this stage of psychosocial development should be discussed.

Reading socialisation may take different courses, but it is mostly determined by the literacy patterns and standards present in the social environment (Burton, Hamilton and Ivanić, 2010; Heath, 1984). To ensure that reading books is a practised, obvious activity, defined by recognised and operationalised values, it should be first formed in the processes of primary socialisation, and the cultural patterns related to reading practices should be assimilated from the social environment (Hamston and Love, 2003; Kraaykamp, 2003; Millard, 1997). The first condition determining the socialisation of

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Reading is the transmission of the cultural models in the family home on the placement of literary practices (the acts of writing and reading) within everyday activities. If they are present in the family lifestyle, then they belong to the cultural toolkit – as Ann Swidler (1986) called it – the repertoire of acting strategies, the set of tools at hand. Following the reflections of Pierre Bourdieu (2005), this means that reading practices fall within the formula of creating tools, in the habitus, and an individual has the appropriate dispositions for undertaking a given activity. Effective socialisation leads to the inclusion in the cultural toolkit of the habit of reaching for a book (as well as each longer text, also in electronic form) in many different situations and for many different aims: from practical aims – as a source of information, or as an activity needed for work, education, self-development, or as a way of filling leisure or empty time (e.g. in a waiting room, on a train), to autotelic ends – as a form of entertainment, relaxation, escapism, which is related to the ability to find pleasure in reading. All reading experiences increase communicative competences, the skills of reading and interpreting cultural texts (see Rogoff, 1995; Schiefele, Schaffner, Möller and Wigfield, 2012).

For maturing adolescents, belonging to peer groups plays a particular role. They shape the identity of an adolescent and contain the “significant others”. Peer groups, which most often become the reference point for youths, also form the cultural patterns in reading. The social relations associated with them are one of the components that motivate reading (Wentzel and Wigfield, 1998; Wentzel, 1996) and are significant in shaping and sustaining reading practices – especially spontaneous ones.

The transmission of reading patterns is not always effective. It should be emphasised that the features of adolescence include resistance, or even revolt against existing patterns, searching for one’s own way. Adolescents seek their own styles of spending leisure time, including reading (Hamston and Love, 2005; Knoester, 2009; Love and Hamston, 2003; Williams, 2006). Counterconditioning may also occur when the positive influence of family on developing reading attitudes is lacking, when the individual is eager to read despite low cultural capital, and in the absence of implemented patterns of reading practice in the social environment. This situation in Polish history was referred to by e.g. Stanisław Siekierski (2000), who cited peasants’ diaries containing evidence of successful attempts at seeking other value systems outside the immediate environment. In cases of cultural neglect, which is often accompanied by the deprivation of many needs, a striving may occur for compensation, escapist reading or seeking from books personal models and social practices, new authorities, alternative to those known from everyday life. Adolescence is characterised by a specific suddenness in building identity, both socially and individually (Witkowski, 2000). When adolescents feel deprived of their needs relating to personal development, they may try to compensate by reading, which remedies the shortcomings, e.g. in social life. Such a motivation to start reading was described by Janice Radway (1991) in the example of housewives reading romances.

**Sex as a differentiating factor**

Adolescence, which is the stage in which lower secondary school students are found, is a time of intensive physiological changes to the body, and the way this is experienced is influenced by the social, cultural and psychological characteristics of the individual (Obuchowska, 1996). The course of the developmental process differs by sex – for girls, the changes begin earlier. Early adolescence is also a time of developing cognitive activities, improving informational processes, critical thinking, perception, memory, etc., which are
also under influence of the social environment. It is a more intense time of deepened self-analysis, youthful egocentrism, the development of the imagination. Such propensities may lead to escaping into a world of dreams, often wishful, compensatory, which occurs more frequently with girls than with boys (Neilsen, 2006; Obuchowska, 1996). Looking at the differences between the sexes, one can see different patterns of social roles and peer relations between girls and boys, acquired in the process of socialisation. The mechanisms of discrepancies in behaviours due to sex are explained by the social cognitive theory of Albert Bandura and Kay Bussey (Bussey and Bandura, 1999), which integrates psychological and sociological approaches. This theory is based on the conviction that situational variability impacts the construction of identity in the roles of men and women (Hofstede, 2007). This means that development of gender (that is culturally conditioned sex) is formed by an interweaving triad of factors: cultural-social, i.e. patterns relating to expectations attributed to the sexes (stereotypes, socialisation pressures, social sanctions, stratification level and sex segregation; Chomczyńska-Rubacha, 2011); individual intrapsychic factors (emotions and motivations), as well as biological factors. According to Bandura and Bussey, the formation of gender identity and its associated roles are determined by socio-cultural conditions, socialisation processes in the family environment, peer environment, impact of mass media and educational institutions, social sanctions rewarding behaviours attributed to the sexes in a given culture, rather than intrapsychic factors. Of importance, according to the authors, are the self-regulation mechanisms governing socially transmitted patterns, the extent to which an individual succumbs to them, how he or she corrects or modifies them. The different attitudes towards reading of girls and boys may testify to the differences resulting from an individual’s sex and the socialisation processes associated with it. Much empirical evidence point to girls as more eager and frequent readers, especially of books, particularly fiction (Hall and Coles, 1999; Zasacka, 2013). They are also more likely to have a positive attitude towards reading and manifest a stronger motivation to read, as well as to assign greater importance to reading, considering it to be an important and attractive activity (see Logan and Johnson, 2009; Marinak and Gambrell, 2010; Wigfield and Guthrie, 1997; Zasacka, 2014a). The causes of such a state of affairs (the topic calls for more in-depth research) are suggested to include differences in the reading attitudes of mothers and fathers, the greater involvement of mothers in making reading part of everyday family life (Millard, 1997), as well as school curricula, reading lists, and the way reading assignments are discussed in the classroom, which are more favourable to the way girls read (Coles and Hall, 2002).

Reading engagement

Reading is a complex process of creating meaning, which has a multidimensional cognitive, aesthetic and socio-cultural nature (Alexander and Fox, 2013), but it is built on specific skills. Three independent aspects of these skills are distinguished (Brzezińska, 1987): technical – the techniques of writing (recognition and association of graphic symbols with phonics); semantic – component skills of associating recognised symbols with experience, “verbatim understanding of words and sentences”, and critical-creative – component skills enabling an individual to reflexively position oneself to the text, to assess the content that was read and interpret

1 The theory stems from Albert Bandura’s social learning theory, according to which: “it is not true that people are driven by inner forces, nor that they are pushed by environmental stimuli. As a matter of fact, human psychological functioning consists of the constant, mutual interaction of individual and environmental determinants. Within this approach, a particularly central role is played by symbolic processes, substitute learning and self-regulation processes” (Bandura, 2007, p. 29).
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it, not only literally, but also figuratively – and to use the content that was read. All these skills involve three spheres (Brzezińska, 1987): the sphere of psychomotor and cognitive processes, and – which we wish to emphasise in particular in this article – the spheres of emotional-motivational processes, necessary for overcoming the difficulties of reading. The third sphere is the motivation to read, which determines the likelihood of becoming involved in reading.

Empirical studies analysing reading engagement have a rich tradition. In particular, studies on the circumstances that accompany reading for pleasure concentrate on various forms of involvement in the text. It is observed from many theoretical and methodological perspectives, which trace how texts are received, especially literary texts. For instance, cognitive psychology talks about “being absorbed by a book” on being transported through the narrative into a different world (Nell, 1988; Gerrig 1998; Zunshine, 2006). This engagement is also described through the emotions triggered in the course of reading, emotions relating to the literary characters: e.g. empathy, identification with the main character, or participation in the literary plot developed by the author.

Reading engagement is observed in studies of students’ reading attitudes and educational progress (such as PISA of the OECD), the effects of actions to promote reading, as well as in the evaluation of the applied instructional methods. It defines the positive emotional attitude to reading, forming a key component of internal motivations to read (Alexander and Fox, 2013; Guthrie and Wigfield 2000; Wigfield and Guthrie, 1997). Both engagement and reading motivations are not considered in isolation, but in relation to other factors, such as: the socio-cultural context, prior knowledge and interests of the students, learning strategies, etc. To find appropriate empirical indicators that allow reading engagement to be observed, those that describe students’ reading activity are used first, and then those that assess their attitude towards reading – to what extent students consider the activity to be valuable, to be a source pleasure and knowledge, directly triggering related intrinsic motivation (Brozo, Shiel and Topping, 2007/2008; Kirsch et al., 2002).

Let us examine whether reading engagement understood in this way (and its component parts) is conditioned by the sex of lower secondary school students and the characteristics of the social and cultural environment, in which the process of reading socialisation took place. A consequence of answering the question will be to investigate another issue: how does reading engagement influence reading skills, and, as a result – educational progress.

The reading practices of adolescents in two research perspectives

To analyse the socio-demographic determinants of reading engagement and reading practices of lower secondary school students and related educational achievements, we shall refer to quantitative readership studies conducted in Poland over the last 15 years. The first are national surveys on lower secondary school students’ reading habits and attitudes (Lower secondary school students’ reading habits and attitudes, Polish lower secondary school students’ reading habits and attitudes – symbolic community and cultural distances; Reading habits and attitudes of children and youth), the second – the cycles of the Programme for International Student Assessment (PISA), conducted by the Organisation for Economic Cooperation and Development (OECD). All measurements within the studies were carried out on a representative random sample, which allows us to draw conclusions concerning the whole population. It should be noted, however, that the populations in the two studies were not defined in the same way, which limits the possibility of making direct
comparisons, even in the case of analysing students’ answers to the same questions. The PISA study used a population of individuals who were 15 years old in the year preceding the year of conducting the next edition of the study. They were mainly students of the third year of lower secondary school, but also included students from other lower secondary grades, as well as students from upper secondary schools (see Federowicz, 2013). In studies on the reading habits and attitudes of youth, the population was mainly third year lower secondary school students, regardless of age (see Zasacka, 2014a). The foregoing notwithstanding, the studies are complementary with regard to the determinants of the reading practices and skills of adolescents, and a synthesis of their results provides a fuller picture of the observed phenomena.

National studies of adolescents’ reading habits and attitudes among lower secondary school students were implemented in three editions, in 2003, 2010, and 2013 (Zasacka, 2008; 2014). They refer to surveys on the reading practices and interests of adolescents and adults found in Anglo-Saxon publications (Alexander and Fox, 2011; Clark and Douglas, 2011; Clark, 2012). Studies on lower secondary school students’ reading fall within the tradition of studies on participation in culture and the extent to which books are read in society (see Koryś and Dawidowicz-Chymkowska, 2012; Straus, 2002) conducted for several decades by the Institute of Books and Reading of the National Library of Poland. Reading books is defined here as a social practice related to the reigning cultural norms and patterns in a given place and time, as well as the social roles of the persons undertaking such activities (Wolff, 2009). The studies consider the particular social situation of symbolic communication (Kłoskowska, 1981), which is the reading of books. They relate both to the achievements of the sociology of youth, especially issues concerning participation in culture, the role of new media in everyday life, the changes occurring in practiced literacy (Kress, 2003; Livingstone, 2002), adolescents’ reading of fiction and studies on popular culture, including popular literature and its relation to school education and youth literature (Leszczyński, 2010; Myrdzik and Latoch-Zielnińska, 2006; Pecora, 1999).

The results of the Polish editions of studies on reading enable diagnoses to be made on many research problems and the changes which occurred over the 2003–2013 decade, including: which segment of Polish youth completing compulsory school education is functioning without reading literary assignments and not reading for pleasure; what is the socio-demographic differentiation of reading attitudes observed through reading activity and what is its intensity (measured by the number of books read), book choices and preferences, and attitude towards reading; ways of participating in the social circulation of books, the nature and social reach of reading practices on a screen, and the reading motivations of adolescent readers.

The second analysed perspective is from the two editions of the international PISA study on educational progress (Bialecki and Haman, 2003; Federowicz, 2010), in which one of the research topics was reading and text interpretation skills. The main goal of the PISA study is to measure students’ competence in three areas: reading and interpretation, mathematics, and reasoning in the natural sciences. The selected areas stem from

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2 The first two editions of the study (in 2003 and 2010) were carried out by the end of studies in the 3rd year of lower secondary school; only the third edition of the study of 2013 took place at a different moment of the school year – in November of the third year. Reading books during leisure time was observed as an activity undertaken over the year. It was defined through the number and type of selected books, and – in addition in 2010 and 2013 – as one of the leisure time activities. Reading activity as obligated by school was determined on the basis of information about reading books from the reading lists over the school year, in which the study was carried out, that is from September to November 2013 and until May in the 2003 and 2010 editions of the survey in the school year preceding the study.
one of the basic principles of the PISA study, which was developed to measure the skills of fifteen-year-olds needed by both youths and adults, which are the foundation for further education, professional development, social activity, financial literacy and personal development (Federowicz, 2010). The skill of reading is a basic ability, without it, achieving the goals cited above is difficult, so it has a broad definition in the cited study:

Here, reading literacy covers many cognitive competences – from basic decoding skills, through interpretation, to reflection on the content and form of the message. It concerns such reading, which enables active learning about the world, develops the skill of building knowledge about the reality that surrounds us, provides the opportunity to formulate one’s own opinions and enables active interactions. The study defines it as: Reading literacy means understanding, using, and reflecting on written texts (in different forms and by different carriers), and engagement with their content, in order to achieve one's goals, to develop one's knowledge and potential, and to participate in society (Federowicz, 2010, p. 26).

In the analyses carried out for the purposes of this article, we used the results of the reading literacy of Polish students, calculated on the basis of tests they completed, consisting of different tasks measuring the entire spectrum of skills related to reading competences. They include five aspects: retrieving information, understanding the sense of the text, developing an interpretation, reflecting on and evaluating the text (Federowicz, 2010). In 2000 and 2009, reading and text interpretation were the main areas of the PISA survey, and the part of the questionnaire dedicated to this was more developed than other parts. The 2000 edition focused, among others, on issues related to reading attitudes, reading activities, engagement in reading, reader’s self-awareness. In 2009, reading electronic texts was also analysed, enabling the provision of information from not only on the relation between students’ reading and text interpretation skills and their socio-demographic characteristics, but also on their attitudes towards reading.

The reading and text interpretation skills of fifteen-year-olds, their sex and economic, social and cultural status

Reports from subsequent PISA editions indicate a positive correlation between the economic, social and cultural status of a student and the obtained results in reading in all participating countries (e.g. OECD, 2010b). An index that portrays the economic, social and cultural status (ESCS) for the PISA survey was developed with three measures: the student’s household resources (including the number of books in the household), the occupational status of the student’s parents and their level of education, measured by the number of years of formal education (see OECD, 2012). If the ESCS index itself can be analysed in terms of social inequalities, then the strength of the interdependence between economic, social and cultural status and the results of the measurement of skills can be treated as one of the measures of inequality in education. Against the background of other participating countries, Poland obtained values of this index close to the average for OECD member countries (Dolata, Pokrop and Jakubowski, 2013). The coefficient of the linear relation between the result of the measurement of Polish students’ reading literacy and the ESCS index exhibited similar values for both discussed survey editions: 0.36 in 2000 and 0.38 in 2009.

The results of the PISA survey prove that Polish fifteen-year-olds differ greatly in the obtained results of the reading literacy measurement in terms of sex. The advantage of girls over boys, calculated as the difference between the average reading literacy test results in 2009, was 49 (girls: 525, boys: 476), which ranked Polish adolescents in 14th place.
(OECD, 2010a) among all countries participating in the PISA survey in 2009. Although the split was smaller in 2012 (girls: 539, boys: 497), and thus there was a drop in the ranking (22nd place; OECD, 2014), sex is still an important factor differentiating the results. The regularity observed in subsequent editions of the survey shows that better reading literacy of girls than boys is a strong and stable characteristic of Polish adolescents. In this context, the following question should be asked: Does the observed dependence between the ESCS index and the results of the competency measurement take a similar form for girls and boys?

In the multiple linear regression model (Table 1, Model 1a), both sex and the ESCD index have a significant impact on the result when predicting the outcome of the competency measurement of Polish students. Taking into account the possible interaction between ESCS and sex, note that the economic, social and cultural status has a slightly greater impact on the results of boys than girls, with a very small increase of the $R^2$ coefficient (Table 1, Model 1b) in relation to the model without this interaction. The advantage of girls over boys concerns all social and cultural environments, yet the difference decreases as the ESCS index increases and it is already small for youths at the highest level of the ESCS index. It must be remembered that adolescents with the highest ESCS values, from families with very high economic, social and cultural capital, constitute a small percentage of the population of fifteen-year-olds.

### Engagement in reading as presented in surveys of adolescents’ reading habits and attitudes and in the PISA studies

As mentioned above, one of the ways of examining the connections between reading attitudes and educational achievements is to determine student’s reading engagement. From the perspective adopted in this article, reading engagement is manifested by school reading and the systematic reading of books and other texts for pleasure, as well as a positive attitude about this activity. These components of reading engagement are observable both in adolescents’ reading habits and attitude surveys, and in the PISA

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**Table 1**  
Reading literacy result of PISA 2009 by economic, social and cultural status and sex*(a)*

<table>
<thead>
<tr>
<th>Variable/Interaction</th>
<th>Model 1a</th>
<th>Model 1b (interaction: ESCS*Sex)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESCS</td>
<td>39.13*** (1.79)</td>
<td>42.42*** (2.57)</td>
</tr>
<tr>
<td>[Boy]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girl</td>
<td>50.48*** (2.39)</td>
<td>48.67*** (2.44)</td>
</tr>
<tr>
<td>Interaction: ESCS*Sex</td>
<td></td>
<td>-6.45* (3.05)</td>
</tr>
<tr>
<td>Intercept</td>
<td>487.11*** (2.32)</td>
<td>487.97*** (2.36)</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.229</td>
<td>0.230</td>
</tr>
<tr>
<td>$N$</td>
<td>4 870</td>
<td>4 870</td>
</tr>
</tbody>
</table>

*(a)* Prediction of the results for reading literacy on the basis of the five plausible values placed within a set of data with the results of students from the Polish part of the survey. The data are weighted in accordance with the sampling scheme. The table presents unstandardized coefficients of linear regression with the values of standard errors provided in parentheses, calculated with the use of replication weights, significance measures (*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$) and averaged $R^2$ coefficient. Own calculations based on data from PISA 2009.

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Reading engagement and school achievement

Reading engagement is determined in PISA through the following set of indicators: time spent on reading for pleasure, reading different types of texts (books: fiction and other publications, magazines, daily press, comics, emails, websites), positive attitude towards reading, and interest in the text that was read. In surveys on adolescents’ reading habits and attitude, reading attitudes are observed on the basis of a broader set of indicators, including: reading activity, intensity (measured by the number of books read), book choices, reading motivation, and attitude towards reading. In this article, we analyse four selected components which allowed us to use the three editions of the surveys on adolescents’ reading habits and attitudes, and at the same time enable us to draw a complementary portrait of reading engagement among Polish lower secondary school students based on PISA results. These are: reading books required for school, reading books for pleasure, the frequency of reading for pleasure, and attitude towards reading.

We present the results of both studies on the level of reading engagement among Polish lower secondary school students, as well as the potential possibility of the impact of such engagement on educational achievement. In this study, we focus on the impact of students’ sex and their parents’ social and cultural capital on the chances of the engagement of adolescents in reading. In this case, social and cultural capital is measured by the level of education of parents and the size of the household book library. Unlike PISA, the term “economic, social and cultural status” is used.

**The reading activity of lower secondary school students during the decade of 2003–2013**

A necessary condition for the engagement of a student in reading is for him/her to start reading a book. Student reading practices were observed in studies of the readership of lower secondary school students in the context of two situations of reading, characterised by different conditions and motivations. The first one is the reading of books for pleasure, during leisure time, when a student makes the autonomous decision to select and read a book. Reading during one’s leisure time is evidence of the fact that the activity is valued by acknowledgement and implementation, and the choice of book – of the individual interests and reading needs of the student, developed as the result of having adopted the cultural patterns of reading practices observed in the socio-cultural environment. The other context of reading relates to required reading for school. It is formed by the teacher’s application of didactic strategies and formulation of expectations, and it is determined by curriculum requirements. It is also dependent on a student’s educational aspirations and attitude towards learning Polish. Both reading contexts are influenced by a student’s individual language, cognitive and cultural competences, reading motivations, access to books and information on them, as well as the social relations accompanying reading (Zasacka, 2008; 2014a). To assess which group of Polish adolescents has no opportunity to become engaged in reading, the size of the group of non-readers must be determined. The surveys of adolescents’ reading habits and attitudes enabled us to differentiate groups of students who do not read for school or leisure, thereby depriving themselves of the compensatory
influence reading practices may have on deficits relating to the socialisation process in the family.

Successful reading socialisation leads to the formation of a group of adolescents, for whom reading books takes its place among other leisure activities, while school reading is obvious. They are an active reading audience. On the other side, there are non-readers, who do not even fulfil the school’s requirement to read texts from the reading list, and, therefore, cannot actively participate in Polish language lessons, and have no personal reading needs. The data presented in Figure 1 show that the percentage of non-readers remained at a similar level over the 10 years under discussion. Attention must be paid to the slight increase for girls (difference 2003–2013: $p < 0.01$). Besides sex, another factor that differentiates the reading activity of adolescents is cultural capital, measured by parents’ educational level and size of the student’s household library. The practices of reading for pleasure are more varied than those relating to school requirements. The strongest predictor of not reading books is the size of a household’s and student’s library – as many as 22% of non-readers come from households with a minimum number of books (up to 10 books; Zasacka, 2014a).

All three surveys of Polish lower secondary school students’ reading habits and attitudes confirm that the greatest number of non-readers are found among students intending to continue their schooling at a basic vocational school or vocational upper secondary school (as many as 36% students in 2003; 31% in 2010 and 29% in 2013), thus schools chosen mostly by boys. School selection after the compulsory stage of education will separate students lacking reading practices from the rest of their peers, which will deepen existing differences (Dolata et al., 2013).

Looking at the data from 2003–2013, one can see that the reading activity of Polish lower secondary school students to fulfil school requirements remains at a similar level. However, there was a drop (difference 2003–2013: $p < 0.001$) in the percentage of students who declared that they read recreationally (Figure 2). There is visible downward trend in declared recreational reading for boys – the difference between 2003 and 2013 ($p < 0.001$) was 11%. The percentage of girls

![Figure 1. Percentage share of students who did not read a single book over the year \(-\) by sex in the years: 2003 ($N = 1396$), 2010 ($N = 1465$), and 2013 ($N = 1816$).](image)

Based on the survey Czytelnictwo dzieci i młodzieży (Reading habits and attitudes of children and youth) from the editions of 2003, 2010, 2013.
reading recreationally began to shrink only in 2013 – a drop of 8% (difference between 2010–2013: \( p < 0.001 \)).

We can also see that over the decade covered by the surveys, reading activity in families with the lowest parental cultural capital, measured by their education level, decreased. The difference in the percentage of students reading for pleasure among lower secondary school students, whose mothers had completed basic vocational education or a higher level, was 15% in 2003. In the 2013 survey, the difference increased to 23%. We also note an increase in the variance of reading practices between rural and urban adolescents, especially of those living in large cities.

To better observe the determinants of reading activity, another attribute of adolescents’ reading practices was added to the categories of the books required to be read for school and those read by one’s own choice – systematic (i.e. at least once a week) leisure time book reading. This enabled the creation of the category “systematically active readers”.

Every fourth surveyed lower secondary school student belongs to this group – in 2013 – 31% girls and only every fifth boy (Figure 3). Over three years, the difference in the share of systematically active readers among girls and boys dropped from 18% to 11%. It is most difficult to find such a reader in rural areas: this group accounts for 25% of girls and only 16% of boys. We can see an increase in the share of systematically active readers in families with higher education. If we take into account the sex of students and the impact of parental social status measured by level of education, then the difference

![Figure 2. Percentage of students reading for pleasure and reading for school in the third year of lower secondary school for: 2003 (N = 1396), 2010 (N = 1465), and 2013 (N = 1816). Based on the survey Czytelnictwo dzieci i młodzieży (Reading habits and attitudes of children and youth) from the editions of 2003, 2010, 2013.](image-url)
in reading activity between girls and boys in environments with the lowest educational capital increases. It should be emphasised that the regularity observed over the ten year period testifies to the fact that the group of non-readers, especially those who do not read books of their own choosing, are among the students from environments with the lowest social and cultural capital.

**Reading activity and reading and interpretation skills**

The amounts of time spent on reading may be inferred on the basis of answers to question asked by PISA: “How much time do you spent on average to read for pleasure?” The difference in responses between girls and boys is significant (Figure 4). More than half of the girls and only every fifth boy declared that they read for pleasure for more than 30 minutes per day. The very large group of boys who never read for pleasure is especially striking.

The results presented in Figure 5 indicate the growth of the group of non-reading fifteen-year-old boys and girls between 2000 and 2009, regardless of economic, social and cultural status. In each category, presented in quartile divisions of the ESCS index, the
Figure 4. Time spent on reading for pleasure by boys and girls. Based on data from PISA 2009 (N = 4887).

Figure 5. Percentage of students who do not read for pleasure by quartiles of the ESCS index in 2000 (N = 3415) and 2009 (N = 4887). Based on data from PISA.
percentage of boys who do not read (the difference of 2000–2009 in each category: \( p < 0.01 \)) increased. Among girls, the differences are not so visible – over nine years, the percentage of girls who do not read for pleasure did not change significantly. It should also be stressed that there is a very strong dependence of reading for pleasure on economic, social and cultural status.

As may be assumed, the competences of students who read for pleasure, not only as required by school, are greater than those who do not read. One must ask: Does this dependence result only from the connection between reading for pleasure and the social status of the student’s family, or perhaps does reading – regardless of family characteristics – provide the chance to develop better

<p>| Table 2 | Reading literacy result of PISA 2009 depending on economic, social and cultural status, sex and amount of time spent on recreational reading(^{(a)}) |
|-----------------|-----------------|-----------------|</p>
<table>
<thead>
<tr>
<th>Variable/Interaction</th>
<th>Model 2a</th>
<th>Model 2b</th>
<th>Model 2c</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ESCS</strong></td>
<td>35.46(^{***}) (1.78)</td>
<td>34.71(^{***}) (3.30)</td>
<td>35.33(^{***}) (1.78)</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[Boy]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[Girl]</td>
<td>36.40(^{***}) (2.72)</td>
<td>36.44(^{***}) (2.70)</td>
<td>44.43(^{***}) (4.55)</td>
</tr>
<tr>
<td><strong>Time spent on reading per day</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[I don’t read for pleasure]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 min. or less</td>
<td>22.84(^{***}) (3.03)</td>
<td>22.89(^{***}) (3.45)</td>
<td>26.01(^{***}) (4.24)</td>
</tr>
<tr>
<td>30–60 min.</td>
<td>41.65(^{***}) (3.92)</td>
<td>42.09(^{***}) (4.24)</td>
<td>47.67(^{***}) (6.33)</td>
</tr>
<tr>
<td>60 min. or more(^{(b)})</td>
<td>50.77(^{***}) (4.61)</td>
<td>51.05(^{***}) (4.83)</td>
<td>55.57(^{***}) (7.74)</td>
</tr>
<tr>
<td><strong>ESCS</strong>*Time spent on reading per day**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[I don’t read for pleasure]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 min or less</td>
<td>-0.04 (3.98)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30–60 min</td>
<td>1.27 (4.44)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60 min or more(^{(b)})</td>
<td>2.12 (4.23)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sex</strong>*Time spent on reading per day**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[Girl; I don’t read for pleasure]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girl; 30 min. or less</td>
<td>-9.96 (6.65)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girl; 30–60 min.</td>
<td>-13.69 (7.81)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girl; 60 min. or more(^{(b)})</td>
<td>-11.62 (7.82)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Intercept</strong></td>
<td>468.75(^{***}) (2.72)</td>
<td>468.42(^{***}) (3.16)</td>
<td>466.51(^{***}) (2.99)</td>
</tr>
<tr>
<td><strong>R(^2)</strong></td>
<td>0.271</td>
<td>0.272</td>
<td>0.273</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>4 854</td>
<td>4 854</td>
<td>4 854</td>
</tr>
</tbody>
</table>

\(^{(a)}\) Prediction of the result of reading literacy based on five plausible values placed in the set of data with the results of students from the Polish part of the survey. Data weighted in accordance with the sampling scheme. The table presents unstandardised multiple linear regression coefficients together with the provided values of standard errors, calculated with the use of replication weights, significance measures (\( ^{*} p < 0.05; ^{**} p < 0.01; ^{***} p < 0.001 \)) and averaged \( R^2 \) coefficient. The variable time spent on reading for pleasure was recoded into binary variables. The reference category is the response “I don’t read for pleasure”.

\(^{(b)}\) Due to low numbers, categories: “1–2 hours per day” and “more than 2 hours per day” were combined into one “more than 60 minutes a day”. Own calculations based on data from PISA 2009.
reading skills, and thus may compensate for the worse social and cultural factors characterising the student’s family of origin or his/her socialisation environment?

Analysis of the responses to the question on the frequency of reading for pleasure enables the above hypothesis to be verified and the impact of reading for pleasure on reading skills to be determined. Predicting with the use of the multiple linear regression of the results of measurements for reading and interpretation skills in particular groups declaring a specific amount of time spent on reading for leisure, while controlling for the ESCS index and sex (Table 2, Model 2a), shows that such practices have a positive impact on reading skills, regardless of deficiencies in skills by sex or social environment. Even more, the longer the declared time spent on reading, the stronger the observed positive effect.

This result begs another question: Does reading for pleasure similarly “help” students who have both low and high economic, social and cultural status? It turns out that reading for pleasure exerts a “common”, positive influence on results – it does not differentiate the observed dependence in terms of ESCS values (Table 2, Model 2b). This is illustrated in a slightly simplified manner by Figure 6, which presents the average results of reading in groups differentiated by the quartile division of the ESCS index. Regardless of the socialisation environment, reading activity increases the observed results in reading skills.

As stated above, reading for pleasure, besides the required reading for school, is strongly differentiated by sex – girls read much more often and more. As could be predicted, boys’ lower results in reading skills may be “more strongly” compensated by reading for pleasure. However, the results of the multiple linear regression model with the interaction between sex and reading for pleasure do not confirm such suppositions (Table 2, Model 2c). It is worth emphasising that more frequent reading improves the reading skills of students who could not, for other reasons, attain them at a lower level of education – thanks to reading, they can obtain results closer to those of students

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**Figure 6.** Average results for reading skills by time spent on reading for pleasure in groups differentiated by quartile division of the economic, social and cultural status.

Due to low numbers, categories: “1–2 hours per day” and “more than 2 hours per day” were combined into one “more than 60 minutes a day”. Own calculations based on data from PISA 2009 ($N = 4854$).
from families with a high social status. The impact of reading can be treated as an egalitarian factor that improves skills, regardless of other analysed characteristics.

**Lower secondary school students as engaged readers**

The next component of reading engagement is a positive attitude towards this activity, manifesting the emotional and evaluative component of reading attitudes. It is described by researchers applying the theories of reading motivation (Guthrie and Wigfield, 2000; Wigfield, 1997), who place engagement among the elements of intrinsic motivation. To learn about students’ emotional attitude towards reading, the Polish surveys on reading habits and attitudes asked students if they “like reading books”. In the 2003 and 2010 editions, a response scale was used: “yes—no” and “hard to say”. Similar percentages of lower secondary school students checked “yes” (2003 – 49.6%; 2010 – 46.2%), and similar percentages of students responded “hard to say” (2003 – 31.8%; 2010 – 31.1%). In 2013, the response scale was expanded – students could check one of five response options, without the “hard to say” option. In the 2003 and 2010 editions, the dependencies with socio-demographic characteristics were similar to those obtained in 2013 (Figure 7). A positive attitude towards reading, just as with the previously presented reading activity indicators, is strongly correlated with sex and the family social and cultural status of the student.

Just as with the other components of reading attitudes (reading activity and preferences), emotional attitude towards reading books is most strongly influenced by the sex of lower secondary school students: over the whole period of the surveys, girls declared almost twice as often as boys that reading was an activity they liked. The indicators of family social and cultural status also strongly differentiate attitude towards reading books (Figure 7).

In order to comprehensively cover the components of reading attitudes of lower secondary school students, the category of engaged readers was differentiated in the

**Figure 7. Students’ responses to the question: “Do you like reading books (in general, reading for school, reading outside of school)?” by sex, father’s education, number of books in the household library.**

Based on the survey *Czytelnictwo dzieci i młodzieży* (*Reading habits and attitudes of children and youth*) from 2013 (*N* = 1806).
Reading engagement and school achievement

Readership research. These were people who declared that they read books outside of required and other reading for school, and admitted that they liked reading them. Thus, they were readers who made reading choices, did not oppose required school reading, and admitted that they liked reading them. What is worth emphasising is the stability of the attitudes of lower secondary school students observed on the basis of the number of engaged readers. In the period between the three editions of the survey, it remained at almost the same level. Also in this case, sex was the strongest differentiating factor for this component of reading attitudes. The difference in the proportion of engaged readers (who declare reading books in leisure time, read books from school reading lists and like reading) by: sex, father’s educational level, number of books in household library in: 2003 (N = 1395), 2010 (N = 1472), 2013 (N = 1806). Figure 8. Percentage of engaged readers (who declare reading books in leisure time, read books from school reading lists and like reading) by: sex, father’s educational level, number of books in household library in: 2003 (N = 1395), 2010 (N = 1472), 2013 (N = 1806).
percentage of engaged readers among girls and boys was, during the whole decade of the study, not less than 25% – in 2003, it was as high as 32%, 31% in 2010, to fall in 2013, when the share of girls who liked to read decreased to 26% (Figure 8). Differentiating the category of engaged readers enabled an even clearer presentation to be made of the socio-demographic determinants of reading attitudes. The contributing factors include: female sex, higher education of parents, having a large household library, and living in a large city. Social and cultural factors, especially the educational and cultural capital of the family, have greater impact on positive attitude towards reading and to reading engagement among boys than girls. The likelihood of being an engaged reader among adolescents from families with low educational capital is much lower among boys. Similarly, as in the case of the measurement of other components of reading attitudes, the greatest difference occurred between boys from families with low and high educational capital – it reached as much as 26%.

### Pleasure from reading and reading and interpretation skills

In order to measure more precisely the engagement of adolescents in reading, the PISA survey (and also the readership study since 2013) employs a set of 11 statements, for which the student declares the degree of agreement with them. All statements concern the “pleasure” derived from reading, relating to motivations for reading (Wigfield and Guthrie, 1997; Zasacka, 2014a) and subsequent aspects constituting such motivations. They serve to examine the self-assessment of reading competences and reading efficacy (e.g. “I cannot sit still and read for more than a few minutes”), acknowledgement of reading as an attractive activity, which testifies to feeling an internal motivation to read (e.g. “Reading is one of my favourite hobbies”); the social aspect of reading books (e.g. “I like talking about books with other people” “I like to exchange books with my friends”) and feelings about various situations relating to books (“I am happy when I receive a book as a present”; “I enjoy going to a bookstore or library”). Based on students’ responses, an index was constructed, called “reading enjoyment” (JOYREAD, see OECD, 2012). Table 3 presents the average values and standard deviations of the index with respect to students’ sex and the economic, social and cultural status of family of

<table>
<thead>
<tr>
<th>Statistics</th>
<th>OECD</th>
<th>Poland</th>
<th>Boys</th>
<th>Girls</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>( M )</td>
<td>0.00</td>
<td>0.02</td>
<td>-0.36</td>
<td>0.39</td>
<td>-0.16</td>
<td>-0.12</td>
<td>-0.02</td>
<td>0.42</td>
</tr>
<tr>
<td>( SD )</td>
<td>1.00</td>
<td>1.08</td>
<td>0.91</td>
<td>1.11</td>
<td>0.93</td>
<td>1.05</td>
<td>1.08</td>
<td>1.19</td>
</tr>
</tbody>
</table>

Based on data from PISA 2009.

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4 Only 20% of sons of fathers with basic education and 46% of sons of fathers with higher education are engaged readers, the difference was two times smaller among girls: 47% of daughters of fathers with basic education and 69% of daughters of fathers with higher education.

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5 The question asked within PISA is: “How much do you agree or disagree with these statements about reading?” with the response options: “strongly disagree–disagree–agree–strongly agree”. The question asked in the readership survey is: “Please indicate the extent to which the following statement is relevant to you (if you agree with it).” with the response options: “very relevant to me–somewhat relevant to me–somewhat irrelevant to me–very irrelevant to me.”
Reading engagement and school achievement

Polish fifteen-year-olds, on average, do not diverge in the level of reading enjoyment from the average for OECD member states, yet girls have a much higher average among Polish students, and at the same time, slightly greater differentiation of JOYREAD values than boys. Similarly, the higher the economic, social and cultural status, the higher the values and differentiation of the JOYREAD index, with a moderate linear correlation coefficient value between JOYREAD and ESCS, equal to 0.20.

The connection between the test on reading and interpretation skills and the JOYREAD index among Polish fifteen-year-olds \( R^2 = 0.19 \) is similar to the OECD average \( R^2 = 0.18 \) (OECD, 2010c). Students who enjoy reading more, achieve better results in the reading literacy test. When predicting a student’s result by sex or the ESCS and JOYREAD indexes, the multiple linear regression model shows that reading enjoyment influences the skills of both boys and girls – regardless of their socialisation environment (Table 4, Model 3a). Adding the interactions between the ESCS index and the JOYREAD index to the above regression model indicates a small negative correlation with the result of the measured skills. This means that with an increase in the values of the index representing the family economic, social and cultural status of the student, the

<table>
<thead>
<tr>
<th>Variable/Interaction</th>
<th>Model 3a (ESCS*JOYREAD)</th>
<th>Model 3b (ESCS*JOYREAD)</th>
<th>Model 3c (Sex*JOYREAD)</th>
<th>Model 3d (Sex*JOYREAD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESCS</td>
<td>32.73*** (1.80)</td>
<td>33.10*** (1.84)</td>
<td>32.73*** (1.80)</td>
<td>32.79*** (1.81)</td>
</tr>
<tr>
<td>Sex [Boy]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girl</td>
<td>30.58*** (2.61)</td>
<td>30.47*** (2.60)</td>
<td>30.52*** (2.65)</td>
<td>28.10*** (2.72)</td>
</tr>
<tr>
<td>JOYREAD</td>
<td>24.87*** (1.38)</td>
<td>24.59*** (1.38)</td>
<td>25.48*** (2.42)</td>
<td>22.15*** (1.44)</td>
</tr>
<tr>
<td>Interaction: ESCS*JOYREAD</td>
<td>-2.63* (1.24)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction: Sex*JOYREAD</td>
<td></td>
<td>-1.02 (2.56)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time spent on reading per day [I don’t read for pleasure]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 min. or less</td>
<td></td>
<td></td>
<td>10.20** (3.04)</td>
<td></td>
</tr>
<tr>
<td>30–60 min.</td>
<td></td>
<td></td>
<td>17.69*** (4.07)</td>
<td></td>
</tr>
<tr>
<td>60 min. or more(b)</td>
<td></td>
<td></td>
<td>11.79* (4.61)</td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>495.61*** (2.22)</td>
<td>496.27*** (2.36)</td>
<td>495.83*** (2.46)</td>
<td>488.39*** (2.81)</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>0.308</td>
<td>0.309</td>
<td>0.308</td>
<td>0.313</td>
</tr>
<tr>
<td>( N )</td>
<td>4,773</td>
<td>4,773</td>
<td>4,773</td>
<td>4,758</td>
</tr>
</tbody>
</table>

(a) Prediction of the result of reading literacy based on five plausible values placed in the set of data with the results of students from the Polish part of the survey. Data weighted in accordance with the sampling scheme. The table presents unstandardised multiple linear regression coefficients together with the provided values of standard errors, calculated with the use of replication weights, significance measures \( * p < 0.05; ** p < 0.01; *** p < 0.001 \) and averaged \( R^2 \) coefficient. The variable time spent on reading for pleasure was recoded into binary variables. The reference category is the response “I don’t read for pleasure”.

(b) Due to low numbers, categories: “1–2 hours per day” and “more than 2 hours per day” were combined into one “more than 1 hour per day”. Own calculations based on data from PISA 2009.
positive impact of the JOYREAD index on reading and interpretation skills slightly weakens (Table 4, Model 3b). The observed dependence indicates that reading enjoyment creates the opportunity for increasing the competences of students with the lowest cultural capital. The second extension of the model was to investigate the interaction between the JOYREAD index and students’ sex. The results of the conducted analysis do not show that the impact of JOYREAD on skills differs by sex (Table 4, Model 3c). This means that feeling joy when reading favours the development of reading competences to the same extent for both girls and boys.

The next step in the analysis was to add binary variables to the model that represent the previously analysed amount of time spent on reading for pleasure. This does not significantly improve the prediction of the result, yet the statistical significance of the slope coefficient for all independent variables is observed (Table 4, Model 3d). This leads to the conclusion that, besides the previously analysed impact of sex and economic, social and cultural status, both reading activity and the time spent on it, as well as reading enjoyment, while controlling for the remaining independent variables, have a significant impact on reading and text interpretation skills. One may suspect that the intensification of efforts to enhance reading activity among adolescents would lead to a greater level of reading skills, and thus – greater educational progress and better ability to cope in adult life. Another important conclusion from the above analysis is that when engagement in reading is improved, it influences the development of reading literacy and the educational progress of students, regardless of their sex or social and cultural environment of origin. Attention should be paid in particular to the fact that engagement in reading remedies the deficits caused by socialisation in an environment with the lowest social and cultural capital.

**Summary**

Both of the presented research perspectives, even though their goals are formulated slightly differently (PISA focuses on educational achievements, while the survey on reading habits and attitudes focuses on the social differentiation of reading attitudes among Polish adolescents), enable us to draw similar conclusions. A characteristic feature of Polish adolescents are the great differences in the reading practices of girls and boys. Polish girls read systematically and eagerly, they spend more time on this activity than their male friends, and in effect, more easily become engaged in reading. A significant characteristic indicating symptoms of weakness in boys is their lower engagement in reading; reading for them is a much less attractive activity than it is for girls. Analysis of the results of the readership survey of children and youth also casts light on lower secondary school students’ internal motivations, which determine their inclination to become engaged in reading, indicating that they influence boys to a smaller extent in their reading practices. This differentiation has its consequences – girls are more skilful readers, they make better use of complex skills, which include text interpretation. Boys, who are in the same environment, the same school classes, cope worse with reading text. This is evident from the analysis of PISA results, indicating a strong correlation between reading engagement – observed in systematic reading and satisfaction from performing this activity – and the development of reading skills.

At the same time, the results of the PISA study prove that deficits in the economic, social and cultural capital of a student’s family impact achieved educational progress. Regardless of sex, adolescents are similarly influenced by the household environment: parents’ educational capital and professional status, household material and educational resources, especially home libraries. However,
Despite the fact that girls from environments with low economic, social and cultural capital achieve worse results than their female colleagues from the upper rungs of the stratification ladder, boys from the same environments are still characterised by worse skill levels in working with texts, especially interpretation. The dependencies shown testify to the fact that both undertaking reading for pleasure, and the amount of time spent on this activity contribute to the development of skills related to text comprehension and interpretation. Nevertheless, also the joy felt, which constitutes an important aspect of reading engagement, is strongly connected to students’ results. None of the groups is excluded from this positive impact – reading engagement enables better results to be achieved by both boys and girls, both students from the lowest levels of social stratification, and those with high economic, social and cultural capital. However, in observing the reading attitudes of lower secondary school students over the last ten years, one can see that there is a growing group of fifteen-year-olds from environments located at the bottom of the stratification ladder, who avoid reading long, complex texts, especially books not assigned at school. This group is mostly made up of students who deprive themselves of the chance to become engaged in reading, and thus improve their reading and interpretation skills, required for efficient learning in all disciplines of knowledge, and for independence in their future adult life. The dependencies observed in the presented analyses indicate that feeling joy while reading and its frequent experience creates a special opportunity for students from environments with the lowest cultural capital to improve their competences.

An important implication results from the described regularities: youth, especially boys from environments located at the bottom of the stratification ladder, need support from educational institutions to remedy their shortcomings in reading socialisation. Steps should be taken within this intervention to awaken the desire of students to gain satisfaction from reading and to make reading a habit.

**Literature**


The article was developed on the basis of the results of the research projects: Programme for International Student Assessment (2000 and 2009 editions); *Czytelnictwo gimnazjalistów* [Lower secondary school students’ reading habits and attitudes], carried out by the National Library of Poland, *Czytelnictwo polskiej młodzieży gimnazjalnej – współnota symboliczna i kulturowe dystanse (Polish lower secondary school students’ reading habits and attitudes – symbolic community and cultural distances)*, carried out by the National Library and financed by the Ministry of Science and Higher Education, and *Czytelnictwo dzieci i młodzieży (Reading habits and attitudes of children and youth)*, carried out within the systemic project “Quality and effectiveness of education – strengthening of institutional research capabilities” implemented by the Educational Research Institute and co-financed by the European Social Fund (Human Capital Operational Programme 2007–2013, Priority III High quality of the education system). A preliminary version of this article was published in Polish in *Edukacja, 135*(4), 2015.