Outcomes of PISA and PIAAC Research and Today's Czech School Practice^{*}

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The aim of this article is to think about key issues of readers' comprehension literacy of a specific category of research sample readers (15-24 years old). To what extent is the information of both international researches implemented into reality and chosen curriculum. In the first part of the article is introduced the basic terminology (literacy, according to Organisation for Economic Co-operation and Development [OECD], functional literacy, and reader's literacy). It is essential to understand that it is not just about literacy skills, i.e., being able to read texts and understand them, but also the skills to find, process, and compare the information contained in the text, and reproduce text content. In the second part the article thinks about and compares selected key data from international Program for International Student Assessment (PISA) and Program for the International Assessment of Adult Competencies (PIAAC) research for specific category of research sample (15-24 years old readers). It is also worth considering whether the teaching community and the general public are aware of the need for specific measurements and the international comparison of literacy, in which the Czech Republic participates.

Keywords: literacy, reading strategy, education to reading, curricula

Introduction and Basic Terminology

The education of readers is an essential educational activity to acquire functional literacy skills, which is an important input to the adoption of a number of key competences.

Reading is one of the most important educational activities for students who attend primary school (later, other educational institutions). The art of reading and understanding the text belongs among the social and cultural manifestations of advanced civilized man. Knowledge of letters is used to record information and to process knowledge. A related skill is to read text not only technically, but also functionally (in view of certain communication situations in daily life).

Functional literacy—skills for the implementation of various human activities necessary for life in contemporary civilization—is literacy in the field of literary work, documentary and numerical, for example,

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the ability not only to read, but also to understand complex texts and fill in forms, to understand graphs and tables, etc. (Průcha, 2009, p. 67). Reader's literacy—complex knowledge and skills that enable an individual to deal with written texts commonly encountered in everyday life (e.g., a railway timetable or instructions for taking medication)—is not just about literacy skills, i.e., being able to read texts and understand them, but also the skills to find, process, and compare the information contained in the text, reproduce text content, etc. (Průcha, 2009, p. 42).

According to the definition of literacy (according to Organisation for Economic Co-operation and Development [OECD] and Program for International Student Assessment [PISA]), it is the skills in understanding a written text, thinking about it, and using it to achieve certain goals, to develop own abilities and knowledge, and for active integration into society (Procházková, 2002).

Selected Key Data From International PISA and Program for the International Assessment of Adult Competencies (PIAAC) Research

The organizer of the international PISA and PIAAC research is the OECD. Both studies focus on finding the level of basic skills needed in solving everyday problems, and affecting the labour market.

PISA (2009) focused on the target group of 15 years old students, and PIAAC (2011/2012) on the adult population between 16-65 years old.

The aim of the PISA study is to determine whether pupils of different countries at the end of compulsory schooling acquire the knowledge and skills that are necessary for the successful involvement of young people in the real world of the new millennium (how they can use what has been learned in diverse life situations), while the PIAAC research aims to examine the level of preparedness of the adult population in modern society.

Among the surveyed PISA skills were: information gathering, processing, and evaluation of the text. PIAAC monitored reading skills, information searches, the use of computers and technology, work experience, and the process of initial and continuing education.

The research respected the specificities of development of literacy in each of the participating countries, taking into account, for example, children and their maturity period of the preschool methods of working with pupils with specific learning needs, socio-cultural differences, as well as extracurricular and lifelong learning.

This contribution is dedicated to the selected category research sample of 15-24 years old readers.

Possible Key Literacy Issues of the Czech Population

Even though a lot of research projects deal with diverse supporting influences for the development of literacy (e.g., Huffman, Mehlinger, & Kerivan, 2000), a key position in its development is held by the school. International studies (PISA and PIAAC) indicate the current status of literacy in comparison among member states, and it is worth considering that our level of reading strategies for 15 years old pupils is getting worse. It is therefore important to investigate all the available measures to prevent and intervene, in order to support the development of reading skills (mainly in the processing and evaluation of information, critical thinking, and interconnection processing of information in the text with their own experience gained in everyday life).

To understand the European trends in attitudes to reading and reading skills, it is necessary to analyse existing educational curricula, which define the boundaries and possible methods of reading literacy development. The possibility of comparison with other countries is an inspiration for the possible modification of teacher training, including support for the development of reading.

Among other factors affecting literacy, own didactic work of teachers (choice of methods), course organization, the number of pupils, classroom amenities, school libraries, and other educational centres must be included. School experience shows the weak motivation and unwillingness of many teachers to use appropriate methodology (methods of critical thinking, teachers working with art books, literature for youth, etc.). From interviews with teachers of different kinds of schools that have taken place in the context of our survey, we can see that across all stages, teaching the Czech language and literature only working with excerpts from artistic literature in papers prevails. It also showed that the development of a comprehensive approach to reading is mostly applied only in the 1st grade of primary school (reading skills are dealt with by teachers not only in teaching the mother tongue, but also in other subjects). The situation is different for the 2nd grade of primary schools, where we find a comprehensive approach to reading virtually missing (reading skills deal only with learning the Czech language and literature, and sometimes foreign languages). In the 3rd grade of education, the introduction of the state graduation exam returns to Czech language and literature, using the book as a whole (not just extracts from the texts).

Although for mutual understanding of content being communicated, communication between people is important. Our findings do not reflect this fact, because schools do not respect the requirements for mastering the basic rules of language and communication training, stylistic and literary education, as applied in everyday life.

The question is to what extent our contemporary curriculum characterizes and develops literacy skills in all areas of our education. It is also worth considering whether the teaching community and the general public are aware of the need for specific measurements and the international comparison of literacy, in which the Czech Republic participates.

Results of International Research and Practice in the Selected Curricula of Pedagogic Educational Institutions for the Pupil Population

Human personality develops even at a preschool age, when developing need and motivation for self-knowledge (i.e., different literacy, including reading literacy, which is enshrined in the current preschool, and later school, curriculum). Curricular document Framework Educational Programme for Basic Education (FEP BE) 2004 does not contain the characteristics leading to reading skills. It is up to the teachers of preschools how their educational and training activities are used to develop literacy skills, and they often substitute their own expert ideas for the gaps in the existing general educational programme for preschool education. According to the survey, some hope of change (adding measures to promote and develop pre-reading skills and their methodology) in the basic preschool curriculum was brought by the thematic report published by the report of research (Czech Statistical Office) to support the development of literacy in preschool and primary education (Kropáčková, Wildová, & Kucharská, 2014). It can be stated that the systematic teaching of reading and writing is performed from compulsory school attendance.

In economically and socially developed countries, they are laying the foundation for lifelong learning as early as in preschool education, which reveals the results of the Progress in International Reading Literacy Study (PIRLS) and PISA investigations. Here, it confirms that pupils attending nursery school and kindergarten perform significantly better, and often reach a higher level of education.

In 2001, the so-called National Programme for the Development of Education White Paper, which forms a coherent concept of education development in the Czech Republic for the next period of 5-10 years, was published.

The FEP BE has an educational portion divided into nine educational areas, which are composed of one educational field or interlinked educational fields (the titles subjects). In 2007, there was a realization of FEP BE in all elementary schools in the Czech Republic in the form of school educational programs of individual schools (under elaboration on the specific conditions of their school environments).

According to Švrčková (2011) and Kropáčová (2006), the current form of FEP BE insufficiently appeals to the development of literacy of students (in importance for success in everyday life).

Literacy skills, or their components, do not figure as an important goal at any level in the FEP BE. The FEP BE is not a required systematic development of literacy skills of each pupil and literacy as such, then it is not integrated at the level of general education, and binding targets is also built next to the key competences. Expected outputs of individual disciplines require mastery of some of the components of development of literacy mostly only in fields that are traditionally perceived as appropriate, and where the reader is reading, and readership is largely a self-content industry (language and communication training, literature). Even here, development of literacy is not systematically covered in the modern meaning. Other courses and cross-cutting themes in the contemporary conception of the curriculum contribute to the development of literacy sporadically, although their role can and should be much more substantial. (Švrčková, 2011, p. 26)

Since September 1, 2013, the effective program is in the document Standards for Basic Education (Ministry of Education, Youth and Sports of the Czech Republic [MŠMT], 2013c). We will focus on text analysis targeted for pupils of the second stage of primary school (9th grade).

An urgent problem of today's educational curriculum documents is whether they put sufficient emphasis on explaining the needs of a pupil in education (respect for individual differences in abilities, skills, and knowledge of pupils). The valid revision of FEP BE has been some changes in the concept of education, but in advisory didactic teaching of the mother tongue, it does not separate (specific) emphasis on developing reading strategies (only as part of communicative competences). Standards for Basic Education of the Czech language and literature prepared pursuant to the modified FEP BE (MŠMT, 2013b), effective from September 1, 2013, include 10 expected results in the thematic area called 1. Communication and Education Essay, eight expected outcomes in the area named 2. Language Education, and nine expected outcomes in the area named 3. Literary Education.

From this document (standards for Czech language for basic school education programs), it is not entirely clear how exemplary the role of developing specific reading strategies and skills are that international surveys of literacy focus on. Through study and analysis of standardized tasks, training facilities can specify reading skills, as targeted by PISA and PIAAC, for example, skills focused on information gathering, processing, and evaluating information.

Example 1

Reading, comprehension, and readership strategies dedicated to the first thematic area of Communication and Composition, and these expected outcomes FEP ČJL-9-1-01 (e.g., in reading the text, the student has to distinguish facts from opinions and assessments, collate and verify facts through questions with other available sources of information). The discussed literacy strategy reflects the skills of the students to find information, process, compare, and evaluate it according to specification.

Example 2

The expected output of FEP ČJL-9-1-06 (currently included in the above document of 1.9.2013) seeks to distinguish prepared and impromptu speech communication. It emphasizes the diversity of verbal, nonverbal, and paralinguistic means of language. There, it obviously applies to reading education, for example, selecting

an appropriate reading tempo, phrasing, intonation according to the kinds of sentences under the rules of pronunciation. The benefit is an appeal to productive short key information, distinguishing speech in private, and in public. Illustrative work leads to students being able to talk about a topic they understand (e.g., by providing the information in speech). The acquired skills can be applied in working with texts (e.g., what a given character says and why). There are noticeable signs of working with information, analysis, and evaluation of the text.

Example 3

The expected output of FEP ČJL-9-3-03 is directed to the expression (sharing) of personal impressions from reading, and others. It is the expression of views on the work of art (an appeal to the right argument, stating both positive and negative opinions). An illustrative role belongs among the readership strategies in evaluating text.

In conclusion, we can say that in the analyzed curriculum document (text analysis is based on tested methodology to be used in an international survey of reading literacy of 15 years old pupils) Standards for Basic Education of the Czech language and literature processed according to the modified FEP BE (with specifications for the second stage of primary school, 9th grade) are processed selected current output from the field of literacy training reading strategies consistent with tested skills of reading literacy and reading performance at international measurements (PISA 2009) were processed, as witnessed by the above analysis of the document. But, we cannot expect a significant improvement in Czech pupils in reading, since some lack of unified specialized terminology of development of literacy (terminology) in all curricula (FEP Standards for Basic Education of the Czech language and literature, with specifications for the second stage of primary school, 9th grade) is missing.

Also, obvious is the absence of systematic development of each pupil's development of literacy. Given that development of literacy is not integrated at the level of general education, and mandatory targets are not built next to key competences, we do not think that we can expect significant improvement in Czech students in reading in other international surveys in the future. Of course, in this troubled area being examined, development of literacy plays a role not only for students, but also for their teachers and learning materials (ČJL textbooks).

It is certainly a question of the extent which ČJL textbooks meet (for students of 9th grade), based on the requirements of the mandatory curricula, to what extent teachers (Czech language) of 15 years old students are interested in the results (outcomes) of international development of literacy research, and whether teachers have an interest, motivation, time, and space for further education in the monitored problematic plane.

Results of International Research and Practice in the Selected Curricula of Educational Institutions of the Adult Population

Another part of this paper focuses on the adult population. In the youngest age group of the adult population (16-24 years old), research showed worse results, just like in other developed countries. Despite this deterioration, however, it is the youngest group who was evaluated at least as average.

The group that achieved the worst results among the population was the 35-54 years old group. Apparently, here, we see the results of a hectic period, heavy workload, parenting, and a lack of time for hobbies and personal skills development.

On the contrary, as for tendencies for improvement, we can talk about the older adult population between 55 and 65 years old, presumably because they are not professionally active, and therefore, have more time to devote to educational activities that promote personality development and improve the quality of life.

For university educated individuals, results in reading literacy have worsened since 1998, probably in the context of increasing access to higher studies, the skills of Czech university students still remain above average in international comparisons. The research brings indisputable evidence that skills increase with increasing education.

In our selected adult population, i.e., 16-24 years old, we focus on analyzing the curricula of secondary education (the catalogue of testing requirements for school-leaving examinations in the Czech language and in literature).

For secondary school pupils, teachers, and the educational community (as well as the lay public), it is important to monitor developments and the educational concept of a unified state graduation exam in Czech language and literature.

On April 30, 2013, the *Ministry of Education, Youth and Sports* published (in accordance with Act No. 561/2004 Coll., on preschool, primary, secondary, higher professional, and other education—the Education Act, as amended by subsequent regulatory documents) catalogues tests required for school-leaving examinations in foreign languages, mathematics, and Czech language and literature. With the above requirements, tests and sub-tests of school-leaving examinations held after January 1, 2015, will be developed.

Catalogues are mandatory educational documents that are based on the framework of educational programmes for secondary schools and general educational programmes for the fields of secondary vocational education with school-leaving exams (effective from 2007), and valid teaching documents for secondary vocational schools. In the preparatory process, catalogues were also based on the Standard of Secondary Vocational Education, issued by the Research Institute of Vocational Education (VÚOŠ) Prague (with effect from January 1, 1998).

The publication of catalogues of requirements for 2015 (the revision of previously existing catalogues) has not fundamentally altered the structure and scope of school-leaving examinations in Czech language and literature, but thanks to the professional pedagogic and public discussion, it has stabilized the structure of the text, with the option to maintain comparability between test tasks and assignments. Parts of the individual catalogues are examples of test tasks and examples of written work assignments, as well as a worksheet for the oral exam.

We consider the openness and accessibility of information output on the current curricula on the CERMAT Website (<http://www.Novamaturita.cz>) a positive direction in education. On this Website, there is valid information on the organization and preparation for the school-leaving examination in the current period (for pupils, teachers, and the general public). The graduation bulletin is published regularly in advance, with a summary of key information on selected problematic phenomena. The practice, repetition, and examining pupils' knowledge and skills can be used in the archives of graduation assignments (tests, essays, as well as worksheets, sample tasks with solutions) from previous years of state school-leaving exams.

Research has shown that today's schools are not sufficiently harnessing their full potential for the development of literacy, for example, because questionnaires for teachers and students, as well as interviews, revealed insufficient teacher support in active and productive work with the text. Reproduction of the text is predominant. The aforementioned outlets also confirmed the PIRLS test results, which showed that teachers mainly used reading material in a uniform manner, regardless of the reading level of students. Reading

comprehension is only checked verbally, by reproduction, or identifying the main ideas, and less frequently compared to the experience of the student or other texts, not developing skills in anticipation and generalization (Najvarová, 2008, p. 20).

In reading literacy, from 2000 to 2009, the results of primary school pupils and students in school-leaving and non-school leaving exam programs of secondary vocational schools significantly worsened. This increased the gap between the results of these pupils and pupils of grammar schools, whose results are virtually unchanged. (Palečková, Tomášek, & Basl, 2010, p. 35)

It can be stated that education towards reading is deliberately conceived conceptually. The level of pupils' reading strategies at the end of secondary studies is evaluated by the didactic text form (since the school year 2014-2015, it has contained a didactic test with open and closed tasks) and oral examinations (artistic and non-artistic analysis of the text).

Conclusion

It is worth considering that the Czech pupils in reading literacy tests only achieve average results. Their results are comparable to, e.g., the results of Austrian and Slovakian pupils; but the youngest population of students from neighbouring Poland, Germany, and also pupils from Hungary, fared better. The Czech Republic is also among the top five OECD countries, which, since 2000, has had a significant deterioration in results (Australia, Sweden, Austria, and Ireland). The failure of Czech pupils in reading literacy is a problem concerning fact processing, comparison, analysis, interpretation, and evaluation.

The PIAAC final results confirm the hypothesis of declining education of the Czech adult population. The Czech Republic has achieved average results in reading, because reading proficiency in Czech adults can be compared with the level of literacy in 1998.

Many reading studies indicate the necessity of taking a complex look at developing reading strategies—across all stages of human development, from childhood, through youth, and into adulthood. Based on international research, we see that immature literacy leads to study problems, and then to the difficulties associated with finding work (we are talking then about functional illiteracy). With a lower level of education attainment, difficulties in social application are closely related.

Education dedicated to reading occurs in varying degrees at all grades of schools, but not to the same degree. The teacher's personality and specific didactic work are always important, which lead to education in reading, and respecting the existing curriculum, and possibly the complementary absence of the above-mentioned problem areas.

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