

5TH PIAAC INTERNATIONAL CONFERENCE

LITERACY CHANGE AS A RESULT OF THE EDUCATION REFORM:
COMPARISON AMONG THE POST-SOVIET COUNTRIES

DR. JOLITA DUDAITĖ, LITHUANIA

Introduction and Theoretical Background

- ❖ Over the last decades, in both developed and developing countries, the education reform became one of the key political matters.
- ❖ Education reform is generally defined as change in one or more aspects of education system: goals and tasks, policy-making and management system or power structures, funding and budget processes, system organisation, education content, pedagogy, social relations of teaching and learning, assessment and rewards (Gaziel, 2010).
- ❖ The change in education is intended for modeling future society change by responding to newly comprehended values.

Introduction and Theoretical Background

- ❖ The fall of the Soviet Union in 1989–1991 enabled 28 new countries to implement structural changes in education systems which were controlled by the Soviet government for a long time (Khavenson and Carnoy, 2016).
- ❖ In many post-Soviet countries, the education reform began in around 1988 and celebrates its 30th anniversary this year.
- ❖ The end of the 20th century was important time for the education reform in the post-Soviet countries: the restoration of independence of the countries created the necessity of systematic reform covering all fields of education.
- ❖ With the essential change in the political situation, the post-Soviet countries had to develop the fundamentally new education systems instead of adapting them in one way or another.

Introduction and Theoretical Background

- ❖ During the transition period the reforms implemented in the societies of the former Soviet republics and countries controlled by the Soviet government after 1989–1991 were clearly focused on the dissolution of the communist ideology and on the necessity to validate the new countries (Silova, 2004).
- ❖ The new education systems had to be created gradually by disproving and essentially changing the former Soviet education framework – its structure, values, content, methods and principles.
- ❖ Among the main goals off all education reforms of these countries were political and ideological goals (Silova, Johnson and Heyneman, 2007).

Introduction and Theoretical Background

- ❖ Considering that about three decades have already passed and several generations who studied within the framework of the reformed systems starting from the first grade have already grown, it is important and relevant to estimate the results of these reforms.
- ❖ One – although not the only one – of the measures to estimate the results of the education system or education reform is change in literacy and competencies of population brought up by certain education systems.
- ❖ It is obvious that population literacy is determined not only by the education system implemented in the country but also by informal learning and social environment (which is particularly rapidly changing as it happened in the post-Soviet countries); however, change in population literacy can to a certain extent be considered as one of the indicators of the education reform results, albeit the approximate one.

Introduction and Theoretical Background

- ❖ **The purpose** of this presentation is to compare the results of education reforms of the post-Soviet countries based on the change in population literacy which is regarded as a result of former learning.
- ❖ The data of OECD PIAAC are used for literacy comparison.
- ❖ Literacy and education system efficiency is usually analysed in student or school context. The novelty of this analysis is the use of data on literacy of the adults instead of students for the comparison of the results of the education reforms.

Introduction and Theoretical Background

- ❖ **The question** raised in the analysis: in which post-Soviet countries did the education reforms condition the greatest positive change in population literacy?
- ❖ The education reforms of the post-Soviet countries, their specific goals and implementation are not analysed here. The focus is given to the change in population literacy as one of possible indicators of the results of the education reforms, irrespective of philosophies of specific education reforms in the analyzed countries.

Methodology

- ❖ The analysis of the academic effects of the education reforms of the post-Soviet countries is complicated because of the lack of reliable and comparable data on students' achievements in the Soviet times.
- ❖ The post-Soviet countries started participating in the international surveys on education, the results of which can be compared across countries, only after the fall of the Soviet Union, e.g. Lithuania, Latvia, Russia and Slovakia participated in the international mathematics and science survey IEA TIMSS for the first time in 1995.
- ❖ Part of the post-Soviet countries have not participated in any international surveys on education yet.

Methodology

- ❖ It was decided that the data of the OECD PIAAC should be used for the analysis as this is the largest international survey on education focused on adult literacy ever conducted.
- ❖ Seven post-Soviet countries participated in the PIAAC survey: **Lithuania, Estonia, Russian Federation, Poland, the Czech Republic, Slovakia and Slovenia.**

Methodology

Sample:

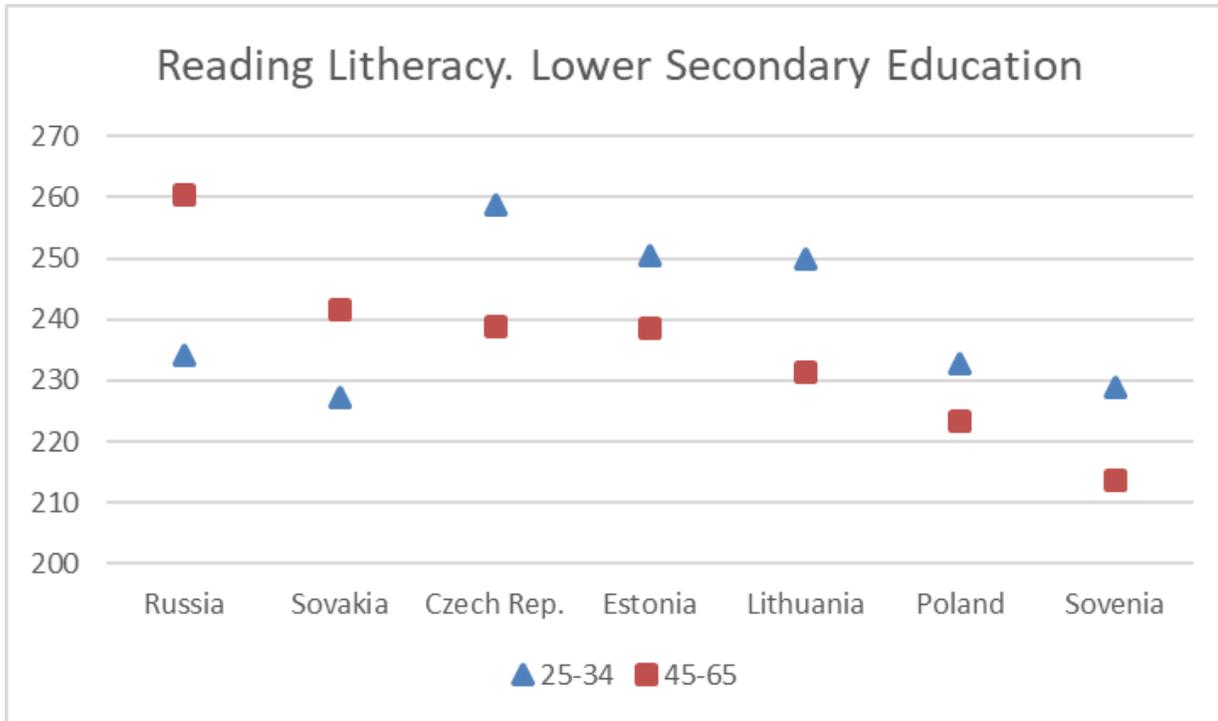
- ❖ Two clusters of participants of PIAAC were selected for the analysis.
- ❖ The first cluster includes persons who studied in the reformed school from the first grade, i.e. those who have not experienced the Soviet education system. This cluster excludes persons who were still studying during the PIAAC survey. Therefore, the first cluster is designed of persons **aged 25–34**.
- ❖ The second cluster includes persons whose entire school education was provided within the framework of the Soviet education system and who had not experienced any manifestation of the last education reform. Therefore, the second cluster is designed of persons **aged 45–65**.
- ❖ These two clusters represent the **post- and pre-reform** education systems of the country.
- ❖ In addition, it is also important to take into account the respondents' achieved education level. It was decided to analyse only data of the respondents with two lowest levels of educational attainment: **lower secondary education (ISCED 2 and lower)** and **upper secondary education (ISCED 3)**. These two levels best represent the education system of the country.

Methodology

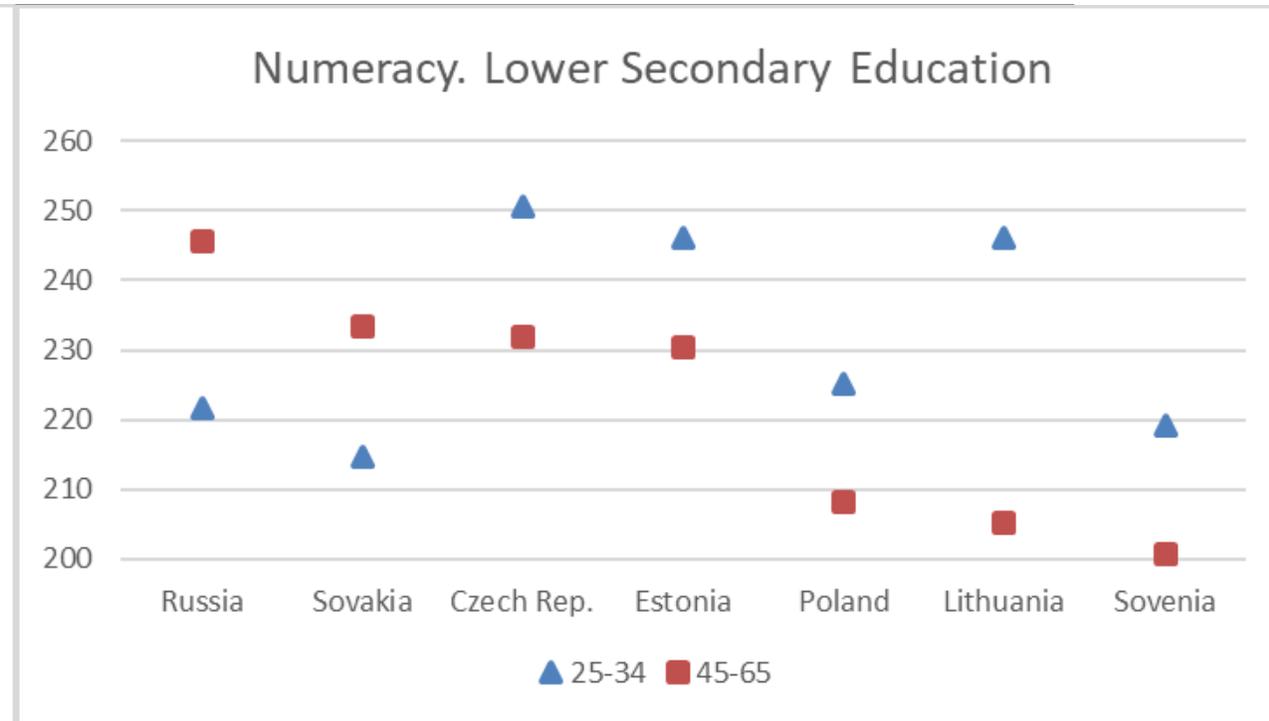
Methods of analysis:

- ❖ The test results in two fields studied by the PIACC – reading literacy and numeracy, as well as the questionnaire questions about the highest level of education completed and age were used for the analysis.
- ❖ Descriptive statistics methods were applied for the analysis by using IBM SPSS Statistics 24.
- ❖ The analysis does not employ strict methods of statistical analysis because the conclusions are made by comparing the countries, considering the fact that such estimation of the results of the education reforms is approximate as the population literacy is not only the reflection of the education reform but only its part.

Analysis of the Results

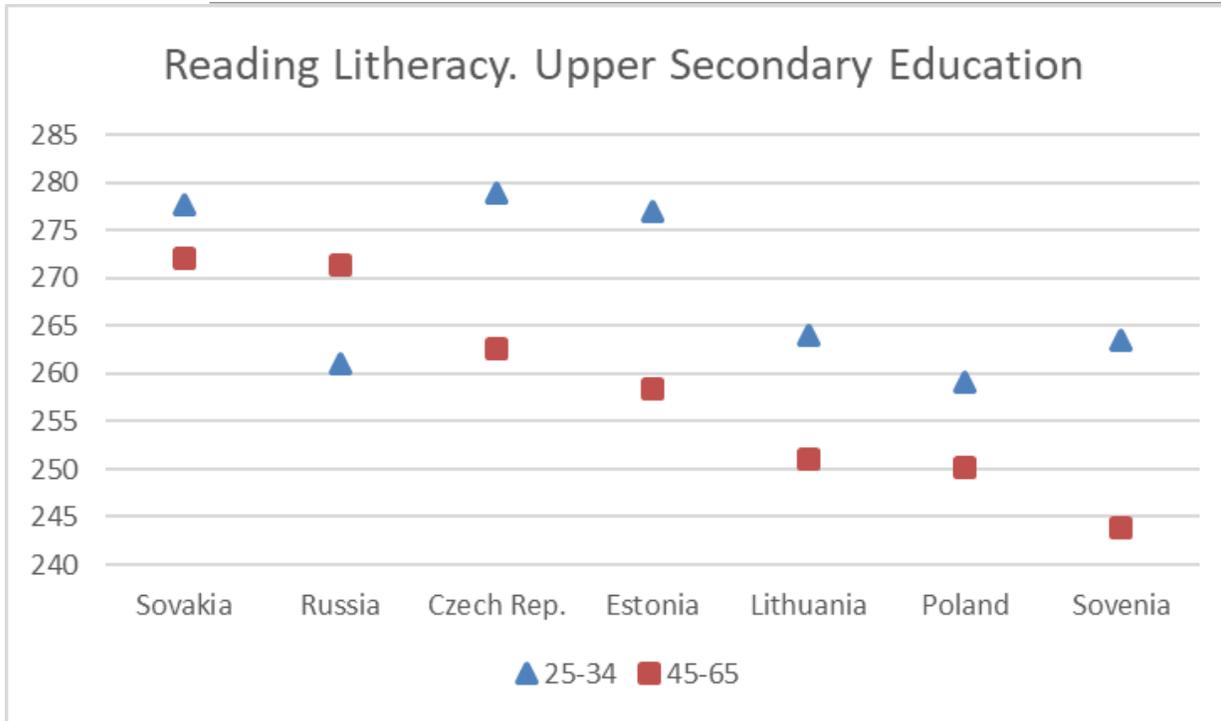


Comparison of the **reading literacy** results of respondents with **lower secondary** education between two age clusters.

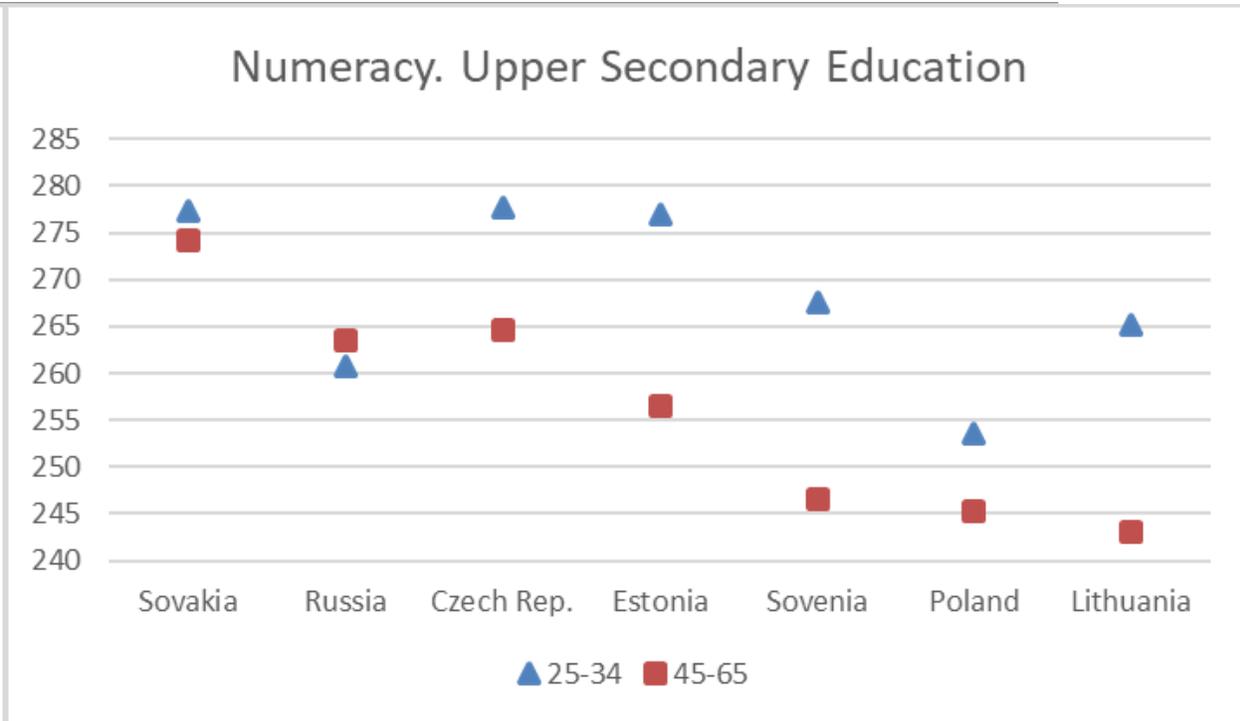


Comparison of the **numeracy** results of respondents with **lower secondary** education between two age clusters.

Analysis of the Results



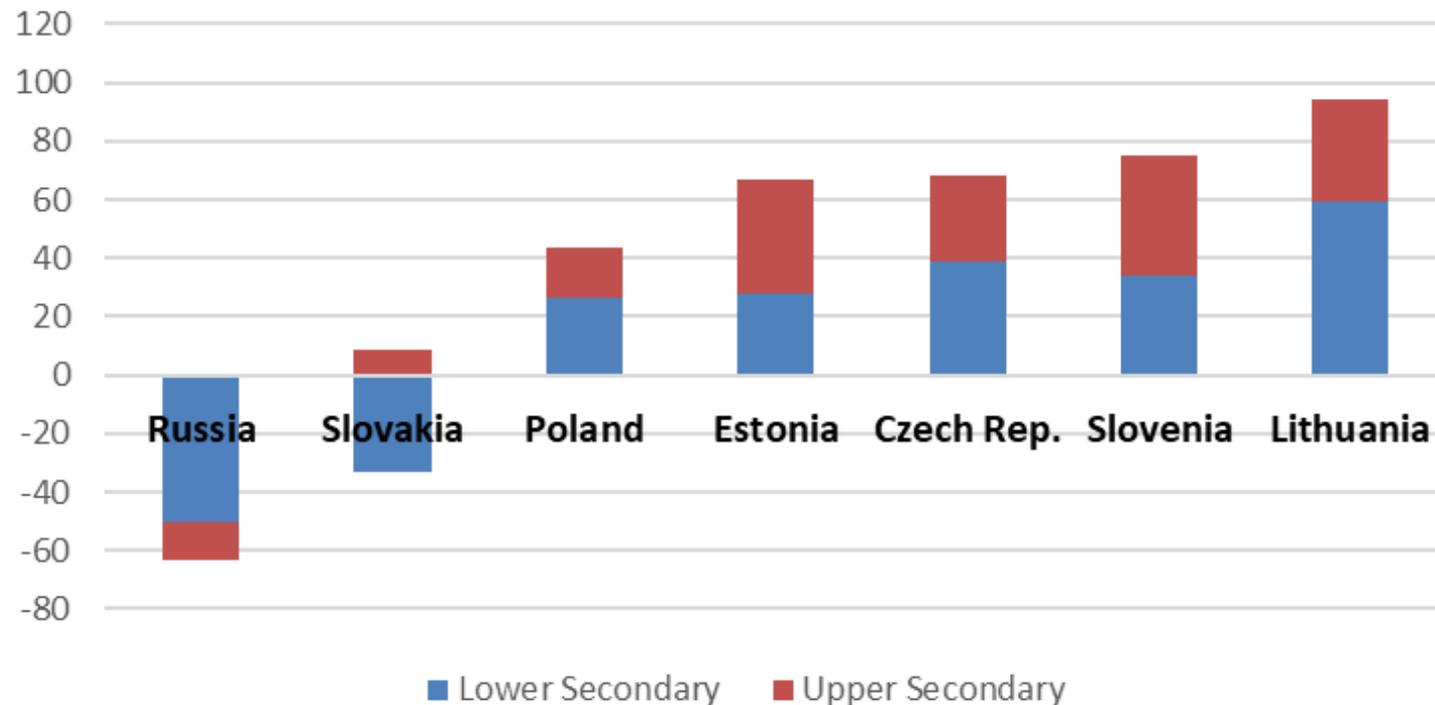
Comparison of the **reading literacy** results of respondents with **upper secondary** education between two age clusters.



Comparison of the **numeracy** results of respondents with **upper secondary** education between two age clusters.

Analysis of the Results

Summarized difference in results



Overall difference in the reading literacy and numeracy results between the Soviet education system (45–65 age group) cluster and the reformed education system (25–34 age group) cluster.

Conclusions

- ❖ The **most positive** results of the education reform at the **lower secondary** education level were received in **Lithuania**, the **least positive** – in **Poland**, the **most negative** – in **Russia**.
- ❖ The **most positive** results of the education reform at the **upper secondary** education level were recorded in **Slovenia**, the **least positive** – in **Slovakia**, while the **negative** results were received only in **Russia**.
- ❖ In summary, at the **lower and upper secondary** education levels, the **most positive** results of the education reform were observed in **Lithuania**, while in **Russia**, the results of the education reform were negative.

Limitations of the Analysis

- ❖ The analysis of the results of the education reform was carried out in terms of the population literacy change. It is obvious that the literacy change is just one of the possible measures for estimating the results of the reform. Moreover, the degree of population literacy is determined not only by the education system, it is influenced by other factors as well. It would be relevant to estimate the results of the reform in other ways; this offers great opportunities for a series of further surveys.
- ❖ This presentation provided a detailed analysis of only two components of literacy – reading literacy and numeracy. Although reading literacy and numeracy are fundamental components of literacy, they do not fully cover the concept of literacy. It would be important to analyse the population literacy and its change in wider range of aspects; however, such work is limited by the actual data collected in the OECD PIAAC survey.
- ❖ The comparison of the education reform results covered not all post-Soviet countries, just the ones the data on which are available in the OECD PIAAC survey databases.
- ❖ The education systems during Soviet period in compared countries were based on the same ideology, but they there not exact the same. Therefore, only the difference between results before and after reforms could be analyzed.
- ❖ This presentation provides the initial analysis of the population literacy change as a result of education reform which tends to focus on providing summarized results of the literacy changes. More detailed analysis could be the further step in this subject.

5TH PIAAC INTERNATIONAL CONFERENCE

LITERACY CHANGE AS A RESULT OF THE EDUCATION REFORM:
COMPARISON AMONG THE POST-SOVIET COUNTRIES

DR. JOLITA DUDAITĖ, LITHUANIA