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Key competencies in the sustainable development of globalized society

Abstract

Today we stay against the need of a deep reflection on the consequences and impact of present decisions and actions of society on future generations. Conscious of responsibility towards future world shows the only one way of sustainable of every aspect development, indicating the education and key competencies of society as one of the inalienable conditions for the implementation of this concept. Although the results of the PIAAC international studies are not unambiguous indicator of the level of economic development of the countries measured in GDP *per capita*, it can and should be the basis of the analysis of the effectiveness of the education systems in different countries and associations with the level of economic development of the country.

Key words: conditions of modern society, key competencies of contemporary society, globalized society, sustainable development of society, key competencies for a human development

Sustainable entity determines a sustainable society

The rapid development of information and communication technologies in recent decades has forced changes in the environment of human life in the highest rates in the history of our civilization. Climate change, unjust distribution of wealth or draining of natural resources, observed globally in recent years, increase anxiety. To deal with these problems, it becomes necessary to immediately initiate a global change of consciousness and thinking. It is necessary to learn the principles of sustainable development and to implement them in the global and local activities of governments and communities, organizations and families, companies and individuals. Here comes, implemented within the framework of lifelong learning, education for sustainable development (ESD), whose "objectives should include knowledge, skills and attitudes for sustainable thinking and action in

the field of interdisciplinary global challenges relating to economic, social and environmental conditions"[1].

Today we stand against the need of integrated actions with a reflection on the consequences and impact of our decisions and actions on future generations. Education for sustainable development is able to help us realize that our way and lifestyle affects not only us and our loved ones, but also the others – today and in the future; and this means that each of us has the opportunity today to do something that will improve the situation in the future.

Conscious of responsibility towards future generations, the member states of the United Nations through their representatives participating in the worldwide conference on *Environment and Development* in Rio de Janeiro in 1992, adopted the concept of sustainable development as a reference point for the further development of mankind, indicating the education as one of the inalienable conditions for the implementation of this concept. Ten years later – at the next UN summit – also in Rio de Janeiro, intensifying efforts to achieve the previously adopted assumptions, there was announced the Decade of Education for Sustainable Development (DEZR) for years 2005–2014, coordinated by UNESCO on behalf of the UN. At the beginning of the decade, the member states of the UN Economic Commission for Europe (UNECE), to reinforce the need to take concrete action, adopted another strategic document – *Strategy for Education for Sustainable Development.*

All of these international obligations clearly confirm the status of the problem and its global importance of having a bearing on the quality of life of every individual.

Sustainable development (SD) gives equal rights to the needs of the present and future and includes three dimensions: social, economic and environmental. Only a synergistic interaction between the various entities, taking into account the principle of equity within and between generations, is able to bring about the desired changes, enable sustainable and harmonious development of man for a sustainable future of the world, because it is essential to fairly distribute wealth within one generation and to allow the next generations the use of the goods available today. To determine a common course of action, there have been formulated and adopted by the international community (including Poland) the *Millennium Development Goals*, taking into account such priority initiatives as:

[1] *Strategia Edukacji dla Zrównoważonego Rozwoju Europejskiej Komisji Gospodarczej ONZ*, Ministerstwo Środowiska, Warszawa 2008, pp. 4–6.

- improving the quality of life – poverty reduction, strengthening of health etc.,
- promotion of human rights – equal rights for men and women, the autonomous development of societies, childcare and elderly care, the perception of education as an autonomous right of every human being,
- promoting education as a key to development, as a way allowing people to use their potential and take responsibility for the decisions they make,
- drawing attention to the quality of education and the development of self-competence and effective learning – the participation of all people in lifelong education and development.

The most important objective of education for sustainable development is to develop and improve in society (and in particular among teachers, students and pupils) key competencies enabling activity responding to the challenges of sustainable development. This means orienting knowledge into activities integrating various areas of science (e.g. sociology, economics, information and communication technologies, philosophy, cultural diversity, ecology). ESD is intended to enable every man to acquire knowledge, to enable skills acquisition and shaping attitudes necessary to create a sustainable living environment for themselves and others – now and in the future. One of the basic assumptions is that the acquisition and development of these competencies was held in the framework of integrated educational area of formal, non-formal and informal education, which means the inclusion of key SD content to the process of teaching/learning at every stage of the process of lifelong learning.

The key objectives of education for sustainable development include:

- shaping students' ability to reflect on their own situation and situation of other people, finding interconnections and conditions of these situations,
- encouraging the critical evaluation of the facts and circumstances,
- shaping reflective look at the capability of individual and collective responsibility,
- the development of critical reflection on the possibilities of changing each of the unsustainable situations,
- implementation of the responsibility for their individual and social decisions.

One of the inalienable tasks for EZR is to promote and increase the efficiency of primary education, as in many countries the real and functional illiteracy is still too high. From the first years of formal education it is essential to shape the competencies that will enable and ensure citizens' life in accordance with the principles of sustainable development. Education,

at all levels, needs to be re-oriented to support the sustainable development of all individuals and societies. First of all it is necessary to disseminate public awareness and understanding of the need for sustainable development because the effectiveness of the actions in this field depends on the awareness, attitudes and determination in relation to the harmonious development of each individual in a globalized society.

One of the basic tasks of education for sustainable development is the use of participatory teaching and learning methods to stimulate learners to explore and develop their own ways of solving problems, changes in behavior and attitudes, and to take a comprehensive approach to sustainable development. ESD puts strong emphasis on key competencies, which, as a generic, determine development through the acquisition of subsequent competence. In particular, there is a need for critical, forward thinking and synergy, in a heterogeneous group, which means that there is a need to analyze, review and redefine the basic assumptions of formal education process. Trans-disciplinary shaping method (as part of lifelong education) becomes necessary, the so-called *competencies of the future* – key in achieving the most important objectives of the concept of sustainable development of the world.

The implementation of the objectives of sustainable development is based on the global analysis of local activities, and education for sustainable development assumes to integrate all disciplines in the synergistic interaction to shape individuals and communities responsible for their decisions, that can reconcile the often conflicted interests and participate in creating a sustainable future of the world.

Key competencies of an entity as basis of human capital resources

Competencies of individuals are clearly the quality of human resources, becoming the twenty-first century global currency[2]. Globalizing economy, conditioned by key competencies, based on knowledge, and information-based societies stimulated with technological progress, determine the rate of economic growth and prosperity level of residents. Quality of human capital gains importance in a special way today, against the downward number of productive population, especially in Europe. This means that the acquisition, development and management of competencies are today the most effective strategies for human resources management in

[2] *Umiejętności Polaków – wyniki Międzynarodowego Badania Kompetencji Osób Dorosłyh (PIAAC)*, Raport Instytutu Badań Edukacyjnych, Warszawa 2013, p. 9.

institutions, organizations and businesses[3]. An increase and better use of human resources is an integral part of international development strategies, reflected in the international provisions, such as: formulated by the OECD – *OECD Skills Strategy* and by the European Commission – *Europe 2020*. The necessity of human resources management is also integrated with national policies in all countries of the world – for example, Polish long- and medium-term national development strategies or *Strategia rozwoju kapitału ludzkiego* (*Human Capital Development Strategy*) and *Perspektywa uczenia się przez całe życie* (*Lifelong Learning Perspectives*). Content of these documents relate to agreed priorities and directions of activities aimed at increasing human capital, but it is a slow process, making it impossible to assess the current level of achievement of the objectives.

One of the long-term goals of the *Europe 2020*[4] is to achieve in the EU an intelligent and sustainable economic growth, supporting social inclusion. Specific features of economic growth in *Europe 2020* strategy require systematic, long-term measures aimed at the growth of human capital enabling: innovative research and technological development adapted to methods and forms of education, low-carbon economy and competitive industry or job creation while minimizing poverty. But the basis for the implementation of all of these short-term and long-term challenges is the competencies of individuals, which determine the quality of a society where these individuals are integrated.

Key competencies of individuals as a factor of sustainable development of society

Competencies should be seen both as a result of a condition of development – on the one hand, their acquisition and development is a sign and confirmation of human development, on the other hand, thanks to them we can acquire new knowledge and skills. Among the skills of contemporary man we can extract a set of priority competencies that are essential in any activity – social, educational or professional one. Key competencies, also called generic, allow acquisition and development (generating) of others – professional or specialty competencies. For this reason, possession, acquisition, development and maintenance of the individual key competencies in the lifelong learning process becomes a necessary strategy today, a priority, both in terms of economic, educational or social policies. This is

[3] Ł. Sienkiewicz, K. Trawińska-Konador, K. Podwójcic, *Polityka zarządzania kompetencjami pracowników*, Instytut Badań Edukacyjnych, Warszawa 2013, pp. 5–6.

[4] European Commission, *Europe 2020 Strategy*, Brussels 2010.

reflected in the strategic national, European and global documents, defining lines of action necessary for sustainable development in a globalized world. One of the main challenges in this context is the quality and effectiveness of formal education, especially at primary and secondary level, which is responsible for development of key competencies that determine all active and effective lifelong learning processes.

The effectiveness of investing in competencies of society (human capital) is usually visible only after many years, therefore, the development of effective strategies to support the development of human capital depends on a reliable assessment of baseline and current analysis of ongoing changes in this area. This is done through international measurement of learning outcomes in the form of comparable, in an international context, research of competence held[5]. The first such study was carried out in the 60s of the twentieth century, and over the next 50 years, the International Association for the Evaluation of Educational Achievement (IEA) has carried out several studies designed to assess students in primary key competencies in mathematics, reading and the natural sciences[6]. Since 2000, the Organization for Economic Co-operation and Development (OECD) is more and more involved in the problems of analysis of the level of key competencies in an international perspective. There is an increasing number of countries participating in this type of research.

The most important and the most common studies examining the key competencies of youth is the PISA (Programme for International Student Assessment), coordinated by the OECD. Conducted every three years, includes a representative sample of 15-year-olds and aims at a comparative analysis of students' learning outcomes in the countries participating in the study, including Poland. The survey results show that Poland was among 13 countries which from 2000 to 2009 managed to significantly reduce the number of students achieving the weakest performance in reading (this percentage decreased from 23.2% in 2000 to 15% in 2009).

Extremely important, in my opinion, is the fact that the international analysis of the level of key competencies concerns not only of youth acquiring them in formal education, but also adults who have completed their formal education. Analysis of the current state of their key competencies can help

[5] E.A. Hanushek, L. Woessmann, *Do better schools lead to more growth? Cognitive skills, economic outcomes, and causation*, http://hanushek.stanford.edu/sites/default/files/publications/Hanushek%2BWoessmann%202012%20JEconGrowth%2017%284%29.pdf, access: 7.10.2015.

[6] E.A. Hanushek, L. Woessmann, How much do educational outcomes matter in OECD countries?*, Economic Policy,* 2011, vol. 26(67), pp. 427–491.

you answer the following questions: *Does modern school educate?* and *How effectively?* In the 90s of the twentieth century (1994, 1996, 1998) the first International Adult Literacy Survey (IALS) was conducted in 23 countries, including Poland. In another international study, ALL (International Adult Literacy and Skills Survey), conducted between 2002–2003 and 2006–2008, only 10 countries participated, but the experience arising from the above mentioned studies have been used to develop the largest international study of key competencies of adults, whose main reason was the need to obtain an answer to the question: *How can education and training systems affect the shape and level of competence of adults?*

PIAAC (the Programme for the International Assessment of Adult Competencies) was conducted by the OECD in years 2011–2012 in 24 countries, attended by a total of 166,000 people aged 16–65 years. The aim of the study was to measure the three key competencies – most fundamental in the modern world and most important in the acquisition of new skills and knowledge: reading comprehension, mathematical reasoning and practical use of information and communication technologies (these skills were measured on a scale of 0 to 500 points). Data obtained in this study provides the opportunity to:

- attempt to assess the quality of human capital, and on this basis, the economic potential in the participating countries;
- examine the relationship between key competencies, education and labor market conditions;
- reference quality assessment of human capital for social cohesion in the countries participating in the study.

As can be seen from the charts listed below, contained in the last edition of PIAAC study report, the results obtained by adult Poles participating in the study, both in terms of reading comprehension and mathematical reasoning, are below the average of OECD countries. Moreover, analysis of the results for Poland shows that low level of competencies surveyed (level 1 or below) in Poland is characterized by much larger percentage of adult respondents than the average in other OECD countries, while the highest level of skills (level 4 or 5) has a comparatively smaller group of Poles in the study than the average in other OECD countries.

Although the results of the PIAAC studies are not unambiguous indicator of the level of economic development of the countries measured in GDP *per capita*, it can and should be the basis of the analysis of the effectiveness of the education systems in different countries and associations with the level of economic development of the country.

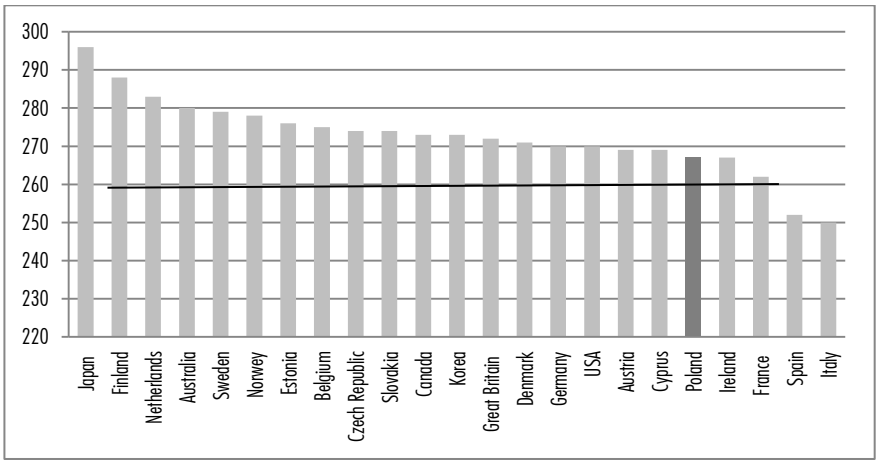

Fig. 1. Average PIAAC results of people aged 16–65 in 23 countries – Text comprehension
Source: *Umiejętności Polaków…*, p. 45

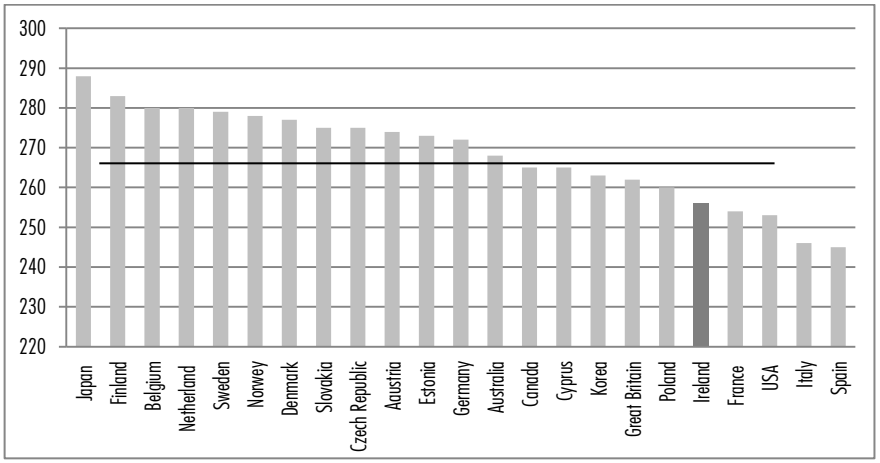

Fig. 2. Average PIAAC results of people aged 16–65 in 23 countries – Mathematical reasoning
Source: *Umiejętności Polaków…*, p. 45

As for the third competence included in the PIAAC study – the ability to use information and communication technologies (ICT), as is clear from the graph above, in all the countries participating in the study, there is a group of adults who have never used a computer or have little knowledge in this area. However, while in Sweden, the Netherlands and Norway, this group accounts for 7% of the study population – in Korea, Slovakia, Italy and Poland, this group makes up to 25%. Taking into account that this estimation

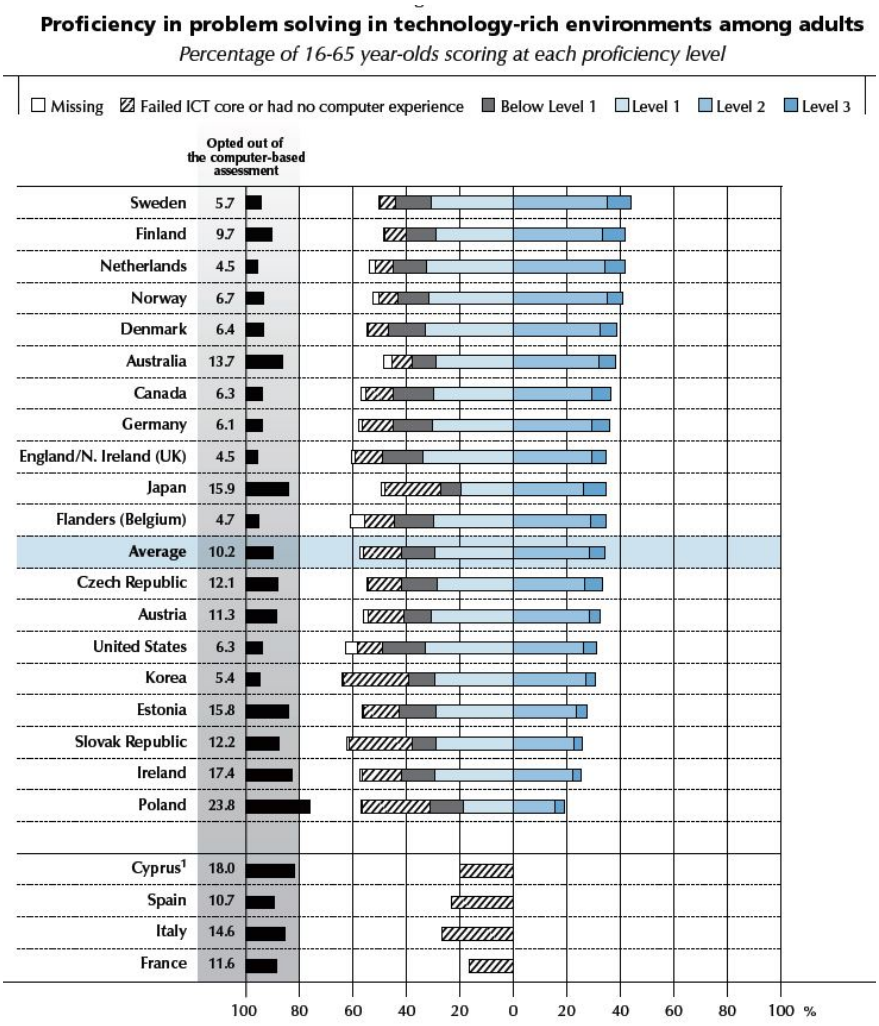

Fig. 3. Percentage of people aged 16–65 able to use information-communication technologies
Source: *OECD Skills Outlook 2013. First results from the survey of adults skills*, p. 89

does not include the number of people who refused to participate in a computer version of the test, you have to assume that in the adult population over 25% of Poles may not have competencies to use the information and communication technologies in everyday life. Of course, the reasons for such situation can be various: the differences in the structure of the Polish economy in relation to the more developed countries, differences in access to modern technology, the diversity of professions, lack of opportunity to acquire relevant skills in formal education etc. However, PIAAC study results should pay attention to the problem of digital exclusion and the real

level of competence to use ICT tools, especially among people with low levels of education, the elderly and the unemployed. The threat becomes stronger, because the effectiveness of using these tools today determines not only our professional, but also educational and social activity.

Changes that occur faster and faster in a globalizing world oblige a man to become more active – both autonomously and in collaboration in a heterogeneous group – both in the labor market as in the community, but primarily, people become responsible for their own development. a characteristic feature of our reality is change, which makes it necessary to dynamically update competencies, being both the condition and the attribute of development. Changing, thanks to ICT, quality of life makes a range of key competencies systematically expanding on the competencies that previously functioned as a specialized. In particular, it concerns information literacy, media or technology, enabling efficient and transparent integration of digital tools and new media in a professional or social activity, but mainly in the educational activity. Today it is difficult to imagine the process of learning without access to the Internet and its resources, without modern tools of communication or processing and publishing information.

Indispensable prerequisite for sustainable development of the world is the harmonious development of the individual, who should be able to:

- communicate with others in a socially acceptable way,
- learn independently and take entrepreneurial initiatives to realize the stated objectives and meet his own needs,
- acquire and develop knowledge and skills to meet his own needs without violating the rights of others and the destruction of the environment,
- understand the complexity and interdependence of the environment, social conditions and economic resources,
- make conscious decisions and make choices that do not infringe social, economic and environmental balance,
- develop a proper system of values and beliefs taking into account the concern for others and for the environment,
- implement, based on autonomous actions, effective cooperation in a heterogeneous group "to improve the quality of life today, without destroying the planet's resources for the future"[7].

[7] *ESD in the UK in 2008: A Survey of Action. The U Decade of Education for Sustainable Development 2005–2014–2008,* Report by Education for Sustainable Development Indicators Advisory Group, published by the UK National Commission for UNESCO, p. 47.

Increasingly, in the set of key competencies of modern man, *competencies of the future*[8] appear, and they are inalienable to the need to ensure a sustainable society and the world – today and in the future; it is about the knowledge, skills and readiness for action relating to social, economic and environmental aspects concerning: multifaceted analysis of the current situation, possible risks and development trends prediction, solutions and activities to enable future generations to live and develop in conditions not worse than the present. Formation of these competencies is the main goal of education for sustainable development, which has become a necessity in reality so strongly saturated with inequalities, the threat of exclusion, unequal access to goods and raw materials.

An integral part of national and international development strategies adopted in recent years by individual countries – including Poland, the European Union and the OECD, is to raise the level and increase the use of human capital.

Priorities and actions set out in international strategy *Europe 2020*, *OECD Skills Strategy*[9] and in Polish: long-term and medium-term national development strategy and the *Human Capital Development Strategy* and *Lifelong Learning Perspectives*, imply the development of human capital based on the current state of society competencies defined by the PIAAC study results.

Comprehensive skills development strategy for efficient economy is based on three basic principles:

- we should give priority to shape key competencies and strategic competencies for the labor market (in the context of lifelong learning),
- we should reduce deactivation through various forms of stimulating activity in the labor market,
- it is necessary to intensify measures to adapt to the development of competencies (especially advanced) which correspond to the needs of the labor market.

Policy development of human capital in Poland, through the development and improving competencies of society, is defined by strategic documents, the most important of which are: *Poland 2030. The third wave of modernity*; *Long-term National Development Strategy* from 11.01.2013;

[8] The concept of the *competencies of the future* was defined for the first time by Gerhard de Haan – professor at the Freie Universität Berlin; Band Nr. 39 der Reihe "Bildungsforschung" (hrsg. vom BMBF) mit dem Titel "Bildung für nachhaltige Entwicklung – Beiträge der Bildungsforschung", http://www.empirische-bildungsforschung-bmbf.de/_media/39_Bildungsforschung.pdf.

[9] *OECD Skills Strategy* was formed in OECD Report, *Better Skills, Better Jobs, Better Lives*, 2012.

National Development Strategy 2020 from 25.09.2012; *Human Capital Development Strategy 2020* from 18.06.2013; *Lifelong Learning Perspectives* from 10.09.2013[10]; and the draft document *Lifelong Learning Perspectives* from 15.05.2013.

All of these documents emphasize the need to develop human capital, which translates into: an increase in innovation and competitiveness of the economy and society more active in economic, social and political life of the country, at all stages. Actions to implement the adopted strategy, should aim to:

- form and develop key competencies (including innovation and creativity),
- increase the level of information/digital/technology/media literacy,
- increase the quality of education (formal, informal, non-formal), among others, by integrating, in the educational process, digital tools; adequate systems of validation and certification of competencies acquired outside the formal system,
- disseminate various forms of adult learning,
- reduce the educational and professional passivity of NETT youth,
- raise PIAAC test scores, at least to the level of the OECD average.

Rank of documents emphasizing non-transferability of shaping and developing key competencies of society, for the development of the country or Europe, clearly confirms the role of key competencies of the individual – both in the development of the individual, and the society as a whole.

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