

## The role of state schools of higher vocational education in the sustainable development process

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**Abstract:** The indications of creating at the end of the 1990s and in the first decade of the 21st century public higher vocational schools were undoubtedly included in the idea of sustainable development. Thereby, the hypothesis that the functioning of higher schools fosters the current process of sustainable development is justified. The hypothesis was verified by means of inductive and deductive reasoning. The effects of analyses and considerations indicate the significant role of state schools of higher vocational education in the sustainable development process. Increasing educational opportunities for young people from smaller towns, the growth of gross enrolment ratio in regions where state higher vocational schools were formed, indirect economic stimulation in these regions and supplying them with financial means from the national budget in the form of grants for higher schools and financial assistance for students, boosting revitalisation processes in urban areas and the positive effects of cooperation of these schools with numerous entities in the socio-economic environment seem to demonstrate that their functioning supports the development of subregional centres, and in this way, contributes to sustainable development at the regional scale.

**Keywords:** state universities of applied sciences, sustainable development strategies, subregional centres

**JEL:** I25, Q01

### Introduction

The results of numerous studies and analyses indicate a significant influence of higher education on creating human capital. M. Ratajczak claims that the changes taking place in human capital derive, to a great extent, from the education system, including higher education, and, at the same time, he adds that, considering the processes taking place in contemporary world, the role of human capital as a development factor will grow [Ratajczak 2013, p. 22-33]. In the knowledge society and knowledge based economy, higher education, as a significant link in the social system as well as economic sector, takes on particular importance [Ratajczak 2010, p. 3-9]. It can be seen, for example, in the communication from the European Commission “The Role of Universities in the Europe of Knowledge”, whose aim was to initiate a debate on the issue of the role of European universities in society and knowledge based economy [European Commission 2003].

As long as, in the light of the aforementioned remarks, it can be stated with full responsibility that higher education plays an important role in the socio-economic development

process, there arises a question about the role of education at a higher level in the sustainable development process. The question becomes much more important in the context of migration of people observed in Poland, and particularly of people of early working age, from smaller municipal centres and from rural areas to larger agglomerations. The ongoing process which, in the author's opinion, could be termed "metropolisation of development", calls into question the contribution of tertiary education in creating sustainable development. The functioning of large academic universities located in the biggest metropolitan areas, allows sustainable development at a national level, but, at the same time, it contributes to the aforementioned metropolisation and, in this way, it contradicts the need for sustainable development regionally. The sustainable development process, in terms of regions, should then be fostered by the functioning of state schools of higher vocational education, that is higher schools located in subregional centres.

The aim of the paper is to attempt to illustrate the role of public higher vocational schools (state schools of higher vocational education) in the sustainable development process. From the paper's point of view, it is significant that, at the end of the 1990s and in the first decade of the 21st century, the most important reasons for forming over 30 state schools of higher vocational education, that is higher schools having their seats in mid-size towns, located in different parts of Poland, was, on the one hand, the need to increase the low gross enrolment ratio at higher education level, which impeded the development process of regions, and on the other hand, the need for equality of educational opportunities, by bringing studies closer to less wealthy secondary school graduates, especially youths from small towns [Winnicki 2008, p. 29-34]. These reasons were, undoubtedly, part of the idea of sustainable development, which justifies the hypothesis that functioning of state schools of higher vocational education fosters the current process of sustainable development. The hypothesis was verified by means of inductive and deductive reasoning, using the results of the analysis of local sustainable development strategies, development strategies of higher schools, and the knowledge and experience gained by the author during almost 20 years of functioning in one of the state schools of higher vocational education.

### **Tertiary education in European and Polish sustainable development strategies**

Among the currently existing European and Polish development strategies, two documents deserve particular attention, namely, "Strategy Europe 2020" and "Responsible Development Strategy to 2020". These strategies attach great importance to the issue of sustainable development and, at the same time, attribute a vital role to tertiary education in creating development processes. Further, the paper presents notations included in the

aforementioned strategies which directly refer to higher education. It must be stressed here that the focus was on these excerpts of strategy documents which were dedicated to development targets (the programme part of the strategy), with text contained in the diagnostic part of the strategy being left out. The intention of the author was, then, not to present long and complex descriptions of issues connected with higher education included in sustainable development strategies, but raising the subject of the importance ascribed to education in creating development processes.

The second decade of the 21st century is marked in the European Union by the implementation of the three priorities contained in “Strategy Europe 2020” defined as a strategy for smart, sustainable and inclusive growth. The strategy puts forward five headline and measurable targets, and presents seven flagship initiatives enabling progress under each of the priorities. The issues related to higher education were directly reflected within the first priority of the discussed strategy, that is, intelligent development – economic development based on knowledge and innovation, and, relating to the target, in the field of education, in the light of which at least 40% of the people from young generation should gain a tertiary education<sup>1</sup>. To implement the priority and achieve the target there are, with regard to higher education, two flagship initiatives, namely, “The Innovation Union” whose aim is to use research, development and innovative activity to solve different problems, and “Youth on the Move” which is oriented towards the improvement and enhancement of the attractiveness of European higher education internationally, and raising the quality of all levels of education and training in the UE. In the first project, it was stressed that the European Commission will, among other things, promote knowledge partnerships and strengthen links between education, business, research and education, and promote entrepreneurship by supporting young innovative companies. Then, the second project signalled the engagement of the European Commission in, among other things, integrating and improving the activities of European programmes in relation to mobility, research and inter-university cooperation, and including them in national programmes and resources, and in stepping up the modernisation agenda of higher education (curricula, governance and financing) by benchmarking university performance and educational outcomes in a global context<sup>2</sup>.

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<sup>1</sup> Specifically, it is about increasing the share of the population aged 30-34 having completed tertiary education to at least 40% by 2020.

<sup>2</sup> At the same time, in “Strategy Europe 2020” it was stressed, in terms of the two discussed projects, that all member states must: reform national and regional systems of conducting research and development activity so that it fosters excellence and smart specialisation, reinforce cooperation between universities, research and business, implement joint programming and enhance cross-border cooperation in areas with EU value added and adjust national funding procedures so as to ensure the diffusion of technology across EU territory; to ensure

The core development strategy of the country for the coming years, defining the basic conditions, objectives and trends of development in social, economic, regional and spatial terms, is the “Responsible Development Strategy to 2020” (SOR)<sup>3</sup>. The strategy puts forward three specific objectives, and, within them 12 main areas of activity concentration (from 2 to 5 depending on the objective), completed with intervention directions (58 directions altogether). Furthermore, the document identifies six areas influencing the achievement of strategy targets, under which 28 intervention directions were proposed. Higher education directly fits into the specific objective concerning sustainable economic growth based increasingly on knowledge, data and organisational excellence, and in the field devoted to human and social capital. The authors of this strategy turn attention to the fact that in order to enhance human and social capital in the national system of innovation, programme and system activities are planned, targeted at all stages of the shaping of innovators, that is schools of different levels, universities and other scientific and research units and enterprises. Moreover, within SOR, there is mention of the need to better gear education and learning towards a system effectively cooperating with the environment (economic, social, cultural) and to base it on more autonomous and less bureaucratic universities, to support staff management and development, and internationalise and open Polish higher schools to innovation. Excerpts from SOR concerning higher education are presented in table 1.

Table 1. Formulations referring to higher education contained in “Responsible Development Strategy to 2020”

| <b>Areas, objectives, directions and activity directly referring to tertiary education</b>   |
|--|
| <p>Specific objective 1. Sustainable economic growth based increasingly on knowledge, data and organisational excellence</p> <ul style="list-style-type: none"> <li>– Area: development of innovative companies <ul style="list-style-type: none"> <li>• Intervention direction 1. Enhancing human and social capital in the national innovation system <ul style="list-style-type: none"> <li>▪ Promoting enterprise culture at universities, enhancing research potential at universities and their stronger involvement in the system of creating innovation</li> <li>▪ Introducing changes in the education system oriented towards shaping attitudes and features fostering innovation</li> </ul> </li> </ul> </li> </ul> |

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a sufficient supply of science, maths and engineering graduates and to focus school curricula on creativity, innovation and entrepreneurship; to ensure sufficient investment in education and training systems at all levels (pre-school to tertiary); to improve educational outcomes addressing each segment (pre-school, primary, secondary, vocational and tertiary) within an integrated approach, encompassing key competencies and aiming at reducing early school leaving; to enhance openness and relevance of education systems by building national qualification frameworks and better gearing learning outcomes towards labour market needs (European Commission 2010).

<sup>3</sup>The strategy is the updated version of the “National Development Strategy 2020”. The adoption of it meant rejecting “Long-term National Development Strategy 2030. The Third Wave of Modernity”.

| <b>Areas, objectives, directions and activity directly referring to tertiary education</b>  |
|---|
| The area influencing the achievement of strategy objectives: Human and social capital<br>– Intervention direction 1. Better gearing of education and learning outcomes towards labour market needs <ul style="list-style-type: none"><li>• The development of higher education directed at a system effectively collaborating with the environment (economic, social, cultural) based on more autonomous and less bureaucratized universities</li><li>• Tailoring tertiary education to the needs of the modern economy</li><li>• Supporting management and development of academic staff</li><li>• Internationalisation and opening of Polish higher schools to innovation</li></ul> |

Source: Own elaboration based on (Ministry of Development 2017).

### **State schools of higher vocational education in local sustainable development strategies**

Among currently existing local development strategies, or more precisely, the strategy documents of districts and cities where state higher vocational schools operate, four development strategies for districts (of Gorzów, Jarosław, Koszalin, Tarnów) and six development strategies for cities (Gorzów Wielkopolski, Łomża, Płock, Sanok, Suwałki, Wałbrzych) have been analysed. These strategies, unlike most local strategy documents, are not reduced to issues of socio-economic development, but they also pay attention to the issue of sustainable development, as can be seen in the titles of these documents. This paper further presents the results of the verification of whether the diagnostic and programme parts of the aforementioned documents contain reference to state schools of higher vocational education, and if they do, to what extent.

Based on the review of the contents of the four strategies for sustainable development of districts, it can be stated that two of them, namely, in “Sustainable Development Strategy of the Gorzów District to 2020” and “Sustainable Development Strategy of the Tarnów District for 2011-2020”, the fact of the existence in their region of state higher vocational schools was completely ignored. Then, in “Sustainable Development Strategy of the Jarosław District for 2014-2020” there was just a mention that a state higher vocational school operates in the region. Only in the diagnostic part of “Sustainable Development Strategy of the Koszalin Functional Area”<sup>4</sup> was more attention given to state school of higher vocational education. Unfortunately, in none of the analysed strategic documents were issues relating to the discussed higher schools contained in the programme part (table 2).

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<sup>4</sup> Koszalin Functional Area covers the territory of Koszalin district and the city of Koszalin.

Table 2. The extent of coverage of contents directly referring to state schools of higher vocational education in sustainable development strategies of districts\*

| Title of strategy document  | Diagnostic part of the strategy | Programme part of the strategy |
|---|---------------------------------|--------------------------------|
| Sustainable Development Strategy for Gorzów District to 2020      |                                 |                                |
| Sustainable Development Strategy for Jarosław District 2014-2020  | +                               |                                |
| Sustainable Development Strategy for the Koszalin Functional Area | ++                              |                                |
| Sustainable Development Strategy for Tarnów District 2011-2020    |                                 |                                |

\* the symbols used in the table stand for: three pluses (+++) large coverage of the discussed issues; two pluses (++) average coverage of the discussed issues; one plus (+) minimal coverage of the discussed issues (just a mention that there is a state higher vocational school in the region); an empty field means no coverage of the discussed issues.

Source: Own elaboration based on sustainable development strategy of districts where state schools of higher vocational education operate.

Based on the review of the contents of the six sustainable development strategies for cities, it can be stated that most of them take into consideration the issues related to the functioning of state schools of higher vocational education, relatively assessing, to the medium or large extent. Only in the “Sustainable Development Strategy of the City of Wałbrzych to 2020” there was just a mention of the functioning of state schools of higher vocational education. Most attention to the discussed higher schools was paid by the following cities: Suwałki, Gorzów Wielkopolski and Łomża. Also quite significant is the extent of coverage of the issue directly referring to state schools of higher vocational education in the strategies for Płock and Sanok (table 3).

Table 3. The extent of coverage of the contents directly referring to state schools of higher vocational education in sustainable development strategies for cities\*

| Title of strategy document   | Diagnostic part of the strategy | Programme part of the strategy |
|--|---------------------------------|--------------------------------|
| Sustainable Development Strategy for the City of Gorzów Wielkopolski 2010-2020 | ++                              | ++                             |
| Sustainable Development Strategy for the City of Łomża to 2020                 | +                               | ++                             |
| Sustainable Development Strategy for the City of Płock to 2022                 | ++                              |                                |
| Sustainable Development Strategy for the City Sanok 2013-2024                  | ++                              |                                |
| Sustainable Development Strategy for the City of Suwałki to 2020               | +++                             | +++                            |
| Sustainable Development Strategy for Wałbrzych to 2020                         | +                               |                                |

\* the symbols used in the table stand for: three pluses (+++) large coverage of the discussed issues; two pluses (++) medium coverage of the discussed issues; one plus (+) minimal coverage of the discussed issues ( just a mention that there is a state school of higher vocational education in the area of the city); an empty field means no coverage of the discussed issues.

Source: Own elaboration based on sustainable development strategies of the cities where state schools of higher vocational education operate.

One of the strategic objectives in “Sustainable Development Strategy for the City of Suwałki to 2020” was the development of PWSZ in Suwałki, including creating new degree courses and education to master level. In the document, it was signalled that besides educational activity, the school also focuses on research – the Cross-border Technology Transfer Centre is located there – in the implementation phase, aiming to create greater cooperation opportunities for science and business, while in the further plans for school development there is the establishment of the Cross-border Renewable Energy Centre. In the strategy, it was also stressed that Suwałki may play an important role in terms of education through the development of PWSZ’s activity in Suwałki and the Science and Technology Park Poland-East with a technology incubator. Based on the school, there are plans to create an Emergency Medical Centre – in collaboration with the Emergency and Medical Procedures Laboratory and Medical Air Rescue. In the programme part of the “Sustainable Development Strategy for the City of Gorzów Wielkopolski for 2010-2020” it was considered justified to support the efforts of PWSZ in Gorzów Wielkopolski to establish a Gorzowska Academy, through, among others, funding the necessary technical and scientific infrastructure, while the programme part of the “Sustainable Development Strategy for the City of Łomża to 2020” predicts support provided by the city for the development of higher schools, with the particular inclusion of PWSIP in Łomża, undertaking, together with the school and other institutions, joint action for the start-up in Łomża of a leading research centre for food processing, and developing the higher

school's infrastructure, namely a campus, sports hall and a laboratory for modern food processing. In the "Sustainable Development Strategy for the City of Sanok for 2013-2024" it was stressed that the main task of PWSZ in Sanok is not only supporting regional development, through educating highly qualified employees, but also influencing the cultural and economic policy of the Karpacki Euroregion. In turn, in the "Sustainable Development Strategy for the City of Plock to 2022" there was presented detailed information on the PWSZ in Plock, namely on the number of students of particular degree courses, academic staff and its teaching facilities.

Summing up the review of the contents of local sustainable development strategies, it can be concluded that if in the district strategic documents the fact of the existence of state schools of higher vocational education in their region was left unstated, or only mentioned briefly (while listing all the functioning universities) then, in the city strategic documents the fact that state schools of higher vocational education are located in their region was mentioned and, what is more, was considered an asset of the city and its opportunities for development, and sometimes even providing support to state schools of higher vocational education was elevated to the status of a strategy objective.

### **The question of sustainable development in the strategies for state schools of higher vocational education**

Development strategies for state schools of higher vocational education are highly diversified in terms of the form and scope of information presented. Despite the differences, the structure of most of the documents is similar. They include the mission, vision and development objectives (on one, or several levels). Many of them also include a diagnosis of the current state, usually concluded with a SWOT analysis. The further part of the paper presents the results of the verification of whether the strategies for the analysed schools, or more precisely the mission and vision contents, mention the sustainable development process.

The effects of this verification allow us to reach the conclusion that formulations referring to this development were included only in three among over 30 strategy documents. The manner of their formulation was quite varied – a very brief formulation was included in the "Development Strategy for the PWSZ in Głogów for 2014-2018", and a relatively long one in the "Development Strategy for S. Pigoń PWSZ in Krosno for 2015-2020". However, the missions and visions emphasised the issue of serving the city and regional development through conducting teaching and science, and research activity, and linked sustainable development to shaping democratic, civic and patriotic attitudes among students, graduates and employees. A detailed listing of the formulations is presented in table 4.

Table 4. Formulations referring to sustainable development contained in development strategies for state schools of higher vocational education

| <b>State School of Higher Vocational Education (PWSZ)</b> | <b>Formulations contents in terms of mission and/or vision referring to sustainable development</b>   |
|---|---|
| PWSZ in Głogów  | Taking action fostering sustainable development in conditions of social and ethical responsibility.   |
| PWSZ in Krosno  | Shaping and developing responsible democratic, civic and patriotic attitudes among students, graduates and employees and in the environment for the sustainable development of the city, region, Poland and Europe, and in this way contributing to regional development. |
| PWSZ in Oświęcim  | Taking action and projects in the field of science, teaching, education for sustainable development, shaping a knowledge based society and civic attitudes among the students, graduates, and employees of PWSZ, the inhabitants of the city and the region.              |

Source: Own elaboration based on development strategies for state schools of higher vocational education.

### **Functioning of state schools of higher vocational education and the sustainable development process**

Attempting to verify the hypothesis according to which the functioning of state schools of higher vocational education fosters the process of sustainable development, there must be emphasised several issues which, in the author's opinion, are of particular importance. Firstly, creating state schools of higher vocational education greatly decreased the degree of spatial concentration of higher education, reducing in this way inequalities in access to higher schools in Poland, providing the same education opportunities for young people. As expected, greater spatial accessibility of tertiary education institutions positively affected the gross enrolment ratio in the regions where state schools of higher vocational education were formed. Secondly, the functioning of state schools of higher vocational education indirectly influences the economy of the cities and districts where the schools are located. Being established in mid-size towns, which previously did not have tertiary education institutions, the schools generated new employment, frequently becoming an important employer locally. Employment involved the necessity of student services and the need to maintain infrastructure facilities [Misztal 2000, p. 18-21]. In turn, residence and living of students in these cities generated growth in consumer demand in local rental markets, transport services, food services and entertainment, sports and recreation [Augustyniak 2015, p. 193-201], although it must be assumed that the growth was relatively small, as most students are either residents of the cities where these higher schools are located, or residents of the surrounding towns. Thirdly, creating state schools of higher vocational education boosted the process of revitalisation of urban areas, particularly in the neighbourhoods where the schools are located. These were frequently former military buildings

or former office buildings which were shut down as a result of administrative reforms. Fourthly, state schools of higher vocational education receive subsidies from the national budget on an annual basis for tasks connected with educating students of full-time studies and maintenance of universities (the so-called “basic grant”). Their amount is very diverse (it depends on many factors – in compliance with the current algorithm of subsidies distribution), but on average, in recent years the amount accounted for several million zloty annually. Furthermore, state schools of higher vocational education receive funds from the national budget for financial assistance for students, where the average funding for one school in recent years amounted to several million zloty on an annual basis. If, with reference to the “basic grant” it is hardly possible to estimate what part is spent locally, then, in the case of funds for financial assistance for students, it can be assumed, taking into consideration the place of residence of its beneficiaries, that the largest part of them is spent locally. Fifthly, state schools of higher vocational education collaborate with numerous entities in the socio-economic environment, to the greatest extent with public institutions and city authorities. The collaboration with these entities, determined by the limited spatial extent of influence of state schools of higher vocational education and the type of degree courses conducted by them, contributes – in the opinion of university authorities, local government authorities and employers – to building partnerships and mutual trust, shaping positive behaviours and attitudes towards cooperation, and it also influences the sense of community in the regional/local environment. In the students’ opinion, state schools of higher vocational education also create a friendly atmosphere for studying and student life, but, over and above this, they contribute to creating the skills of cooperation, openness and flexibility among students. In the opinion of local government authorities (not to mention university authorities), these schools engage in initiatives raising the competitiveness and attractiveness of the cities, districts and regions where they operate.

The issues presented above indicate the significant role of state schools of higher vocational education in the sustainable development process. The increase in educational opportunities for young people from smaller towns, the growth in gross enrolment ratio in the regions where state schools of higher vocational education were created, indirect economic stimulation in these regions and enhancing them with financial means from the national budget in the form of grants for the universities and financial assistance for students, boosting the process of revitalisation of urban areas, as well as the positive effects of collaboration between the higher schools and numerous entities in the socio-economic environment, seem to show that the functioning of state schools of higher vocational education fosters the sustainable development process. The schools support the development of subregional centres, and in this

way they contribute to sustainable development regionally. In the author's opinion, this fact allows the positive verification of the hypothesis stated in this paper.

### **Conclusion**

The considerations on the role of state schools of higher vocational education in the process of sustainable development incline the author to formulate several general conclusions and points. Firstly, the adaptation of state schools of higher vocational education to a dynamically changing reality entails the necessity of emphasising its present place among the participants in the sustainable development process, and, at the same time, to continue searching for its place in this process. Secondly, acting through state schools of higher vocational education for the benefit of regional and local communities requires redefining their functions, which, undoubtedly should be different from the objectives and tasks of the scientifically strongest academic universities located in the largest conurbations. Thirdly, the building of long-term relationships with different entities by state schools of higher vocational education, based on mutual trust, should make these schools become, in a sense, "factories" of social capital for the cities, districts and subregions where they are located. Fourthly, enhancing the role of state schools of higher vocational education in creating the process of sustainable development at the regional and local level should be correlated with their evolution towards smart organisations. And finally, fifthly, implementing the changes in the functioning of state schools of higher vocational education should be well thought out and consistent – both at the level of the whole sector of state schools of higher vocational education and at the level of particular schools constituting this sector.

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