

## THE ETHICAL AND CIVIC COMPETENCE OF YOUNG PEOPLE IN THE REGION OF WIELKOPOLSKA

Halina ZBOROŃ

Poznań University of Economics and Business; halina.zboron@ue.poznan.pl, ORCID: 0000-0002-8399-6709

**Purpose:** To present the results of research on the readiness of secondary school students to perform professional roles in Industry 4.0. The object of the research is the ethical and civic competence.

**Design/methodology/approach:** The research was conducted with the use of an original empirical research tool. The theoretical reference of the research are forecasts identifying professional competencies for Industry 4.0.

**Findings:** The research showed that young people from secondary schools are highly aware of social ethical norms in the context of the economic practice. Furthermore, the young people who took part in the research demonstrate readiness to behave responsibly and take account of non-economic values when making business decisions.

**Research limitations/implications:** The research sample was a group of students from the schools of the region of Wielkopolska. The research is not representative and thus the results may not be extrapolated to the entire population of young people in Poland. The developed research tool, however, is of universal use.

**Practical implications:** The research regards competencies that will be in demand in the Industry 4.0 labour market. Their identification allows for designing educational tools that will prepare young people better to perform professional roles.

**Social implications:** The development of the ethical and civic competence of young people is of importance for the quality of social life and the condition of the natural environment. Effective formation of responsible attitudes among young people is socially important.

**Originality/value:** The author has created an original tool to test the level of the ethical and civic competence. The tool may be used to verify educational effects in terms of the formation of the ethical and civic awareness among students.

**Keywords:** competencies, ethics, citizenship, civic attitude, Polish youth, Industry 4.0.

**Category of the paper:** Research paper.

## **1. Introduction. Educational challenges in the face of changes in the market**

From the perspective of the education policy, mere observation of a present situation in the labour market seems to be insufficient. Appropriate preparation of young people to perform professional roles requires consideration of forecasted changes in the economy as well as accurate predictions of the labour market's future expectations. This is why it is so important to analyse long-term trends in economic changes and identify trends regarding the future requirements of employees' competencies. Such identification may form a basis for undertakings, pursued at various education levels, aimed at eliminating competency gaps. Thus, the effectiveness of education, as measured by how the learning effects correspond to the requirements of employers, requires that such education goals be pursued that are set based on correct forecasts and reliable diagnoses of a current situation. Based on such a diagnosis, attempts are made to identify the challenges regarding competency gaps that we are facing when preparing the future personnel for the economy. Currently, the diagnosis and identification measures as well as various forms of support of competency development regard, in the majority of cases, university students. Universities have an obligation to track the situation of their graduates,<sup>1</sup> and the results of such monitoring are used to introduce changes in the curricula and organise additional education forms, such as workshops, courses, seminars or apprenticeship programmes aimed at developing or reinforcing the competencies that are valuable for employers. Such measures should be extended to cover also those groups of young people who enter the labour market after graduating from a secondary school. To improve the effectiveness of such measures, we should implement them already at an earlier education stage. In this context, the identification of the competencies of primary and secondary school students seems to be a relevant task.

That matter is dealt with in this text. The aim of this paper is to present the results of a research project regarding the readiness of young people in Poland, i.e. students of secondary schools, to perform professional roles in Industry 4.0. The paper presents the results regarding the ethical and civic competence.

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<sup>1</sup> Poland has introduced a national graduate tracking system (ELA), which provides valuable information about the economic situation of graduates of state universities.

## 2. Contemporary labour market and expected competencies of an employee

The contemporary labour market may be described by reference to two important trends of changes. The first one regards a gradual transformation of the contemporary economies of the West into Economy 4.0, a model marked by extensive use of information technologies and considerable level of automation in industrial production (Cellary, 2019). The fourth industrial revolution (fourth after mechanisation, electrification and computerisation), which is currently happening in the Western world, consists in the integration of the world of digitally controlled machines (production lines) with people who manage automated production processes. The changes that are taking place apply principally to the manufacturing sector, described as Industry 4.0, where the creation of networks connecting the material world (tangible elements of production processes) with the internet and information systems is of paramount importance. The flow of information between people, machines and information technologies is the basis of operation for production processes. A cyber-physical environment emerges, consisting of networks of information flow between people, machines and the systems forming the reality of Industry 4.0, which is the foundation of Economy 4.0, which also covers the entire infrastructure and market environment (Cellary, 2019). In this new economic environment, completely new challenges for employees emerge and they require specific preparation.

Knowledge-based Economy 4.0 will require specific competencies: IT, analytical and communication skills, self-organisation, readiness for constant learning, openness and teamwork, creativity, flexibility, ability to respond quickly to changes and adapt to changing conditions both inside and outside an organisation.

Competence areas are described as cognitive and social. The so-called hard (subject-matter-related) skills gain in value with regard to social competencies: communication skills, openness, readiness to work with others, loyalty, ability to solve conflicts and organise teamwork. This list should be completed with the ethical and civic competence; and the reason for that lies in the second significant trend observed in the contemporary economies, i.e. the growing popularity of the socially responsible business model. Social expectations as to respecting ethical standards, addressed to market participants, affect the labour market in that the profile of the professional competencies sought by employers change. A business that respects CSR standards in its operations and pursues ethical programmes requires engagement of employees, who are ready to take up related challenges.

Market participants in the Western world are aware that there is a social agreement regarding the obligations imposed on them. The cultural changes, having been taking place gradually since the mid-1950s, of the social opinion about the impact of business on its environment have led to an effective change of our thinking about economic operations. The business social responsibility concept has evolved gradually: from the early defensive stage of negating corporate social responsibility in the greedy era, to the next stages: the charitable,

promotional, strategic and systemic one (see: Carroll, 1999; Frederic, 1994, 1998, 2013; Visser, 2010a, 2010b), to a conclusion that all previous attempts to improve the CSR model should be abandoned in favour of a completely different approach to define the idea. The starting point for this new approach is to reverse the applicable axiological order and adopt a different perspective, according to which the starting point of business operations should be to create shared value (CSV) (Porter, Kramer, 2011) or to create value together (Hausner, 2019). Currently, it may be assumed that the idea of social responsibility is evolving towards the concept of corporate citizenship (Valor, 2005; Zboroń, 2019). This paper does not allow to explore this idea more broadly<sup>2</sup>, but for the needs of the main considerations of this paper we are going to assume that the basis of corporate citizenship is that businesses in their operations should take the perspective of society's welfare into account and make decisions that link the expected profits with social interest. The popularisation of this trend in thinking about social responsibility will lead to a broader definition of the obligations of the economic practice participants. It is thus reasonable to include the ethical and civic competence to the set of skills required from future employees.

### 3. Methods. The research on the competence of secondary school students

The research *The New Generation in the New Economy* (original name: *Nowe Pokolenie w Nowej Gospodarce*) was conducted as part of the project *The Regional Initiative of Excellence* (original name: *Regionalna Inicjatywa Doskonałości*) carried out in Poznań University of Business and Economics.<sup>3</sup> The research was carried out between 17 May and 8 June 2021. The participants were young people aged 13-20 who were the students of secondary schools located in Poznań and the region of Wielkopolska: general education secondary schools, technical secondary schools and vocational secondary schools. The statistical unit was a student while the sampling unit was a school form. The type of town, type of school and the quality of education (determined by reference to the school ranking published every year in *Perspektywy*, a Polish monthly magazine about education) were taken into account in the sampling procedure. The research included students from schools representing varying education levels (the best, good, average, poor and the poorest schools) and varying locations. There were 26 schools in the research (9 general education schools, 9 technical schools, 8 vocational schools), of which 5 were located in Poznań, 19 in other towns of the region of Wielkopolska and 2 were located in villages. The goal of the research was to develop a methodology to carry out regular research on the preparation of the young generation

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<sup>2</sup> This matter is discussed in another paper by H. Zboroń (2019).

<sup>3</sup> The project is funded as part of the programme of the Minister of Science and Higher Education under the name *Regional Initiative of Excellence* in 2019-2022; project No.: 004/RID/2018/19; funding at PLN 3,000,000.

to serve professional roles. A set of 8 tools was created: 7 individual standardised tasks and one teamwork task. Each tool is used to examine one competency, and because each tool is an independent task, they may be used separately. The toolset covers the following: the mathematical literacy competence (allowing to determine analytical competence), the ethical and civic competence, communication, creativity, teamwork, self-organisation at work and task planning, digital content creation and ability to search for information with the use of IT tools, and learning new things<sup>4</sup>. This paper deals with the results of the test of the ethical and civic competence.

## 4. Results

### 4.1. Task one: evaluating negative behaviours by reference to moral norms

The research goal in task one was to answer the question how young people from secondary schools evaluate the importance of listed social norms. The questions in the task regarded the following situations: hiring employees without a contract, exposing employees to the risk of health or life loss, misleading a customer as to the quality of a good or service, failure to meet contractual terms, unequal treatment of employees, carrying out operations harmful to the natural environment.

**Table 1.**

*Results of task 1, by sex*

Average rate	Question 1	Question 2	Question 3	Question 4	Question 5	Question 6
<b>Total</b> <b>-12.42</b>	-1.28	-2.63	-2.07	-2.37	-1.89	-2.18
<b>girls</b> <b>-12.83</b>	-1.39	-2.68	-2.10	-2.42	-2.02	-2.22
<b>boys</b> <b>-11.72</b>	-1.10	-2.55	-2.01	-2.27	-1.68	-2.11

Source: Own work.

<sup>4</sup> The list of the competencies was determined based on the literature on the subject, an analysis of data from individual in-depth interviews and opinions of experts, i.e. participants of discussion panels. The following literature, among others, was used: Żarczyńska-Dobiesz A., Chomątowska B., (2014), *Pokolenie „Z” na rynku pracy – wyzwania dla zarządzania zasobami ludzkimi*; Mazur-Wierzbicka E., (2019), *Zarządzanie różnorodnością pokoleniową w organizacjach; Przyszłość edukacji. Scenariusze 2046. Raport z badań*, Infuture Institute (2021); *Młodość czy doświadczenie? Kapitał ludzki w Polsce. Raport podsumowujący III edycję badań Bilansu Kapitału Ludzkiego*, (2013), J. Górniak (ed.).

The results of task one are satisfactory: all exemplary behaviours were evaluated negatively, so according to the common standards. The average rate of all answers is (-12.42), and this result is in the middle of the high level. A slight difference between the results of girls and boys may be observed. Girls are more inclined to deem the example behaviours to be reprehensible. Nevertheless, the results for both sexes are similar.

**Table 2.**

*Results of task 1, by school type*

Average rate	Question 1	Question 2	Question 3	Question 4	Question 5	Question 6
<b>General education school</b> <b>-12.02</b>	-0.93	-2.63	-2.15	-2.37	-1.85	-2.09
<b>Technical school</b> <b>-13.37</b>	-1.56	-2.65	-2.00	-2.41	-1.95	-2.28
<b>Vocational school</b> <b>-12.54</b>	-1.54	-2.61	-2.01	-2.29	-1.89	-2.20

Source: Own work.

The analysis of the results as broken down by school type does not show any significant differences between the students, although a difference between technical and general education schools may be puzzling. The higher ethical and civic sensitivity among students of technical schools may be explained by the differences in the number of girls among the tested groups: girls accounted for 63% of the total participants from general education schools, while in technical schools it was 69%.

#### **4.2. Task two: evaluating behaviours in the context of a conflict of values**

Task two was designed to see if the young people, when evaluating the behaviours, take account of the economic interest: does the perspective of earning potential financial gains makes the exemplary economic behaviours seem less negative? In the task instructions, the students were asked to impersonate a businessperson, an owner of a small construction company that competes with other businesses for access to profitable contracts, which forces the owner to make difficult decisions. The task description presented six examples of business situations requiring decisions to be made in the context of a conflict of ethical and business values. The students' task was to evaluate the behaviours resulting from the decisions made. The rating scale was the same as in task one.

The first situation regarded hiring employees without a contract. The description emphasised difficult conditions of competing with other businesses, which induced the business owner to hire economic migrants without an employment contract to allow for labour costs reduction. The young respondents found this behaviour morally questionable, and the average rating in numbers was (-0.99). There were slight differences between the ratings by girls (-1.10) and boys (-0.8) and the students from general education schools (-0.75), technical schools (-1.25) and vocational schools (-1.08).

The second example presented disregard for OHS rules driven by the need to maintain high pace of work and negligence in supplying employees with protective clothing and appropriate tools for safe work. In this case, the average rating was (-2.27) (in words: inappropriate behaviour), for girls the result was (-2.43), for boys (-2.01), while the answers in comparison of school types were very even and amounted to (-2.29) for general education and technical schools, and (-2.21) for vocational schools.

The third situation regarded an opportunity to gain benefit at a customer's cost. In the example, the entrepreneur used a lower quality material, against what was agreed with the customer and without the latter's knowledge. The description of the event underlined that it is very unlikely the abuse would be discovered. The behaviour was found morally questionable. In numerical terms the average rating was (-1.55), for girls it was (-1.64), for boys (-1.39). Students of general education schools rated it at (-1.6), students of technical schools at (-1.45) and students of vocational schools at (-1.59).

The fourth situation regarded a problem of failure to meet the deadline to perform a contract because of assuming another obligation. Emphasis was placed on the issue of seeking more contracts in order to ensure the liquidity of the company. The presented behaviour of misleading the customer consciously in respect of the order delivery time was, similarly as in the previous cases, evaluated as morally questionable. The average rating was (-1.4), girls rated it at (-1.54) on average, boys at (-1.15), general school students at (-1.43), technical school students at (-1.51) and vocational school students at (-1.16).

The fifth situation regarded varied treatment of employees by the employer and discrimination of the employed economic migrants. The description included the mechanisms of worse treatment of foreigners looking for a job in Polish businesses. It was underlined that such people are very determined and often agree to undertake a job without any contract and for a different, worse pay than other employees. This behaviour was evaluated slightly more severely than the previous ones: the average rating was in the morally questionable range and in terms of numbers it was (-1.65), the average for girls was (-1.89), and for boys (-1.22). The results of the students of general education and technical schools were almost identical, for the students of vocational schools the described behaviour was slightly more tolerable.

The last example of wrong behaviours regarded fly-tipping, i.e. illegal disposal of waste at places not intended for that purpose. Although it was underlined that businesses may save a lot when disposing waste this way, the young respondents definitely condemned such behaviour and deemed it improper – the average rating was (-2.14), for girls it was (-2.27), for boys (-1.92). In the case of general education and technical secondary schools, the rating was within the improper behaviour range ((-2.26) and (-2.11) respectively), for vocational schools the students deemed it morally questionable ((-1.92)).

**Table 3.***Total results of task 2, by sex*

	Situation 1	Situation 2	Situation 3	Situation 4	Situation 5	Situation 6
<b>Total -10</b>	-0.99	-2.27	-1.55	-1.40	-1.65	-2.14
<b>girls -10.87</b>	-1.10	-2.43	-1.64	-1.54	-1.89	-2.27
<b>boys -8.49</b>	-0.80	-2.01	-1.39	-1.15	-1.22	-1.92

Source: Own work.

**Table 4.***Total results of task 2, by school type*

Average rating	Situation 1	Situation 2	Situation 3	Situation 4	Situation 5	Situation 6
<b>General education school -10.07</b>	-0.75	-2.29	-1.60	-1.43	-1.74	-2.26
<b>Technical school -10.34</b>	-1.25	-2.29	-1.45	-1.51	-1.73	-2.11
<b>Vocational school -9.29</b>	-1.08	-2.21	-1.59	-1.16	-1.31	-1.94

Source: Own work.

The results of task 2 show a high level of the ethical and civic competence, although they are slightly lower in comparison to task 1. Such a difference could have been expected due to the fact that the specific behaviours were rated in the complex context of the specific situation of the business owner making a choice due to various axiological reasons. Thus, the validity of ethical norms taken into consideration when rating the behaviours outside of the context of real-life situations decreased in the opinion of the young people.

## 5. Discussion on the results

The results of the entire research on the ethical and civic competence among students of secondary schools show a high level of this competence: it is contained within the range of (-18) to (-6), which is described as the range of high competence. Differences may be observed between female and male students as well as between the representatives of the particular school types, although they are not considerably large.

**Table 5.***Total results, by sex*

	Total	girls	boys
<b>Average of both tasks</b>	-11.21	-11.85	-10.10

Source: Own work.



**Table 6.***Total results, by school type*

	<b>Total</b>	<b>General education schools</b>	<b>Technical schools</b>	<b>Vocational schools</b>
<b>Average of both tasks</b>	-11.21	-11.04	-11.85	-10.91

Source: Own work.

Although there are no significant differences between the sexes (which was underlined above), girls achieved a slightly better result in both tasks in all questions. This is demonstrated consistently throughout the research. It may be a sign of differences in the upbringing effects and the expectation of higher empathy to be shown by girls. It may also be an argument for the thesis of a strong impact of the stereotypes of femininity and masculinity.

The differences in the results from both the tasks are worthy of note. For girls it is 1.96, for boys 3.23. This may mean that boys, when evaluating the behaviour in a specific situational context, took account of the conflict of interest and are more inclined to take account of the economic argument. In the case of girls, the conflict of interest has not affected their evaluation of the behaviour. Thus, it may be assumed that boys in their evaluations take account of material benefits to a larger extent and are more understanding for people violating ethical norms in the situation of a conflict of values.

**Table 7.***Comparison of the results from both tasks, by sex*

<b>Average of both tasks</b>	<b>Task 1</b>	<b>Task 2</b>
Girls	-12.83	-10.87
Boys	-11.72	-8.49

Source: Own work.

An important matter when analysing the research results is prudence. The research conducted regards the students' beliefs, the content of the awareness, and not actual attitudes confirmed in actual choices made. In research of this type, the factor described as the social desirability bias must be accounted for. It regards both the first and the second task. In the case of questions about important social matters with positive values, especially those regarding ethical and environmentally-friendly matters, the formulated answers may to a large extent be only of declaratory nature. This is why the results of the research must be treated with great prudence and interpreted accordingly. It is only justified to speak of the extent to which the young people are aware of the importance of the ethical norms pertaining to the behaviours of the participants of the economic practice. So, when speaking of a high level of the ethical and civic competence, we only refer to the area of knowledge – the identification and acknowledgment of the validity of the ethical norms determining the standards of behaviours. The ability to resolve moral dilemmas correctly is, however, certainly a good foundation for correct behaviours in social life.

## 6. Summary

The transformation of the contemporary economies of the West into the model of Economy 4.0 is the determinant of changes in the labour market. The forecasts regarding the professional competencies expected by employers in the future bring up a question whether the contemporary young people will be able to meet such expectations. Thus, a very important matter is the knowledge about what skills will be sought by employers from their potential employees in the near and the more distant future. It is equally important to identify the skills of future candidates, in particular interpersonal and social competencies.

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