

**PROFESSIONAL COMPETENCIES OF CANDIDATES FOR  
EMPLOYEES IN THE ASSESSMENT OF EMPLOYERS  
(BASED ON THE EXAMPLE OF THE ENTREPRENEURS FROM  
MACHINE INDUSTRY)**

**Moczydłowska J.M., Widelska U.\***

**Abstract:** Professional competences are the important issue of human resource management. Nowadays, the awareness of employers grows that the quantity of human capital is not as much important as its quality. This raises specific, high expectations towards the candidates for employees, and indirectly towards schools that educate them. The purpose of this article is to get to know the opinions of entrepreneurs on the degree of preparation of graduates of secondary schools and universities for work and their expectations regarding professional competencies of the employed staff. As an example the machine industry has been selected. The presented empirical material has been collected as a part of a wider project carried out by a team of the Institute of Research and Analysis VIVADE, of which the authors are members.

**Key words:** competencies, candidates for employees, employers, machine industry

### **Introduction**

In the world of contemporary organizations, regardless of their size, structure and other attributes, the most valuable asset constitute employees. Employers are generally aware of the role of human capital. Even if they cannot precisely define it, they know that development of their enterprises depends on the qualifications, knowledge, skills, experience and personality predispositions of employees. People who are associated with the organization identify with its mission, possess appropriate professional competencies and constitute the driving force of development of every organization. Therefore, the awareness of employers grows that the quantity of human capital is not as much important as its quality. This raises specific, high expectations towards candidates for employees, and indirectly towards schools that educate them. The purpose of this article is to get to know the opinions of entrepreneurs on the degree of preparation of graduates of secondary schools and universities for work and their expectations regarding professional competencies of the employed staff. As an example the machine industry has been selected. The choice results from the fact that enterprises representing different industries need employees with professional competencies associated with this profile of education. The presented empirical material has been collected as a part of a wider project carried out by a team of the Institute of Research and Analysis VIVADE, of which the authors are members. The study used quantitative (questionnaire) and qualitative methods (FGI, IDI).

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\* **Joanna M. Moczydłowska**, Łazarski University, **Urszula Widelska** Białystok University of Technology, ✉ corresponding author: widelskau@wp.pl; joanna@moczydlowska.pl

## The concept of professional competencies

The theoretical origin of the concept of professional competencies is long and complex. In the view of numerous publications devoted to this subject, the authors confine to the synthetic presentation of the main views included in this theoretical mainstream [4].

The beginnings of the interest of the problem of professional competencies and management of this resource goes back to ancient times, however, contemporary management sciences combine the development of the concept of competencies with development of the behavioural school of management on the one hand, and with development of the resource approach towards the strategic management on the other hand. According to the concept of resources, organizations differ fundamentally in terms of resources, the use of which affects the efficiency of their operations. If some of the resources and skills allow for the use of opportunities and neutralizing threats, if they are available for a small number of entities, and if they are difficult to imitate and copy, they just constitute assets which should be strengthened and around which the action strategy should be built. The source of these unique, rare and valuable competencies of organizations may be professional competencies of their employees.

For years competencies were (and in many cases still are) identified with the formal right of a given person to make decisions, to take a position on any matter on behalf of the organization. Quality, efficiency and effectiveness of professional work were rather considered in the context of *qualifications*. Qualifications were mainly described on the basis of formal education, possessed knowledge and skills. Currently, the semantic range of qualifications and competencies has been extended and the differences between them became less sharp. There is no lack of supporters of the thesis that the term *qualifications* has a much narrower meaning and relates primarily to the results of education, and replacing the term *qualifications* with the term *competencies* is supposed to reflect the significant changes taking place in the labour market, consisting in the fact that in the process of performing work, routine physical work give way to operations far more intellectual [7].

The mentioned transformations do not change the fact that the university diploma degree conferring the formal qualifications is still a fundamental right to work in most professions and in the majority of positions. A supporter of defining competencies broader is T. Oleksyn [6]. Defining the competencies he mentions a set of elements that create them:

- internal motivation,
- talents and predispositions,
- knowledge,
- education,
- experience and practical skills,
- health and condition,
- other psychophysical traits important in the work processes,

- attitudes and behaviours expected in the workplace,
- formal qualifications to act.

Analyzing the components of employee competencies listed by T. Oleksyn [6], it is worth noting that these factors cannot be treated as a simple sum or collection. They are extremely dependent on each other and there are close connections and relations between them. For example, talents and predispositions have an influence on the possessed skills. Education affects the scope of knowledge. Internal motivation largely determines attitudes towards work, and health and condition may enhance or limit the practical skills.

Undertaking the task of determining the essence of professional competencies, it becomes a dilemma whether they are dispositions, opportunities inherent in an employee or dispositions disclosed in operation, thus accessible to observation. In the literature from the area of management sciences, different views are promoted on this subject. For example, in the definition proposed by the program of Management Charter Initiative [3] competencies are regarded as *an ability to perform work according to the standards set by the organization employing the person*. Similarly, the definition of competencies is formulated by Hanpower Services Commission: *competencies are the abilities of performing activities in the profession in a manner which is consistent with the standards required for the given position* [4]. Also G. Filipowicz [2] treats *competencies as dispositions in terms of knowledge, skills and attitudes (...)*. Thus, according to the presented views, they are rather possibilities to undertake determined behaviours requiring; as each disposition; activation in the process of motivating. On the other hand, it is emphasized that competencies should be measurable, and this requires that they become revealed in behaviours of employees. This element is strongly emphasized by R.E. Boyatzis [1] in his definition of competencies, where he writes about the components of competencies as ones *acquired and used* by a given person.

„Using” means that drawing conclusions about competencies takes place primarily on the basis of specific behaviours of employees and the results of their work.

The problem: competencies - behaviours or dispositions? can be also determined including behaviours in the set of components of competencies. Yet, another attempt to solve this problem is reflected in the work of C. Worduffe [9]. The author proposes the division of competencies into two groups: „input” and „output”. The input competencies are primarily attributes of an employee or an organization. They constitute a definite potential. In contrast, the second group the output competencies represents specific standards of operation results that are reflected in the results of a worker or the results of operations of a company. In this article, the authors are interested in the input competencies expected by employers. To sum up the epistemological analysis, it is assumed that professional competencies comprise all features of employees, which are used and developed in the process of work in order to achieve the objectives of an organization and

consistent with their personal goals of employees. However, their activation in a form of concrete, observable and desired actions of an employee depends on the external factors: powers given by the organization and working conditions, particularly emphasizing the role of the motivation system and associated with it organizational culture.

### **Competencies of graduates in the assessment of Polish employers – the current state of research**

So far, most studies connected with the subject of this article were carried out by the Warsaw School of Economics, American Chamber of Commerce in Poland and Ernst & Young in 2012. The studies in which a questionnaire was used were supposed to obtain the information what are the competencies of an “ideal” graduate from the point of view of employers. Respondents were given a list of professional competencies and asked to choose the most important, from the perspective of employers. In this way, a list of 10 most desirable competencies emerged. The list is presented in Table 1.

**Table 1. Key professional competencies in the assessment of employers – all-Polish research**

No.	Name of a competency
1.	effective communication
2.	ability to use foreign languages
3.	openness to learning and continuous development
4.	engagement
5.	team work
6.	ability to define and justify priorities
7.	ethical conduct as a basis for action
8.	responsibility
9.	ability to organize work and efficient time management
10.	flexibility and ability to adapt

*Source: Author's elaboration based on [www.sgh.waw.pl](http://www.sgh.waw.pl) (2014.04.02)*

Employers care about competencies possessed by graduates so they do not have to acquire them “from scratch” at the workplace. They also emphasized the importance of openness to learning, the ability to work with people from different countries, representatives of different cultures and religions as well as logical thinking. Among deficiencies of the employed graduates the surveyed employers indicated: an ability to define and justify priorities, work organization and time management. Employers also drew attention to a certain dependence of graduates as new employees, but on the other hand, emphasized the need of learning to work in a team. Employers also signalled that graduates should possess interdisciplinary knowledge and experience gained in the course of apprenticeships and trainings as well as an ability to use specific work tools (e.g. advanced knowledge of Excel).

According to the results of the survey, a majority of the surveyed employers (84%) assess the preparation of graduates to work as „quite positive.” On the other hand, 13% of the respondents consider the preparation of graduates as „definitely positive”, and 3% believe that their preparation is rather „negative” [10].

### Research methodology

To implement the research subject the results of quantitative and qualitative research were used, conducted by IBiA VIVADE among enterprises from machinery sector, from the Podlasie province. The studies among employers constituted an integral part of the research process. The scope of the research among this group of respondents included:

- finding out the opinions about the strength of “brands” of schools and universities from the Podlasie province,
- assessment of the importance of courses and levels of education in the process of recruiting graduates,
- examination of the image of higher education in the Podlasie province from the perspective of employers,
- getting to know the expectations of employers towards graduates of secondary schools and universities of the surveyed courses,
- assessment of graduates of the selected courses and the quality of their employment preparation by schools and colleges from the Podlasie region.

The quantitative research comprised 120 enterprises employing graduates of secondary schools and higher education courses related to the machine industry, among which 47% were small enterprises. The examined economic entities varied in terms of organizational and legal forms. The largest group constituted self-employed individuals (44%). The second biggest group were limited liability companies.

In the process of the qualitative research 20 in-depth interviews (IDI) and one focus group interview (FGI) were conducted. The research methodology constructed in this way allowed for a deeper analysis of the problem, and thus answering the following questions:

- What is the real, and what is the expected level of competencies of graduates of secondary schools and institutions of higher education in fields related to the machine industry from the perspective of an employer?
- Are there differences in expectations for competencies depending on the size of an enterprise?
- What is the level of expectations of employers regarding competencies of graduates of secondary schools and universities? What are the similarities and differences in this respect?
- Do employers feel jointly responsible for development and creation of professional competencies of graduates? What are the conditions of cooperation between enterprises and the sphere of education?

### **Competencies of graduates of schools and courses connected with the machine industry in the opinion of employers from Podlasie – analysis of the research results**

While assessing professional competencies of graduates associated with the machine industry from the perspective of employers from the Podlasie province, first of all, the regional context of the study should be taken into account. The machinery sector does not designate industrial traditions of the Podlasie province, but it is represented by companies that are recognizable not only at the regional, but also at the country and province levels. In Podlasie, as in the whole country, the vast majority of companies operating in the machinery sector belong to a group of micro-enterprises. The machine industry, due to its profile, is among the sectors whose development is determined by the rate of absorption of technical progress. Prosperity of this type of speciality, also in the context of specific requirements towards the labour market, requires involvement of investment funds. In the Podlasie province total investment expenditure in 2012 amounted to 6517.8 million PLN, of which investments in industry and construction constituted 35.9 % [7]. This state of affairs suggests certain duality of factors shaping the demand on the labour market within the analyzed sector. The predominance of small enterprises in the structure may determine the demand for employees possessing a lot of diversified competencies. Large and innovative enterprises can orientate themselves towards the unique and specialized competencies to a greater extent.

As the quantitative research shows (see Table 2), the assessment of individual professional competency made by entrepreneurs from Podlasie representing the machine industry is quite positive. Referring to graduates of vocational schools, the highest ratings got computer handling and teamwork, and the low ratings knowledge of foreign languages and specialized theoretical knowledge. Quite a high assessment of teamwork relating to graduates of vocational school may result from their presence in the work environment already at the level of education. Apprenticeships shape the ability to build relations with supervisors and other employees. Acquiring experience in the course of an apprenticeship allows for exposing practical skills more freely, which also has a positive effect on relations in the workplace. The high assessment of computer literacy may have a twofold source. Firstly, computerization is a fully popularized phenomenon. Computer literacy is an essential tool enabling unrestricted functioning not only in a professional, but also social sphere. On the other hand, we must take into account that in the research participated diversified enterprises in terms of size and represented level of innovation. This may mean different requirements of employers for computer literacy. In case of small companies and simultaneously with a low degree of innovation, requirements for computer handling may be limited to the basic skills.

Entrepreneurs quite poorly assessed the level of knowledge of foreign languages by graduates. Hasty analysis of expectations of employers in this regard

relating to a group of graduates of vocational schools, at first glance may raise some concerns and even controversy. The strengthened stereotype of a graduate of a vocational school amounts to a person performing a specific, often mechanical type of activity in the manufacturing process. Nowadays, such an image of a graduate representing the analysed level of education is not compatible with expectations and challenges of the contemporary economy. Currently, a process of internationalization of enterprises is taking place, which means for companies to operate on foreign markets. More frequently, enterprises make investments in international markets and start to cooperate with foreign partners. In the opinion of employers, young people at the level of a vocational school should be prepared for such a possibility. A graduate should know not only the basics of communicative language, but primarily, the specialised enabling more efficient handling of machinery and equipment.

At a low level employers assessed the theoretical knowledge. This confirms, rather widespread, disapproval of entrepreneurs to the current system of vocational training, deviating from current needs and demands of employers.

**Table 2. Professional competencies and skills of graduates of vocational schools, technical colleges and higher education institutions related to the machine industry in the opinion of employers**

Competencies / skills	An average assessment of the level of a qualification / skill* (N=120)		
	Vocational schools	Technical college	Higher education institutions
Knowledge of foreign languages	2.61	2.76	3.18
Theoretical expertise	2.93	3.19	3.20
Organization of work	3.12	3.22	3.33
Ability to interpret drawings / technical schemes	3.17	3.24	3.34
Independence	3.19	3.25	3.36
Learning / self-education	3.20	3.28	3.42
Problem solving	3.23	3.30	3.45
Decision making	3.25	3.31	3.50
Specialized software handling	3.26	3.38	3.51
General knowledge	3.28	3.39	3.55
Creative thinking	3.29	3.42	3.66
Ability to use tools / specialized equipment	3.35	3.54	3.73
Teamwork	3.69	3.77	3.87
Computer literacy	3.91	4.04	4.25

*Source: self-elaboration based on Moczyłowska J.M. (red.), Badanie losów zawodowych absolwentów szkół ponadgimnazjalnych i wyższych województwa podlaskiego kształcących w zawodach technicznych i inżynierskich związanych z branżą maszynową, którzy ukończyli naukę w latach 2010 – 2012, WUP, Białystok 2013.*

\* - employers assessed each competency in a scale from 1 to 5, where 1 denoted a very low assessment and 5 a very high

In a very similar way, employers assessed competencies of graduates of technical colleges. The similar range of assessments indicates that competency requirements of employers towards graduates of secondary schools grow. Entrepreneurs expect specialists equipped with such a range of competencies, which will enable implementing by them not only objectives of a manufacturing process, but also long-term strategic objectives of an enterprise, including the ones related to the image of a company.

Professional competencies of graduates of institutions of higher education are assessed by employers higher than graduates' of secondary schools, however - what seems to be interesting - knowledge of foreign languages and theoretical expertise are rated at the lowest level.

The qualitative research also provided interesting conclusions. Employers identified factors which limit the competency attractiveness of graduates of secondary schools. According to the majority of participants of the research, systemic problems appear in the process of education. It has been emphasized, that not only the regional, but also national system of education at a secondary level is not adapted to needs of the business practice, including needs of the machine industry. There are disparities between the development of education and the level of the industry development. Frequently, education does not keep up with the rate of changes occurring in the economic reality. Entrepreneurs critically referred to the level of education within the framework of vocational subjects. In their opinion, the cause of the unsatisfactory state of affairs lies in the quality of knowledge transferred to students; therefore, it seems necessary that teachers of vocational subjects, regardless of the level of education, should also possess practical experience. In the opinion of the respondents, the predominance of theoretical knowledge over the practical is still visible. Teachers' knowledge does not evolve at a satisfactory pace. Experience shows, that in many cases they transfer the previously acquired knowledge, but not the new and updated one. According to the opinions expressed during the test, entrepreneurs are ready to complement some deficiencies in the education of teachers, especially in the context of the most important skills. They are aware that schools do not have as much specialized equipment as them. Entrepreneurs expect, however, that candidates who are prepared to work are conscious of associated with it responsibility. They feel the need to engage in learning programs and expect to increase the level of knowledge of teachers because they believe that it will directly translate into the level of competencies of students – their potential employees.

The results of the qualitative research also show the relational shortcomings concerning cooperation of education and practice at the level of higher education. This situation limits the ability of institutions of higher education to shape professional competencies at the satisfactory for employers level. In the course of FGI, employers noticed that the system of education at universities does not fully allow for meeting expectations of the labour market. This results from a complex mission that Polish universities perform, including technical universities.



There is a clear discrepancy between what university authorities expect from teachers and what the labour market and economic practice expect from them. Such disproportion of priorities limits cooperation between education and practice. Employers, especially in relation to university graduates, expect interdisciplinary education. In their opinion, it could be a much better solution than the subsequent training of new employees by specialized training companies. Entrepreneurs notice, as in the case of graduates of the lower-level of education, a lack of developed social skills and interdisciplinary university graduates, which reduce the chances for employment and assimilation in the workplace.

In the opinion of employers, the system of higher education in the Podlasie province does not always corresponds to actual needs of the region. Entrepreneurs are aware of legal and administrative restrictions reducing the intensity of cooperation between education and practice; however, they believe that a strong determination and commitment of both parties should change this situation. In the course of the qualitative research, an opinion has been expressed that there has not been developed a model of cooperation between education and practice. Today's reality exposes more the differences in the approach to meeting specific objectives than the perspective of common solutions. This state of affairs also affects the quality of graduates because the knowledge transmitted in the course of study is not fully linked with the expectations of future employers.

### Summary

Analysis of the research results confirmed that professional competencies are very important for employers. This means that attractiveness of employees grows if the range of competencies possessed by them is diverse. For entrepreneurs representing the machine industry, not only are important competencies of graduates that allow for realization of manufacturing objectives of a company, but especially those that enable to achieve long-term strategic objectives focused on innovation and development. This perspective of human resources development is characteristic for Polish enterprises. In this context, it is not possible to assess employment needs of enterprises from the machine sector in the Podlasie province as a particularly diverse. It is worth noting, that employers from Podlasie poorly assess knowledge of foreign languages and the level of specialized knowledge of both graduates of higher education and secondary schools. In this respect, the research results confirm the inadequacy of education and training programs to needs of the industry. They also indicate the unsatisfactory level of cooperation between economy practice and the sphere of education. Entrepreneurs express their readiness to cooperate with universities and secondary schools to improve the process of education, but expect a greater involvement of representatives of education in the process of learning and meeting the needs of local business.

One more conclusion should be undertaken. The researches show that entrepreneurs make a gradation of schools. The lowest rating of the professional competencies concerns graduates of vocational schools. The level of professional

competencies of graduates of polytechnics and techniques are better evaluated by producers. This means that companies are aware of the differences in levels of education, but despite this, they make the assessment of professional competence through the prism of their needs and expectations of the market. They are convinced, that this perspective should be noticed by the schools regardless of the level of education. Nowadays, the employee is not performer or executor of commands, but he is an important part of the organization. In the opinion of machinery entrepreneurs, the education, usually is corresponded to the first approach.

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## KOMPETENCJE ZAWODOWE KANDYDATÓW NA PRACOWNIKÓW W OCENIE PRACODAWCÓW (NA PODSTAWIE PRZEDSIĘBIORCÓW PRZEMYSŁU MASZYNOWEGO)

**Streszczenie:** Kompetencje zawodowe stanowią istotną kwestię zarządzania zasobami ludzkimi. Obecnie wzrasta świadomość pracodawców, że ilość kapitału ludzkiego nie jest tak ważna, jak jego jakość. Rodzi to określone, wysokie wymagania wobec kandydatów na pracowników i pośrednio w kierunku szkół, które ich kształcą. Celem niniejszego artykułu jest poznanie opinii przedsiębiorców na temat stopnia przygotowania do pracy absolwentów szkół średnich i uczelni wyższych i ich oczekiwań dotyczących profesjonalnych kompetencji zatrudnionego personelu. Jako przykład wybrany został przemysł maszynowy. Przedstawiony materiał empiryczny został zebrany w ramach szerszego projektu realizowanego przez zespół z Instytutu Badań i Analiz VIVADE, którego autorzy artykułu są członkami.

**Słowa kluczowe:** kompetencje, kandydaci na pracowników, pracodawcy, przemysł maszynowy

**为雇员在雇主（基于来自机械行业的企业家们的示例）评估候选人的专业能力**

**摘要：**专业能力是人力资源管理的重要问题。如今，对雇主的认识的增长人力资本的数量是不一样重要，它的质量。这就提出了具体的高期望实现的雇员，候选人和间接地对他们进行教育的学校。这篇文章的目的是要了解企业家的中学和大学的毕业生的工作准备的程度和他们的期望专业胜任能力有关聘用人员的意见。作为一个例子已选定机行业。提出实证材料已收集作为由一个研究所的研究和分析 VIVADE，作者所参加的团队进行更广泛的项目的一部分

**关键词：**能力，候选人，雇主，工程。