evet EXPERTS

Developments in Vocational Education and Training

Selection of Texts
by the National Team of Experts
for Vocational Education
and Training

volume 3

FRSE Publications

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Publications

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Selection of Texts by the National Team of Experts for Vocational Education and Training

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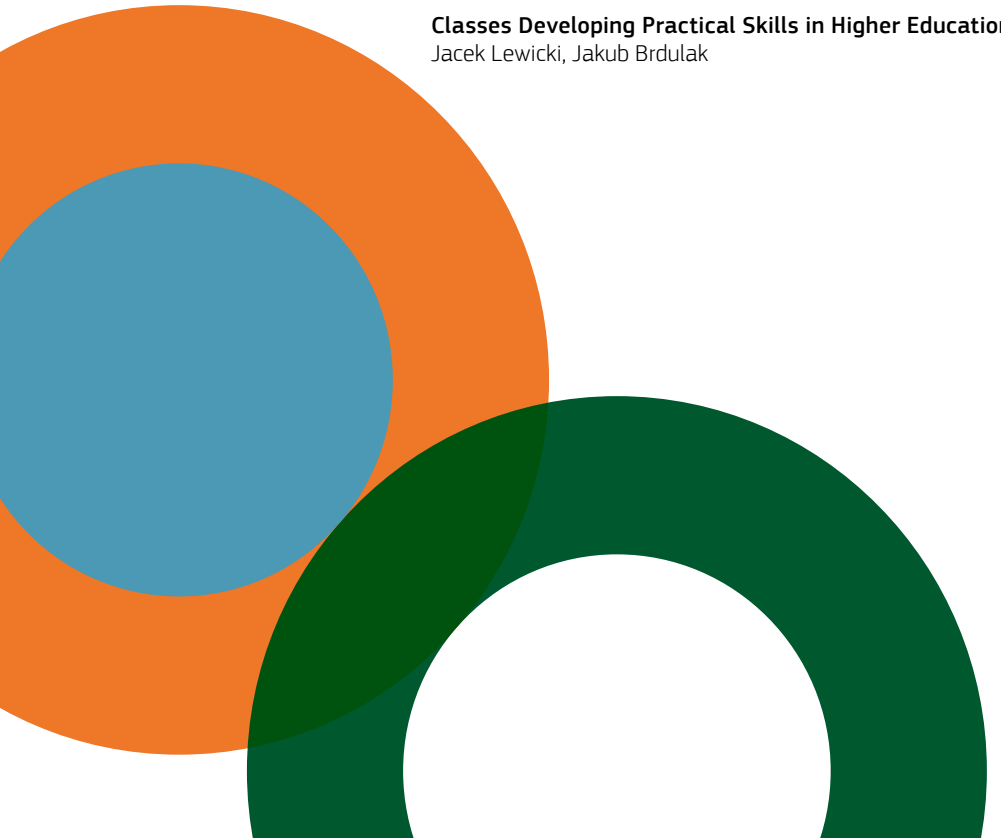

Introduction

In April 2021, the Foundation for the Development of the Education System – the Polish National Agency for the Erasmus+ Programme and the European Solidarity Corps – launched the Team of Experts for Vocational Education and Training (EVET). Since then, its members have been appointed annually by the Ministry of National Education and the Ministry of Science and Higher Education. In 2024, the team consisted of seventeen education specialists and six experts associated with higher education. They were educators, examiners, public officials, researchers, and academics working in various fields of vocational education, as well as representatives from the business sector.

The work of the Team of Experts forms an integral part of the Erasmus+ programme's Work Plan. The EVET Team focuses on improving the quality of vocational education and strengthening cooperation between sectoral vocational schools, technical secondary schools, and employers. These goals are achieved in close collaboration with institutions involved in implementing the Erasmus+ programme in the Vocational Education and Training and Higher Education fields, as well as through the Europass, Euroguidance, EPALE, and WorldSkills Poland initiatives.

EVET experts provide substantive advice to Erasmus+ programme beneficiaries and to institutions active in the field of vocational education in Poland. They advise on how to effectively use EU tools that support the mobility of vocational trainers, facilitate the recognition of skills and qualifications, and enable the monitoring of graduate outcomes in this sector. In addition, they participate in thematic events organised by the FRSE, including conferences, seminars, workshops, training sessions, lectures, debates, study visits, and analytical work. The results of the EVET experts' work are presented in the form of publications and informational materials available on the website www.ekspercivet.org.pl. This book presents key articles developed by the members of the EVET Team in 2024.

Read on to learn more!

The Europass, Euroguidance and EVET Team

Foundation for the Development of the Education System

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Validation of Vocational Qualifications Throughout the Careers of Graduates of Technical Secondary Schools and Stage I Sectoral Vocational Schools

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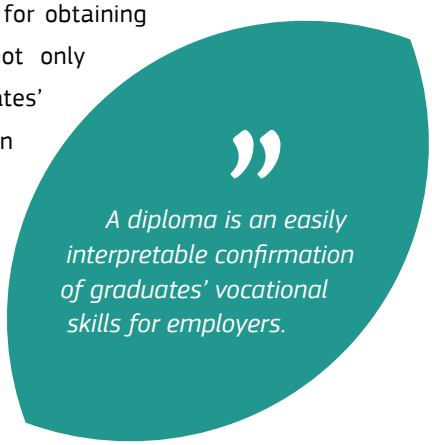
What are Vocational Diplomas and Qualification Certificates?

The demands of the labour market are constantly changing, which is why holding verified vocational qualifications has become essential for young people graduating from technical secondary schools and sectoral vocational schools. Following the post-communist transformation, one of the most significant milestones for vocational education was the 1999 educational reform. It introduced external examinations for vocational schools – initially in 2004 for students of basic vocational schools and from 2006 for students of technical secondary schools. Since 2012, individuals outside the school system have also been eligible to take these examinations. That same year, a new system was introduced that divided each occupation into specific qualifications. Students took examinations confirming their qualifications within an occupation, and those who collected certificates for all qualifications assigned to a given profession, and achieved the required level of education, were awarded a diploma confirming vocational qualifications. The 2017 reform brought further changes to the core curriculum, which were reflected in the examination itself.

For years, students of technical secondary schools and basic vocational schools – later replaced by stage I sectoral vocational schools (SVS I) – could complete their education without taking vocational examinations. Consequently, many graduates lacked formal confirmation of their skills, limiting their opportunities in the labour market. To address this issue, new regulations were introduced in 2019, along with an update to the core curricula, making it mandatory to sit the vocational examination as a condition for obtaining a school-leaving certificate. This change was intended not only to verify the quality of teaching but also to improve graduates' employability. Students who pass the vocational examination in each of the qualifications distinguished within their occupation receive qualification certificates from the Regional Examination Boards (OKE). As in previous systems, obtaining all qualification certificates and the appropriate level of education entitles the graduate to receive a vocational diploma along with a Europass supplement. A diploma is an easily interpretable confirmation of graduates' vocational skills for employers.



Around half a million vocational examinations take place in Poland each year, posing a considerable organisational and financial challenge. Graduates of technical secondary schools and SVS I who were not juvenile workers take examinations organised by the Regional Examination Boards, whereas juvenile workers who trained with craft employers take

journeyman examinations administered by chambers of crafts. The former obtain vocational diplomas, while the latter receive journeyperson certificates[1].

Passing the vocational examination requires considerable effort from students. In occupations comprising more than one qualification, a separate examination is held for each. The vocational examination consists of a written part and a practical part. To pass, a candidate must score at least 50% in the written section and 75% in the practical section. Only then may they receive a vocational diploma, issued by the Central Examination Board (CKE).

Before the examinations became mandatory, some students did not even attempt to take them. A 2012 study found that approximately 2% of basic vocational school students did not plan to sit the examinations because they felt they did not need them (Goźlińska & Kruszewski, 2013). A 2017 study yielded similar findings: around 2% of students from basic vocational schools and technical secondary schools indicated they would not take the examinations (Bulkowski et al., 2019). The most common reasons were a lack of intention to work in their trained occupation and the belief that they would fail the examination. In practice, the percentage of students who ultimately did not take the vocational examinations was even higher.

Do All Graduates Have Their Qualifications Confirmed?

The mandatory requirement to take vocational examinations has likely contributed to a rise in the number of graduates obtaining a vocational diploma. Data from the tracking of upper-secondary school graduates' careers – specifically SVS I graduates from 2022 – support this assumption. That year, the first graduates subject to the mandatory examination requirement left school. Among SVS I graduates (who were not juvenile workers), 66% obtained a vocational diploma, approximately 7% earned only a qualification certificate, and about 26% did not pass the vocational examination. In contrast, in 2021, as many as 37% of SVS I graduates completed their education without any formal confirmation of their qualifications or skills. This issue affected men (38%) more often than women (34%). The situation was better among graduates of technical secondary schools, yet 11% of them still did not obtain any qualifications. Here too, men (13%) fared worse than women (8%).

1 In the remainder of this text, we focus on graduates of stage I sectoral vocational schools (SVS I) who were not juvenile workers. In the case of juvenile workers, the statistics on the attainment of journeyman certificates are unfortunately understated. Despite a statutory obligation, only some chambers of crafts submit data on these certificates to the Educational Information System.

It is worth noting that by March 2023, around 20% of the 2021 technical secondary schools graduates had not yet obtained all the qualifications required for their occupation, holding only partial confirmation in the form of a qualification certificate.

Graduate tracking data reveal clear differences across occupations in the share of graduates who successfully obtain vocational diplomas. Among SVS I graduates who were not juvenile workers, the percentage ranged from just 12% for motor vehicle mechanics to as high as 83% for confectioners. For technical secondary school graduates, the range was narrower – from 51% for IT technicians to 85% for hospitality technicians. Such disparities may stem from many factors: individual students' abilities, different opportunities for practical training with employers, varying levels of motivation to work in the trained occupation, and the differing importance of diplomas across industries. Labour market demand for specific occupations within a given region, as well as broader economic conditions, may also influence these results.

From a theoretical standpoint, the significance of a vocational diploma in career development can be explained through two economic theories: human capital theory and signalling theory. Human capital theory posits that investing in education increases future employment prospects and earnings. According to this theory, employers make hiring decisions based on the full knowledge of a candidate's skills, such as their level of education. Signalling theory, proposed by Michael Spence in 1973, assumes the opposite – that employers lack complete knowledge of a candidate's skills and thus take risks when hiring. Candidates can increase their chances by "signalling" their productivity through credentials such as diplomas and certificates.

Given the certification function of vocational examinations, it can be assumed that SVS I and technical secondary school graduates who hold a vocational diploma have better prospects on the labour market than those without such confirmation. To verify this assumption, we can examine graduate tracking data. Since none of the SVS I and technical secondary school graduates completing education in 2021 were yet subject to the mandatory examination requirement, the presence of the vocational diploma in this group can be considered a reliable indicator of qualities valued by the labour market. This pertains not only to the level of practical vocational skills and theoretical knowledge but also to other valuable traits such as motivation, perseverance, learning ability, and intellectual aptitude.

The tracking data allow for an assessment of the professional and educational situation of 2021 graduates at two key points: in December 2021 (six months after graduation) and in December 2022 (18 months after graduation). We can distinguish four possible educational and professional statuses:

1) education only, i.e., continuing education without concurrent employment; 2) education and work, where employment is registered with the Social Insurance Institution (ZUS), signifying employment under contract or self-employment; 3) work only, where graduates are in any form of employment registered with ZUS and are not continuing their education; and 4) neither education nor work, which is either confirmed by ZUS data or indicated by a lack of any information about their professional activity. In addition, it is possible to analyse the duration of unemployment and periods of inactivity (neither working nor studying).

The Professional Situation of Graduates – Can a Diploma Help?

Graduates of stage I sectoral vocational schools

Among SVS I graduates who do not continue their education, having a vocational diploma clearly increases their chances of employment. Six months after graduation, 48% of graduates with a diploma were employed, compared to 43% in the group without a diploma or any certificates. After 18 months, the gap between them widened: 61% of diploma holders were employed, compared to 53% of those without one – an 8 percentage point advantage for those with a diploma.

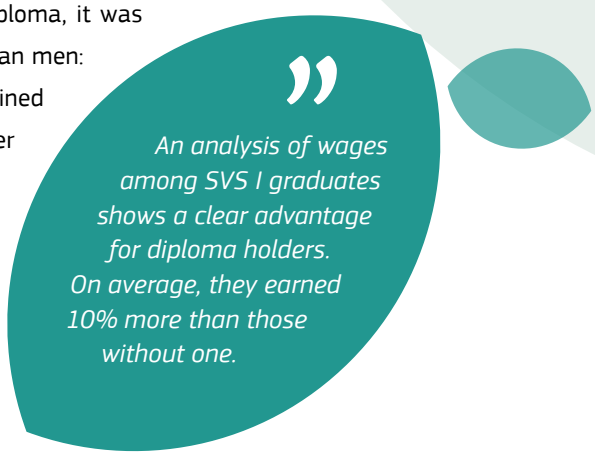
However, the situation for women was less favourable than for men. Six months after graduation, 40% of women with a diploma were employed, while in the group without a diploma, the figure was 35%. A year later, this difference widened: 47% of women with a diploma were employed, compared to 37% without one, increasing thegap from 5 to 10 percentage points. By comparison, among men with a diploma, the employment rate was 50% after six months, and 45% for those without one. After 18 months, 61% of men with a diploma and 53% of those without were employed. This means that the employment rate for men without a diploma was still higher than for women with one.

According to human capacity theory, employers make hiring decisions based on the full knowledge of a candidate's skills, such as their level of education.

Graduates with a diploma and certificate were more likely to combine work and study, thereby broadening their career prospects. Among those without a diploma or certificate, combining work and study was less common, resulting in a lower employment rate (including those both working and studying) – by 3 percentage points in December 2021 and 6 percentage points in December 2022.

Graduates without a vocational diploma were also more likely to be not in employment, education, or training (NEET). Six months after graduation, as many as 43% of them were neither studying nor working; a year later, this figure fell by only 2 percentage points. In contrast, the percentage among diploma holders was significantly lower – 36% in December 2021, dropping more sharply by 5 percentage points over the following year. A particularly concerning finding is that for women without a diploma, the percentage of those not in work or education rose after a year (from 45% to 47%), while for men in the same group it fell (from 43% to 39%).

Analyses show that holding a vocational diploma reduces the length of NEET status, especially among SVS I graduates. Those without a vocational diploma spent an average of 9.8 months outside education or employment. For those who obtained a certificate but not a diploma, this period averaged 8.3 months, and for graduates with a diploma, it was even shorter – 8.1 months. Women were in a worse position than men: those without formal confirmation of their qualifications remained NEET for an average of 10.8 months, more than a month longer than men.



An analysis of wages among SVS I graduates shows a clear advantage for diploma holders. On average, they earned 10% more than those without one. This difference was particularly evident for men, where the wage premium for a diploma reached 12%, compared to 5% among women.

The final indicator worth considering is registered unemployment. After graduation, 15–17% of SVS I graduates registered as unemployed with the labour office; this percentage declined over time. Among them, the average duration of unemployment did not differ significantly between those who confirmed their qualifications and those who did not – it was approximately 2.6 months for both groups.

Graduates of technical secondary schools

Over half of the graduates of technical secondary schools who did not continue their education were employed within six months of graduation. Among these, 60% of graduates with a vocational diploma were employed, compared to 53% of those who did not pass the vocational examinations. After 18 months (in December 2022), employment rates increased in both groups: to 68% among diploma holders and 61% among those with no qualifications. This means a 7-percentage-point advantage for those with a diploma.

As with SVS I graduates, those with a vocational diploma were more likely to continue their education. Six months after graduation, as many as 53% of them were still studying (with 12% combining education with work). A year later, in December 2022, this share rose to 58%.

By contrast, graduates of technical secondary schools without a diploma – whether lacking certificates altogether or holding only partial confirmation of qualification – were less inclined to pursue further education. In December 2021, 32% of graduates with no certificates and 34% of graduates with at least one certificate had entered further education; by December 2022, these figures rose to 35% and 38%, respectively. Graduates with a diploma were also more likely to have passed the matura exam (the national secondary school leaving examination). These are typically individuals with stronger educational outcomes and greater motivation for further study. Among women who passed the matura exam, as many as 86% also held a vocational diploma. In contrast, among women without the matura exam, 56% obtained the diploma, which constitutes a 30-percentage-point difference. A similar pattern was observed among men.

The greatest disparities appear among those neither in education nor employment. In December 2021, this group accounted for 19% of diploma holders, compared to 33% among graduates without a diploma – a 14-percentage-point gap. A year later, this percentage fell to 13% for diploma holders but remained high among those without one. It stood at 25% for graduates without any vocational examination and 22% for those with at least one qualification certificate.

Graduates of technical secondary schools without a vocational diploma remained inactive for an average of 7.4 months, while those who obtained certificates but not a full diploma spent 6.7 months in this situation. The shortest inactivity period was observed among diploma holders – an average of 5.0 months for men and 5.1 months for women. Wage analysis also confirms a clear, albeit smaller, advantage for diploma holders. On average, they earned 7% more than those without a diploma. Among men, the premium was 11%, only 2 percentage points higher than among women.

For technical secondary school graduates, around 13% registered with labour offices after graduation – a figure that, as with SVS I graduates, decreases over time. Diploma holders were unemployed for an average of 1.7 months, while those uncertificated remained unemployed for slightly longer, an average of 2.1 months.

Is a Diploma More Important Than a Graduate's Other Attributes?

When analysing the results of the graduate tracking, we employed more advanced statistical methods. This allowed us to determine which graduate characteristics increased the chances of finding employment and obtaining good wages. By controlling factors such as gender, age at graduation, and work experience gained during schooling, we can be surer of the positive relationship between obtaining a vocational diploma and young people's situation on the labour market.

The evidence so far suggests that holding a vocational diploma is associated with better outcomes in both employment and wages. SVS I graduates who obtained a vocational diploma

had an approximately 7-percentage-point greater chance of finding a job six months after graduation. After 18 months, the chances for those with a diploma rose to 12 percentage points. In the case of graduates from technical secondary schools, we obtained a more optimistic result. It seems that having a vocational diploma not only increases the chance of finding employment (by approx. 8 percentage points compared to graduates without a diploma) but is also associated with higher wages.

Graduates of technical secondary schools who held a vocational diploma earned, on average, 7% more six months after graduation and about 10% more after 18 months than their peers who did not obtain any qualification certificate. Although work experience gained during schooling is initially very important for a graduate's situation, its influence diminishes over time (within two years of graduation), while the positive effect of having a vocational diploma grows. Immediately after graduating from a technical secondary school, work experience in the form of an employment contract during schooling was associated with a 32 percentage point higher chance of employment and wages that were, on average, 35% higher than those of graduates without such experience. After a year, the advantage for these graduates was smaller (a 17 percentage point greater probability of employment and 18% higher earnings, respectively). A concerning finding here is, once again, the significantly worse situation for women, both SVS I and technical secondary school graduates. On average, they have a lower chance of finding employment (by 8 pp. for SVS I graduates and approx. 2 pp. for technical secondary school graduates in the first months after graduation) and also receive lower average wages (by as much as 18% and 15% in the first six months after completing education, for SVS I and technical secondary schools, respectively). However, by obtaining a vocational diploma they can improve their situation.

Conclusion

Graduates of both SVS I and technical secondary schools who obtain a vocational diploma are in a stronger position on the labour market than their peers without such documents. Those with a diploma are more likely to be employed and, in the case of technical secondary school graduates, more likely to continue their education. Diploma holders also spend less time registered as unemployed and experience shorter periods outside education or employment (NEET status). Moreover, their average wages – particularly among technical secondary school graduates – are higher than those of graduates who did not obtain this document. Although advanced statistical methods do not confirm a significant wage premium for SVS I graduates, they do indicate that holding a diploma significantly increases the likelihood of employment. To better determine the true wage premium associated with a diploma, more precise data will be needed. Further extensions of the graduate tracking system should allow for a more accurate estimation of this effect while accounting for other graduate characteristics that may determine their situation on the labour

market. Nevertheless, the preliminary findings presented here strongly suggest that it is worth encouraging students of both technical secondary schools and SVS I to prepare thoroughly for their vocational examinations. The diplomas they earn can significantly help them in building their future professional careers.

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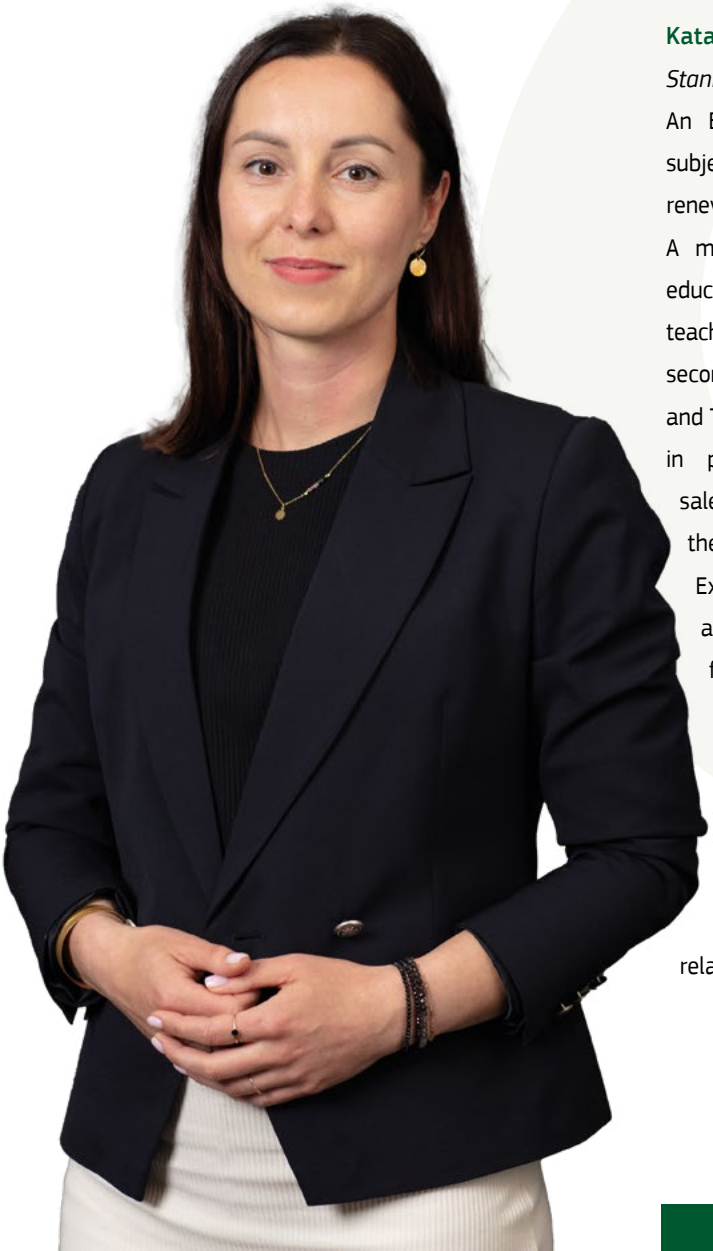
How to Effectively Formulate Educational Requirements in Vocational Education and Training

Key Steps and Best Practices



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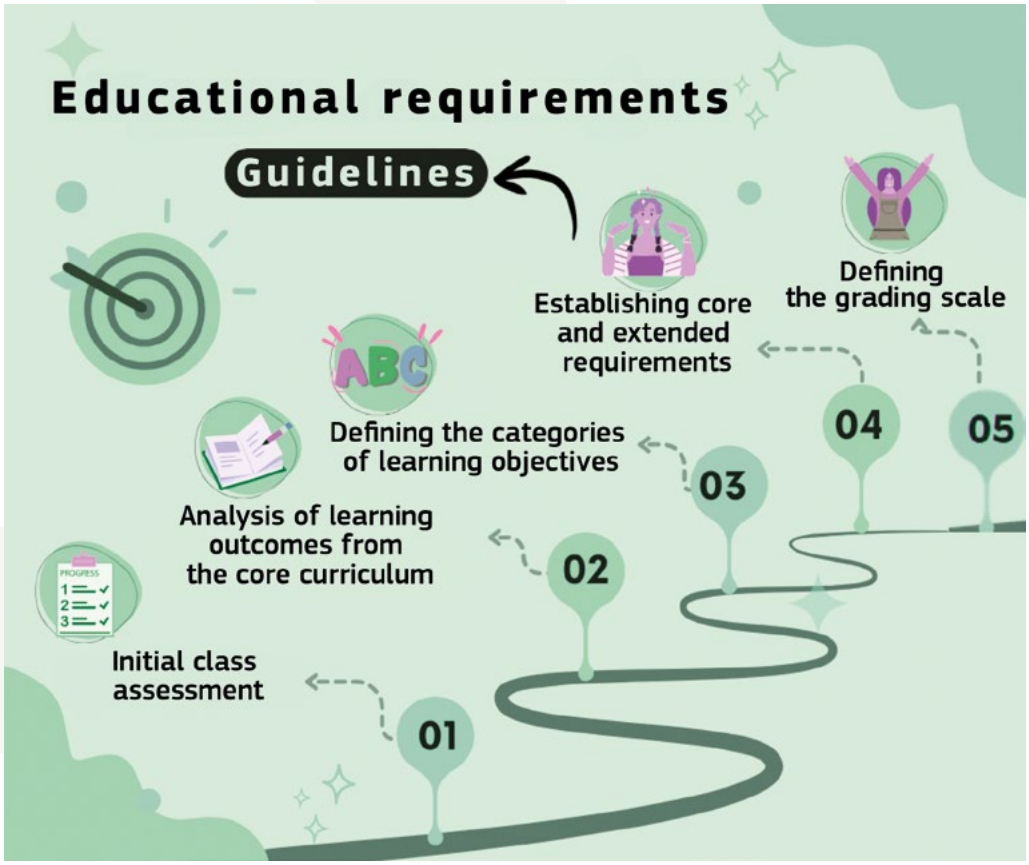
Formulating educational requirements is a complex process that demands a precise approach. To develop an effective learning 'roadmap' for students, a teacher must clearly define the learning objectives and determine what skills and knowledge students are expected to acquire. A key element of this process is an analysis of the core curriculum, which allows the creation of requirements closely aligned with the intended learning outcomes. Clearly defined requirements not only support students in their development but also help teachers to monitor and assess their progress effectively.

Key Steps in Formulating Effective Educational Requirements

Figure 1. The process of formulating educational requirements



Source: author's own elaboration.

Step 1. Initial diagnosis of the class unit's needs

The first step in formulating educational requirements is to conduct an initial diagnosis of the class unit's needs. Before setting the requirements, the teacher should thoroughly assess the students' current level, identifying both their strengths and the difficulties they may face. The results of this diagnosis can significantly influence the development or adjustment of the educational requirements and make it possible to tailor them to students' needs.

Step 2. Analysis of learning outcomes from the core curriculum

The next step involves a detailed analysis of the learning outcomes specified in the core curriculum. At this stage, the teacher determines which skills and knowledge are essential for students when studying a particular subject within a given occupation. These learning outcomes are therefore the foundation upon which the entire teaching process is built, defining what students are expected to learn.

Step 3. Defining categories of learning objectives

At this stage, it is useful to establish a taxonomy for the requirements set out in the core curriculum. Classification tools such as Benjamin Bloom's taxonomy (levels A–F) or Bolesław Niemierko's taxonomy (levels A–D) can be used for this purpose. Teachers have the freedom to choose, as stipulated in Article 12(2) of the Teacher's Charter, which states: "In implementing the curriculum, a teacher has the right to freely apply such teaching and educational methods as they deem most appropriate from among those recognised by contemporary pedagogical sciences, and to choose from among the textbooks and other teaching aids approved for school use". A taxonomy helps assign appropriate levels of difficulty to particular educational activities. In Poland, Niemierko's taxonomy is commonly used (see Table 1), dividing requirements into two main categories: knowledge and skills.

Both the structure of the taxonomy and its practical application are crucial for the correct formulation of educational requirements. Particular attention should be paid to the action verbs used in the taxonomy – e.g., 'name' (category A), 'explain' (category B), 'compare' (category C), 'evaluate, show differences' (category D) – as these help to define the level of difficulty of requirement.

Table 1. Bolesław Niemierko's Taxonomy of Educational Objectives with Action Verbs Useful in Defining Learning Objectives

Level I KNOWLEDGE	Category A Remembering knowledge	defining, describing, identifying, labelling, listing, associating, naming, tracing, reproducing, selecting, stating, naming, itemising, enumerating
	Category B Understanding knowledge	transforming, defending, distinguishing, estimating, explaining, generalising, giving examples, inferring, paraphrasing, predicting, summarising, rewriting in a new form, summarising, translating
Level II SKILLS	Category C Applying knowledge in typical situations	changing, calculating, demonstrating, discovering, manipulating, modifying, operating, predicting, preparing, producing, relating, showing, solving, using, comparing, characterising, selecting a method, plotting, finding, applying
	Category D Applying knowledge in problem situations	breaking down, diagramming, differentiating, distinguishing, identifying, recognising, illustrating, inferring, deducing, highlighting, determining relationships, selecting, excluding, dividing into smaller parts, predicting, detecting, evaluating, proposing, planning, proving, analysing, showing differences, categorising, compiling, composing, creating, devising, isolating, explaining, producing, modifying, organising, planning, processing, reconstructing, establishing relationships, reorganising, reviewing, rewriting in a new form, summarising, speaking, writing, appraising, comparing, concluding, describing, discriminating, explaining, judging, interpreting, relating, summarising, supporting

Source: author's own elaboration.

The table I have developed may assist in formulating educational requirements. It contains requirements from the core curriculum for the surveying technician occupation, which I teach, together with taxonomic categories (TC) that specify the level of complexity of the learning objectives. The table also includes the criteria for distinguishing levels of requirements, which are described below.

Student	TC	ISV	CSV	U	Level	Grade
performs surveying calculations according to the Bradis-Krylov rules	C					
lists and applies units of measurement in surveying	A/C					
evaluates the accuracy and cartometric properties of cartographic and photogrammetric products	D					
describes ways to prevent hazards present in the work environment	B					
analyses data obtained from the land and building register	D					
lists the sectors of the economy in which data from the register are used	A					
calculates the scale of a map	C					
plans a professional development path	D					
analyses data obtained from the land and building register	D					
explains what constitutes ethical conduct in the profession	B					
names the surveying and legal documents related to the real property cadastre	A					
distinguishes between types of maps	B					

TC – taxonomic categories, ISV – intra-subject value, CSV – cross-subject value, U – usefulness.
Source: author's own elaboration.

The process of formulating educational requirements should be well thought out, tailored to students' abilities, and clearly linked to the learning outcomes of the core curriculum. It is important to distinguish between knowledge and skills and to use suitable taxonomic tools that facilitate the assessment and monitoring of student progress.

Step 4. Establishing Core and Extended Requirements

The next step is to define core and extended requirements. It is worth clarifying some common misconceptions regarding these terms, as it is often assumed that core requirements are those specified in the core curriculum, while extended requirements refer to additional content included in the teaching programme. This is not entirely accurate. Core requirements are those essential for practising a given occupation. They are mandatory for all students and cover the fundamental knowledge and skills that every student must master. Extended requirements, on the other hand, apply to students capable of meeting more advanced expectations – though, in the case of vocational subjects, there are relatively few.

Criteria for Distinguishing Levels of Requirements

- **intra-subject necessity** – referring to the knowledge and skills that form the basis for learning a given subject (intra-subject value – ISV);
- **cross-subject necessity** – resulting from the links between a given activity and the teaching content of other subjects (cross-subject value – CSV);
- **usefulness** – expressed in present and future extracurricular activities, including the spontaneous application of elements in professional work (usefulness – U).

Example from the subject of surveying drawing

I have selected three educational requirements and defined their intra-subject value, cross--subject value, and usefulness in the workplace for each.

- The student distinguishes between types of field sketches depending on purpose and on the method of planimetric or altimetric surveying
  - intra-subject (ISV): +
  - cross-subject (CSV): +
  - usefulness (U): +

Interpretation: three '+' signs indicate a core requirement.

- The student prepares field sketches in accordance with legal regulations
  - intra-subject (ISV): +
  - cross-subject (CSV): +
  - usefulness (U): +

Interpretation: three '+' signs indicate a core requirement.

- The student converts geocentric coordinates to plane rectangular coordinates and plane rectangular coordinates to geocentric coordinates
  - intra-subject (ISV): +
  - cross-subject (CSV): -
  - usefulness (U): –

Interpretation: if there is at least one '–' sign among the criteria (this usually applies to cross-subject value or usefulness), the requirement is classified as extended.

Let us return to the previously mentioned table, which contains the educational requirements from the core curriculum for my subject. Its second column specifies the categories of learning objectives (the taxonomic categories already referenced). Adjacent to this, we define the intra-subject value, cross-subject value, and usefulness to indicate whether the requirement belongs to the core (C) or extended (E) level. We therefore fill in four columns, leaving the last one blank.

Student	TC	ISV	CSV	U	Level	Grade
performs surveying calculations according to the Bradis-Krylov rules	C	+	+	+	c	
lists and applies units of measurement in surveying	A/C	+	+	+	c	
evaluates the accuracy and cartometric properties of cartographic and photogrammetric products	D	+	+	+	c	
describes ways to prevent hazards present in the work environment	B	+	+	+	c	
analyses data obtained from the land and building register	D	+	+	+	c	
lists the sectors of the economy in which data from the register are used	A	+	-	-	e	
calculates the scale of a map	C	+	+	+	c	
plans a professional development path	D	+	-	+	e	
analyses data obtained from the land and building register	D	+	+	+	c	
explains what constitutes ethical conduct in the profession	B	+	+	+	c	
names the surveying and legal documents related to the real property cadastre	A	+	+	+	c	
distinguishes between types of maps	B	+	+	+	c	

TC – taxonomic categories, ISV – intra-subject value, CSV – cross-subject value, U – usefulness.
Source: author's own elaboration.

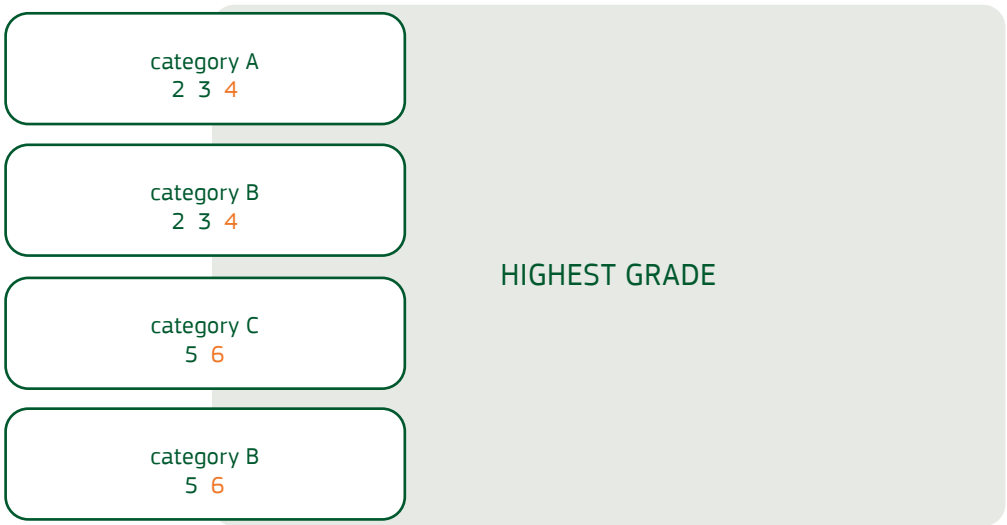
Step 5. Defining the grading scale

At this point, the following information will be needed:

- **core requirements** – for these requirements, the grading scale is: pass, satisfactory, and good.
- **extended requirements** – for these requirements, the grading scale is: good, very good, and excellent.

For both core and extended requirements, we select the lowest grade, which will be our starting point.

Now it is time for the taxonomic categories. In this case, we select the highest grade, which I have highlighted below.



As a reminder, we have already filled in the following in the table:

- column 1: the educational requirements;
- column 2: the categories of learning objectives (taxonomic categories – TC);
- columns 3–6: the intra-subject value (ISV), cross-subject value (CSV), and usefulness (U), which determine whether the requirement is at the core (C) or extended (E) level.

Now, in the column concerning the grading scale, you must:

- **determine the requirement level (core – C or extended – E):** based on the previously established level (core or extended), select the lowest possible grade;
- **check the taxonomic category (TC):** record the grade assigned to the taxonomic category, which is the highest possible grade in a given case, in the table.

Example

For a criterion that has been classified as a core requirement, the grading scale could be as follows:

- Requirement: "The student distinguishes between types of field sketche",
- Level: C (core) – we select 'pass' as the lowest grade,
- Taxonomic category: B – I select 'good' as the highest grade.

Once the final 'Grade' column is completed, the table will be ready to use in the subsequent stages of formulating educational requirements (see adjacent page).

On the following page, I present a fragment of the complete document setting out the educational requirements necessary for students to obtain specific mid-term and annual classification grades in the subject of surveying drawing for the first year of the surveying technician occupation.

To conclude, well-formulated educational requirements provide a solid foundation that supports both teaching and assessment. They enable teachers to align didactic methods more closely with students' needs while giving students clear guidance on the objectives they are expected to achieve. Let us remember that effective education involves not only the transmission of knowledge but also the ability to assess it. Through a well-designed process for developing educational requirements, we support students' development and enhance the overall quality of vocational education.

Student	TC	ISV	CSV	U	Level	Grade
performs surveying calculations according to the Bradis-Krylov rules	C	+	+	+	c	2-5
lists and applies units of measurement in surveying	A/C	+	+	+	c	2-4/5
evaluates the accuracy and cartometric properties of cartographic and photogrammetric products	D	+	+	+	c	2-6
describes ways to prevent hazards present in the work environment	B	+	+	+	c	2-4
analyses data obtained from the land and building register	D	+	+	+	c	2-6
lists the sectors of the economy in which data from the register are used	A	+	-	-	c	4
calculates the scale of a map	C	+	+	+	c	2-5
plans a professional development path	D	+	+	+	c	4-6
analyses data obtained from the land and building register	D	+	-	+	c	2-6
explains what constitutes ethical conduct in the profession	B	+	+	+	c	2-4
names the surveying and legal documents related to the real property cadastre	A	+	+	+	c	2-4
distinguishes between types of maps	B	+	+	+	c	2-4

TC – taxonomic categories, ISV – intra-subject value, CSV – cross-subject value, U – usefulness.
Source: author's own elaboration.

In terms of knowledge and skills		grade				
No	Core curriculum requirement	pass	satisfactory	good	very good	excellent
Thematic block 1: Drafting work in surveying. The student:						
1	BUD.18.2. 8) Uses measuring instruments and drafting tools	names drafting tools used in cartographic work	distinguishes between measuring instruments used in surveying and cartographic work	selects drafting tools to complete a task	determines the functions and suitability of drafting tools for mapping on various map bases	independently prepares surveying and cartographic documentation using drafting tools
		distinguishes between measuring instruments used in surveying and cartographic work	lists drafting media for preparing cartographic works	selects measuring instruments to perform a measurement on a map	performs cartometric measurements on a map	applies the principles of qualitative and quantitative generalisation of map content
Thematic block 2: Technical lettering. The student:						
2	BUD.18.2. 6) Uses technical lettering when preparing field sketches		defines the principles for describing surveying and cartographic documentation	uses technical lettering when preparing graphic products		
Thematic block 3: Cartographic symbols. The student:						
3	BUD.18.2. 3) Recognises cartographic symbols	– recognises standard cartographic symbols – reads cartographic symbols on the base map – draws basic cartographic symbols	– draws cartographic symbols – distinguishes the colour scheme of cartographic symbols – discusses the rules for annotating features on the base map	– independently draws cartographic symbols as specified in the regulation – applies descriptions and the colour scheme of symbols	interprets the descriptions of cartographic symbols	independently prepares surveying and cartographic documentation using cartographic symbols and object descriptions with the help of computer software for map creation

Source: author's own elaboration.

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The Impact of Examination Centre Equipment on Education in Selected Occupations within Vocational/Sectoral Schooling

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Vocational/sectoral education plays a key role in preparing students to enter the labour market. The centres where vocational examinations are held form an integral part of this process.

The vocational examination in Poland has evolved since 2004 and currently consists of two components: a written part and a practical one. The latter one is particularly important, as it assesses the skills essential for practising a given occupation. The model used for the practical examination has a significant impact on both the educational process and students' practical skills, since it determines the equipment required at examination stations.

The practical part of the examination is conducted according to one of the following models:

- **'d'** – where the sole outcome of the examination task is documentation;
- **'dk'** – where the sole outcome of the examination task is documentation prepared using a computer;
- **'w'** – where the outcome of the examination task is a product or service;
- **'wk'** – where the outcome of the examination task is a product or service produced using a computer.

In the **'d'** model, the candidate's task is to prepare documentation related to a specific professional task. This may include a technical description, diagrams, plans, calculations, or other elements. The examination focuses on the ability to prepare precise and comprehensible documentation that could be used in real professional settings. An example of an examination based on the 'd' model is the qualification ***EKA.01 Customer service in administrative units in the occupation of administration technician 334306.***

The latter part of the vocational examination is particularly important, as it assesses the practical skills that are essential for practising a given occupation.

The **'dk** model is a variant of the **'d'** model, in which the documentation is prepared using a computer. It applies to occupations where the creation of documents such as technical drawings in CAD programs, the preparation of cost estimates using specialised software, etc., is of key importance. An example of an examination in the **'dk'** model is the qualification **MEC.09 Organisation and supervision of the production processes of machinery and equipment in the occupation of mechanical technician 311504.**

The equipment required for this qualification exam consists of a computer connected to a printer, together with CAD software enabling the creation of a technical drawing and dimensioning in 2D space. The CAD software should allow drawing to be saved in DWG format, version 2010, for example, AutoCAD, BricsCAD, MegaCAD, LogoCAD, Solid Edge, SolidWorks, or ZWCAD.

In the **'w'** model, the candidate performs a specific practical task at a prepared examination station, either an actual station or one replicating real working conditions. This model assesses the complete process of carrying out a task characteristic of the relevant qualification or occupation, requiring the candidate to work with the machines, tools, materials, and devices necessary for that trade. An example of an examination using the **'w'** model is the qualification **MEC.05 Operation of machine tools within the occupations of mechanical technician 311504 and machine tool operator 722307.**

Each of the models used in the practical part of the examination makes it possible to assess different aspects of professional competence, from manual and technical skills to precision in documenting processes and knowledge of tools.

The equipment for this qualification includes, among other things:

- a conventional machine tool (a lathe or milling machine),
- a numerically controlled machine tool (a CNC lathe or CNC milling machine),
- a workpiece storage unit,
- an inspection and measurement station.

The **'wk'** model is similar to the **'w'** model, but part of the examination task is performed on a computer, while the remainder takes place at an examination station equipped with machines, devices, and tools. This model applies to occupations where key skills involve software operation, design, and programming. An example of an examination based on the **'wk'** model is the qualification **MED.07 Assembly and operation of electronic devices and medical IT systems within the occupation of electronics and medical IT technician 311411.**

The examination station for this qualification includes, among other things:

- a computer set with software;
- medical and IT apparatus, as well as control and measurement instruments such as a two-channel oscilloscope and a digital multimeter.

Each of the aforementioned models used in the practical part of the examination enables the assessment of different aspects of professional competence, from manual and technical skills to the precision in documenting work processes and proficiency in computer tools.

The first vocational examinations for graduates of basic vocational schools were held in 2004, and the first examinations for graduates of technical secondary schools took place in 2006. By design, examinations for graduates of basic vocational schools (now called **BS I** schools) were, and still are, conducted according to the **'w'** model, at real or simulated examination stations that replicate actual working conditions. Graduates are required to demonstrate practical skills by 'producing' a product or providing a service. These examinations have always been conducted at examination centres authorised by the regional examination boards. Such facilities usually contain between three and six examination stations for a given occupation. The technical parameters of these stations must be consistent across the country, ensuring that the examination task can be performed at each of them. These tasks are uniform for all candidates pursuing the same occupation or qualification.

The equipment of examination stations, together with the examination model, particularly in the practical part, has had, and continues to have, a strong influence on the educational process. It also affects further training and self-education of teachers, practical vocational training instructors, and employers. Since 2004, the practical stage of the examinations has assessed skills in four areas of requirements:

- planning the activities required to perform the task,
- organising the workstation,
- performing the examination task in compliance with health and safety, fire protection, and environmental protection regulations,
- presenting the result of the completed task.

For occupations for which two topics were provided, the candidate would draw one of them before beginning the examination. They would then either draw again or be assigned to a specific examination station.

Below, I present examples of selected occupations where examination centre equipment significantly influenced the educational process.

In the occupation of **salesperson 522[01]**, two examination topics were specified:

- serving a specified type of customer at a stand in a given industry, using a designated form of sale;
- serving a specified type of customer in a wholesale warehouse in a given industry and with a specific degree of work organisation.

For the first topic, completing the practical stage of the task required, among other skills, the ability to operate a fiscal cash register. This came as a surprise to candidates and teachers in schools, and also posed a challenge to examiners. The first examinations revealed that a number of candidates struggled to perform the practical task, and the most common problems arose precisely when operating the fiscal cash register, resulting in low performance. Consequently, local governments equipped salesperson training workshops with fiscal cash registers, and training sessions were provided for both teachers and candidates.

For the occupation of **automotive painter 714[03]**, the examination standards required the presence of a certified spray booth of a size suitable for the dimensions of the painted elements or sub-assemblies. However, during the first examinations, it became apparent that very few schools or training centres in Poland possessed such equipment. In practice, this meant that, for example, students from the entire Silesian Voivodeship had to take the examination at the only appropriately equipped examination centre in the region, located in Mysłowice. Students, often accompanied by their teachers, travelled from afar to take the examination on equipment they were operating for the first time. This example illustrates how a lack of equipment in home schools can discourage candidates from sitting the examination, particularly when the only available centre is located far from their place of residence.

Similarly, for the occupation of **chemical industry equipment operator 815[01]**, the examination standards required a tank-type reactor used in organic industry processes (such as sulfonation, nitration, esterification), along with control and measurement instrumentation. For many years, students training in this field took the examination at the sole fully-equipped examination centre in Poland, located in Gliwice. Candidates travelled to this centre from as far as the area of the Regional Examination Board in Gdańsk.

A compelling example of how examination equipment influences the educational process is provided by the occupation of **machine tool operator 722[02]**. In the first information guide published by the Central Examination Board (CKE) in Warsaw, the practical stage of the examination included two practical tasks/topics:

- performing specific technological operations on conventional machine tools in accordance with documentation;
- performing a specific technological operation on a numerically controlled machine tool in accordance with documentation.

However, a significant number of schools providing training in this occupation lacked numerically controlled machine tools or possessed only one type of CNC machine (either a lathe or a milling machine). Others relied solely on machine tool simulators. This shortage of modern equipment hindered students' learning. During the first examinations, candidates who drew the second topic – requiring CNC operation – often withdrew from the practical part altogether.

In 2012, the structure of vocational education changed. A division into qualifications distinguished within individual occupations was introduced, allowing students to acquire specific skills more flexibly. Students could obtain them by completing courses and passing examinations confirming their professional competence The core curriculum for the occupation of machine tool operator was revised accordingly, leading to changes in the examination process. The examination for the **M.19 qualification, distinguished within the occupation of machine tool operator**, required candidates to use both numerically controlled and conventional machine tools. Every candidate had to perform part of the task on two different machines (a so-called 'transition' between machines).

Further reforms followed with the introduction of the 2017 and subsequently the 2019 formula. The 2019 formula for vocational examinations in Poland, implemented under the Act of 22 November 2018, came into force on 1 September 2019, hence the name '2019 formula'. The practical part of the examination for candidates in the occupation of machine tool operator 722307 did not change significantly in terms of procedure, though the equipment requirements for examination centres were updated, specified in more detail, and expanded.

On 6 June 2024, the Regulation of the Minister of Education amending the regulation on the core curricula for sectoral school occupations and additional vocational skills in selected sectoral school occupations (Journal of Laws of 2024, item 993) was signed. As a result, the core curriculum for the **occupation of machine tool operator – specifically the qualification MEC.05**. Operation

of machine tools – was revised. This qualification is distinguished both within the occupation of machine tool operator and within that of mechanical technician.

The new regulation (Journal of Laws of 2024, item 993, Article 1(1a) contains the following provision: *A graduate of a school providing training in the occupation of machine tool operator should be prepared to perform professional tasks within the scope of the MEC.05. Operation of machine tools qualification:*

- *preparing numerically controlled and conventional machine tools for planned machining;*
- *performing machining on numerically controlled machine tools in accordance with technological documentation.*

This provision means that the practical part of the vocational examination will no longer include tasks involving conventional machine tools.

Conclusion

The equipment of an examination centre and the chosen examination model have a significant impact on the educational process in schools and practical training centres. The equipment required for each occupation/qualification is specified and published by the Central Examination Board in Warsaw, which issues detailed descriptions in a three-year cycle. Before each school year, the Board may introduce minor modifications to the existing specifications, highlighted in red. These changes are implemented only when necessary – for instance, to align with software updates or changes in trade names of equipment components. Descriptions of equipment for some qualifications may also include information on planned changes anticipated in the following three years.

The equipment requirements specified by the Central Examination Board affect several key areas:

a) the functioning of schools, practical training centres, and employers providing training in a given occupation or qualification

The publication of equipment lists is of crucial importance for sectoral schools, as it enables them to apply formally to local government units (LGUs) for financial resources to purchase the necessary equipment. Thus, these lists serve not only as guidance but also as the formal basis for funding applications.

Schools lacking appropriate equipment often find it difficult to collaborate with local employers, who may be reluctant to hire graduates without sufficient practical preparation. Conversely, schools that maintain modern, well-equipped training and examination facilities tend to gain prestige, attract more capable candidates, and achieve better educational outcomes.

b) the work of vocational subject teachers and practical training instructors

Properly equipped schools and workshops provide teachers with access to modern machinery, tools, and technologies, enabling a more practical and interactive approach to teaching. This enhances student engagement and allows teachers to conduct mock examinations or simulations using the same equipment as that used in official assessments. This allows students to familiarise themselves with examination procedures. The introduction of new machines and equipment often necessitates training for teachers and instructors, allowing them to update their professional knowledge and adapt to evolving technologies and teaching methods.

c) students, vocational qualification courses (VQCs) participants, and individuals taking external examinations

Access to modern, industry-standard equipment allows students and VQC participants to learn using the same tools and technologies applied in the labour market. Candidates who train on identical or similar equipment to that used during the examination (and subsequently in their future work) experience less stress and are better prepared to pass it. Consequently, graduates who have had the opportunity to train and work on modern equipment are more attractive to employers, as they can contribute effectively from the outset of their careers. This significantly increases their chances of finding a job quickly after graduation.

"The equipment of an examination centre and the chosen examination model have a significant impact on the educational process in schools and practical training centres.

d) vocational examinations results

A lack of appropriate equipment in schools can have serious negative effects on examination results, especially in fields where practical skills are decisive. Students unfamiliar with the examination equipment may feel insecure and stressed during the assessment, which can lead to errors stemming from inexperience rather than lack of knowledge. This increases the risk of failure, which may, in turn, affect their future careers.

The introduction of a new occupation into the classification of sectoral school occupations should be carefully planned, especially regarding the specification of required equipment and the examination model. The correct and prudent specification of equipment for education and examinations, following a thorough analysis of the labour market and consultations with employers and representatives of higher education institutions, will have a very significant impact on student recruitment for training in new occupations.

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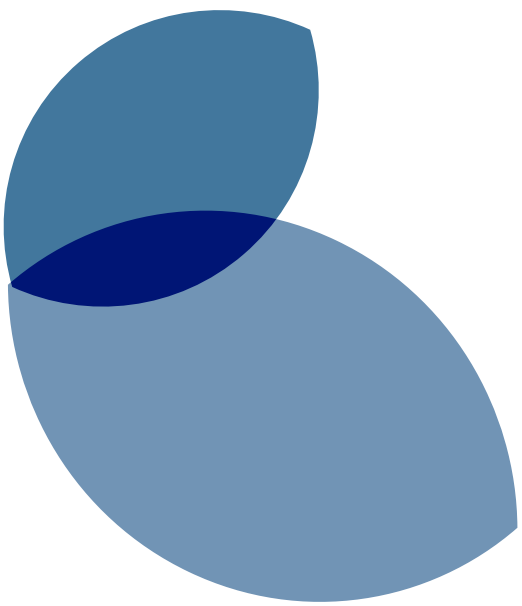

From SkillsPoland to WorldSkills
Regional Vocational Competitions as a Path to the World Championships

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Today, vocational education is becoming a path to success for young people with passion. It plays a vital role in preparing them for employment and in meeting the economic needs of both the regions and the country. The task of schools, and in particular their teachers, is to recognise and awaken the passions and interests of their students. Education is a collaborative process in which the role of teachers is crucial, yet students' success ultimately depends on themselves. By observing and speaking with them, we can often identify their strengths and weaknesses, as well as their desire to grow and uncover hidden talents. Getting to know our students allows us to propose various forms of personal development. One such form of support is encouraging them to take part in skills competitions.

The Championships of Young Professionals, as the WorldSkills and EuroSkills competitions are known, are held alternately every two years. This initiative brings together young people, industry, and teachers, giving participants the chance to compete, gain experience, and learn how to excel in their chosen professions. It also allows them to showcase their skills in a range of technical and craft-based fields. The aim of the competition is to promote and develop vocational skills among young people, raise the standards of vocational education, enhance the prestige of technical and craft-based occupations, and create a platform for effective cooperation between business and vocational training providers. It is aimed primarily at students of vocational and technical secondary schools, as well as young professionals who wish to stand out in their industries. Participation in this programme offers an opportunity not only to test one's skills at a national level but also to gain international recognition.

Structure and Benefits

The competitions consist of several stages:

- SkillsPoland regional qualifiers: This is the first and key qualification stage. They are organised in different parts of Poland to select the best participants in each vocational category. Eligible competitors include both students and professionals aged 18–25. The regional competitions include both theoretical and practical tasks that reflect real challenges participants may encounter in their work. Each competitor must therefore demonstrate both technical knowledge and manual skills.
- SkillsPoland national finals: Winners of the regional competitions advance to the national finals, where they compete against the best participants from across Poland. These finals are held at a higher level of difficulty and require full commitment and mastery of the relevant techniques. The national finals are not only a competition but also a valuable learning experience that can benefit participants' future careers.
- EuroSkills and WorldSkills: The best participants from the national finals are selected to represent Poland internationally at EuroSkills (European) and WorldSkills (global). These

are the most prestigious contests for young professionals worldwide, held in different cities around the globe and often compared to the Olympic Games.

Vocational skills competitions help raise the standards of vocational education while providing participants with numerous benefits, including faster career development, industry networking, and knowledge exchange. WorldSkills winners are often recruited by renowned companies and organisations, and their titles can open doors to prestigious positions within their sectors. Through collaboration with top specialists from Poland and abroad, participants can develop their skills, while teachers and educational institutions can adapt their curricula to international standards.

The first person to notice a student's potential is often a teacher or internship supervisor. They are best placed to assess how far students can develop their talents, prepare for a profession, or acquire other industry-specific competences. Bearing this in mind, teachers select the most suitable teaching aids and tools to prepare learners, course participants, or university students for professional work. Formally, those engaged in vocational education aim to obtain a diploma, a certificate confirming their qualifications, or documentation proving completion of a course in a given field. However, teachers can also draw students' attention to additional training opportunities. Vocational competitions for specific industries – such as WorldSkills – can be a valuable complement to formal education, although their importance will vary for each participant. Supporting talented students as they overcome initial hesitation, discussing competition rules, and assisting with registration will certainly help students overcome initial difficulties.

The participation of students or graduates in global vocational skills competition also offers a range of benefits for teachers.
Here are the top ten:

1. increased professional prestige and authority,
2. development of teaching competences,
3. access to modern technologies and materials,
4. motivation for further work,
5. improved prospects for professional career development,
6. development of a professional network,
7. becoming a source of inspiration and a role model for other students,
8. the opportunity to participate in international events,
9. enhanced school reputation,
10. better teaching outcomes.

Participation in olympiads and competitions is also a mark of distinction for educational institutions and companies. Those that can boast competition achievements often gain excellent opportunities to promote their work within specific industries.

In turn, young people who win medals at WorldSkills become ambassadors for their occupations. Their success shows that careers in technical and craft-based industries can be not only profitable but also fulfilling and prestigious.

Standards and Their Impact on Teaching

For a vocational teacher, the assessment system used in these competitions is of particular interest.

Competition tasks, compared with those in vocational qualification or a journeyman examination, are significantly more extensive and take place over a longer period. This raises an important question: what skills are assessed during SkillsPoland, EuroSkills, and WorldSkills?

The jury pays particular attention to precision. Tasks are designed to require flawless execution, both technically and aesthetically. Participants are also assessed on their speed of work while maintaining high-quality results. In addition, competitors must demonstrate the ability to solve problems they might encounter at work, applying both their experience and analytical thinking. Due to the wide range of competition areas, some events also require knowledge of modern technologies, including mechatronics, robotics, or IT. To become a WorldSkills champion, and a leader in their field, participants undergo rigorous training to raise their skills to a world-class level. These intensive preparations are supported by top experts and mentors from the given industry, who help them solve complex tasks. Achieving success at WorldSkills requires not only commitment but, above all, passion for one's occupation.

The participation of young people in regional SkillsPoland competitions is supported by various public entities, among which industry employers play a crucial role. In the modern world, the rapid growth of knowledge, digitalisation, automation, and technological development should encourage enterprises to cooperate with schools and to undertake joint initiatives that help create a positive image of vocational education aligned with labour market needs. Responsible employers should cooperate with schools, teachers, and students by supporting training preparation, providing competition equipment, and contributing to the creation of industry clusters. The integration

of these activities can raise the quality of education, attract and retain top talent, and offer young people a gateway to successful careers.

Vocational education and the WorldSkills competition are closely linked, as they both aim to promote and develop practical skills while supporting young people in acquiring competences that are essential in the labour market. WorldSkills serves as an international platform that not only recognises outstanding young professionals but also highlights the importance of vocational education in global economic development. As a result, vocational training becomes a key factor in shaping the future of industry, technology, and innovation.

In many countries, these competitions are an integral part of the vocational education system, motivating students to refine their skills. Institutions that prepare students for WorldSkills must align their curricula with current industry standards. This ensures that students receive world--class education, enhancing their competitiveness in the labour market. Cooperation between schools and entrepreneurs is also important, as it leads to the creation of curricula that are better tailored to industry needs. Consequently, graduates of vocational and technical secondary schools are better prepared to work in modern sectors of the economy.

Another significant element linking vocational education with WorldSkills is student motivation. High-level competition and the possibility of gaining international recognition encourage students to improve their skills continuously. It can also open many doors to employment, internships, and even global careers. The competitions reflect the latest market trends and demands, including automation, sustainable development, and digitalisation. Therefore, WorldSkills may be regarded as a barometer of technological and economic change. Vocational education must adapt to these transformations to prepare students for future challenges.

In many countries, WorldSkills competitions are viewed as a tool for supporting reforms in vocational education. By raising standards, providing inspiration, and building awareness of the importance of technical professions, the WorldSkills initiative exerts a real influence on vocational schooling. Through cooperation between industry, government, and teachers, it creates a global skills platform available to all

The Profile of an Ideal Graduate

The most important goal of vocational education is to equip graduates with the right skills and competences. Hard skills (technical and specialised) include:

- knowledge of technologies and work tools: a graduate should understand the tools and technologies used in their industry, such as programming, specialised software, analytical tools, or machinery;
- knowledge of foreign languages: in the age of globalisation, knowledge of at least one

foreign language, most often English, is crucial. Other languages are also increasingly valued, depending on the region and sector;

- ability to work with data: skills in analysis, interpretation, and appliance of data in decision-making are increasingly sought after;
- certificates and specialised training: confirmation of one's competences by completing training and obtaining industry certificates (e.g., programming certificates in IT, accounting certificates in finance).

As for the soft skills (interpersonal and social), they include:

- communication: a graduate should be capable of effective communication, both written and oral. It is important to convey information in a clear and precise manner;
- teamwork: the ability to cooperate in a group, understand different perspectives, and effectively carry out team tasks is crucial in many occupations;
- adaptability: the labour market is changing rapidly, so the ability to adapt to new conditions, technologies, and tasks is of significant importance;
- creativity and innovation: companies value individuals who can propose new, innovative solutions and are open to new challenges;
- problem-solving skills: a graduate should possess analytical skills and think critically. This enables them to solve problems in the workplace effectively.

Among hard skills, digital and technological competences are essential. Regardless of industry, knowledge of basic digital tools (e.g., the Office suite, Google Workspace) is essential. Awareness of cybersecurity and digital threats, as well as the ability to secure information are also of vital importance. One last important competence is understanding of the latest trends such as artificial intelligence, automation, or cloud computing.

However, artificial intelligence cannot replace personal and professional skills, which is why it is necessary to develop students' ability to manage their time and organise their work appropriately. Upon completing their education, graduates should be able to set priorities, meet deadlines, work independently, take responsibility for their actions, and strive for continuous self-improvement. They should demonstrate an entrepreneurial approach to problems, initiative, and the ability to seek out new opportunities – traits that are highly valued on the labour market. Graduates must also be aware of employers' expectations, know the realities of industry and trends, and skilfully adapt their competences accordingly. Building and maintaining professional relationships (networking) is equally important, as it helps in gaining new professional opportunities and advancing one's career.

The final component of vocational education involves attitude and professional ethics. Employers value honesty, loyalty, respect for company values and rules, and a commitment to lifelong learning. Graduates should be open to improving their qualifications and continuing professional development. Rapid technological progress demands a constant readiness to learn.

To summarise, the ideal graduate – and a potential winner of SkillsPoland, EuroSkills, or WorldSkills – is someone who possesses a wide range of hard skills enabling them to perform specialised tasks, along with well-developed soft skills that enhance cooperation, adaptability, and personal development. A graduate should also be flexible, capable of continuous development and learning, aware of market expectations, and ready to embrace change. In this way, they can find their place across a variety of professions and industries.

Conclusion

Vocational skills competitions offer many opportunities for both young people and their teachers. They serve as a platform for exchanging experiences, improving qualifications, and promoting vocational training and education. Technical professions, often undervalued, are in fact vital to every country's economy. For potential competitors, taking part in just the second stage of the competition creates attractive prospects for cooperation with employers and helps them expand their professional networks. Once the competition is over, participants have the invaluable opportunity to learn from one another.

Preparing for such competitions can be a considerable challenge for most institutions – though it depends on the industry. Many competitions go beyond Level 5 of the Polish Qualifications Framework, as participants are expected to complete tasks without instructions, make independent decisions, and even perform tasks innovatively to outperform other participants.

Employers, when selecting candidates for their companies, are increasingly interested in applicants' involvement in fields related to their business beyond formal qualifications. Job interviews often include practical tests assessing skills, such as assembly, reading documentation, and adherence to standards or best practices. As a result, participants in skills competitions are particularly attractive candidates. For teachers who have trained such professionals, this is a source of genuine pride, while for the institutions they represent, it provides an excellent promotional opportunity.

Teachers can integrate the skills standards and assessment criteria from the SkillsPoland, EuroSkills, and WorldSkills competitions into their teaching methodology, enabling them to train medal-worthy experts. An essential factor in this process is the school's openness to innovation and the support of the management team. Head teachers should foster a positive atmosphere that gives both students and teachers the right conditions to prepare for competitions. This is not an easy task: preparations can be monotonous and long, and difficulties may arise, but the effort is worthwhile. Having a champion in a given field is a major achievement for any school, one that

enhances its functioning and prestige within the local community. It also serves as a motivation for both teachers and students. Competitions should therefore be regarded as an important element of the collective work of the entire educational team.

SkillsPoland competitions are an integral part of the vocational education system. They bring together leading companies in the industry, top educational and training institutions, and the most talented young people in a way that no other initiative can match. Through cooperation between enterprises, teachers, and policymakers, these competitions create a pathway to professional excellence that benefits everyone. Skills create opportunities and connect communities. They are the foundation of economic progress. We must recognise that we are part of this process and enable young people to pursue their passions, discover their talents, and embrace new challenges.

> *Job interviews at companies increasingly involve testing skills in applying standards or following best practices.*

Participation in regional SkillsPoland competitions marks the beginning of a fascinating journey that can lead to global success at WorldSkills. It is not just a competition but also an opportunity for professional growth, international experience, and industry recognition. It is worth taking up the challenge, as WorldSkills winners often become leaders in their fields.

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Work Placements within the Practical Education Profile

A Path to Professional Success

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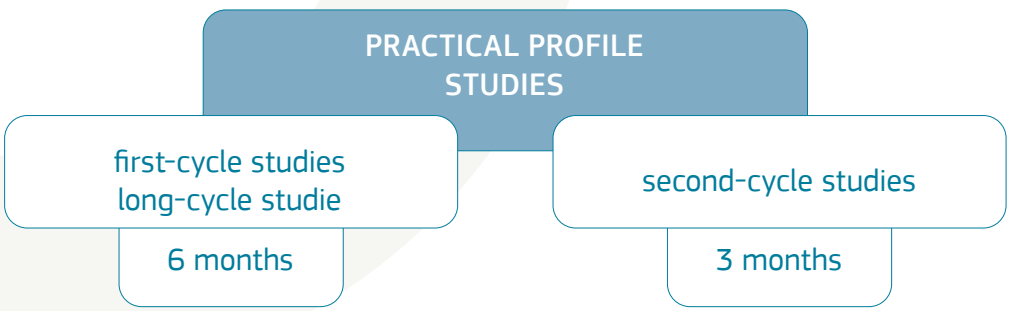
The modern labour market requires employees to have not only theoretical knowledge but, above all, practical skills gained through experience. These competences are essential for performing various occupations and thus for functioning effectively in society. Beginning our adventure with learning, from a very young age, we learn to solve various tasks to skilfully plan our personal and professional development in the future. Student placements are a key element in preparing potential employees for the challenges posed by the labour market.

Higher Education and the Benefits of Completing Work Placements

The Law on Higher Education and Science in Poland distinguishes between first-cycle studies, second-cycle studies, and long-cycle studies (Dz.U. [Journal of Laws] of 2018, item 1668, Art. 64(1). Studies can follow a practical profile, where more than half of the ECTS[1] points are allocated to classes that focus on developing practical skills, or a general academic profile, with more than half of the points allocated to classes related to the research activities conducted at the institution (Dz.U. [Journal of Laws] of 2018, item 1668, Art. 64(2). In the latter case, a work placement is not a requirement.

When a practical profile is chosen, the study programme provides for different placement durations depending on the level of study (cf. Figure 1), with the exception of study programmes preparing students for the professions referred to in Art. 68(1) of the aforementioned Act.

Figure 1. Duration of work placements

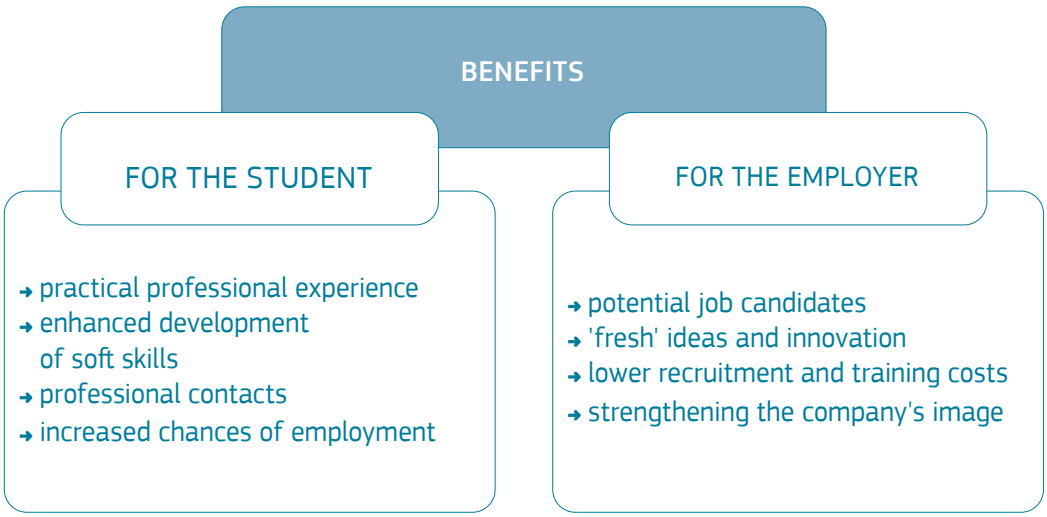


Source: authors' own elaboration based on the Act on Higher Education and Science, Dz.U. [Journal of Laws] of 2018, item 1668, Art. 67(5).

1 The European Credit Transfer and Accumulation System (ECTS) is a fundamental element of the Bologna Process and the European Higher Education Area (EHEA). It serves to compare study programmes and simultaneously enables the recognition of academic qualifications obtained abroad. For more, see: education.ec.europa.eu/pl/education-levels/higher-education [accessed: 18 September 2024].

The purpose of work placements is to prepare students for entry into the labour market. They provide an opportunity to gain experience and specific skills that will benefit future employers (Figure 2). A work placement allows for the verification of theoretical knowledge acquired during studies and a confrontation with the reality of a professional environment. A close link between the work placement location and the field of study enables students to acquire specific professional competences (Rafalska, 2012).

Figure 2. Benefits of undertaking work placements



Source: author's own elaboration.

The opportunity to use knowledge in real-world conditions allows students to gain practical professional experience and understand the principles of the labour market. Performing professional tasks at real workstations makes students ideal candidates for employees. It also gives them an advantage over competitors in the labour market and has a huge impact on reducing companies' recruitment and training costs. Students who are familiar with a company's structure, organisational culture, and tasks no longer require the adaptation period typically necessary when hiring new people.

During work placements, students are also able to develop their competences in interpersonal communication, teamwork, time management, or problem-solving. These types of soft skills have been listed among the competences of the future (World Economic Forum, 2020) as being extremely valued by employers and often crucial for professional success.

In many cases, a work placement is the deciding factor for employment, often leading to a job offer immediately after its completion. Employers value proper preparation for work,

and confirmation of a completed placement serves as proof of the ability to apply theory in practice. Furthermore, a fresh perspective, creativity, and being up-to-date with the latest trends can be a source of the innovation necessary for a company's operations.

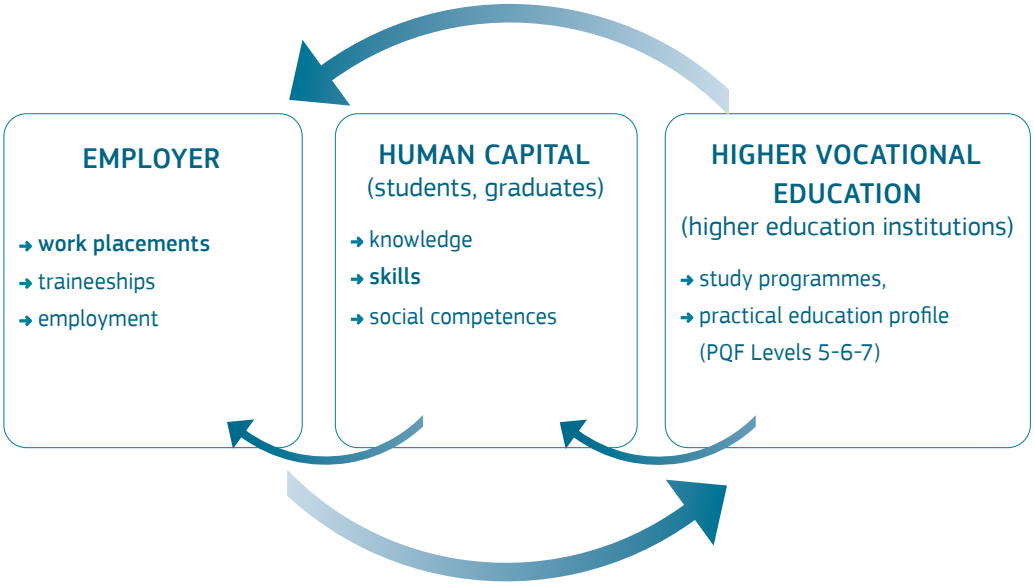
The Organisation of Work Placements in Higher Education Programmes with a Practical Profile

Every higher education institution offering a practical profile has its own regulations concerning the organisation and completion of student placements. To meet the demands of the global market, higher education institutions establish close cooperation with the business environment, creating consultative bodies.

> *In many cases, a work placement is the deciding factor for employment, often leading to a job offer immediately after its completion.*

As part of such cooperation, employers (IES, 2013) in many cases have an influence on changes in study programmes, primarily regarding the knowledge, skills, and social competences that students should acquire before undertaking placements and which are necessary for performing specific professional tasks. As a result, by creating study programmes that stem from the needs of labour markets, institutions offering a practical profile equip students with appropriate 'professional' learning outcomes. They acquire knowledge, skills, and social competences both during theoretical education (lectures), practical training (classes, laboratories, workshops, seminars), and while completing work placements. These determine the success not only of the student, who finds their professional career path, but also of the employer, who gains a properly prepared employee (Figure 3).

Figure 3. Interdependencies related to improving education within the practical profile



Source: author's own elaboration.

Work placements constitute a key part of higher education programmes with a practical profile. For their proper organisation, a supervisor is appointed both at the higher education institution and at the workplace. Such a model enables the effective management of students' time and the efficient assessment of their achieved learning outcomes during the final placement examinations. This is carried out in accordance with the guidelines included in the course syllabus.

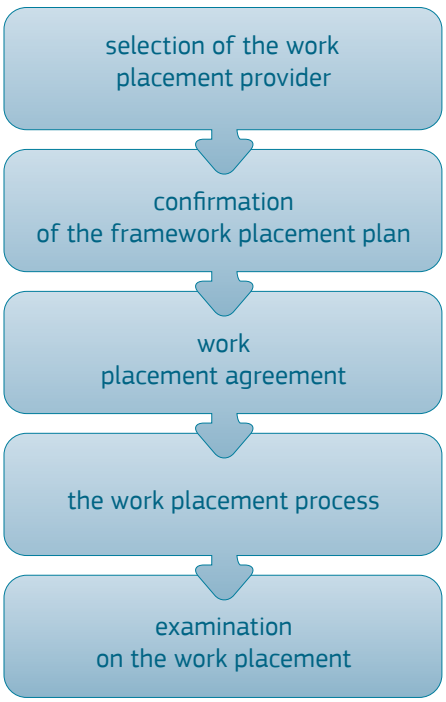
Professional experience gained during studies is a significant advantage for any graduate entering the labour market. Currently, at many institutions, work placements are confirmed by the submission of a report. Every student is bound by an established framework placement plan, which enables the achievement of specific learning outcomes.

Work Placements: A Case Study of First-Cycle Programmes with a Practical Profile at the University of Applied Sciences in Elbląg

Before the introduction of the six-month work placement system, which is now mandatory in first-cycle programmes with a practical profile (under the Law 2.0), the University of Applied Sciences (ANS) in Elbląg developed substantive and operational principles for its implementation.

This was part of a pilot scheme involving 36 higher education institutions and over 7,000 trainees[2]. This was made possible only through close cooperation with employers, which resulted in the preparation of appropriate instructions and documentation for the work placements. The pilot scheme enabled the development of a uniform system and the creation of a tool for verifying learning outcomes achieved during the placements, which takes the form of 'mini professional tasks' (Dębowski et al., 2019). The organisational diagram for work placements in a selected field of study at the ANS in Elbląg is presented in Figure 4.

Figure 4. The organisation of work placements at the University of Applied Sciences in Elbląg for the economics programme



Source: author's own elaboration based on the Work Placement Regulations of the Institute of Economics at the ANS in Elbląg.

At the ANS in Elbląg, the choice of the work placement provider and the nature of the work performed by the student must be consistent with their field of study. The placement can be undertaken at an organisation with which the university has a permanent cooperation agreement,

2 A non-competitive conceptual project entitled "The Programme of Work Placements in State Higher Vocational Schools", implemented under the PO WER Programme – Priority Axis III Higher Education for the Economy and Development; Ministry of Science and Higher Education, Warsaw 2015–2019.

or at a provider (either in Poland or abroad) proposed by the student and approved by the university work placement supervisor.

Before commencing the work placement, the student is obliged to provide confirmation from the chosen provider that it is possible to achieve the learning outcomes specified in the course syllabus. In the next step, a work placement agreement is signed, and the placement is carried out. In addition to placements under these agreements, they can also be completed through employment contracts, traineeships, volunteering, civil law contracts, or by running one's own business.

During the six-month work placement, the student becomes familiar with the internal work organisation and the operating conditions within the local and regional environment. Furthermore, they gain experience in performing assigned duties both independently and as part of a team, develop the ability to apply previously acquired theoretical knowledge in practice, and learn about their own opportunities on the labour market. In addition, they have the opportunity to define the topic of their diploma thesis, which may be of an applied nature. After completing the work placement, the student is obliged to submit a progress report to the university supervisor, confirmed by the workplace supervisor.

The work placement is credited by means of an oral examination held in front of an examination board, which includes the chairperson of the board, the university work placement supervisor, and an academic teacher associated with the field of study. The board may also include workplace supervisors who, in agreement with the university supervisors, prepare examination questions in the form of mini professional tasks.

Skills acquired during a work placement can make a graduate stand out from other candidates during the recruitment process.

Referring to the aforementioned pilot scheme and the currently mandated six-month work placement for the practical profile, it is worth recalling the sets of learning units developed by the team active during the pilot, known as 'institutional qualifications' (which can now be related to micro-credentials). Their description (consistent with the Integrated Qualifications System – IQS) included learning outcomes acquired both during studies and during the work placement. It can therefore be concluded that a study programme, including the six-month work placement, constitutes a definable professional qualification that could be entered into the Integrated Qualifications Register. This would contribute not only to the success of the higher education institution offering studies with a practical profile but also of students and employers.

Conclusion

Skills acquired during a work placement can make a graduate stand out from other candidates during recruitment for their first-ever job. However, to use them as an asset, it is worthwhile for the graduate to have confirmation of their acquisition, at least in the form of a credible certificate.

In this regard, higher education institutions, in consultation with the hosts of the work placements, should consider using the opportunity to issue micro-credentials, which would serve as confirmation of the professional skills acquired. This would significantly raise the standing of the institution and the certificate of professional skills it issues, which attests to the level of education.

It would also be worthwhile for higher education institutions offering a practical profile to describe their study programmes in the language of employers, thereby confirming the 'professional' nature of the field of study. Graduation would then be associated not only with obtaining a full qualification in the form of a diploma but also with the confirmation of having acquired a specific skill or professional qualification. Creating new fields of study that enable the acquisition of certified professional qualifications could contribute to the development and competitiveness of not only the institution but also the entire region. A broad educational offer would increase students' chances of professional success and employers' chances of success in their respective industries, thanks to access to the best candidates.

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SWOT Analysis of the Process of Introducing Changes to Educational Offerings

A Case Study of Lubuskie Voivodeship

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The education process, including the introduction of changes in vocational education offerings, is nowadays considered within the framework of lifelong learning (LLL). All related activities aim to improve the level of knowledge, skills, and competences from a personal, civic, and social perspective linked to employment. We are, therefore, observers or participants in this process. If we accept that change is the hallmark of the future (and today there is no other alternative), then one of the most crucial issues becomes solving the problems (or tensions) that arise at the intersection of old and new social and economic orders. This requires leveraging the strengths and weaknesses of these phenomena, as well as the opportunities and threats they create.

Such a SWOT[1] diagnosis was prepared for the Lubuskie Voivodeship[2]. In the 2018/2019–2021/2022 school years, 1,572 vocational education entities were surveyed. The results showed that the process of change in vocational education offerings is driven by both exogenous and endogenous variables. Importantly, these variables can 'shift' from a favourable variant to an unfavourable one and vice versa, meaning the entire SWOT analysis should be treated as relative. What is weak may, under certain conditions, be treated as positive, and an opportunity can quickly become a threat. Furthermore, a given phenomenon may appear optimistic from one perspective while exhibiting destructive tendencies in other respects.

A definite strength in the process of adapting vocational education programmes is the Lubuskie Employment Pact (an agreement between non-governmental organisations, local governments, trade unions, and employer organisations). Within this pact, four sectoral partnerships were established for vocational guidance, labour market research, continuing education, and the social economy. Thematic meetings organised within these partnerships address current factors influencing this process. The concurrently established Lubuskie Voivodeship Vocational Guidance Forum has met the ministerial requirements, according to which, since 2019, all students in post-primary schools must attend classes on vocational guidance (in the view of the analysis's author, this effectively constitutes lifelong guidance). This is made possible by a group of guidance counsellors, who are employed in 12.6% of all surveyed entities in the Lubuskie Voivodeship. This percentage may change, for instance, with an increase in the number of hours allocated to this subject. It is certainly easier for permanently employed guidance counsellors to assist young people and to conduct graduate tracking – a practice so crucial to the process under discussion.

[1] The acronym SWOT comes from the names of the components of this process: *Strengths, Weaknesses, Opportunities, and Threats*.

[2] This article is a fragment of a document prepared as part of the project: "Skills Create Opportunities. Building a System of Coordination and Monitoring of Regional Activities for Vocational Education, Higher Education, and Lifelong Learning, Including Adult Learning", Agreement KPO/22/LLL/U/003, Zielona Góra, April 2024.

In this context, it is worth noting that in the four-year period under review, the number of students in post-primary schools increased across all counties, mainly in post-secondary schools and technical secondary schools. This information can be linked, among other things, to changes in the educational offer that students find appealing. These results correspond with demographic data: the share of the pre-working age population in the Lubuskie Voivodeship is 18.2%, and although it decreased during the analysed period, it is close to the national average of 18.4%. The voivodeship appears to be attractive to young people, and interest in vocational education and training is greater than before 2018. This is a positive aspect and a considerable asset.

Another strength is the territorial distribution of educational providers, which indicates a correlation between their existence and the concentration of economic processes in the counties (the voivodeship under study has 12 counties and two voivodeship cities with county rights). Outside the region's capitals (Zielona Góra, Gorzów Wielkopolski), the percentage of educational providers is higher in those counties where economic zones and technology parks operate, as well as where a larger number of enterprises are located. It is in these areas, therefore, that relatively greater changes in the provision of education can be expected.

> *The SWOT analysis should be treated as relative: what is weak may under certain conditions become a positive category, and an opportunity can quickly turn into a threat.*

A significant asset is the relatively high number of 129 occupations offered in post-primary schools. In the 2023/2024 academic year, the offer in Lubuskie schools included occupations such as film and television production administrator (one of nine introduced this academic year by the Ministry of Education and Science) and sound engineering technician (introduced by the ministry in previous years). It must be remembered, however, that all educational programmes, both old and new, require cooperation with business partners. A lack thereof can be a weak point. A similar situation applies to surplus and shortage occupations. The multitude and nature of the factors influencing their definition, classification, and dynamics create numerous ambiguities. For example, the occupation of motor vehicle mechanic is in shortage in eight counties, despite being part of their educational offer. A bricklayer-plasterer is in shortage in five counties where the occupation is offered and in two where it is not (Gorzów and Świebodzin counties). The profession of childminder is a shortage occupation in four counties, none of which include it in their educational offer (Strzelce-Drezdenko, Sulęcin, Świebodzin, and Żagań counties). The situation is similar for surplus occupations. For instance, such shortage occupations as hairdresser (in Międzyrzecz county), tailor (in Słubice county), motor vehicle mechanic (in Międzyrzecz county), and IT technician (in Zielona Góra) are included in the educational offer in those counties. Conversely, mechanic-fitter of machinery and equipment (in Międzyrzecz county) and mechanical technician (in Wschowa county), which are surplus occupations, are not

currently offered in those counties. In general, however, it can be stated that the number of surplus occupations in the Lubuskie Voivodeship is negligible. Ironically, the majority of institutions offer training in occupations that are in shortage, yet these occupations do not disappear from the shortage list. The research methodology for defining and classifying these occupations warrants closer examination.

The provision of partial qualifications awarded within the school and higher education system in the Lubuskie Voivodeship should also be considered an internal potential of the analysed system. It is extensive and takes into account regional specifics in the fields of culture, entertainment, and recreation. The provision of postgraduate studies and the partial qualifications that can be obtained upon their completion should be deemed sufficient. Although this offer is limited to three counties (Zielona Góra, Gorzów Wielkopolski, and Żary county), this should not pose a significant problem for those interested. The offer of internal courses and training also looks encouraging. Employee development, which involves enhancing and expanding their potential and capabilities, can positively influence the promotion of a learning culture and, indirectly, changes in the educational offer.

Educational offers and their changes are linked to infrastructure. The collected data indicate that 69% of entities declare they have their own workshops. This represents significant potential, although a considerable number of the surveyed entities do not provide information about their resources in this area.

The process of introducing changes to VET provision, specifically one of its elements – diagnosing interest in the educational offer – is conditioned by promotional activities and coherent, attractive communication strategies. Over half of the educational institutions promote their offer in a manner that is clear to researchers and potential clients. Communication concerning general information and recruitment should certainly be considered a strength, whereas communication related to retraining (10.4%) and employment (8.9%) is a weakness. Issues related to certification account for 38.6% of communi-cated matters. The target audiences for the promotional messages of educational institutions are mostly adults and young people. These are undoubtedly assets of the process.

Collaboration chains, visible in the process of implementing changes to the provision of VET (despite considerable variation in the data between counties), also constitute a strength. This refers to the cooperation of all surveyed entities with schools (from 5.30% to 38.9%), employers (from 8% to 41.5%), and other bodies (from 17.2% to 50%). Business representatives seek to cooperate with post-primary and higher education institutions to acquire qualified

employees. Business partners appear in vocational schools, and patronage classes are also being created. Furthermore, two Sectoral Skills Centres (BCU) have been established, and in post-primary schools, young people learn about business and management in a new subject that has replaced the basics of entrepreneurship. One hopes that the change is not confined to the name.

The noticeable downward trend in the number of teachers (including vocational subject teachers) in the Lubuskie Voivodeship and the rising average age of professionally active teachers may be a cause for concern. Staff shortages, which constitute a weakness in the process, are a derivative of a nationwide crisis. These results are similar in all regions of Poland. Across the country, there is a shortfall of 23,596 teachers (data as of July 2023). This represents 3.41% of teaching positions (Dealerzy Wiedzy, 2024).

The weaknesses of the process under discussion also include certain shortcomings in aligning the educational offer with the external environment, in terms of labour market analysis and consultation with business representatives at the earliest possible stage. This is an extremely difficult and multifaceted task. The establishment of Voivodeship Coordination Teams for Vocational Education and Training certainly presents an opportunity to organise and synchronise these activities.

Among the weaknesses of the process under discussion are also shortcomings in aligning the educational offer with the environment in terms of labour market analysis.

In the area of evaluation (and, more broadly, monitoring), there is a clear deficit in institutions, primarily concerning the self-assessment of educational units. If monitoring is conducted at all, it most often covers the curriculum; graduates' career paths are monitored less frequently. It must be stressed that during the research period (from September 2021), regulations were introduced according to which monitoring is not a mandatory form of pedagogical supervision. Furthermore, overly complex procedures may exacerbate this phenomenon.

The complexity of rules and regulations is another weakness in the introduction of a new occupation into the sectoral education system. It is a lengthy process, preceded by numerous formal decisions, which hinders the updating of educational offer in a way that allows for a timely response to the labour market situation. Additional difficulties may arise from modifications to the regulations governing sectoral education in Poland. Since 2018, many changes, including systemic ones, have been implemented. A new core curriculum came into force in 2019, and the classification of occupations is amended almost every year. Unfortunately, information about these transformations has not been compiled into a single publication. It can certainly be stated that the vocational education landscape is undergoing a transformation to become more appealing to its audience.

A difficulty that may pose a threat in the long term are issues related to the situation of enterprises that provide practical placements and future jobs. Most of these are small companies – the structure of these entities does not differ significantly between counties (excluding economic zones and technology parks). However, after the COVID-19 pandemic, a significant decrease in their number was recorded (also in the public sector). In regions lacking entrepreneurs from a specific sector, introducing a new occupation may become impossible, even if a school is able to meet the necessary requirements, such as those concerning teaching staff. Securing partners is a fundamental part of the process of implementing changes to the vocational education and training offer.

A further threat may relate to the low wages in the dominant industries of the Lubuskie Voivodeship. This, however, is a macroeconomic factor that should not be considered solely in *ceteris paribus* terms. The persistently low unemployment rate is certainly a variable that mitigates this threat. It should be remembered that low unemployment and high wage dynamics increase the risk of rising inflation.

The level of social competences, and more broadly, employability skills, can also be perceived as a threat. Problems arising from deficits in the social competences of various groups are raised as a serious risk by bodies associated with vocational education and the labour market[3]. Although only job offers were analysed in this respect (370 offers), the issue warrants closer examination. In all counties, employers are looking for employees in the construction, trade, economic-administrative, and education sectors. These results largely overlap with the dominant industries in the Lubuskie Voivodeship: construction and wholesale and retail trade. However, the vast majority of these offers (over ⅔) did not contain any expectations regarding the following soft skills: analytical thinking, creativity, foreign language proficiency, learning ability, decision-making, self-management, results orientation, problem-solving, and digital skills. Only just over 16% of employers require communication skills and interpersonal competences from their future employees. To a small extent, they expect stress management, conflict management, teamwork, coping with change, or intercultural competences. It is hoped that this is due to the haphazard construction of job offers and that the lack of these requirements is confined to written declarations. However, omitting soft skills is a serious mistake and may cause problems in the long term.

Conversely, opportunities can be seen in relation to employers' educational requirements. For most positions, secondary and basic vocational education is required (68%). This indicates

[3] Meetings of the National Team of Experts for VET.

the wide availability of jobs for people without higher education, which may translate into an increase in the provision of education at levels 3 and 4 of the Polish Qualifications Framework (PQF).

Undoubtedly, various forms of support also represent an opportunity in the process of change within the learning sphere. The study considered 274 support programmes offered during the study period: Erasmus+ projects were mentioned by 92% of respondents, ministerial programmes by 4%, and competitions and scholarships by 2%. Over 41% of the types of support were addressed to all counties in the voivodeship, and over 15% were supra-regional projects. It can be stated that support was distributed fairly evenly across all counties of the Lubuskie Voivodeship in the following areas: employee training, improving the quality of education, infrastructure development, technology development, language learning, development of extracurricular skills, supporting talent, enhancing the quality of VET, study visits, workshops, support for people with disabilities and the excluded, and raising the quality of education. An analysis of how this support is used shows that the largest number of entities invest in talent and help people with disabilities and the excluded. Almost 15% of entities develop their infrastructure thanks to this support. Non--formal and informal education providers make significantly greater use of support solutions than formal education providers.

Although the study showed that the offer in the area of smart specialisations is weak, based on global trends and reports, it can be concluded that this area will develop, and an increasing number of courses from these categories will appear in the educational offer. Today, in all counties of the Lubuskie Voivodeship, one can train in occupations related to smart specialisations, and most of these are classified as either balanced or shortage occupations. In the field of the green economy, there are few job offers in the analysed region (constituting 2.4% of all offers). The health and quality of life sector accounts for just under 4%, and innovative industry for 8%. The analysed job offers mainly relate to industries outside the area of smart specialisations (approx. 85%).

Identifying the strengths, weaknesses, opportunities, and threats in the process of introducing changes to VET offers is a conditional exercise. The future is associated with uncertainty, crisis, hyper-flexibility, and hyper-competitiveness. The answer to a changing world is the permanent acquisition of knowledge and the ability to apply it in the face of diversity. There is a need for efficient management of what has become a complex process of vocational education and training. Close cooperation can bring benefits to all participants in the process.

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Classes Developing Practical Skills in Higher Education

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Introduction

In a rapidly changing world, expectations for higher education are also evolving. Technological development, widespread access to information, changes in the labour market (the fourth industrial revolution), and rapid social transformations also require modifications in education at various levels, concerning both the content of learning outcomes and the methods of teaching and their evaluation (e.g., Aboderin, Havenga, 2024; Wieczorek, 2021; Schwab, 2016). Higher education is widely expected to be useful, especially in a professional context. Thus, the ability of graduates to apply the competences acquired during their studies in practice is becoming an important educational goal (cf. Times, 2024).

Competences for the Future

> Future skills can be characterised as competences that enable individuals to act and solve complex problems in the unpredictable.

Higher education is expected to prepare graduates not so much for life "here and now", but primarily for functioning in a rapidly changing world. Education, therefore, is meant to be "for the future". In recent years, research on the competences or skills desired in graduates has gained increasing popularity. This includes discussions of future, key, and transversal competences, among others (cf. Ehlers, Eigbrecht, 2024). Essentially, 'future skills' can be characterised as competences that enable individuals to act and (successfully) solve complex problems in unpredictable contexts. These skills are based on cognitive, motivational, volitional (i.e., intentional), and social resources; they are value-based and can be acquired through the learning process (Ehlers, Eigbrecht, 2024, p. 29). Research on the needs of 17 selected industries in Poland has also identified common competences that graduates will need in the future. These include skills in communication, building and maintaining relationships, cooperation (in groups, including in international environments), work organisation and planning (including analytical competences), as well as digital competences and the ability to learn independently (cf. Szczucka et al., 2023). As is evident, the practical aspect is key here.

At this point, however, it is also necessary to note the critical voices regarding an excessive focus in higher education on key competences defined solely by the demands of the labour market (Washer, 2007, pp. 58–60).

Defining Practical Skills in the Polish Higher Education System

Formally, the development of practical skills has been, and remains, one of the fundamental determinants of study profiles in Polish law (cf. Lewicki, Brdulak, 2023). Unfortunately, the currently binding Law on Higher Education and Science of 2018 does not define these basic concepts. The term “classes developing practical skills” appears in it with reference to higher education primarily in Article 64:

Art. 64

2 The following profiles of studies are conducted:

1) practical profile, where more than half of the ECTS credits are allocated to classes developing practical skills;

2) general academic profile, where more than half of the ECTS credits are allocated to classes related to the scientific activity conducted in the higher education institution.

This provision is further elaborated in the Regulation on studies (MNiSW, 2018a):

§ 3 [...]

5 Study programme:

1) with a practical profile – includes classes shaping practical skills at a rate of more than 50% of the number of ECTS credits referred to in sec. 1 point 1;

2) with a general academic profile – includes classes related to the scientific activity conducted at the university in the discipline or disciplines to which the field of study is assigned, at a rate of more than 50% of the number of ECTS credits referred to in sec. 1 point 1, and takes into account the participation of students in classes preparing for or participating in scientific activities.

By law, the concept of "classes developing practical skills" also applies to specialist training at level 5 of the Polish Qualifications Framework (PQF), i.e., to short-cycle education (Chmielecka, Kraśniewska, 2017):

Art. 161. [...]

2. The curriculum of specialist education shall determine learning outcomes taking into account the universal characteristics of the first level specified in the Act of 22 December 2015 on the Integrated Qualification System and the characteristics of the second level laid down in the provisions issued on the basis of Art. 7(2) of the aforementioned Act. The curriculum provides for classes developing practical skills.

Speaking of the Act on the Integrated Qualifications System (IQS Act, 2015), it is worth noting that it specifies the types of learning outcomes, the characteristics of which for higher education are detailed in a regulation (see below). In Article 7(3)(2), the ISQ Act specifies four scopes of skills:

- applying knowledge – solving problems and performing tasks;
- communicating – receiving and creating statements, disseminating knowledge in the scientific community, and using a foreign language;
- organising work – planning and teamwork;
- learning – planning one's own development and that of others.

It should be emphasised that the 2018 regulation (MNiSW, 2018c) governing learning outcomes in higher education does not differentiate the descriptors (characteristics) of learning outcomes according to the study profile, as was the case in previous regulations (cf. Lewicki, Brdulak, 2023). Thus, in accordance with the fundamental principle applied in the qualifications framework system, the most important thing is for the learner to achieve the intended learning outcomes, while the method of achieving them is of secondary importance. Of course, the path to acquiring knowledge, skills, or social competences influences the choice of methods for their verification (validation), but it does not necessarily have to affect the learning outcomes themselves.

If one were to literally interpret the above-cited Article 64(2) of the Law on Higher Education and Science (2018) and Article 3(5) of the Regulation on studies (MNiSW, 2018a), one could conclude, for example, that classes in general academic profile programmes should be primarily theoretical and related to knowledge, and that more than half of them should relate to research activity. Of course, this would be absurd. Firstly, the regulations specify minimum requirements. Secondly, practical classes do not preclude references to research activity, and vice versa. Finally, it seems that the legislator's intent is different and relates primarily to preparing graduates to enter the labour market, as indicated by another provision of the said regulation (MNiSW, 2018a):

Art. 6. Classes shaping practical skills, provided for in the study programme of practical profile, are conducted:

1) under conditions appropriate to the scope of professional activity;

2) in a way that allows students to perform practical activities.

This, therefore, refers to two key elements. The first is the creation of conditions that correspond to those found in a professional work environment, and the second is the performance of specific tasks by students. The above definition is a legacy of earlier legal solutions concerning both

professional studies and studies with a practical profile, where workshops were to be conducted by "individuals with professional experience gained outside the university" (cf. Lewicki, Brdulak, 2023).

Moreover, the above-cited Regulation on studies (MNiSW, 2018a) permits, as part of improving study programmes, changes during the study cycle. These are modifications to the content delivered to students during classes, which take into account "the latest scientific, artistic, or professional achievements" (MNiSW, 2018a, Art. 7(5)(1). This provision, therefore, makes no distinction between study profiles or types of classes. The Polish Accreditation Committee (PKA) reaches similar conclusions when defining the criteria for evaluating the implementation of higher education programmes with different profiles (see below).

At this point, it should be noted that the regulations permit the auxiliary use of distance learning methods and techniques for classes developing practical skills (MNiSW, 2018a, Art. 12(2). It seems that the decisive factor should be, above all, the specific nature of the skills in question. It is impossible to fully teach practical skills in accordance with Article 6, for example, the use of a given technique or device, in an online format. However, programming skills, for instance, are perfectly suited for distance learning.

Quality Assurance in the Context of Practical Skills

Quality assurance in higher education is divided into internal QA, carried out within the institution, which will likely be the subject of a comprehensive evaluation by the PKA, and external QA, carried out by the PKA as a programme evaluation.

Due to the lack of a regulation on the criteria for comprehensive evaluation, the current procedure only includes programme evaluation. It is adapted to the two profiles of study programmes offered by higher education institutions: the practical profile and the general academic profile.

The specific nature of these profiles is worth examining through the prism of the graduate profile. It is assumed, in very general terms, that a graduate of a general academic profile is prepared to undertake professional work in knowledge-based industries or to continue their education at level 8 of the PQF – in a doctoral school. In the case of a practical profile, the graduate should be prepared to undertake work in specific professions, so that their competitiveness on the labour market is greater upon graduation. To simplify, it can be assumed that the practical profile should be oriented primarily towards professional matters. This logic is reinforced by the legal acts that were analysed in the section concerning the definition of practical skills in the Polish higher education system.

The PKA reflects this specificity by somewhat differentiating the evaluation standards for general academic and practical programmes. The table on the following page presents these differences.

Table 1. Differences in quality standards for specific profiles in PKA criterion 2: Implementation of the study programme: programme content, schedule for the implementation of the programme and forms and organisation of classes, teaching methods, professional placements, organisation of the teaching and learning process

General academic profile	Practical profile
EDUCATION QUALITY STANDARD 2.1 The programme content is consistent with the learning outcomes and takes into account, in particular, the current state of knowledge and research methodology in the discipline or disciplines to which the field is assigned, as well as the results of the institution's research activity in that discipline or disciplines.	EDUCATION QUALITY STANDARD 2.1 The programme content is consistent with the learning outcomes and takes into account the current knowledge and its applications within the discipline or disciplines to which the field is assigned, norms and principles, as well as **the current state of practice in the areas of professional/economic activity and the professional labour market relevant to the field** [emphasis added by the Author].
EDUCATION QUALITY STANDARD 2.3 Teaching methods are student-oriented, motivate students to actively participate in the teaching and learning process, and enable them to achieve the learning outcomes, including, in particular, enabling preparation for conducting research activity or participation in such activity.	EDUCATION QUALITY STANDARD 2.3 Teaching methods are student-oriented, motivate students to actively participate in the teaching and learning process, and enable them to achieve the learning outcomes, including, in particular, enabling **preparation for professional activity in the areas of the professional labour market relevant to the field** [emphasis added by the Author].
EDUCATION QUALITY STANDARD 2.4 If professional placements are included in the study programme, their programme, organisation, and supervision of their implementation, the selection of placement locations and the environment in which they take place, including infrastructure, as well as the competences of the supervisors, ensure the proper implementation of the placements and the achievement of learning outcomes by the students, particularly those related to the acquisition of research competences.	EDUCATION QUALITY STANDARD 2.4 The programme of professional placements, their organisation and supervision of their implementation, the selection of placement locations and the environment in which they take place, including infrastructure, as well as the competences of the supervisors, ensure the proper implementation of the placements and the achievement of learning outcomes by the students, particularly those **related to professional preparation** [emphasis added by the Author].

Source: author's own elaboration based on the Statute of the PKA, 2018, Annex 2.

It is worth noting that the differences apply only to the standards, not the criteria. This approach is a derivative of the provisions of the Regulation on the criteria for programme evaluation, which does not differentiate them with respect to the individual profiles (MNiSW, 2018b).

The evaluation process is conducted on behalf of the PKA by its members and experts, who are guided by, among other things, the principle of autonomy (Code of the PKA, 2009, Article 3). The assessments formulated by individual teams may differ, which is a characteristic of qualitative and expert-based evaluation. The PKA's evaluation is also external in nature. The Committee nevertheless expects higher education institutions to have within their structures and units a division or person responsible for internal quality assurance, so that the teaching process can be improved autonomously. Hence, the issue of conducting and evaluating classes that develop practical skills should be thoroughly addressed by the given higher education institution, which, in turn, should be prepared to justify why it classifies certain classes as those that develop practical skills.

The area of practical skills is directly related to the skills learning outcomes. Every study programme offered by a higher education institution (field of study) must have defined learning outcomes in three domains: knowledge, skills, and social competences (MNiSW, 2018c). This means that the institution should have mechanisms in place to verify the learning outcomes, as it is the achievement of specific results by students that determines the awarding of a diploma. The PKA's evaluation particularly focuses on the verification of the achievement of learning outcomes. To this end, the Committee examines, among other things, coursework and theses, and conducts class observations. This is not an audit, as the scope of the PKA's examination in these areas is limited and thus not representative. The purpose of this evaluation is only a preliminary diagnosis of teaching methodologies and forms of student assessment.

Higher education institutions may find it more or less easy to assess practical skills, depending on the field of study. For example, in technical or arts-related fields, the verification of learning outcomes in the domain of skills is usually simpler and involves completing a specific project or work of art. In the case of social sciences and humanities, this matter can be more difficult. When the PKA reviews applications (which are still in the nature of an *ex ante* programme evaluation), the assessment teams, in relation to the social sciences and humanities, very often expect the institution to indicate, within the educational concept for a given profession, the links to the employment to which the field of study is intended to lead. This increases the likelihood that the skills developed during the course of study in a given field will be better represented in the labour market and, as a result, will genuinely provide added value for the student. It also provides a logical justification for why the institution classifies certain classes as those that develop practical skills.

The Keyword: Profession

The development of practical skills thus directs us towards professional activity and the labour market. Remaining in the sphere of state regulations, professions and specialities for the needs of the labour market are organised by a 2014 regulation of the Minister of Labour and Social Policy (MPiPS, 2014). The classification contained therein is used for, among other things, vocational guidance, vocational training, and labour market research and analysis. It groups professions but does not provide their description or a standard. The concept of a 'profession' itself is defined as follows (Explanations to the classification):

A profession is a source of income and means a set of tasks (activities) distinguished as a result of the social division of labour, requiring competences acquired in the course of learning or practice; a speciality comprises a part of a profession that requires additional competences. The classification was developed based on the International Standard Classification of Occupations ISCO-08.

Currently, the classification identifies 2,455 occupations and specialities (MRPiPS, 2017).

It is worth noting that in the classification of occupations, the group of specialists is defined with reference to, among other things, scientific research (MRPiPS, 2017):

Group 2. Specialists – this group includes occupations that require a high level of professional knowledge, skills, and experience in technical, natural, social, humanities, and related sciences. Their main tasks involve putting scientific or artistic concepts and theories into practice, expanding the current state of knowledge through research and creativity and systematic teaching in this field.

Within this classification, academic teachers constitute a separate sub-group (231. Academic teachers). This is another argument in favour of treating study profiles primarily as different organisational forms of education, rather than through the prism of the learning outcomes themselves.

The classification, therefore, does not directly relate to higher education, which has a fairly broad autonomy in terms of its curricula. In practice, different fields of study can prepare students for similar professions, and a given profession (or job position) can be performed by people who have completed different courses of study. Of course, different professions, authorisations, or job positions require either a specific education (e.g., defined by the field of study) or specific competences. Strictly regulated professions, such as a doctor or teacher, require studies whose curriculum is defined in education standards. There is also a large group of professions that require, at entry-level, an education from a group of fields, e.g., assigned to a given discipline, but the professional authorisations depend on sectoral/state examinations, unless a given study programme is appropriately accredited by an external body (e.g., based on an agreement with

the university). However, the vast majority of jobs for higher education graduates are not so strictly regulated, and what matters most to employers are precisely the transversal competences and a certain scope of foundational knowledge from graduates.

Conclusion

Taking into account the aforementioned legal requirements and PKA standards, defining the "classes developing practical skills" for any field of study will require, already at the programme design stage, firstly, an analysis of labour market needs with respect to the expected competences of graduates, and secondly, the definition of a graduate profile and the selection of a corresponding description of the field of study in the language of learning outcomes. As mentioned in the section on quality assurance, the PKA expects higher education institutions, in their applications to launch practical-profile fields of study, to indicate (in the section on the educational concept) the specific professions that graduates will be able to pursue after their studies (this applies especially to the social sciences and humanities). In the opinion of PKA experts, failure to specify a profession or professions significantly hinders (and sometimes even makes impossible) a reliable assessment of the classes developing practical skills, as it is not clear for what purpose these practical skills are to be developed.

In many cases, it is not only the characteristics of professions but also certain professional activities (or groups of them) or processes that will determine the practical skills desired by the labour market, and thus will define the classes to be included in the study programme. In some instances, a direct guide might be, for example, sectoral qualifications that lead to specific certificates; in others, indirectly, it might be standards for processes or technology, which can sometimes change very dynamically. Additionally, as research on future competences shows, many of them are universal and transversal in nature and do not directly relate to a specific profession or job position.

Practical education thus has various dimensions. Crucially, in the case of practical profile programmes, practical education should be linked to the expectations of the socio-economic environment regarding practical skills. Therefore, institutions are expected to engage in a dialogue with this environment when creating study programmes and to have a concept for a specific set of learning outcomes that will enhance the graduate's attractiveness on the labour market.

It is also worth noting that every practical profile programme, whether at the Bachelor's or Master's level, must, as stipulated by law, include classes conducted in conditions appropriate for the given scope of professional activity and in a manner that enables students to perform practical tasks.

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