Case study Poland

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Facilitating vocational learning: the influence of assessments

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CHAPTER 1.

Development of assessment in 1990-2021

This chapter presents the key developments of the assessment system within formal VET against the background of the changes in the vocational exam system which have taken place in Poland since 1990([1]).

1.1. General information on changes within the formal general and vocational education system in Poland([2])

Changes in the formal education system began with the School Education Act of 7 September 1991 and were designed to be introduced gradually (Sławiński et al. 2013: 113). This Act increased the autonomy of schools and teachers in their decisions and provided the institutional set up for the functioning of educational institutions and school choice.

The second wave of reform came in 1999, when a coherent set of institutions was established (Herbst et al., 2015). According to the logic of the 1999 reform, the content of education and external examinations verifying the achievement of learning outcomes was to remain at the central level (ministry of education and its agencies), whereas other aspects of governance were decentralised and delegated to municipalities and schools. From the perspective of this report, this is the crucial element of the formal education system. VET schools have gained significant freedom and flexibility in shaping the learning programme (curriculum) as long as it is broadly in line with the VET core curricula, which is set up at the national level. It was possible to introduce this because all VET learners are required to take the vocational exam organised by the Central Examination Board and eight subordinated regional examination boards.

The reform of 1999 also introduced a new school structure (a six-year primary school, three-year lower secondary school and three-year upper secondary

([1]) This chapter does not describe the assessment system organised within craft in Poland.

([2]) This chapter is based on Dębowski, H., Stęchły, W. (2022). *Poland: striving for better governance and integration,* in V. Tūtlys, J. Markowitsch, S. Pavlin J. Winterton (Eds.), *Skill Formation in Central and Eastern Europe. A search for Patterns and Directions of Development*. Berlin, Germany: Peter Lang Verlag.

school)([3]) and an external examination system was established consisting of the Central Examination Board and eight regional examination boards, which became responsible for designing and conducting general and vocational external examinations.

Presently, external standardised exams are organised at the end of primary school (exam for 8th graders) and upper secondary school (*matura*) and for the awarding of vocational certificates and diplomas. In 2005, the *matura* replaced the admission examinations to higher education.

Over the years, the content of general examinations being developed started to focus more on critical thinking, problem solving and other key competences rather than assessing only raw factual knowledge. It could be said that VET examinations experienced a sort of cycle. At the beginning of the 1990s, assessment was meant to resemble real work situations, but since each exam was designed by each school, reliability was low. In the first years of the external examination system from 2006, there was much focus on the reliability of the exam at the cost of its validity. Since 2012, external VET exams have been evolving towards a performance assessment, resembling real work situations to greater extent.

It should also be mentioned that the regional examination boards were fairly stable over the last 20 years in terms of changes in their management and expert staff as well as funding. They were affected to a lesser extent by the political turmoil of changing governments, allowing these organisations to follow a path of gradual improvements to reach a high level of professionalisation.

The early reforms of the education system were focused exclusively on general education, leaving VET marginalised, with initial and continuing programmes remaining ineffective (ETF, 2003, p. 46). Increasing educational aspirations and opportunities to complete higher education and the uncertain labour market prospects of VET graduates in a radically changing economy decreased the attractiveness of VET in the 1990s, which was reflected in the choices of primary school graduates. It can be said that Poland's school system followed the path of 'de-vocationalisation'.

Only since 2010 has vocational education been regaining its position in national policies (Dębowski and Stęchły, 2015). Nevertheless, Poland can be considered a statist VET regime, as distinguished by Busemeyer and Trampush, meaning that it has the high commitment of the public sector, but a relatively low involvement of employers.

([3]) This structure was replaced in 2016 with the eight-year primary school and four-year secondary school.

The learning-outcomes-based core curriculum was introduced in VET in 2012. Formal VET was also opened to adults, as they could participate in RPL procedures and did not have to attend schools for adults. The offer of short courses ending with external exams were also introduced. Major changes in VET were introduced in 2017-19, aimed at bringing VET closer to the world of work and increasing its responsiveness to labour market changes by linking public spending both to the actual costs of this type of education and to labour market demand (e.g., more funding for training in occupations affected by skills shortages).

The main measures in VET introduced in 2017-2019 are the following:

(a) Vocational schools providing education in a given occupation must now organise formal collaboration with relevant employers, e.g., participation in work-based learning, equipping school workshops, patronage classes or organising vocational exams. Previously, such collaboration was optional.

(b) To establish training in new occupations, vocational schools must obtain the approval of the *voivodeship* (regional) labour market council, consisting of local employers, representatives of trade unions, chambers of crafts and local authorities. Previously, opinions were collected mostly from the poviat (county) labour market councils and this was not binding.

(c) A new form of internship was introduced (***staż uczniowski***), which complements previously existing arrangements to enhance employer participation in work-based learning. A new element in ***staż uczniowski*** is that it can extend the scope of the school curriculum. The costs of remuneration are treated as tax deductible costs for employers. Employers can transfer funds directly to schools – for example, if they wish to provide funds to buy equipment. Previously, all funds had to be transferred to local authorities.

(d) Public VET funding is linked to the labour demand for specific occupations and to the cost of training. Up to now, the financing algorithm provided similar per capita funding for different occupations. Schools providing education in occupations in higher demand will receive significantly more public funds. This change aims to incentivise VET school principals and local authorities to provide training in the occupations which are most in demand.

(e) VET teachers are required to participate in professionally oriented training in enterprises for at least 40 hours across a 3-year period. Previously, there was no such obligation. This aims to contribute to upgrading teachers' skills and competences, providing them with access to new technologies and enterprises in a given labour market sector.

(f) As of 2019, the VET exam is mandatory for learners in all VET schools, which means that if a person does not take the VET exam, he/she cannot be promoted to the next class level and cannot obtain a certificate of school

completion. The vocational examination system was recently co-funded by the Ministry of Labour Fund (Reegard and Dębowski, 2020).

1.2. Changes in assessment within formal VET in Poland since 1990

Developments in the last 30 years within the assessment system of VET in Poland are strongly linked with changes in the education system and more broadly with the socio-economic changes relating to transformation. In this period, four main phases can be distinguished, presented in Table 1.

In the period 1990-2004, VET assessment was mostly organised in accordance with the logic of the 1980s reform, where schools were designing assessment on their own and had a great degree of freedom and flexibility. The assessment guidelines issued by the ministry of education were short and general. In this period, VET exams were differentiated depending on the type of school and the profession. The assessment in basic vocational schools (*zasadnicza szkoła zawodowa*) consisted of a theoretical part and practical part. The theoretical part could have the form of written exam or oral exam. The practical part could have been performed with groups of learners or individually. In the upper secondary technical schools (*technikum*), the exam had the form of a diploma dissertation (*praca dyplomowa*). The diploma dissertation usually had the form of a project (e.g., development of a particular tool or restoration of a car). The project was implemented during the last year of study in the technical school. The major concern regarding the assessment in that period was the fact that it was uneven across the country. Additionally, the anecdotal evidence was that many schools had a 'passing culture', which negatively affected the quality of the VET system. This was exacerbated in the 1990s when many state enterprises that were cooperating with VET schools were being shut down. As a result, many VET schools were left without a technological base and teachers. It should be noted, however, that there were also schools for which the 'freedom' given in organising assessment allowed them to design complex assessments of high validity and authenticity. An interviewee from the Central Examination Board gave an example of a technical school in the north of Poland where learners had to complete complex projects within the diploma dissertation:

> *An automobile restoration project for the car mechanic profession: A learner bought an old car (using his own family's money) and as a dissertation project, he had to repair the engine, the braking system, lights, etc. and even some auto body parts. This was a one-year project. As a result, from a total wreck,*

he was able to produce a beautiful car that could be certified for use on the road. On the day he drove to the final exam to present his project, the learner had an accident in which the car rolled over. In order to pass the exam, he had to repair the car again. Since the car was extensively damaged, and could not be completely repaired, the learner decided to convert it into a convertible car.

In 1999, the external examination system was established with the Central and regional examination boards, resulting in a broad paradigm shift in the whole general and vocational education system. The first round of VET exams organised within the external examination system was conducted in 2004. The introduced reform meant that two grading mechanisms were introduced: an internal assessment organised by the school leading to a certificate of school completion, and an external assessment leading to a vocational certificate. Since 2004, the external VET examination system has been somewhat modified, but the logic and its foundation remained the same: a) all VET learners must take the same examination in a given profession (usually at the same time across the country); b) all exam papers are graded by accredited and trained professional raters (examiners) in accordance with assessment criteria, which are set up at the national level; c) the VET exam consists of a written part (in the form of a test) and a practical part; d) the VET exam leading to a vocational certificate is based on the learning outcomes of the VET core curricula; e) the general education component is not assessed via external examinations.

The introduced external examination system was intended to increase the reliability of the exam and designed to enable the results to be compared among schools – so that learners and their parents could be in a better position to compare the quality of teaching among schools and within a school. The external examination system was also perceived as an element of quality assurance. As the involvement of employers was marginal due to the economic recession during the transition period, and could not serve as an element of quality assurance, the quality of teaching in VET schools deteriorated. The lack of comparability and the extensive freedom of VET schools in designing the content of assessment posed significant problems at the end of the 1990s. There was also regional differentiation in the equipment and technological base among schools which the policy had to address.

However, not all the assumptions of the reform could be fulfilled in the first years of the functioning of the examination system. In the first years, the practical part of the exam for some professions in the VET system, mostly in upper secondary technical schools (*technikum*), was organised in a written form.

Learners had to describe how they would prepare a meal or conduct a massage instead of actually performing it. However, the basic vocational schools (*zasadnicza szkoła zawodowa*) always had a practical part of the exam.

This has changed over the years, and since 2012, the practical part has the form of performing specific tasks in conditions resembling those of an actual workplace. Basic vocational schools (*zasadnicza szkoła zawodowa)* always had the practical part organised in the form of performing specific tasks. It should also be emphasised that in the years of transformation, VET was under-financed and school facilities were unevenly equipped with technological apparatus. For this reason, in the first years of the reform, it was not possible for the upper secondary technical schools to have universal performance-based assessment across the country because many schools lacked the necessary equipment. From this perspective, the external assessment system made it possible for the VET school system to modernise more effectively – as local authorities responsible for schools, including VET schools, were being 'pushed' to invest in equipment. Otherwise, their learners would not only not be able to pass the exam, but they would not even be able to participate in the exam if the needed modern equipment was lacking.

In 2012, learning-outcomes-based curricula were introduced in VET, consisting of units of learning outcomes and qualifications. Learning outcomes defined in the VET core curriculum fulfil the role of the examination standard. Some professions consisted of one, two or three distinguished qualifications, meaning that their learners needed to take three examinations in order to receive a VET diploma. Upon successfully completing all subjects, VET learners received a certificate of school completion, and vocational certificate if they passed the VET exam(s). Upon receiving a certificate of school completion as well as all needed VET certificates, the learner received a VET diploma. In 2012, another important change was introduced. Adults could now take short vocational courses as well as external examinations, implementing the validation procedures of non-formal education and informal learning. For adult learners who have completed short courses or who are taking extramural examinations, the assessment (exam) is the same as for regular VET learners.

Other significant changes were introduced in VET in 2019, in addition to modifications in the core curricula. The VET exam became obligatory for school learners. This means that in order to receive a certificate of school completion, the learner must take the VET exam (she/he does not need to pass it). A central IT system was also introduced, within which the whole process of organising the exam is conducted: learners submit their declaration to take the exam, raters (examiners) indicate their availability, The Central Examination Board sets the dates and hours for the exam, etc. Also, the written part of the VET exam must be

organised with the use of computers and the IT system. This allows for the introduction of more complex exam tasks, e.g., in the form of an animation or video.

Table 1. Major phases of assessment developments in formal VET in Poland

	1990-2004	2004-2012	2012-2019	Since 2019
General comments:	The logic of VET assessment in this period was developed in the 1980s. Despite some introduced changes, the logic of the assessment from the 1980s was not changed.	In 1999, amendments to the School Education Act established a Central Examination Board and 8 regional examination boards. In 2004, the first VET exams were conducted by the central and regional examination boards upon completion of basic vocational school. In 2006, the first VET exams for learners of upper secondary technical schools were conducted. Assessment was conducted only at the end of school learning. No possibilities existed for VNIL, adults had to complete schools for adults to attain certification.	In 2012, the learning-outcomes-based curriculum was introduced in VET. VET core curriculum is the major reference document for schools in designing the learning/teaching programme and for the central and regional examination boards. The concept of 'qualification' was introduced in formal VET. Core curriculum in a given profession was divided into one, two or three qualifications, meaning that a learner needed to take one, two or three (depending on the profession) external VET exams in order to obtain a VET diploma. Assessment is organised during the learning process, usually in the third and fourth year of technical school. The VET system was opened to VNIL/RPL procedures. Adults can take extramural exams and do not need to attend formal education classes (provided they have 2 years of work experience or 2 years of education in the area relating to the profession). The offer of short coursed ending with external exams are also introduced.	Taking the VET exam is obligatory for VET learners in order to graduate from school. The written part of the exam is organised with the use of computers. A centralised IT system is operating (since 2017), which is used in the organisation of all VET exams across the country, as well as in calculating exam results and issuing diplomas. Earlier, each regional examination board used its own IT system, which was only partially integrated with the others.
Organisation of assessment	Assessment is organised by schools or employers. National regulations give schools/employers extensive freedom and flexibility in developing the content of assessment.	Assessment is designed by the Central Examination Board and organised by regional examination boards. It should be noted that the exam is taking place with the use of	Assessment is organised by regional examination boards (but the exam takes place with the use of schools'/employers' facilities).	Assessment is organised by regional examination boards (but the exam takes place with the use of schools'/employers' facilities).

	The school director accepts the content of the exam. As a result, there is large diversity across the country. The law requires the examination committee to consist of 3 members, including a representative of an employer.	schools'/employers' facilities. Assessment must be in line with the *examination standard,* a formal document adopted by the ministry of education. Exams are rated by 3 independent external examiners. The final grade is the average of the three grades given by each examiner.	Assessment must be in line with the learning outcomes of the VET core curriculum. *Examination standards* are withdrawn.	Assessment must be in line with the learning outcomes of the VET core curriculum.
Structure of assessment/exam	VET exams are differentiated depending on the type of school and the profession. In basic vocational schools *(zasadnicza szkoła zawodowa)*, the exam consists of a theoretical part and a practical part. The theoretical part may have the form of a written or oral exam. The practical part may be performed in groups of learners or individually. In the upper secondary technical schools (*technikum)*, the exam has the form of a diploma dissertation (*praca dyplomowa).* The diploma dissertation usually has the form of a project (e.g., the development of a particular tool or restoration of a car). The project is implemented during the last year of study in the technical school.	The exam consists of a written part (120 minutes) and a practical part (180 minutes). The written part has the form of a test (one answer out of four possible choices). The written part consists of two subparts: a) 50 questions on practical knowledge relating to the given profession, and b) 20 questions on knowledge relating to entrepreneurship and the labour market. The practical part is organised in two forms: performing a specific task (e.g. a carpenter makes an actual object from wood) or in the form of a written case study/project. The practical part organised in the form of a project dominated in upper secondary technical schools.	The exam consists of a written part (60 minutes) and practical part (120-240 minutes). The written part has the form of a test (one answer out of four possible choices), usually consisting of 40 questions. The part relating to entrepreneurship and the labour market was abolished. The practical part is strictly practical for all professions.	Practically no changes were made with respect to 2012-2019. The exam consists of a written part (60 minutes) and practical part (120-240 minutes). The written part has the form of a test (one answer out of four possible choices), usually consisting of 40 questions. The part relating to entrepreneurship and the labour market was abolished. The practical part is strictly practical for all professions. The minimum number of correct answers (points) for passing the written part is 50% and 75% for practical part.
Time of assessment	In basic vocational school, the practical part could last 2 or 3 days. Legal regulations stated that the practical part could not take place for longer than one week. In the upper secondary technical schools (*technikum*), the exam had the form of a diploma dissertation (*praca dyplomowa*). The diploma dissertation usually had the form of a project (e.g., the	The written part lasts 120 minutes, the practical part lasts 180 minutes. The exam is taken at the completion of the school (after graduation).	The written part lasts 60 minutes, the practical part lasts 120-240 minutes, depending on the profession. E.g., a learner in upper secondary technical school attaining a profession in which three qualifications are distinguished takes a total of 3 exams (i.e., 3x60 minutes of the written part = 180 minutes) and 3x180 minutes of the practical part = 540 minutes.	Apart from a reduction in the number of qualifications distinguished in a profession, no changes were made compared to 2012-2019 The written part lasts 60 minutes, the practical part lasts 120-240 minutes, depending on the profession. E.g., a learner in upper secondary technical school attaining a profession in which two

	development of a particular tool or restoration of a car).		Altogether, an exam for a profession can last up to 800-900 minutes.	qualifications are distinguished takes a total of 2 exams (i.e., 2x60minutes of the written part = 120 minutes) and 2x180 of the practical part = 360 minutes. Altogether, an exam for the profession can last up to 500-600 minutes.
Designing assessment content	The school designs the content of the assessment.	The Central Examination Board along with regional examination boards design the content of the assessment based on the *examination standard.* The examination standard is a document issued in the form of a resolution by the ministry of education. There are two major ministerial documents: a) core curriculum used for schools to design learning programme b) examination standard used by examination boards in designing the content of assessment. Only vocational competences are assessed.	The Central Examination Board together with regional examination boards design the content of the assessment based on the learning outcomes defined in the core curriculum. *Examination standards* have been withdrawn.	The Central Examination Board together with regional examination boards design the content of the assessment based on the learning outcomes defined in the core curriculum.
Grading	The school principal forms an examination committee consisting of 3 members, including a representative of an employer, to assess exams.	Exams are assessed by external examiners/raters accredited by regional examination boards.	Exams are assessed by external examiners/raters accredited by regional examination boards.	Exams are assessed by external examiners/raters accredited by regional examination boards.
Validation of non-formal and informal learning	No possibility exists. An adult learner must complete a school programme.	No possibility exists. An adult learner must complete a school programme.	The VET system allows learners to attain qualifications (certificates) through the validation of non-formal education and informal learning. Persons can take extramural external examinations conducted by regional examination boards if they are over 18 years of age, have completed lower secondary school and have at least two years of	The VET system allows learners to attain qualifications (certificates) through the validation of non-formal education and informal learning. Persons can take extramural external examinations conducted by regional examination boards if they are over 18 years of age, have completed lower secondary school and have at least two years of

			learning or work experience in an occupation relating to the qualification for which the examination is being given. If they do not have two years of learning or work experience, they can enrol in vocational qualification courses. Completion of the vocational qualification course allows the student to take the examination.	learning or work experience in an occupation relating to the qualification for which the examination is being given. If they do not have two years of learning or work experience, they can enrol in vocational qualification courses. Completion of the vocational qualification course allows the student to take the examination.
Issuing the certificate/diploma	The school issues a certificate of school completion. Passing the vocational exam is a requirement for successful school completion. If a learner does not pass the vocational exam, they cannot graduate from VET school and obtain a certificate of school completion.	The school issues a certificate of school completion. The regional examination board issues the vocational certificate and vocational diploma.	The school issues a certificate of school completion. The regional examination board issues the vocational certificate and vocational diploma. The vocational certificate and vocational diploma are referenced to the national qualifications framework.	The school issues a certificate of school completion. The regional examination board issues the vocational certificate and vocational diploma. The vocational certificate and vocational diploma are referenced to the national qualifications framework.
Strengths and weaknesses	Strengths: Flexible system allowing, at least in theory, for the assessment of complex skills in an authentic environment. Weaknesses: uneven system across the country. Top schools were using the flexibility of the system to the benefit of learners, however. in many schools, assessment was characterised by a 'passing culture'. Schools and examination committees were reluctant to fail learners. Also, the focus of the assessment was on a narrow set of practical skills in many schools.	Strengths: The introduction of external assessment contributed to reliability. Learners and parents are able to compare results among schools. Exams are graded by independent and professional raters (examiners). Weaknesses: - The practical part of the exam did not always have the form of performing tasks. Low authenticity. - Lack of funds at that time for VET and for VET assessment organised within the examination system. - External assessment becomes perceived as the only element worthy of attention. The schools train for the purpose of ensuring that the student passes the exam. Internal assessment conducted at the school level loses significance.	Strengths: - The introduction of external assessment contributed to reliability. Learners and parents are able to compare results among schools. - The practical part has the form of performing tasks, leading to an increase of validity and authenticity. High reliability. - The external examination system is used for modernisation purposes – as it 'pushed' local authorities to invest in VET. - The practical exam for most upper secondary technical (*technikum*) learners has the form of a 'case study' and the form of performing tasks. Quite complex skills of problem solving are assessed. - EU funds play a significant role in modernising school equipment and the content of VET exams. - Weaknesses: The exam is focused on	Strengths: - The introduction of external assessment contributed to reliability. Learners and parents are able to compare results among schools. - The practical part has the form of performing tasks, leading to an increase of validity and authenticity. High reliability. - The written part is organised with the use of computers, allowing exam tasks to be designed in the form of videos, animations, etc., leading to the assessment of more complex skills. - The external examination system is used for modernisation purposes – as it 'pushes' local authorities to invest in VET. - The practical exam for most upper secondary technical (*technikum*) learners has the form of a 'case study' and the form of performing tasks. Quite complex

			practical skills. Many transversal key competences are not assessed. There is practically no interaction with the examiner during the exam. - Internal assessment conducted at the school level loses significance, it is not taken into account in attaining a VET certificate. - The system is too rigid for some schools, as they would prefer a more complex assessment.	skills of problem solving are assessed. - EU funds play a significant role in modernising school equipment and the content of VET exams. Weaknesses: - Exam is focused on practical skills. Many transversal key competences are not assessed. There is practically no interaction with an examiner during the exam. - Internal assessment conducted at the school level loses significance.
Labour market conditions	Public enterprises are either being liquidated or restructured, which negatively impacts their involvement in vocational education. Emerging private companies are too weak to be actively involved in VET.	The economic crisis in 2001 hit Poland severely (the so-called Russian crisis), affecting reform efforts and available funds. Unemployment rocketed to 22%.	The economic crisis of 2008 was not very severe in Poland. Since 2010, labour conditions have been gradually improving. The unemployment rate has been decreasing, reaching record low levels of 4-5%. Skills deficits resulted in decision-makers and employers giving greater attention to VET.	Skills deficits are present in most professions. The COVID-19 situation has not changed labour market conditions. The impact of the war in Ukraine is not clear yet.
Source: Own elaboration.				

CHAPTER 2.

Organisation of assessment

Assessment within the VET system consists of internal assessment and external assessment. Internal assessment is organised by the school and its successful completion leads to the awarding of a certificate of school completion (this certificate is not referenced to NQF levels). External assessment is organised by the Central Examination Board and eight regional examination boards. Successful completion of the external examination leads to the awarding of a VET certificate. If a person obtained a certificate of school completion and a VET certificate they are awarded a VET diploma. VET certificates and VET diplomas are referenced to the NQF. VET certificates are treated as partial qualifications, whereas VET diplomas are treated as full qualifications.

Awarding the VET diploma is an automatic process for VET learners who successfully complete VET school and pass VET exams. However, adult learners may follow a different path to obtaining a VET diploma, e.g., the learner could pass the VET exams first (e.g., via the RPL procedure) and receive a VET certificate, and after this acquire the certificate of school completion (e.g., via the RPL procedure) and then the VET diploma. So, the VET diploma in this case may be obtained in a two-step process.

2.1. Internal assessment

Each school within the education system, including VET, adopts its own assessment approach (tools, rules, schedule, etc.) in accordance with national legislation. Both learning achievements and conduct are subject to internal assessment. Pupils are assessed by teachers throughout the school year. Assessment criteria and school marks should be made available to pupils and their parents.

In most cases, learning achievements are assessed separately for each subject by a teacher of the given subject. This applies to subjects relating to general education and vocational education. Mid-year (semester) and end-of-year marks are based on single marks given during the semester(s) or year. Teachers use a marking scale of 1 to 6 to assess learning achievements where 6: excellent, 5: very good, 4: good, 3: satisfactory, 2: acceptable, and 1: unsatisfactory. There is a separate category of ‘conduct’ (*zachowanie*), which is a broad category relating to the ethical and social conduct of a pupil. The latter category is especially relevant

for the category of transversal key competences. Conduct is assessed on the following scale: excellent, very good, good, acceptable, unacceptable and inadmissible. The mark for conduct should not influence subject marks or promotion to the next grade. The interim and annual classification of conduct includes the following basic areas: 1) adhering to student responsibilities; 2) acting in accordance with the good of the school community; 3) care for the school's honour and traditions; 4) care for the beauty of the mother tongue; 5) care for one's own and other people's safety and health; 6) dignified, cultural behaviour in and outside of school; 7) being respectful of others. For further information see Stęchły et al. (2021).

To summarise, a certificate of school completion verifies the achievement of learning outcomes relating to general education and elements of personal and social competences.

2.2. External assessment

2.2.1. Institutional set-up

Institutionally, the external assessment system consists of: the Central Examination Board (CEB), eight regional examination boards, schools or other institutions (e.g., employers) acting as examination centres, as well as examiners/raters. In order to act as an examination centre, VET schools or employers must be accredited by the regional examination board (which checks if the conditions, including equipment, for organising the exams are sufficient) and examiners (which are usually teachers or representatives of employers who need to pass a dedicated exam verifying their possession of the relevant skills). The functioning of the examination system is within the jurisdiction of the ministry of education.

The Central Examination Board is responsible for the guidelines and manner of taking examinations, examination content and assessment criteria. Together with eight regional examination boards, the Central Examination Board prepares sets of questions, problems and tests. In addition, the Central Examination Board analyses aggregate test and examination results, initiates research in the field of assessment and examination, and coordinates the activities of the regional examination boards. The regional examination boards conduct all external examinations.

2.2.2 Structure of VET examinations

The external VET exam is organised for a given qualification. As indicated earlier, there may be one or two qualifications distinguished in a profession (*zawód*). Learners of three-year stage I vocational schools (previously the three-year basic vocational schools) take one exam, whereas most professions taught at the five-year upper secondary technical school consist of two qualifications, which implies that these learners take two exams (two written and two practical exams) during their studies – usually in the fourth and fifth year. In order to pass the written part, a learner must obtain at least 50% of possible points and in order to pass the practical part, a learner must receive at least 75% of possible points. This means that the passing threshold is quite high. In 2021, approximately 76% of learners passed both written and practical parts of the exam out of about 370,000 learners who took the VET exam.

The VET exam consists of a written and practical part. The written part has the form of a multiple-choice test (one answer out of four possible choices) and since 2019, it is organised with the use of computers. Therefore, it is possible to include animations and films in the written part, which broadens the scope of the learning outcomes that can be verified during the exam. The law states that the test part can last 60-90 minutes, but currently it is 60 minutes for all professions.

The practical part can last 120-240 minutes and have one of the following forms:

- documentation (the so-called model ‘d’). The exam assignment for the learner is to solve a case study or series of case studies relating to a task in the given profession. The case study may be solved on paper, but in some professions, this is being done with the use of a computer and dedicated IT programmes (e.g., accountants are using dedicated IT accounting systems). After the exam, the solved case studies are sent (either in the form of a paper or a CD) to the regional examination board and then are graded by external examiners (raters/assessors).

- performance (the so-called model ‘w’). During the exam, a learner must perform a professionally related task, and the examiner (rater/assessor) assesses this performance (live mode) in accordance with national assessment criteria. For example, a car mechanic must diagnose an engine failure and repair it during the exam, while a massage therapist conducts a massage on a real person while the examiner assesses whether it is done in accordance with the assessment criteria and professional knowledge and practice. For some professions, this performance can also be conducted with the use of a computer or dedicated programmes – for example, a mechatronic technician must program a controller as an examination task.

Upper secondary technical school learners in most professions need to take two exams, of which one usually has the form of 'documentation' and the other, the form of 'performance'. The documentation part focuses on abstract thinking and problem solving, whereas the performance part verifies whether the learner acquired practical skills. In this way, it is assumed that the learner is prepared to effectively meet the needs of the profession in the labour market.

2.2.3 Relationship between the VET core curriculum and examination content

Learning and teaching in VET schools is organised within a so-called *profession* (e.g., mechatronic technician, massage therapy technician). Within each profession, one or two qualifications may be distinguished ([4]). In 4-year upper secondary technical schools, most professions consist of two qualifications. The learning outcomes for each qualification are defined in the VET core curriculum. The VET core curriculum is defined in the law (by a resolution of the ministry of education). The VET core curriculum is the basis for the development of schools' own learning programmes, and the Central Examination Board's content of examinations.

The learning outcomes in the VET core curriculum are grouped into units of learning outcomes. The following types of units of learning outcomes are defined within each qualification of the VET core curriculum:

- professionally-oriented units of learning outcomes
  (2- 6 units of learning outcomes depending on the qualification),
- occupational health and safety,
- professionally-oriented foreign language abilities,
- personal and social competences,
- organisation of the work of small teams.

Box 1 presents the structure of the VET core curriculum using the example of the mechatronic technician profession.

([4]) The VET core curriculum from 2012 had even three qualifications distinguished, but this curriculum was replaced in 2017, although exams for professions with three distinguished qualifications are still organised for some learners, mostly for those who did not pass the exam in earlier exam sessions.

Box 1. Structure of the VET curriculum – an example of the profession of ***mechatronic technician***

Two qualifications are distinguished within the profession of *mechatronic technician*:

- ELM.03. Installation, commissioning and maintenance of mechatronic devices and systems;
- ELM.06. Operation and programming of mechatronic devices and systems.

The ELM.03 qualification has the following units of learning outcomes:

ELM.03.1. Occupational Health and Safety
ELM.03.2. Fundamentals of mechatronics
ELM.03.3. Assembly of elements, subassemblies and mechanical units
ELM.03.4. Installation of pneumatic and hydraulic elements, components and assemblies
ELM.03.5. Assembly of electric and electronic elements and components
ELM.03.6. Commissioning of mechatronic devices and systems
ELM.03.7. Maintenance of mechatronic devices and systems
ELM.03.8. A professionally-oriented foreign language
ELM.03.9. Personal and social competences

Assessment criteria are defined for each unit of learning outcomes. For example, ELM0.03.3 has the following defined learning outcomes and assessment criteria:

ELM.03.3. Assembly of elements, subassemblies and mechanical units

Four learning outcomes are distinguished **within this unit of learning outcomes**. A number of assessment criteria are defined for each learning **outcome**. Below are presented examples of two learning outcomes defined for ELM.03.3.

Learning outcomes	**Assessment criteria**
1) Characterises elements, subassemblies and mechanical assemblies	1) Recognizes elements, subassemblies and mechanical assemblies, e.g. shafts, axles, bearings and couplings, gears, mechanisms and spring elements; 2) Describes the structure of elements, subassemblies and mechanical assemblies; 3) Explains the principles of the operation of elements, subassemblies and mechanical assemblies; 4) Determines the use of elements, subassemblies and mechanical assemblies; 5) Selects elements, subassemblies and mechanical units for assembling mechatronic devices and systems.
3) Performs size measurements of the geometric elements of machines	1) Distinguishes between control and measurement instruments to measure the geometrical sizes of machine elements; 2) Selects control and measurement instruments to measure the sizes of the geometric elements of machines; 3) Applies the principles for performing size measurements of the geometric elements of machines; 4) Selects methods of measuring the geometric quantities of machine components.

Source: Own elaboration based on the VET core curriculum.
See more: https://www.ore.edu.pl/wp-content/uploads/2020/03/technik-mechatronik.pdf

As indicated earlier, the learning outcomes defined in the VET core curriculum also serve as examination requirements. Experts working at the Central Examination Board and regional examination boards who are designing the content of examinations must analyse the learning outcomes of the VET core curriculum to decide about the 'spirit' of each profession – which learning outcomes are relevant, which are key, which are commonly used in the performance of occupational tasks. This work is being done in order to determine the general logic and rationale of the VET exam for a given profession and ensure its validity.

Examination content authors are required to directly assign each element of an exam which is being graded (both in the written and practical part) to a particular learning outcome and assessment criteria from the VET core curriculum (see Box 2 below). In the context of this report, this is very important premise, as it implies that the content of the VET core curriculum has a direct and strong impact on the content of examinations.

Box. 2. Relationship of the assessment criteria and learning outcomes defined in VET core curricula

The figure below shows a fragment of the grading scheme used for the practical part of the vocational examination for the GIW.02 *Underground mining* qualification. Each element of the grading scheme indicated as R.1.1 (…), has an assigned number and name of the unit of learning outcomes, number and name of the learning outcome and assessment criterion, which are defined in VET core curriculum.

Name of a qualification:	**Underground mining (GIW.02)**							
Lp.	**Examiner:** • Assess the candidates' work honestly and with commitment. Document the results of the assessment. • Use the adopted rules of assessment objectively. • If the test taker, while completing the examination task, obtains different results or obtains the desired results in a different way than specified in the grading rules, or presents an unusual solution, but in accordance with the art of the profession, continue to evaluate in accordance with the criteria included in the grading rules. Information that the assessment rules do not provide for the situation that has arisen should be immediately provided in the form of a written note to the Chairman of the Examination Team with a request to forward it to the District Examination Commission. The note can be handwritten in draft mode. • Inform the chairman of the supervisory team about all irregularities that occurred during the examination, in particular about violations of occupational health and safety regulations and **Elementy podlegające ocenie/kryteria oceny**	Number of points for meeting the criterion	Number of unit of learning outcome (wypełniane automatycznie)	Name of the unit of learning outcome (wypełniane automatycznie)	Number of learning outcomes (wypełniane automatycznie)	Name of learning outcomes (wypełniane automatycznie)	Number of assessment criterion (wpisać np. 1.6.2)	Name of assessment criterion (wypełniane automatycznie)
R.1	**Result 1: Secure workplace**	**16**						
R.1.1	A beacon aligned with the track axis	4	1.	czeństwo i higien	1.6	organizuje stan	1.6.5	ony środowiska
R.1.2	The first sleeper placed on the rails perpendicular to the track axis	4	5.	widacja podziem	5.5	wykonuje roboty	5.5.1	obisk górniczych
R.1.3	The second sleeper rests at one end on the first sleeper and is inclined towards the possible entry of the rolling stock	4	5.	widacja podziem	5.5	wykonuje roboty	5.5.1	obisk górniczych
R.1.4	The sleepers are stably connected with each other with two carpentry clamps	4	5.	widacja podziem	5.5	wykonuje roboty	5.5.1	obisk górniczych
R.2	**Result 2: Condition of the pit lining**	**12**						
R.2.1	Built-in and tightened stabilizing struts	4	5.	widacja podziem	5.5	żeniem i utrzyma	5.5.6	e stan obudowy
R.2.2	Struts connected in straight lines	4	5.	widacja podziem	5.5	żeniem i utrzyma	5.5.6	e stan obudowy
R.2.3	Stirrups tightened with the torque specified in the workplace manual	4	5.	widacja podziem	5.5	żeniem i utrzyma	5.5.6	e stan obudowy
R.3	**Result 3: Condition of the railway track**	**42**						
R.3.1	New track sleeper laid in place of the damaged track sleeper removed	4	6.	dobywanie kopa	6.4	ane z transporter	6.4.5	ym lub oponowym
R.3.2	The sleeper is arranged symmetrically in relation to the track axis	4	6.	dobywanie kopa	6.4	ane z transporter	6.4.5	ym lub oponowym
R.3.3	Track pads placed under both rails	4	6.	dobywanie kopa	6.4	ane z transporter	6.4.5	ym lub oponowym
R.3.4	Each rail is twisted with two screws on the inside of the track	4	6.	dobywanie kopa	6.4	ane z transporter	6.4.5	ym lub oponowym
R.3.5	Each rail is turned with one screw on the outside of the track	4	6.	dobywanie kopa	6.4	ane z transporter	6.4.5	ym lub oponowym

Source: Central Examination Board materials.

Translation provided by Google translator

2.3. Focus of the VET exams

Despite the fact that the learning outcomes of the VET core curricula cover a broad set of learning outcomes relating to a given profession, as well as personal and social competences, the external end point assessment focuses mostly on practical skills. As indicated earlier, general subjects are not part of VET external exams. However, it should be mentioned that learners of upper secondary technical schools can take (and most do take) the *matura* exam - which is based on the general education core curriculum. Therefore, upper secondary technical school learners are subject to a quite complex assessment process relating to VET and general education.

The main focus so far is to translate the requirements of the VET core curriculum into an exam which resembles real work situations and to solve real work problems. To ensure the authenticity of an assessment, learners must be tested on the most up-to-date technology, materials, software and the proposals of employers must be included. Every team working on the content of a VET exam must have at least one representative of the employers and very often, a broad range of employers are being consulted.

In its guidelines for exam authors, the Central Examination Board requires the inclusion of at least one question/element of assessment relating to every unit of learning outcomes. But this assumption is perceived as unsatisfactory at the moment, and there is conceptual work being conducted on how to include transversal key competences to a wider/larger extent. This especially is in regard to personal and social competences as well as problem solving. However, it should be noted that in the upper secondary technical schools in which learners need to take two exams (one in the form of documentation and one in the form of performance), the transversal skills relating to problem solving are quite well covered.

Since 2019, the Central Examination Board has been working on and conducting pilots to broaden the scope of VET examinations in order to include transversal key competences. Due to the COVID-19 pandemic, some of this work was suspended, but there are plans in the near future to start this work again. There is general consensus that examinations relating to personal and social competences should be well prepared before introducing them into the national examination system. There is also conceptual work underway on the use of virtual reality and augmented reality in the content of VET examinations.

2.4. Ensuring validity and reliability

The process of designing the content of examinations is a long-term (up to two years), multilevel one, involving experts from the Central Examination Board, regional examination boards, as well as teachers, employers and specialists in test design.

In the first step, an author or team of authors prepares a proposal for an examination task, taking into account the guidelines of the Central Examination Board. These experts are usually contracted by one of the regional examination boards. The proposed examination task is reviewed by a team of reviewers. Each team of reviewers (usually 5-7 persons, but sometimes there might be even 9 reviewers) must consist of a representative of an employer, a teacher in the given profession, a representative of higher education in the field relating to the given profession, an employee of the regional examination board, an employee of the Central Examination Board, and optionally, a representative of the relevant ministry possessing related expertise (e.g., ministry of agriculture, infrastructure, economy). A team of reviewers meets several times over a year. If needed, the Central Examination Board organises seminars with schools and employers to discuss the content as well as the logic of an exam for the particular profession.

Once the examination task is approved by the team of reviewers, it is sent for standardisation/trial application to selected schools. Selected learners from the chosen schools (the sample of learners is approximately 30-200 depending on the profession, includes learners who are in the final year of school and have already taken exams) solve the task under the supervision of the task's authors or representatives of regional examination boards. The authors and reviewers discuss the results of this process. This process is designed in such a way as to ensure that exam tasks do not contain errors, that the questions are clear to learners and that the instructions are clear to examiners/raters.

After each exam session, the Central Examination Board and regional examination boards collect feedback from the schools and employers on the quality of the examination tasks. Additionally, these institutions analyse exam results. Since the introduction of the central IT system and database, it is much more efficient to conduct such analyses and to see how populations of learners have been solving each element of the exam – which elements were difficult, which were easy for which learners, from which schools, etc. A team of authors and reviewers are involved in these analyses. The collected feedback and information is then used in preparing future exams.

CHAPTER 3.
Outlook

3.1. Impact of the COVID-19 pandemic

The COVID-19 pandemic had a small effect on the organisation of VET exams and practically no effect on the content of VET exams, contrary to the general exams. It should be noted that after the first mandatory lockdown (March - June 2020), VET schools in Poland were able to organise practical training (but only within the limit of 10 contact hours per week). Apprenticeship training at companies was conducted within the general pandemic rules, but not in the sectors that ceased operating due to lockdowns (e.g. the hospitality sector). Since February 2022, VET schools have been operating normally.

VET exam sessions during the pandemic were organised without major changes (when comparing with the situation before the pandemic) and VET exam requirements were not changed. The majority of VET schools and employers did not request changes in this regard – only a minority of schools had voted to lower exam requirements.

The impact of COVID-19 on exam results is currently being investigated, but in general, only a slight decrease in the results was noted. However, due to changes in the VET core curriculum in 2019, comparisons between exam sessions and singling out the impact of COVID-19 is not a straightforward task.

3.2. Plans and challenges

The introduction of the external examination system has contributed to a positive transformation of VET in Poland, although there are still some shortcomings to be addressed. This section presents positive aspects, challenges and plans for the near future.

Positive aspects of introducing the external VET examination system:

(a) Comparability of the results. Since exams are basically the same across the country, learners and their parents, as well as VET teachers, school principals and national agencies can analyse and compare the results across the country. External exams are strengthening the quality assurance mechanisms embedded within the formal VET system.

(b) Contribution to modernising school equipment and technological base. Over the years, VET exams have gradually become more demanding in terms of

possessing up-to-date equipment and technology, motivating VET schools and local authorities to devote a greater amount of funds to modernise the school base.

(c) Using economies of scale. A greater amount of resources can be devoted to designing the reliable and valid content of an exam at the central level.

(d) Increased reliability of the exams, as they are being designed and graded by independent institutions and examiners.

(e) Introduction of an appeals process and social control of the examination tasks. Learners, via regional boards and the Central Examination Board, can appeal their exam answers and grades to independent experts. The opinions of the independent experts are binding to the Central Examination Board. VET teachers, employers and other stakeholders can also advocate for changes in the structure and content of VET examinations, as they are publicly known.

(f) Introduction of a central IT system used for organising VET exams.

Challenges relating to the standardised external VET examination system:

(a) VET teachers acting as professional examiners. Each year, the number of VET teachers within the school system is decreasing. This situation results from a general deficit of skilled employees in Poland's labour market as well as from the ageing of the teacher population. Many young people do not perceive the teacher profession as attractive in terms of social prestige and wages. So despite positive changes within the VET examination system, many stakeholders are sounding the alarm for the introduction of changes to attract young professionals to teaching at the upper secondary level. Although the reform introduced in 2019 is aimed to tackle some of the problems in this regard.

(b) Employers are signalling an increase in the demand for transferable skills. These competences are least to be included in the examination tasks, while at the same time, are the hardest to include in the standardised national exam system. Pilots on broadening the content of VET examinations were started in 2019, but it still too early to draw final conclusions.

(c) The involvement of employers in VET exams is still limited, though increasing. Therefore, one of the challenges is to involve employers more in the conceptual work on the content of vocational exams and in conducting exams as examination centres. To tackle this challenge the Ministry of Education aims to launch nation wide project of centres of vocational excellence.

(d) In some professions, the standardised external assessment system was introduced at the cost of authenticity. This situation especially affects professions in which personal and social competences are of high importance,

as VET examinations do not envisage interactions between examinees and examiners.

(e) Rising costs. Exams resembling authentic conditions are costly. Therefore, new initiatives must ensure appropriate levels of funding at the national level. This may be difficult to achieve because of demands on public spending due to the war in Ukraine, its related refugee crisis and the COVID-19 pandemic.

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