



TRACK-VET project:

“Developing, assessing and validating transversal key competences in the formal initial and continuing VET”

COUNTRY REPORT – POLAND

Intellectual Output 2

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Introduction

1.1 Abbreviations and acronyms

CKE – Central Examination Board (Centralna Komisja Egzaminacyjna)

CVET – Continuous Vocational Education and Training

EC – European Commission

ECVET – European Credit System for Vocational Education and Training

EQAVET – European Quality Assurance in Vocational Education and Training

EQF – European Qualifications Framework

ESF – European Social Fund

EU – European Union

IBE – Educational Research Institute (Instytut Badań Edukacyjnych)

IQR – Integrated Qualifications Register

IQS – Integrated Qualifications System

ISS – Integrated Skills Strategy

IVET – Initial Vocational Education and Training

KKZ – Vocational qualification courses (*kwalifikacyjne kursy zawodowe*)

KZSZ – Classification of occupations for vocational education

LO – Learning outcomes

MEN – Ministry of National Education (Ministerstwo Edukacji Narodowej)

NQF – National Qualifications Framework

OECD – Organization for Economic Cooperation and Development

OHP – Voluntary Labour Corps (*Ochotnicze Hufce Pracy*)

OKE – District Examination Board (*Okręgowa Komisja Egzaminacyjna*)

ORE – Centre for Education Development

PISA – Programme for International Student Assessment

PPKO – Core curriculum for general education

PPKZ – Core curriculum for vocational education

SEN – Special education needs

SQF – Sectoral Qualifications Framework

TKC – Transversal key competences

VET – Vocational education and training

1.2 Preparation of the report

General information about VET is based mainly on Cedefop / ReferNet reports, including a draft versions of the new Poland Country Report (Chłoń-Domińczak, Holzer-Żelażewska, & Maliszewska, 2018) as well as previously published report on key competences in VET (Siekiera & Luck, 2016). Not only have such reports been validated by the Polish ReferNet Representative, but also the international scope of these publications represents a common starting point in the overall project for a comprehensive presentation of the topic. The remaining information has been retrieved from other publications presented in the latter parts of the report.

The resulting presentation in the Polish Country Report is also based on the project definition of transversal competences (for the best possible international comparability): the TRACK-VET project defines transversal key competences as a subgroup of the 8 key competences defined in the Council Recommendation from 2018, namely: personal, social competences and learning competence; civic competences; entrepreneurship competence; cultural awareness and expression competence (*Council Recommendation of 22 May 2018 on Key Competences for Lifelong learning*, 2018; Dębowski, Reegård, & Stęchły, 2018, p. 13–15).

In addition to internal reflection, the results were also discussed with external stakeholders. 14 experts and stakeholders reflected the topic in interviews or the group discussion. We would also like to express gratitude to the CKE as a strategic partner and IBE for the opportunity to use draft versions of the reports.

1.3 Basic terms

- CVET: continuous vocational education and training: Education or training after initial education and training – or after entry into working life.¹
- Dual system: education or training combining periods in an educational institution or training centre and in the workplace.²
- NQF/EQF: reference tool for describing and comparing qualification levels in qualifications systems developed at national, international or sectoral levels.³

¹ [https://www.eqavet.eu/eu-quality-assurance/glossary/continuing-education-and-training-\(cvet\)](https://www.eqavet.eu/eu-quality-assurance/glossary/continuing-education-and-training-(cvet)).

² Cedefop, 2014, p. 24.

³ Cedefop, 2014, p. 91. In Poland, there is also a nationwide framework (PRK).

- Formal education: education that occurs in an organised and structured environment (in an education or training institution or on the job) and is explicitly designated as learning (in terms of objectives, time or resources). Formal learning is intentional from the learner’s point of view. It typically leads to certification.⁴
- ISCED: ISCED stands for International Standard Classification of Education and is an internationally standardized classification of education.⁵
- IVET: Initial vocational education and training: general or vocational education and training carried out in the initial education system, usually before entering working life.⁶
- Level descriptors: They show the level of qualification in the qualifications framework.⁷
- Non-formal learning: learning embedded in planned activities not explicitly designated as learning (in terms of learning objectives, learning time or learning support). Non-formal learning is intentional from the learner’s point of view.⁸
- Transversal key competences: when competences are universal (in contrast to specific competences which are mainly required in a special field).⁹
- Validation: confirmation by a competent body that learning outcomes (knowledge, skills and/or competences) acquired by an individual in a formal, non-formal or informal setting have been assessed against predefined criteria and are compliant with the requirements of a validation standard. Validation typically leads to certification.¹⁰

⁴ Cedefop, 2014, Terminology of European education and training policy, p. 99.

⁵ https://www.bic.at/downloads/de/archiv/bildungs_abc/isced.pdf.

⁶ [https://www.eqavet.eu/eu-quality-assurance/glossary/initial-education-and-training-\(ivet\)](https://www.eqavet.eu/eu-quality-assurance/glossary/initial-education-and-training-(ivet)) .

⁷ Cedefop, Terminology of European education and training policy (2014), p. 168.

⁸ Cedefop, Terminology of European education and training policy (2014), p. 183 f.

⁹ http://competendo.net/en/Transversal_or_Key_Competences.

¹⁰ Cedefop, Terminology of European education and training policy (2014), p. 127.

1 Overview of the formal initial and continuous VET in Poland

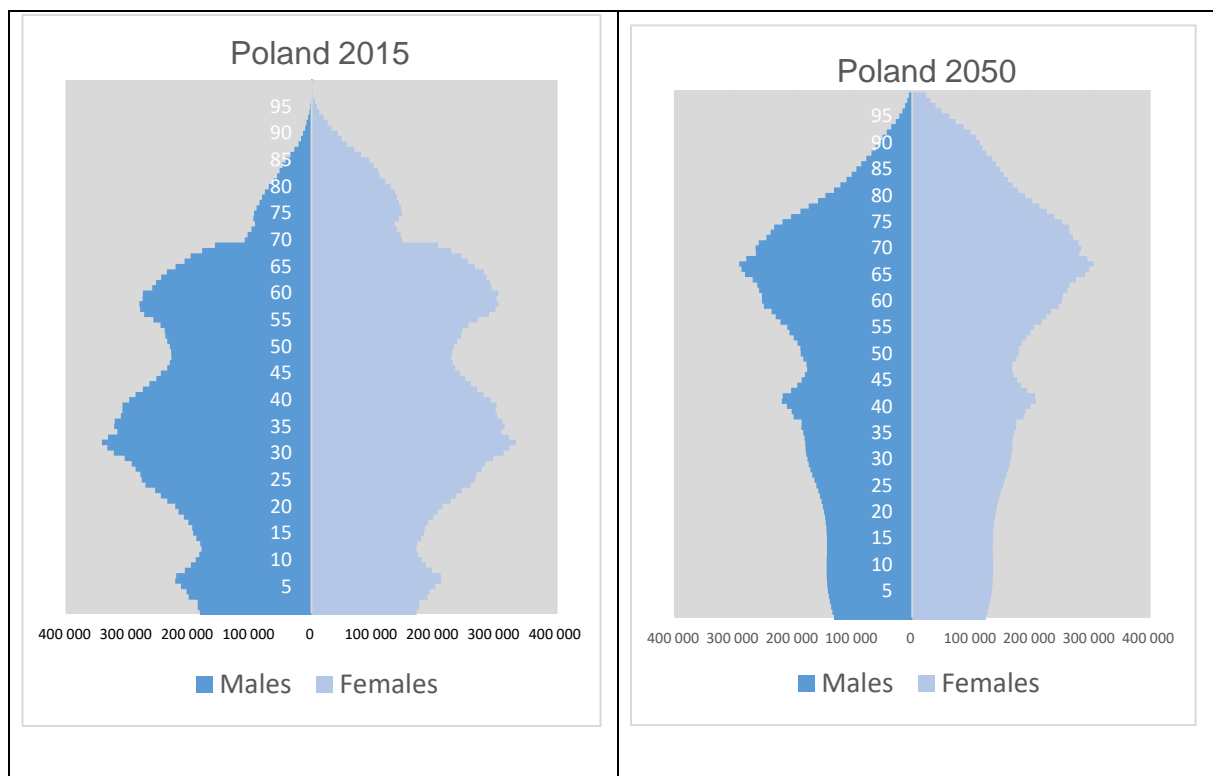
This chapter introduces to the formal initial and continuous VET in Poland. It is based on literature review. First, the structure of the initial VET system and continuous VET are presented in light of external factors influencing the system (1.1). Then, school autonomy is outlined (1.2), followed by key VET regulations (1.3) and institutions responsible for assessment, validation and certification in Polish VET (1.4).

1.1 Formal initial and continuous VET in Poland¹¹

VET system in Poland is influenced with external factors relating to population and demographics, economy and labour market, as well as educational attainment.

Poland is the sixth largest EU country with 38,4 million inhabitants as of 1 January 2018. Low birth rates and growing life expectancy contributes to an expected decrease in population, by almost 12% (-4,5 million) by 2050.

Figure 1. Population age structure in 2015 and 2050



Source: Chłóń-Domińczak et al., 2018.

¹¹ This chapter is predominantly based on (Chłóń-Domińczak, Holzer-Żelażewska, & Maliszewska, 2018). The text has been modified and supplemented with relevant information, however most of the information is a direct citation of the report. For clarity purposes, this reference is not shown for each paragraph.

Demographic trends directly impact on educational enrolment. Since 2005, the overall number of enrolments in VET programmes at upper secondary and post-secondary levels decreased by 35.6%, which represents over half a million learners. The decrease was highest (40% or more than 350 000) in vocational upper secondary programmes. Such a significant decrease in school enrolment, together with low popularity of vocational schools, results in growing skills gap. Table 1. below shows the number of students and graduates in VET schools in recent years.

Table 1. Number of students and graduates of VET schools in Poland in 1990-2015

	Lower secondary VET schools [in thousands]		Upper secondary VET schools and other* [in thousands]		Post secondary VET schools [in thousands]		Altogether [in thousands]	
	pupils	graduates	pupils	graduates	pupils	graduates	pupils	graduates
1990/91	818	243	795	155	108	42	1 722	439
1995/96	730	219	1 012	212	161	59	1 903	490
2000/01	555	182	1 170	246	200	78	1 926	506
2005/06	240	78	857	227	313	104	1 411	409
2010/11	230	76	645	150	299	82	1 174	309
2014/15	190	57	533	121	265	78	988	256

* includes artistic schools which give entitlements for certain types of work, and in years 2004/05 – 2013/14 also supplementary technical schools (*technikum uzupełniające*)

Source: own elaboration based on Statistics Poland.

As far as labour market factors are concerned, total unemployment¹² in Poland in 2018 was 3.2% (6.0% in EU28). It decreased by 2.6 percentage points since 2008¹³. If we look at unemployment by education attainment level, we observe that it is distributed unevenly between those with low- and high-level qualifications. In 2018, the unemployment rate of people with medium-level qualifications, including most VET graduates (ISCED levels 3 and 4) was lower than in the pre-crisis years. In the past five years, there was an overall decrease of unemployment in all age groups and by all types of education levels. Employment rate of 20 to 34-year-old recent VET graduates increased from 72.7% in 2014 to 79.1% in 2018 and still remains below the EU-28 level.¹⁴

¹² Percentage of active population, 25 to 74 years old.

¹³ VET in Europe. Poland, ReferNet Online Tool, 10.10.2019.

¹⁴ Ibidem.

The education system in Poland has currently been undergoing structural transformation. In December 2016, the education ministry introduced reforms which include:

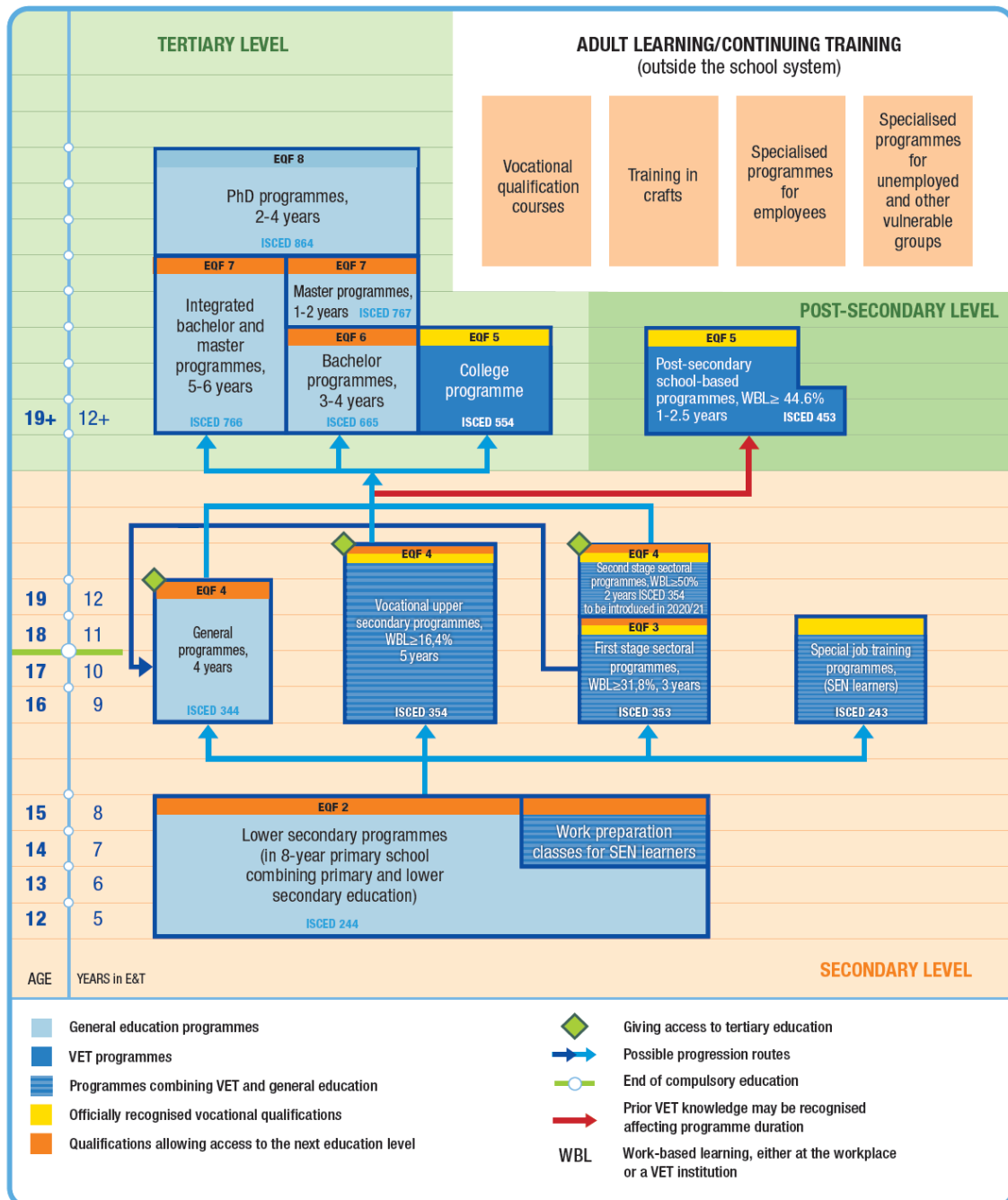
- (a) phasing out lower secondary school (*gimnazjum*);
- (b) restructuring six-year primary education (*szkoła podstawowa*) into an eight-year programme, taking place in one institution, divided into two four-year parts (basic and lower secondary level);
- (c) extending the general upper secondary programme (*licea ogólnokształcące*) - to four years instead of three - and the vocational upper secondary programme (*technika*) to five years instead of four;
- (d) introducing two-stage sectoral programmes (*dwustopniowa szkoła branżowa*); the first stage sectoral school has replaced the basic vocational school (*zasadnicza szkoła zawodowa*) as of 2017/18, while the second stage sectoral schools will begin to operate in 2020/21. (Chłoń-Domińczak et al., 2018)

Changes in the school structure were accompanied by development of new core curricula, including VET core curricula published in early 2019. In secondary programmes the changes take effect since September 2019 ¹⁵.

The school system will be transitioning until 2022/2023. During this period, the previous programmes will be functioning alongside the new ones until they are completely phased out. In the following section, the structure of the new, reformed system is presented.

¹⁵ This includes, among others: strengthening cooperation between schools and employers, introducing a new form of vocational learning for learners, introducing regular professions and skills demand forecasts, new rules on the functioning of the second-stage sectoral programmes and post-secondary programmes, changes to vocational examinations, introducing compulsory training in companies for vocational teachers, streamlined procedures of introducing new occupations to the system, changes in subsidies for local governments for vocational schools, changes in the structure of the institutions providing vocational training, new vocational curricula and classification of occupations.

Figure 2. Education system in Poland



NB: ISCED-P 2011.
Source: Cedefop and ReferNet Poland.

Source: Cedefop and ReferNet Poland, 2019.

Education in Poland is compulsory up to 18 years of age, while full-time school education is compulsory up to age 15. Compulsory education for 15-18 year olds can take place as part-time education, both in and out of school, e.g. in the form of short qualification courses, apprenticeships or vocational training for juvenile workers.

VET programmes provided at the secondary level include:

(a) three-year **first stage sectoral programme** ¹⁶ (*branżowe szkoły I stopnia*, ISCED 353) introduced in 2017 are part of the formal education and training system. This programme is available to primary school graduates (usually 15 year-olds), that is those who received the primary school leaving certificate ¹⁷. The first stage sectoral programme combines general and vocational education and leads to a vocational qualifications diploma for a single-qualification occupation (after passing the State vocational examination). The school director decides on the share of work-based learning, however it cannot be less than 60% of the hours foreseen for vocational education (which combines both theoretical and practical training) ¹⁸. Completion of this programme provides access to further education: at the second year of study at general upper secondary schools for adults or in the two-year second stage sectoral programme. Majority of qualifications attained after these programmes are on level 3 of the Polish Qualifications Framework.

(b) two-year **second stage sectoral programme** (*branżowe szkoły II stopnia*, ISCED 354) will begin to operate in the 2020/21 school year. This second stage sectoral programme aims at further developing the vocational qualifications attained in the first stage sectoral programme and will be available to the graduates of the first stage sectoral programmes ¹⁹ - usually 18 year-olds. The second stage sectoral programme will lead to a vocational qualifications diploma for occupations consisting of two qualifications (after passing the State vocational examination). General education in this programme is planned to be limited, with the main focus placed on the vocational training to be conducted in the form of vocational qualification courses. The school director decides on the share of work-based learning, however it cannot be less than 50% of the hours foreseen for vocational education (which combines both theoretical and practical training). Second stage sectoral programme graduates will be eligible to continue to tertiary education after passing the secondary school leaving examination (*matura*) in three obligatory subjects and the qualifications examination. Majority of qualifications attained after these programmes are on level 4 of the Polish Qualifications Framework.

¹⁶ The first-stage sectoral programme was introduced in the 2017/2018 school year replacing the basic vocational programme. However, for the next two school years, students of the previous basic vocational programme will be finishing their education under the old system. The three-year basic vocational programme, similarly to the first stage sectoral programme, enabled learners to attain a vocational qualifications diploma after passing a state vocational examination and also to continue education on a higher level in the second year of the general upper secondary programme for adults.

¹⁷ This also applies to lower secondary school graduates during the transitional period.

¹⁸ Regulation of the Minister of National Education of March 28, 2017 on the teaching plan in public schools (Journal of Laws 2017, item 703).

¹⁹ This also applies to graduates of basic vocational schools during the transitional period.

- (c) five-year **vocational upper secondary programme**²⁰ (*technika*, ISCED 354) are part of the formal education and training system. This programme is available to primary school graduates, usually 15 year olds, that is those who received the primary school leaving certificate. The vocational upper secondary programme combines general and vocational education and leads to a vocational qualifications diploma for occupations consisting of two qualifications after passing the State vocational examination. The school director decides on the share of work-based learning, however it cannot be less than 50% of the hours foreseen for vocational education (which combines both practical and theoretical training). Graduates of these programmes, after passing the secondary school leaving examination (*matura*), are eligible to continue to tertiary education. Majority of qualifications attained after these programmes are on level 4 of the Polish Qualifications Framework.
- (d) three-year **special job-training programme** (*szkoły specjalne przysposabiające do pracy*) for learners with special education needs (SEN) leads to a job-readiness certificate. This programme is designed for learners with moderate and severe intellectual disabilities or multiple disabilities. It provides educational activities (personal and social functioning classes; communication skills development classes, creativity development classes, physical education and job training classes) as well as revalidation activities. Job training classes constitute over a half of the hours foreseen for the educational activities²¹. Majority of qualifications attained after these programmes are on level 2 of the Polish Qualifications Framework. The programme length is 3 years with the possibility of extending to 4.
- (e) **work preparation classes** are available for SEN learners at the lower secondary level in primary schools for pupils aged 15 years and older (*oddziały przysposabiające do pracy*, ISCED 244). Classes combine general education and work preparation – both adapted to the individual learner’s needs and capabilities²². The programme is developed and adjusted to the specific needs of a learner by a lead teacher. Graduates can enter the labour market or continue their education at the next EQF level.

²⁰ The four-year vocational upper secondary programme will be transformed into a five-year programme starting with the 2019/2020 school year for graduates of the new primary programme. Graduates of the old programmes continue their education based on the previous arrangements.

²¹ Regulation of the Minister of National Education of March 28, 2017 on the teaching plan in public schools (Journal of Laws 2017, item 703).

²² Regulation of the Minister of National Education of 17 March 2017 on the detailed organisation of public school and public pre-schools (Journal of Laws 2017, item 649 with further amendments).

Post-secondary level

At the **post-secondary** non-tertiary level, vocational qualifications can be attained in one- to two-and-a-half year school-based programmes (*szkoły policealne*, ISCED 453). Post-secondary programmes are part of the formal education and training system and are available to the graduates of general and vocational upper secondary programmes (usually 19 year-olds), as well as in the future – the second stage sectoral programmes (usually 20 year-olds).

These programmes are strictly vocational and do not include general education. The school director decides on the share of work-based learning, however it cannot be less than 50% of the hours foreseen for vocational training. Majority of qualifications attained after these programmes are on level 5 of the Polish Qualifications Framework.

Adult learning and out-of-school VET

Adult learning and out-of-school VET is available in continuing education centres, vocational training centres²³, and initial VET (IVET) schools offering:

- courses in the crafts sector for juvenile employees, a significant part of pupils in lower-secondary vocational schools is realizing the VET component of education in the crafts sector (juvenile employees are up to 40% of pupils in I stage sectoral programmes²⁴). It needs to be noted, that upper secondary vocational schools are much more popular, overall craft sector trains overall ca. 10% of the pupils in lower and upper secondary vocational schools;
- vocational qualification courses (*kwalifikacyjne kursy zawodowe – KKZ*) based on the curricula for a qualification in a given occupation; they allow learners to take the State vocational examination and obtain a vocational qualification certificate;
- vocational skills courses based on the core VET curriculum, including learning outcomes for a qualification or common learning outcomes for all occupations;

²³ The structure of institutions providing VET training has changed as of September 2019. Vocational training centres have been established (*centrum kształcenia zawodowego – CKZ*). They are created from the transformation of existing centres for practical training (*placówka kształcenia praktycznego*) or vocational training and development centres (*ośrodek doskonalenia i doskonalenia zawodowego*) responsible for supporting vocational education of VET learners in schools providing practical or theoretical training of juvenile workers. They will be also providing vocational training in the form of courses (professional skills, qualifying vocational courses or other courses - enabling to obtain and supplement knowledge, skills and professional qualifications).

²⁴ Own calculations based on Statistics Poland (number of learners in types of schools) and ZRP (Raport Oświatowy 2018); https://zrp.pl/wp-content/uploads/2019/05/TABELA-7-Nauka-Zawodu_2011-2018.pdf.

- at least 30-hour general skills courses that are based on the general education curriculum.

Adults, including the unemployed, may also undertake vocational training through courses provided by training companies and other non-formal education institutions. Since 2016, the qualifications based on the curricula of such courses can be included in the national qualifications framework.

A special path for young people over 15 years of age lacking a lower secondary education who want to attain vocational qualifications and/or supplement their education is provided by the Voluntary Labour Corps (*Ochotnicze Hufce Pracy* - OHP), which offer vocational training both in their own workshops or as on-the-job training with an employer.

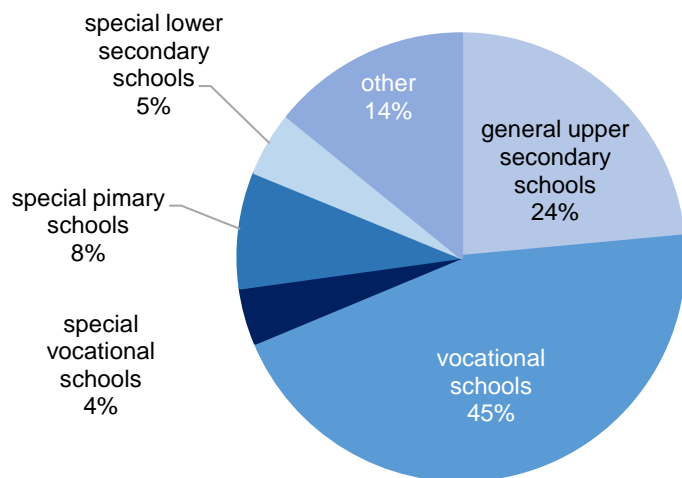
1.2 School autonomy regarding management, financing and the programme content

Autonomy in the managerial and financial aspects

VET has three governance levels: national (ministries), regional (school superintendents, mainly in pedagogical supervision) and county (*powiat* – managing schools). The Ministry of National Education is in charge of VET policy at the secondary level, supported by other ministries responsible for particular occupations. The Ministry of Science and Higher Education is responsible for higher VET. Social partners advise policy makers on necessary changes in VET.

The majority of public education institutions in Poland are managed by local government units. Municipalities (*gminy*) are responsible for establishing and managing pre-schools, primary and lower secondary schools (currently being phased out), excluding schools for learners with special needs; counties (*powiaty*) are responsible for upper secondary schools, including vocational schools, and schools for children with special needs; the regions (*województwa*) are responsible for schools of regional and trans-regional significance (e.g. groups of schools or vocational schools important for the regional economy). The chart below illustrates the structure of the educational expenditures of counties in 2017.

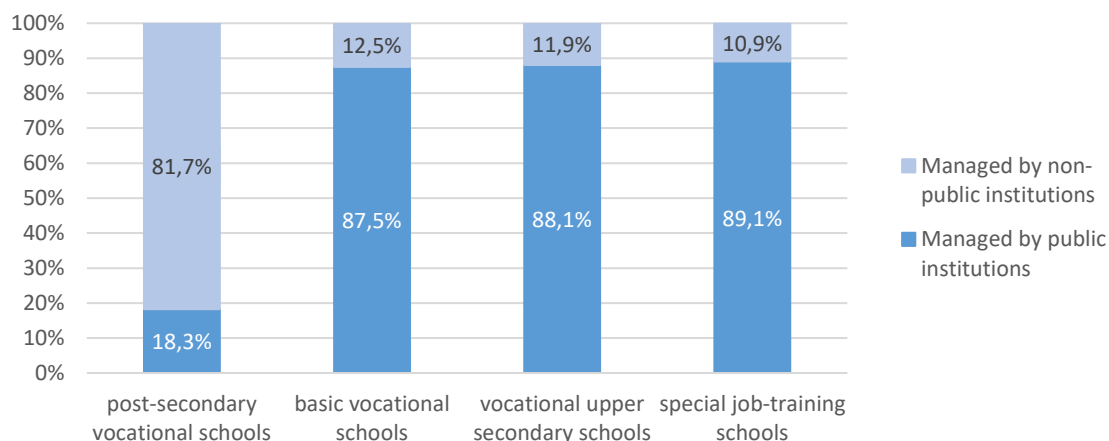
Figure 3. The structure of the educational expenditures of counties in 2017, by school type



Source: Chłoń-Domińczak et al., 2018.

Central government units (usually ministries) also manage schools, typically vocational and fine arts schools, but also schools for prisoners. All types of schools can also be established and managed by non-public institutions, such as religious and social associations, etc. The chart below presents the structure of vocational schools by type and management institution in 2016. Generally, in Poland, the higher the education level, the higher the share of non-public institutions (Federowicz, Choińska-Mika and Walczak, 2014).

Figure 4. The structure of VET schools by type and managing institution in 2016



Source: Chłoń-Domińczak et al., 2018.

In the 2017/2018 school year, there were 6 071 VET schools in Poland. The majority (36%) of them were post-secondary vocational schools, followed by vocational upper secondary schools (31%), 25% constituted the first stage sectoral schools and 8%

special job-training schools. Since 2010, the total number of all VET schools has decreased from 8 864 to 6 071. The decreasing number of VET schools is primarily due to government reforms, which have gradually closed adult VET schools and supplementary VET schools. These types of schools are being replaced by vocational qualifications courses, which enable students to attain certification in a single vocational qualification after passing the State vocational examination. The first courses started in September 2012 and can be provided by public or non-public schools, as well as continuing education centres and practical training centres.

Programme autonomy of schools

One of distinctive features of VET system in Poland is autonomy of VET schools in developing their teaching programmes, based on VET core curricula, and in choosing either subject-centred or modular programmes, which can be easily modified, depending on labour market needs²⁵.

Schools can offer programmes in one of the occupations specified in legal acts – the classification of occupations for sectoral schools²⁶ and the core curriculum for vocational education²⁷. In order to begin teaching in a given occupation the school principal needs to receive acceptance of a voivodship employment board (*województwa rada zatrudnienia*), previously acceptance on poviast level was required.

According to the regulations schools have autonomy regarding the content of delivered programmes – every school can develop their own teaching programme (*program nauczania*). The teaching programme needs to adhere to detailed regulations regarding learning outcomes defined in the core curricula for both general and vocational education as well as general frameworks for teaching in different types of schools (*ramowe plany nauczania*)²⁸. The general intention of the MEN voiced during the implementation of the reform was that: the core curriculum is defined in a general way, allowing schools to adjust to (for example) local needs and that realization of the core curriculum should not require more than 80% of teaching time for vocational component. The new regulation enable learners to achieve additional qualifications (so called market qualifications) during the study period and one year after graduation. Whether these intentions are realized in school practice remains controversial, since the core curriculum is relatively detailed and a central system of examination creates a disincentive for individualization of training contents (read more in chapter xx).

²⁵ VET in Europe. Poland, ReferNet Online Tool, 10.10.2019.

²⁶ Regulation of the Minister of National Education of 15 February 2019 on general objectives and tasks of education in vocational education professions and classification of vocational education professions (Journal of Laws 2019, item. 316).

²⁷ Regulation of the Minister of National Education of 16 May 2019 on core curricula for vocational education professions and additional professional skills in the field of selected professions of vocational education (Journal of Laws 2019, item. 991).

²⁸ Regulation of the Minister of National Education of 3 April 2019 on general framework curricula for public schools (Journal of Laws 2019, item. 639).

1.3 Programme documents in Polish VET

VET programmes available at the national level are developed on the basis of three regulations of the education ministry:

- the classification of occupations for vocational education (KZSZ)²⁹;
- the core curriculum for vocational education (PPKZ)³⁰;
- the core curriculum for general education (PPKO)³¹.

KZSZ includes the list of occupations for which VET programmes can provide education. Qualifications³² are distinguished within occupations. In the new system, each occupation can be made up of either one or two qualifications.

Prior to the 2016/2017 changes in VET, the KZSZ relating to VET schools included 209 vocational occupations and 264 vocational qualifications. The new regulation, signed in March 2017, defines 213 vocational education occupations in which education may be conducted as of September 1, 2017. It covers learning in first stage sectoral programmes, vocational upper secondary programmes, and post-secondary programmes. The regulation introduced two new occupations, there are also five new so-called ancillary occupations for people with minor intellectual disabilities. The new occupations were developed in response to labour market needs. Another regulation introducing a new classification of occupations together with the new core has come into force in September 2019.

Following the KZSZ, learners in the formal vocational education and training system can be awarded two types of documents confirming attained learning outcome: vocational certificates (*Certificate of a vocational qualification in an occupation*) and vocational diplomas (*Vocational qualifications diploma*). Attaining qualifications (vocational certificates) together with holding a school leaving certificate enables a learner to obtain an occupation (vocational diploma).

The curriculum for upper secondary vocational programmes combines general and vocational education; post-secondary programmes provide only vocational education. The vocational parts consist of theoretical and practical aspects. Vocational schools have a relatively high level of independence regarding the organisation of practical training. The practical part of vocational education can take place in school workshops, continuing education centres and practical training centres or with an employer (also

²⁹ Regulation of the Minister of National Education of 13 March 2017 on the classification of occupations for vocational education (Journal of Laws 2017, item. 622).

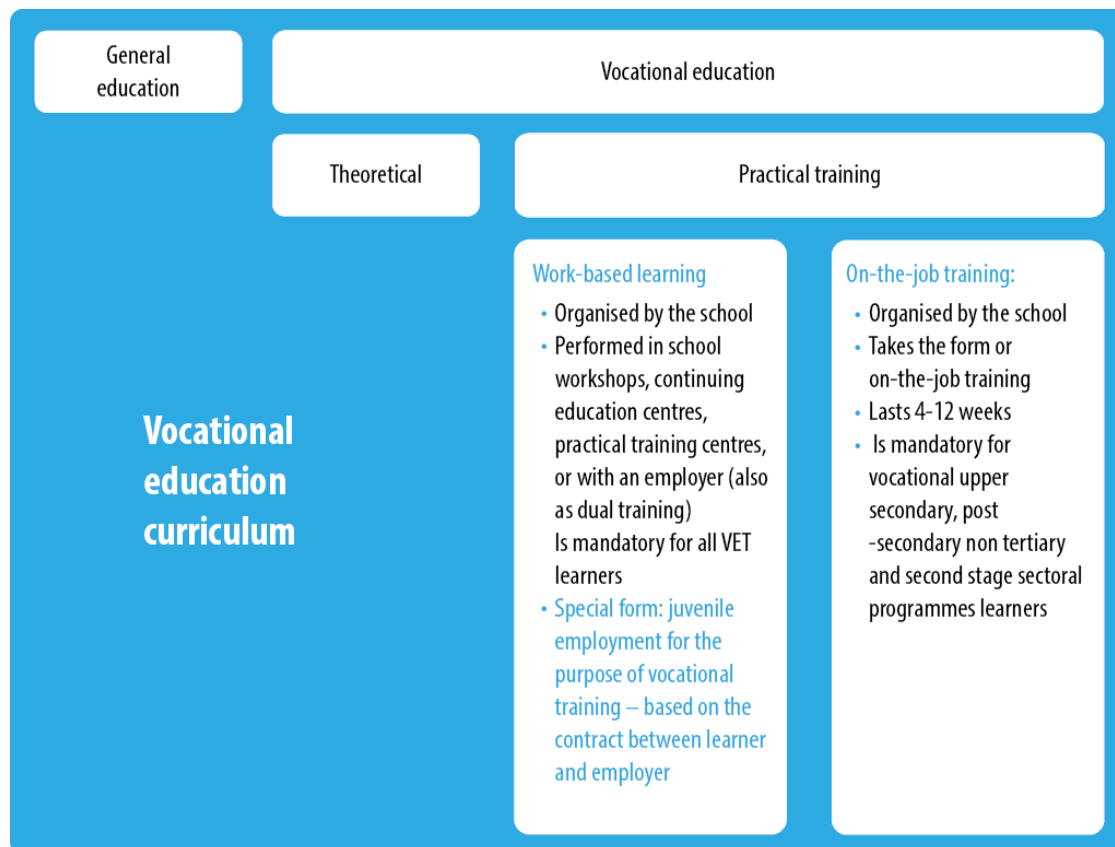
³⁰ Regulation of the Minister of National Education of 31 March 2017 on the core curriculum for training in individual occupations (Journal of Laws 2017, item. 860).

³¹ Regulation of the Minister of National Education of 14 February 2017 on the core curriculum for pre-school education and the core curriculum for general education in primary schools, incl. for learners with moderate and severe intellectual disabilities, and for general education in stage I sectoral vocational schools, general education in special schools preparing for employment, and general education in post-secondary schools (Journal of Laws 2017, item. 356).

³² The term 'qualification' is defined in the School Education Act, similarly as in the European Qualifications Framework Recommendation (2008).

as dual training) either as work-based learning (*zajęcia praktyczne*) or on-the-job training (*praktyka zawodowa*). On-the-job training is mandatory for vocational upper secondary, post-secondary and – according to plans – second stage sectoral programmes and lasts from 4 to 12 weeks, depending on the type of job performed.

Figure 5. Diagram of vocational education curriculum



Source: own elaboration based on legal acts.

A special type of work-based learning is provided through juvenile employment for the purpose of vocational training (*przygotowanie zawodowe młodocianych pracowników*) for young people who are at least 15 years of age but have not yet reached 18, with a lower secondary education or primary education. Juvenile employment is based on a contract between the learner and employer. In the 2017/2018 school year, juvenile workers constituted about half of all the learners in the first stage sectoral schools³³.

Juvenile employment for the purpose of vocational training can take the form of:

- (a) Training for a profession (*nauka zawodu*) – this is dual training, with the theoretical education taking place at school (first stage sectoral) or in an out-of-school system (e.g. courses) and the practical training is organised by the employer on the basis of a work contract. It lasts not more than 36 months and is finalised with a State

³³ Statistics Poland (2018c). Oświata i wychowanie w roku szkolnym 2017/2018 [Education in the 2017/2018 school year]. Warsaw: Statistics Poland, 2018 and earlier editions.

vocational examination. Practical training can also be organised by an employer in the craft trades, on the basis of a work contract. It also lasts not more than 36 months and is finalised with a journeyman's examination (*egzamin czeladniczy*).

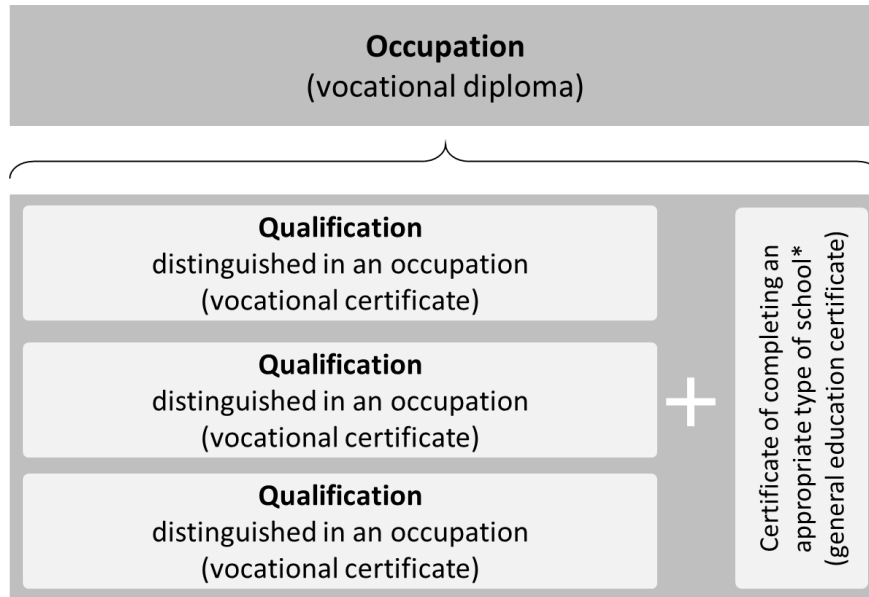
- (b) Training for a specific job (*przyuczenie do wykonywania określonej pracy*) – this prepares a learner to perform specific tasks in a profession. It lasts from 3 to 6 months and is finalised with a verifying examination.

During the training period, a juvenile worker is entitled to a salary (from 4 to 6 percent of the national average salary, depending on the subsequent year of training), social security benefits and holiday leave. The employer may be reimbursed for the salary and social security contribution for the juvenile worker for the period of vocational training from the Labour Fund (established to counter unemployment and financed by mandatory contributions paid by employers). Each year however, the minister responsible for labour, sets financial limits on the reimbursements.

If the juvenile worker passes the examination, the employer is entitled to financial support for the training period approximately equal to 1 850 EUR in the case of 36 months of training (if the training is shorter, the amount is calculated proportionally to the training period), as well as to 58 EUR for each month of training. This financial support is financed from the Labour Fund.

A key element of the changes associated with the introduction of the learning outcomes approach in Poland's VET is distinguishing vocational qualifications in COVE occupations. The COVE includes "occupations" (i.e. compound qualifications) that the schools can offer. Constituent qualifications are distinguished in specific occupations, each comprised of defined units of learning outcomes (ULO) and individual learning outcomes (LO). The COVE includes 215 occupations, in which 254 qualifications are distinguished (2019). The occupations included in this new classification are comprised of one, two or three qualifications. The COVE defines learning outcomes for each occupation and qualification. This is why the Poland's vocational education and training system has two types of documents confirming attained learning outcomes (competences) – vocational certificates and vocational diplomas. Attaining qualifications (vocational certificates) required for a given occupation, together with possession of a school leaving certificate, enables learner to obtain a vocational qualification (compound qualification) (see Figure 6).

Figure 6. Distinguishing qualifications in the occupations listed in the COVE



To be awarded a diploma confirming a vocational qualification attained at school, a pupil must achieve all the qualifications distinguished in the given occupation (vocational certificates) and the certificate of completing an appropriate type of school. The qualifications (vocational certificates and certificate of completing school) can be attained at different times and through the validation of non-formal and informal learning.

*Depending on the vocational diploma, different certificates of completing school are required, e.g. in order to receive the vocational diploma of Electrical Mechanic, a learner must receive a certificate of completing basic vocational school, whereas in order to achieve an Electrical Technician diploma, a learner must attain a certificate of completing technical upper secondary school.

Source: own elaboration.

The core curriculum for vocational education (CCVE) implemented as of September 2012 describes qualifications and occupations with the use of learning outcomes that describe knowledge, skills and personal and social competences. Learning outcomes are grouped in units, which typically contain from several to over a dozen learning outcomes and reflect specific professional tasks. A unit of learning outcomes encompasses a logical and mutually related process leading to a specific objective, which may be the implementation of a specific product, service or decision.

Learning outcomes are described according to “factoring out” logic, meaning that first, the educational aims for a given occupation are described, next – the learning outcomes common to all occupations are defined, after this – the learning outcomes common to a given group of occupations, and only then are the learning outcomes for

the specific occupation defined (for specific qualifications distinguished in the occupation). Figure 2 presents the structure of the entries in the CCVE.

The new VET qualifications' architecture in Poland may be seen as an example of a two-tiered model of curriculum modularisation (or unitisation in some countries). The tiers refer to: (1) qualifications distinguished in occupations and (2) units of learning outcomes defined for qualifications.

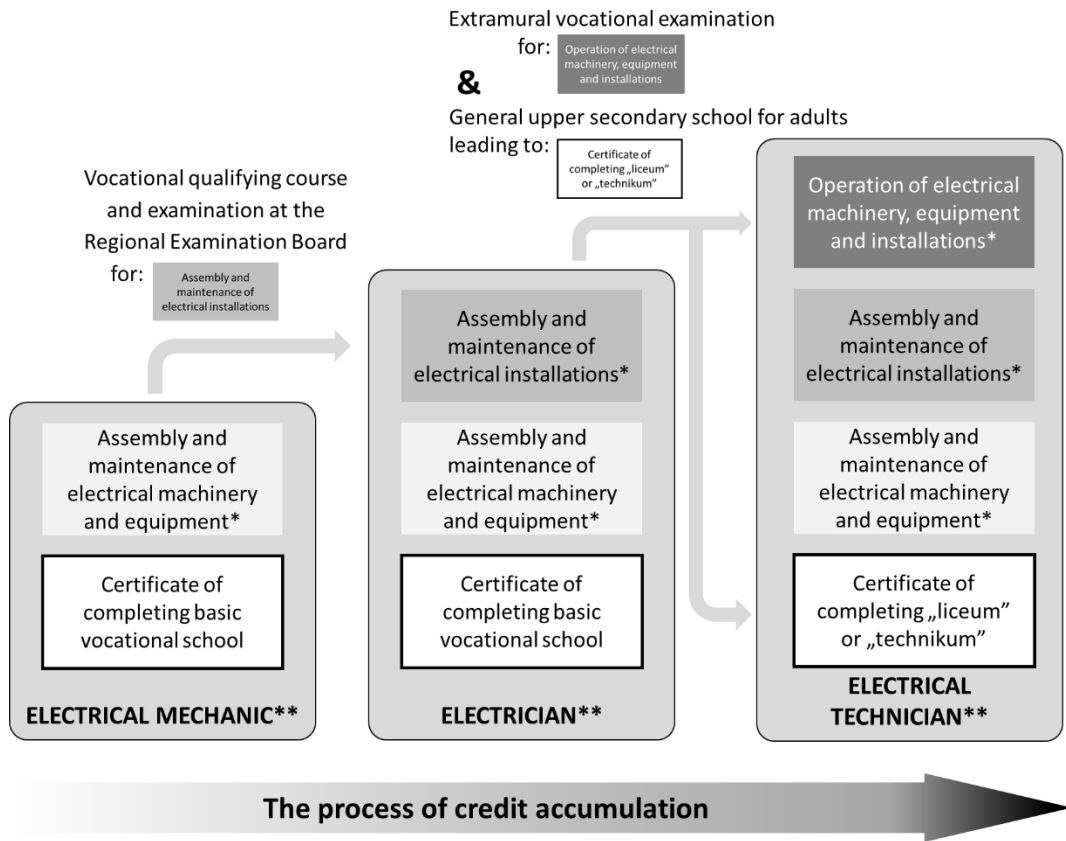
On one hand, qualifications distinguished in occupations are what Le Mouillour (2005) defines as "self-contained" partial qualifications – described with LO and certified individually by a vocational certificate. On the other hand, qualifications formally remain parts of an occupation (or occupations), certified by a vocational diploma – in this sense they are "part of a whole, as they are designed to lead to an established qualification" (Le Mouillour 2005). For some qualifications, the modular structure of Poland's VET corresponds to the "expansion concept" described by Ertl (2002), as modularisation makes credit accumulation possible by having subsequent modules added to previously attained qualifications (see Figure 3).

At the lower tier, units (sets) of learning outcomes have been defined for qualifications. They are not certified and recognised on their own, have no inherent value, and function only as parts of the qualification. Furthermore, the sets of learning outcomes at this tier have been defined with regard to both the didactical process and the outcome. This means that LO common to several qualifications/professions are defined from a curricular-didactical perspective and units specific to a qualification are based on the competency and work-context approach (see Figure 2).

The Polish model of qualifications' architecture and the qualification-occupation relationship can be seen as an interesting approach to VET modernisation, which combines the characteristics of the occupation-based and modular approaches (see: Pilz 2002, Hart, Howieson 2004).

The newly introduced VET qualifications' architecture opens up the opportunity to gain additional qualifications without having to start learning each profession "from the beginning", by adding subsequent qualifications to those already attained. In the context of ECVET, this can be called the accumulation of credits. The accumulation process is described in Figure 7.

Figure 7. Accumulating credits to attain a vocational diploma, using the example of electrical technician



* Vocational certificate

** Vocational diploma

Technikum – vocational upper secondary school; Liceum – general upper secondary school

After completing basic vocational school and attaining the qualification distinguished in the occupation of “electrical mechanic” (“assembly and maintenance of electrical machinery and equipment”), graduates can continue their vocational education by attending, for example, a vocational qualifying course.

After completing the relevant vocational qualifying course, learners can take the examination to attain the qualification of “assembly and maintenance of electrical installations”. Having attained this qualification, learners are awarded a diploma confirming the vocational qualification of the profession of “electrician”.

After fulfilling the relevant requirements related to, among others, the time spent working in a profession or the duration of education, learners can take an extramural vocational examination and attain the qualification of “operation of electrical machinery, equipment and installations”. Finally, learners can achieve the compound qualification of “electrical technician”, but only if they obtain the appropriate level of general education. This can be done by attending a general upper secondary school for adults or by taking extramural examinations in the subjects of the mandatory classes defined in the study programme of the general secondary school for adults.

Source: own elaboration.

1.4 Institutions responsible for assessment, validation and certification in Polish VET

Completing any type of VET programme is not the same as attaining a vocational qualification. Upon graduation only the level of general education is attained, but not the vocational qualification. Vocational qualifications can be attained by passing an external State vocational examination or by passing a journeyman's examination.

Starting in 2019, all learners are obliged to take a State vocational examination or a journeyman's examination as a condition for school graduation; up till now, this has been optional.

Table 2. Main types of vocational examinations and vocational certificates ³⁴

Name	Managing institution	Name of certificate	Short description
State vocational examination <i>(egzamin potwierdzający kwalifikacje w zawodzie)</i>	Central Examination Board <i>(Centralna Komisja Egzaminacyjna)</i> together with 8 regional examination boards <i>(okręgowe komisje egzaminacyjne)</i>	Vocational certificate - Certificate of a vocational qualification in an occupation <i>(świadcstwo potwierdzające kwalifikację w zawodzie)</i>	Certifies a qualification in an occupation or all qualifications in an occupation. Has two parts: written and practical; the candidate has to pass both in order to receive a certificate or diploma. It is based on uniform requirements, the same examination tasks, assessed according to the same criteria and organised in the same way regardless of where the examination is held. It is free for school graduates.
		Vocational qualifications diploma <i>(dyplom potwierdzający kwalifikacje zawodowe)</i>	Awarded to holders of vocational certificates for all qualifications in a given occupation who also have completed their education at the basic vocational or vocational upper secondary level.
Journeyman's examination <i>(egzamin czeladniczy)</i>	Examination boards of crafts chambers	Journeyman's certificate <i>(świadcstwo czeladnicze)</i>	Has two parts: practical and theoretical. The practical part consists of tasks individually performed by a candidate.

³⁴ Changes in some of the names of the examinations and certificates has been introduced as of September 2019.

Master's examination <i>(egzamin mistrzowski)</i>		Master's diploma (<i>dyplom mistrzowski</i>)	The theoretical part is both written and oral. Tasks are based on common examination requirements and the curriculum of the occupation. It is fee based.
Verifying examination for selected qualifications in crafts <i>(egzamin sprawdzający wybrane kwalifikacje zawodowe w rzemiośle)</i>	Examination boards of crafts chambers	Document certifying that the verifying examination has been passed. <i>(zaświadczenie o zdaniu egzaminu sprawdzającego)</i>	It certifies selected qualifications in an occupation that correspond to a specific craft. Has two parts: practical and theoretical. The theoretical part is oral. It is fee based.
Verifying examination after training for a specific job <i>(egzamin sprawdzający po przyuczeniu do wykonywania określonej pracy)</i>	Employer or examination boards of crafts chambers	Document certifying the specific skills acquired during training for a specific job. <i>(zaświadczenie stwierdzające nabycie umiejętności w wykonywaniu prac których dotyczyło przyuczenie)</i>	This is for both adult and juveniles after the training. In the case of unemployed persons, the form of the examination is individually determined during the training in the programme.

Source: own elaboration based on legal acts.

The central examination board and eight regional examination boards are responsible for organising external examinations. The external examination system is supervised by the education minister. In the external examination system, all examinees solve the same tasks and assignments to verify whether they have achieved the learning outcomes defined in the core curriculum.

Trained examiners registered at the regional examination boards assess examination results. The central examination board analyses aggregate test and examination results and initiates research in the field of assessment. The results of external examinations are taken into consideration in both external and internal quality assurance as part of pedagogical supervision.

2 Overview of the transversal key competences in formal VET in Poland

2.1 TKC on the public agenda

The opinions presented in this subchapter are subject to some limitations. Discourse analysis, involving analysis of frequency of use of specific terms in selected documents or media is outside the scope of this research. Therefore the opinions are based on qualitative data only. The opinions reflect results of interviews with representatives of both school sector, administration as well as employers, employees organizations and parents.

Transversal key competences is not a term frequently (if at all) used in the discourse or agenda in the public policy on VET system. Depending on the context these competences are either specified (as for example: entrepreneurship, problem solving or personal competences) or treated as a general category (such as: soft skills, key competences or social competences in a broad sense).

In the recent years the interest in key competences has been fuelled by both the educational as well as labour market partners. On one hand this can be linked to more active and explicit educational policy (e.g. GE and VET core curricula explicitly require developing these competencies since at least 2008 and 2012 respectively), on the other hand the Polish economy is evolving – with constant growth of the services sector, increasing automation etc. The changing model of competition on the national markets and international competitive position of Poland as an exporter of goods, provider of services and service outsourcing destination create pressure for developing this kind of competences.

The interest has been paired with media attention generated by results of big research projects related to competences. To mention PISA (Programme for International Student Assessment) focusing i.e. on problem solving and Bilans Kapitału Ludzkiego (Study of Human Capital - panel research project³⁵) focusing primarily on competences in all aspects. These have contributed to an increase in awareness of the issue. These results have also provided material for click-bait headlines such as “Polish teenagers can’t solve problems [Polskie nastolatki nie umieją rozwiązywać problemów³⁶]” or “Poles are unemployed, because they do not know how to work in teams [Polacy nie mają pracy, bo nie umieją pracować w zespole]³⁷”. The examples of the research presented above can be seen as an example of a newly created policy space, fuelled by the peer pressure of international research and comparison and use of national

³⁵ Bilans Kapitału Ludzkiego is one of the biggest European research projects on competences, employment and labour market. The goal of the project is diagnosis and monitoring of human capital in Poland and identification of factors of its growth. The panel research had already 5 editions (since 2009 to 2015) and is currently continued and deepened selected sectors.

³⁶ Accessed on 01.09.2019:

http://wyborcza.pl/1,75398,15739336,Polskie_nastolatki_nie_umieja_rozwiazywac_problemov.html.

³⁷ Accessed on 01.09.2019: <https://www.wprost.pl/gospodarka/318728/polacy-nie-maja-pracy-bo-nie-umieja-pracowac-w-zespole.html>

research for policy support in the field of competence development in Poland (Lawn & Grek, 2012).

According to interviewed policymakers the interest in human capital development has been endogenic in the first place. The different aspects of skills can be tracked to analyses and strategic documents prior to 2005.

In the recent years the relevance of general competences has been underlined in a number of strategic documents, such as:

- The lifelong learning strategy 2013-20 (2013),
- The human capital development strategy 2020 (2013),
- Strategy for sustainable (responsible) development (2017),
- Integrated Skills Strategy (2018).

Additionally the legislation concerning IQS formally introduced qualifications framework as a reference point for all qualifications in the IQS. The Polish Qualifications Framework consists of three broad categories, i.e. knowledge, skills and social competence. The PQF descriptors show how the following abilities advance at successive levels. These are organized in a way that covers the aspects related to key competences. The structure of the qualifications framework is presented in Table 3.

Table 3. Key descriptive categories and aspects universal for describing knowledge, skills and social competence

Learning outcome group	Key descriptive categories	Key aspects
	Scope	–Completeness of the cognitive perspective –Dependencies
	Depth of understanding	–Completeness of the cognitive perspective –Dependencies
Skills	Problem solving and applying knowledge in practice	–Complexity of the problem –Innovation in the approach –Level of Autonomy –Conditions under which one acts
	Learning	–Autonomy – Methods

	Communication	<ul style="list-style-type: none"> -Scope of expression -Complexity of expression
Social competence	Identity	<ul style="list-style-type: none"> - Participation -Sense of responsibility - Conduct
	Cooperation	<ul style="list-style-type: none"> - Team work -Conditions under which one acts - Leadership
	Responsibility	<ul style="list-style-type: none"> -Consequences of one's own actions -Consequences of the team's actions - Evaluation

Source: own elaboration based on (Chłoń-Domińczak et al., 2013; Chłoń-Domińczak, Kraśniewski, Sławiński, & Chmielecka, 2017).

The PQF also has additional sets of level descriptors, which are specific to general education, higher education and vocational education and training. The latter one relates to specific occupational activities. All sets, the most generic so called 'universal descriptors', and the less generic GE, HE and VET descriptors are to be read together. Organisation of the two sets relevant for formal education in vocational schools, that is the GE and VET-specific level descriptors is presented in Table 4 and 5.

Table 4. Key descriptive categories and aspects for describing knowledge, skills and social competence for general education

Learning outcome group	Key descriptive categories	Key aspects
	Language and communication	<ul style="list-style-type: none"> -Structure and principles of formulating statements
	Mathematics and natural sciences	<ul style="list-style-type: none"> -Concepts and dependencies -Interpretation
	Social functioning	<ul style="list-style-type: none"> -Principles of functioning -Social roles -Identity

Skills	Language and communication	<ul style="list-style-type: none"> -Understanding and formulating statements - Using a foreign language
	Mathematics and natural sciences	<ul style="list-style-type: none"> -Using tools, making observations and performing experiments
	Social functioning	<ul style="list-style-type: none"> -Expressing membership in communities
	Learning	<ul style="list-style-type: none"> -Organisation -Planning
Social competence	Language and communication	<ul style="list-style-type: none"> -Culture of communicating
	Health and the environment	<ul style="list-style-type: none"> -Attention to health and safety -Attitude towards the environment
	Social functioning	<ul style="list-style-type: none"> -Cooperation -Involvement -Assuming responsibility

Source: own elaboration based on (Chłoń-Domińczak et al. 2017).

Table 5. Key descriptive categories and aspects for describing knowledge, skills and social competence for vocational education and training

Learning outcome group	Key descriptive categories	Key aspects
	Theories and principles	<ul style="list-style-type: none"> -Methods and solutions -Business activity -Ethics
	Phenomena and processes	<ul style="list-style-type: none"> -Characteristics and conditions
	Organising work	<ul style="list-style-type: none"> -Methods and technologies

		<ul style="list-style-type: none"> -Organisational solutions -Occupational health and safety
	Tools and materials	<ul style="list-style-type: none"> -Use -Properties
Skills	Information	<ul style="list-style-type: none"> -Documentation -Calculating, analysing, synthesising and predicting
	Organising work	<ul style="list-style-type: none"> -Planning and revising plans -Doing -Revising activities -Information flow
	Tools and materials	<ul style="list-style-type: none"> -Using and selecting
	Learning and professional development	<ul style="list-style-type: none"> -Personal development -Supporting the development of others
Social competence	Following rules	<ul style="list-style-type: none"> -Rules, instructions, laws
	Cooperation	<ul style="list-style-type: none"> -Communication -Professional relations
	Responsibility	<ul style="list-style-type: none"> -Ethical norms

Source: own elaboration based on (Chłoń-Domińczak et al., 2017).

As the above examples show, qualifications frameworks in Poland include a relatively strong and direct relation to transversal key competences as stated in the recommendation. The relation is presented in a matrix, which shows the operationalization of the approach in the TRACKVET project (left side) and the categories and aspects used in PQF (columns).

The matrix serves as an overview, however the interpretation of it should be conservative for two reasons:

- 1) because of conceptual differences literal comparison was not possible, instead the basis of comparison was heuristic analysis of content of the PQF descriptors and the definitions of transversal key competences. Descriptors of levels 1-5 have been taken into account, as these are the ones relevant to

the formal VET, which is subject of this analysis. This yielded in an understanding which might not be intersubjective and reflects the authors point of view.

For example a general comparison of how the “social competences” and “social competence” categories are presented in EU documents and PQF level descriptors shows a significant difference of the approaches used – the PQF descriptors include civic competence (a separate category in EU recommendation) as part of the social competence.

- 2) Neither the columns (knowledge, skills and social competence categories) nor the rows (transversal key competences and their descriptive categories) are disjoint categories. Therefore the categories and aspects shown in the matrix have been selected using a best fit approach, again based on analysis of the content of the descriptors and TKC’s descriptions in EU documents. As a result some categories, which related to many aspects of the TKC’s have been assigned to the ones deemed most adequate by authors.

For example the category named social functioning in PQF level descriptors specific for general education includes aspects related to maintaining well-being ‘become appropriately involved in the activities of a specific community depending on the situation’ – in this case the link has been considered of limited relevance and not represented in the matrix.

Another example is the category of learning (with the key aspect: organization) in PQF descriptors specific for general education which includes ‘undertake autonomous learning according to a defined plan’ – in this case the link has been considered relevant for both methods and strategies of learning as well as motivation and autonomy of learning.

Last example is the relation of TKC category of ‘maintaining well-being’ and the ‘health and safety’ related descriptions in PQF. Although in this case the PQF refers to a very specific, physical aspect of well-being, we have decided that it is relevant as a prerequisite for other aspects of well-being (such as mental and emotional health). Also the category of cooperation (with aspects of: communication and professional relations) present in PQF descriptors relevant for VET has been included as relevant for maintaining healthy relations in workplace (example of descriptor ‘communicate in the professional community in a way that ensures good cooperation in one’s team and with other persons and teams’).

Table 6. The coverage of transversal key competences in Polish Qualifications Framework

Transversal key competences	Descriptive (operationalization) categories in the TRACKVET project	Key descriptive categories and aspects* in PQF Knowledge	Key descriptive categories and aspects* in PQF Skills	Key descriptive categories and aspects* in PQF Social Competence
Personal, social competences and learning competence	Methods and strategies of learning		Learning (methods, organisation, planning) [U, GE] Learning and professional development (personal development, supporting the development of others) [VET]	
	Motivation and autonomy of learning		Learning (organization, autonomy) [U, GE]	
	Maintaining well-being	Organising work (occupational health and safety) [VET]		Health and the environment (attention to health and safety, attitude towards the environment) Cooperation (communication, professional relations) [VET]
	Social and interpersonal relations	Social functioning (principles of functioning, social roles, identity) [GE]	Communication (scope of expression, complexity of expression) [U] Social functioning	Identity (participation, sense of responsibility, conduct) [U] Cooperation (team work, conditions)

			(expressing membership in communities) [GE]	under which one acts, leadership) [U] Social functioning (cooperation, involvement, assuming responsibility) [GE] Cooperation (communication, professional relations) [VET]
Civic competences	Understanding of society	Social functioning (principles of functioning, social roles, identity) [GE]		
	Participation in public affairs		Social functioning (expressing membership in communities) [GE]	Identity (participation) [U] Social functioning (involvement) [GE]
	Values and identity	Social functioning (principles of functioning, social roles, identity) [GE] Theories and principles (ethics) [VET]		Responsibility (ethical norms) [VET] Following rules (rules, instructions, laws) [VET]
Entrepreneurship competence	Taking action and making decisions		Problem solving and applying knowledge in practice (complexity of the problem, innovation in the approach, level of autonomy, conditions)	

			under which one acts) [U] Organizing work (planning and revising plans, doing, revising activities) [VET]	
	Realization of initiatives	Theories and principles (business activity) [VET]	Organizing work (doing, revising activities) [VET]	
Cultural awareness and expression competence	Understanding and appreciation of culture	Social functioning (social roles, identity) [GE]		Language and communication (culture of communication) [GE]
	Cultural expression	Communication (scope of expression, complexity of expression) [U]	Language and communication (using a foreign language) Social functioning (expressing membership in communities) [GE]	
Descriptive categories related to more than one transversal key competence	Critical thinking	Scope (completeness of the cognitive perspective, dependencies) [U] Depth of understanding (completeness of the cognitive perspective,	Mathematics and natural sciences (concepts and dependencies, interpretation) [GE]	

		dependencie s) [U]		
	Problem solving	Theories and principles (methods and solutions) [VET] Organising work (methods and technologies, organisational solutions) [VET]	Problem solving and applying knowledge in practice (complexity of the problem, innovation in the approach, level of autonomy, conditions under which one acts) [U] Organizing work (planning and revising plans, doing, revising activities, information flow) [VET]	Social functioning (involvement) [GE]
	Media literacy	Communication (scope of expression, complexity of expression) [U]		Language and communication (culture of communicating) [GE]
	Creativity and innovation		Problem solving and applying knowledge in practice (complexity of the problem, innovation in the approach, level of autonomy, conditions under which one acts) [U]	

* For PQF related columns the selected aspects of categories have been provided in round brackets. Square brackets indicate the universal descriptors [U] or the descriptors specific for general education [GE] and [VET].

The level descriptors play a specific role in the education system, they can be treated as an indication and a soft incentive for qualifications to include selected aspects. All

qualifications in formal education (including GE, HE and VET) are assigned a PQF level based on comparison of learning outcomes with level descriptors.

This can be seen as an interpretation of EU policies expressed in the recommendations on EQF and key competences. And as a policy transfer mechanism, showing how these policies can further be mapped (see also: Cort, 2010).

The Ministry of National Education has consequently, at least since 2008 informed and stressed the relevance of key competences in the following key programme documents:

- Regulation of the Minister of National Education of 23 December 2008 on the core curriculum for pre-school child development and general education in specific types of schools 2008 [Rozporządzenie Ministra Edukacji Narodowej z dnia 23 grudnia 2008 r. w sprawie podstawy programowej wychowania przedszkolnego oraz kształcenia ogólnego w poszczególnych typach szkół, Dz.U. 2009 nr 4 poz. 17] and
- Regulation of the Minister of National Education of 7 February 2012 on the core curriculum of vocational education [Rozporządzenie Ministra Edukacji Narodowej z dnia 7 lutego 2012 roku w sprawie podstawy programowej kształcenia w zawodach, Dz. U. 2012, poz. 184].

The abovementioned regulations are universally binding acts which form a basis for evaluation of teaching programmes developed by schools, assessment of pupils in internal and external examinations and school evaluation of Education Superintendents (Kuratoria Oświaty).

2.2 Polish approach towards the development of TKC in the formal VET

The development of TKC is generally perceived as the responsibility of teachers and trainers, however contrary to specific skills TKC's are assessed to a small extent during external examinations. This is presented in detail in chapter 4 of the report.

The approach towards TKC development is expressed in the core curricula for general and vocational education. It should be noted that both documents are relevant for learners in VET schools.

Please note that for the purpose of the analysis, we have decided to analyse the VET core curricula of 2012 and 2019. The analysis does not include examples of curricula introduced in 2017. There are a number of reasons for that, the most important ones being: the content and structure of 2017 VET core curricula remained largely unchanged compared to 2012. Some changes in content which have been introduced are also present in 2019 VET core-curricula.

General education core curriculum

The comment from referencing report on 2009 general education core curriculum summarizes the approach to TKC's in this document. Moreover the comment remains relevant also for the new core curricula of 2017.

“The preamble to the core curriculum defines the basic aims of education from the perspective of the challenges of today’s world. Specifically, it emphasises the importance of developing critical thinking and coping with an overflow of information that is not always reliable. The meaning of “key competencies” is underscored, indicated in the European debate on education as an important foundation in preparing youth for adult life. A set of attitudes is described, which should be inculcated by the Polish school. This document emphasises the significance of learning foreign languages and mathematics, developing skills in using knowledge to identify and solve problems, as well as drawing conclusions based on empirical observations.” (Chłoń-Domińczak et al., 2013).

The general education core curriculum used since 2018 states the following [own translation]:

General education in upper-secondary school forms a coherent whole and constitutes the foundation of education, enabling the acquisition of various professional qualifications, and then their improvement or modification, opening the process of lifelong learning.

The purpose of general education in *liceum* (general upper secondary programmes) and *technikum* (vocational upper secondary programmes) are:

- 1) treating ordered, systematic knowledge as a basis for developing skills;
- 2) improving cognitive and language skills, such as reading comprehension, creative writing, formulating questions and problems, using criteria, justifying, explaining, classifying, reasoning, defining, using examples, etc.;
- 3) developing student's personal interests and integrating subject knowledge from various disciplines;
- 4) acquiring the ability to formulate independent and deliberate judgments, justify one's own and others' judgments in the process of dialogue in the investigative community;
- 5) combining the ability of critical and logical thinking with imaginative and creative skills;
- 6) developing social, moral and aesthetic sensitivity;
- 7) developing thought tools enabling students to interact with and understand culture;
- 8) developing students' respect for knowledge, developing passion for exploring the world, and encouraging the practical application of acquired knowledge.

The most important skills acquired by a student during general education in *liceum* (general upper secondary programmes) and *technikum* (vocational upper secondary programmes) are:

- 1) thinking - understood as a complex mental process, involving the creation of new representations using the transformation of available information, including the interaction of many mental operations: inference, abstracting, reasoning, imagining, judging, problem

solving, creativity. Due to the fact that secondary school students learn different subjects at the same time, it is possible to develop the following types of thinking: analytical, synthetic, logical, computational, cause-and-effect, creative, abstract; maintaining continuity in general education develops both perceptual thinking and conceptual thinking. The synthesis of both types of thinking forms the basis of the student's comprehensive development;

- 2) reading - a skill that combines both understanding of the meanings and symbolic meanings of a statement; key linguistic and psychological skill leading to personal development, active participation in the community, transfer of experience between generations;
- 3) the ability to communicate in the mother tongue and in foreign languages, both in speech and in writing, is a basic social skill based on knowledge of language norms and creating the basis for communication in various communication situations;
- 4) creative problem solving in various fields with a conscious use of methods and tools derived from computer science, including programming;
- 5) ability to efficiently use modern information and communication technologies, including care for respect for copyrights and safe movement in cyberspace;
- 6) the ability to independently access information, make its selection, synthesis and evaluation, reliable use of sources;
- 7) acquiring habits of systematic learning, organizing and deepening acquired knowledge;
- 8) ability to cooperate in a group and take individual actions.

One of the most important tasks of a high school and technical college is the development of language competence and communication competence constituting a key cognitive tool in all disciplines of knowledge. Combining language theory and practice is important in this regard. Enriching vocabulary, including learning the terminology specific to each subject, serves the intellectual development of the student, and supporting and caring for this development is the responsibility of each teacher.

An important task of the school is to prepare students for life in the information society. Teachers of all subjects should create conditions for students to acquire skills to search, organize and use information from various sources and to document their work, taking into account the correct composition of the text and the principles of its organization, using information and communication technologies.

The implementation of the above goals should be supported by a well-equipped school library with current collections, both in the form of a book collection and in the form of multimedia resources. Teachers of all subjects should refer to the resources of the school library and cooperate with teachers librarians to comprehensively prepare students for self-education and conscious search, selection and use of information.

Since the means of social communication play an increasingly important role, both in social and individual life, each teacher should devote a lot of attention to media education, i.e. educating students to properly receive and use the media.

Effective language teaching is an important goal of the school's operation. It is very important to adapt the classes to the level of preparation of the student, which he obtained at earlier educational stages.

An important task of the school is also health education, which aims to develop students' attitude of care for their own and other people's health and the ability to create an environment favourable to health.

In the process of general education, the school shapes attitudes among students that favor their further individual and social development, such as: honesty, credibility, responsibility, perseverance, self-esteem, respect for other people, cognitive curiosity, creativity, entrepreneurship, personal culture, readiness to participate in culture, taking initiatives and for teamwork. In social development, it is very important to shape civic attitude, attitude to respect the tradition and culture of one's own nation, as well as an attitude of respect for other cultures and traditions.

Education and upbringing in high school and technical college are conducive to developing civic, patriotic and social attitudes of students. The school's task is to strengthen the sense of national, ethnic and regional identity, attachment to national history and traditions, prepare and encourage activities for the school and local community, including engaging in volunteering. The school cares for the education of young people in a spirit of acceptance and respect for others, shapes the attitude of respect for the natural environment, motivates to take action for environmental protection and develops interest in ecology.

Acquiring social competences, such as communication and collaboration in a group, including in virtual environments, participation in team or individual projects, as well as organization and project management is of great importance for the development of a young person and his successes in adult life.

The lifelong learning strategy requires the ability to make important decisions, ranging from choosing a secondary school, field of study or specific professional specialization, through decisions about the choice of workplace, how to raise and broaden your qualifications, to possible decisions to change your profession. And these skills will be shaped in secondary school.

Source: Regulation of the Minister of National Education of 14 February 2017 on the core curriculum for pre-school education and the core curriculum for general education in primary schools, incl. for pupils with moderate and severe intellectual disabilities, and for general education in stage I sectoral vocational schools, general education in special schools preparing for employment, and general education in post-secondary schools (Journal of Laws 2017, item 356)

The core curriculum on general education for upper secondary schools, used in 2012-2019 stated the following:

The aims of general education at the III and IV stages of education are:

- 1) to have pupils acquire defined resources of knowledge about facts, principles, theories and practices;
- 2) to have pupils attain the skills of using information while performing tasks and solving problems;
- 3) to shape pupils' attitudes enabling them to function in the modern world effectively and responsibly.

The most important skills achieved by a pupil during general education at stages three and four include:

- 1) reading – the ability to understand, use and reflectively process texts, including the texts of culture, leading to the achievement of one’s own objectives, personal development and active participation in society;
- 2) mathematical thinking – the ability to use the tools of mathematics in everyday life and to formulate judgments based on mathematical reasoning;
- 3) scientific thinking – the ability to use scientific knowledge to identify and solve problems and draw conclusions based on empirical observations of nature and society;
- 4) the ability to communicate in one’s native language and a foreign language, both in speech and in writing;
- 5) the ability to effectively use modern information and communication technologies;
- 6) the ability to seek out, select and critically analyse information;
- 7) the ability to recognise one’s own educational and learning needs;
- 8) the ability to work in teams.

One of the key tasks of schools at the III and IV stages of education is continuing development of the ability to use polish language, including solicitude for enriching the vocabulary of pupils. Fulfilling the task is a responsibility of every teacher.

Preparing pupils for life in an information society is an important task of school at the III and IV educational stages. During classes related to different subjects teachers should create conditions for developing the following skills using ICT technologies: searching, organizing and using information from different sources.

(...)

Since the means of social communication play an increasingly important role, both in social and individual life, every teacher should devote a lot of attention to media education, i.e. educating students to properly receive and use the media.

An important goal of the school's activities at the III and IV educational stages is effective language teaching. It is very important to adapt the classes to the level of preparation of the student, which he obtained at earlier educational stages.

Source: Regulation of the Minister of National Education of 23 December 2008 on the core curriculum for pre-school child development and general education in specific types of schools 2008 [Rozporządzenie Ministra Edukacji Narodowej z dnia 23 grudnia 2008 r. w sprawie podstawy programowej wychowania przedszkolnego oraz kształcenia ogólnego w poszczególnych typach szkół, Dz.U. 2009, poz. 17].

Vocational education core curriculum

Both 2012 and 2019 vocational education core curricula state that:

„Integrating and correlation of vocational and general education, including key competences gained in general education on lower stages of education plays a

crucial role in the process of vocational training. An adequate level of general knowledge linked with professional knowledge will impact the vocational competences of graduates of vocational schools, allowing them to cope with the challenges of the changing labour market' [own translation].

The structure of the core curriculum in VET is different for the recently implemented qualifications (2019) and the ones used since 2012. However in both cases, separate sets of learning outcomes for TKCs are used, which can be seen as further underlining of the importance of key competences for learners and the society.

The 2019 core curriculum defined no sets of learning outcomes which are the same for all occupations, but uses proposed elements of universal structure for all of them. According to the interviews, the new structure of the core curriculum³⁸ arises from the need to adapt the descriptions of learning outcomes to specific needs of a given trade / occupation. For example, the personal and social competences required in trades the construction and tourism sectors are different – which is reflected in the detailed descriptions in those two categories of learning outcomes.

The vocational education core curriculum used in 2012-2021 defined:

- 1) the aims and objectives of vocational education;
- 2) the learning outcomes attained in the educational process, including:
 - a) learning outcomes common to all occupations, related to:
 - workplace health and safety,
 - starting and operating business activities,
 - foreign language ability related to the occupation,
 - personal and social competencies,
 - organising the work of small teams (in upper secondary technical schools and post-secondary non-tertiary schools);
 - b) learning outcomes common to the occupations in a field of learning constituting the foundation for education in an occupation or group of occupations: administrative-service oriented, construction, electrical-electronics, mechanics-mining-metallurgy, agriculture-forestry with environmental protection, tourism-gastronomy, medical and social, creative arts;

³⁸ Note: both authors have been consulted in the process of designing the structure.

c) learning outcomes specific to an occupation described in the qualifications for the occupation;

3) description of the education for specific occupations, including:

- the aims of the education,
- the names of the distinguished qualifications,
- the conditions required to undertake training in a given occupation,
- minimum number of hours of vocational education,
- additional qualifications which may be achieved within the specific field of learning.

The universal categories, names of sets of learning outcomes, in 2019 core curriculum are:

- workplace health and safety,
- foreign language ability related to the occupation,
- personal and social competencies,
- organising the work of small teams (in occupations taught in upper secondary technical schools and post-secondary non-tertiary schools);

The outcomes in these categories are sometimes described identically (e.g. for foreign language) and in some cases descriptions have been adapted to specific needs of an occupation or sector. However it has been explicitly stated in the supplementary text to the resolution (uzasadnienie), that even in case of identical descriptions, the contents of training need to be adapted at school level.

3 Formulation of TKC and their location in curricula

This chapter is focused on the formulation of learning outcomes in the core curricula and their location. Identification and analysis of this information is one of the research goals of the TRACK-VET project. However, drawing any conclusions from this analysis should require previous realisation of three facts:

- The programme documents provide a picture of expected learning outcomes. It is useful to think of the core-curriculum as a policy-makers vision. Realization of this vision is formally expected of school principals and teachers, however the vision may be interpreted and implemented in different ways – this especially relevant for transversal key competences;
- The programme documents do not provide a representation of school reality. For once, as any description, it can only be a poor match for reality. Secondly it

is subject to policy decisions, resulting in additional focus on specific issues. As a result, analysis of core curricula may bring a more representative view of policy goals, than it does of reality;

- The learning outcomes in core curricula in Poland are basis for preparing external examinations. This creates a specific bias, namely limiting the detailed part of the curriculum to measurable and observable learning outcomes, which might lead the reader of these standards away from didactic realities of pupil formation in schools³⁹.

In the Polish formal VET system the importance of transversal key competences is underlined in the introductory part of the core curricula. It is stated that developing TKC's is obligatory during realization of all programmes and use of specific teaching approaches (such as study projects or employing modular training) is suggested.

The learning outcomes related to transversal key competences are located in both general and vocational core curricula. Both of these documents are basis for preparing curricula in VET schools. As a result, the pupils programmes consist of four ideal types of learning modules (subjects and activities):

- subjects related mostly to general education core-curriculum (such as Polish language, social studies (*wiedza o społeczeństwie*), philosophy);
- subjects related to both core-curricula (such as mathematics, physics, introduction to entrepreneurship (*podstawy przedsiębiorczości*), foreign language);
- subjects relating to VET core-curriculum (such as technology and knowledge of materials (*technologia i materiałoznawstwo*), technical drawing, electronics and electrotechnics (*elektronika i elektrotechnika*)⁴⁰;
- and practical training (in workshops and/or workplace).

The TKC's in general education are located across subjects and integrated with specific contents. In the sample of learning outcomes shown below, we present examples of learning outcomes from a broad range of subjects and levels. Please note, that in some cases we give examples from subjects which:

- Are not realized in all types of vocational schools – e.g. a different set of subjects are realized in lower-upper secondary VET schools and in upper-secondary VET schools. For example, pupils can choose between philosophy and ethics in upper-secondary school, whereas there is no philosophy in general core-curriculum for lower-upper secondary VET schools. Post-secondary VET schools are not

³⁹ Or as some authors suggest, this bias might also lead to reductionism in education, where teachers limit their didactic approach to these measurable and observable learning goals (Hussey & Smith, 2002; Lassnigg, 2012).

⁴⁰ Note that the names of vocational subjects varies between schools and occupations significantly.

realizing the general education curriculum (finishing upper secondary general education is an entry criterion);

- Are realized at an earlier stage of education, namely lower secondary education (*gimnazjum*), since education at higher stages is a continuation and these outcomes should be developed in previous years of education of VET schools pupils.

The general conclusion of the analysis is that the GE and VET core-curricula are addressing all TKC's, as indicated in the EU recommendation on key competences. The specificity of learning outcomes, which in Poland are statements that need to be precise and verifiable, creates an overrepresentation of outcomes that are linked to the cognitive domain of learning. This can be interpreted as a limitation of the descriptive approach employed in the programme documents. As the interviews suggest, learning outcomes related to the psycho-motoric and affective domain are being developed during the education process, but the way and scope of these didactic process varies significantly depending on factors such as teacher competence and available learning opportunities.

A relevant point has been made by one of the interviewees, stating that the social competences are often (also) developed during extracurricular activities. This point will require further inquiry, but seems a valid hypothesis, which could be extended to all TKC's. However, representative data on extracurricular activities of pupils in VET schools is not available in Poland.

The VET core curriculum addresses especially: personal, social, learning competences and problem solving. Entrepreneurship was represented in all qualifications and occupations in the core-curriculum until 2019, but has been removed from there and remains a part of the 'fundamentals of entrepreneurship' subject in general education. However in some occupations, which usually require self-employment, these competences are present in occupation-specific part of the curriculum (e.g. hairdresser).

The learning outcomes related to TKC's in VET core-curricula are of relatively low granularity, as compared to occupation specific outcomes⁴¹. A relevant change in the approach to formulating learning outcomes in the VET core-curriculum has been implemented in the 2019 reform. Namely the learning outcomes have been supplemented by verification criteria (of high granularity). Examples are presented throughout the following subchapter.

⁴¹ However, it needs to be noted, that the approach to learning outcomes in formal education in Poland remains quite detailed. So in international comparison, they could be perceived as moderate or even high granularity outcomes.

3.1 Formulation of TKC in national and school curricula and other documents

3.1.1 Personal, social competences and learning competence

GENERAL CORE CURRICULUM

Exemplary description of learning outcomes in curriculum	Subject	Relevant curriculum (year of act)
Improving the ability to use various sources of information, including digital resources, assessing their reliability, reliability and substantive correctness.	Polish language	5-year secondary technical school (2017)
Developing habits of systematic learning, ordering acquired knowledge and its deepening, and the synthesis of the material learned.	Polish language	5-year secondary technical school (2017)
Developing the habit of independent, systematic reading.	Polish language	5-year secondary technical school (2017)
Developing talents and interests through participation in various forms of intellectual and creative activity.	Polish language	5-year secondary technical school (2017)
Strengthening the attitude of respect for other people's intellectual property.	Polish language	5-year secondary technical school (2017)
Developing skills to effectively use information technology in searching, organizing and using the acquired information.	Polish language	5-year secondary technical school (2017)
Discusses various forms of learning and assesses their biological significance (perceptive learning, instilling, habituation, trial and error learning, insight learning, imitation learning, motor learning).	Nature	3-year lower secondary schools (2017)
Describes the reflex arc, lists types of reflexes and presents the role of conditional reflexes in learning.	Biology	3-year lower secondary schools (2017)
Analyses the relationship between proper sleep and the functioning of the body, in particular the impact on learning and memory processes and body immunity.	Biology	3-year lower secondary schools (2017)
Chooses ways to reduce excessive stress and deal with it constructively.	Physical education	5-year secondary technical school (2017)
Explains the role of hormones in response to stress.	Biology	5-year secondary technical school (2017)
Explains the role of hormones in human stress response,	Biology	5-year secondary technical school (2017)
Discusses ways to reduce excessive stress and deal with it constructively.	Physical education	3-year lower secondary schools (2017)

Describes the chemical aspects of stress.	Nature	3-year lower secondary schools (2017)
Lists factors that cause stress and gives examples of positive and negative effects of stress.	Biology	3-year lower secondary schools (2017)
Presents ways of dealing with stress.	Biology	3-year lower secondary schools (2017)
Determines the factors that affect the body's homeostasis disorder (stress, harmful substances, including drugs, drug and certain drug abuse, biological pathogens).	Biology	3-year lower secondary schools (2017)
Raising personal and social competences necessary on the labour market and strengthening motivation to work.	Introduction to entrepreneurship	5-year secondary technical school (2017)
Interest in running your own business and motivation to continuous self-development and investing in yourself.	Introduction to entrepreneurship	5-year secondary technical school (2017)
Is able to communicate his feelings and build proper family relationships;	Family life education	Elementary school classes IV-VIII (2017)
Notes and appreciates the formative role of the family: in the transfer of knowledge (about life, man, the world, interpersonal relations), shaping attitudes, practicing skills, creating hierarchy of values, teaching norms and behaviours compatible with them.	Family life education	Elementary school classes IV-VIII (2017)
Understands how interpersonal relationships are built, explains their importance in socio-emotional development; can present the essence of: camaraderie and friendship, youth crush, first fascinations, falling in love, love; draws attention to the need and value of mutual respect, assistance, empathy and cooperation.	Family life education	Elementary school classes IV-VIII (2017)
Understands the principles of verbal and non-verbal communication and its importance in interpersonal relations; accepts responsibility for manifested reactions, spoken and written words.	Family life education	Elementary school classes IV-VIII (2017)
Discusses the importance for health of good relationships with other people, including parents and peers of the same and opposite sex.	Physical education	3-year lower secondary schools (2017)
Reflects on the problem of the impact of consumerism, workaholism and economic pressure associated with maximizing profits on human health and life and his family ties.	Geography	5-year secondary technical school (2017)
Discusses the health benefits of undertaking various forms of physical activity in subsequent periods of human life.	Physical education	3-year lower secondary schools (2017)
Explains what health is; lists factors that have a positive and negative impact on health and well-being, and indicates those on which it may affect;	Physical education	3-year lower secondary schools (2017)

Lists behaviour that is conducive to and threatening health, and explains what it is and how to make health-beneficial choices.	Physical education	3-year lower secondary schools (2017)
Explains the relationship between physical activity and nutrition and health and well-being, and discusses how to maintain adequate body weight throughout all life periods;	Physical education	3-year lower secondary schools (2017)
Explains where to look for reliable health and sport information, and critically analyses media information in this regard.	Physical education	3-year lower secondary schools (2017)
Performs shaping and compensating exercises to counteract the negative effects of health on work, including sitting and using the computer.	Physical education	3-year lower secondary schools (2017)
Explains the relationship between physical activity and nutrition and health and well-being, and discusses how to maintain adequate body weight throughout all life periods.	Physical education	I stage sectoral school (2017)
Explains where to look for reliable health and sport information, and critically analyses media information in this regard.	Physical education	I stage sectoral school (2017)
Performs shaping and compensating exercises to counteract the negative effects of health on work, including sitting and using the computer.	Physical education	I stage sectoral school (2017)
Explains the relationship between professional sport and sport for all and health.	Physical education	I stage sectoral school (2017)
Explains why health is a value for man and a resource for society, and what care for health in youth and early adulthood consists in.	Physical education	I stage sectoral school (2017)
Explains what responsibility for one's own and other people's health means.	Physical education	I stage sectoral school (2017)
Explains what is self-examination and self-monitoring of health, and why you should undergo preventive examinations throughout your life.	Physical education	I stage sectoral school (2017)
Plans a project on selected health issues and indicates ways of attracting project allies and co-participants at school, home or in the local community.	Physical education	I stage sectoral school (2017)
Discusses the participation of people, organizations and institutions in activities for health.	Physical education	I stage sectoral school (2017)
Explains the relationship between health and the environment, and what it can do to create a health-friendly environment.	Physical education	I stage sectoral school (2017)
Understands that abortion can pose a threat to mental and physical health - legal, medical and ethical aspects.	Family life education	I stage sectoral school (2017)

Gives examples of activities that are an expression of concern for one's own health and life.	Ethics	I stage sectoral school (2017)
Uses the acquired chemical knowledge in everyday life in the context of caring for his own health and environmental protection.	Chemistry	I stage sectoral school (2017)
Presents the negative impact on human health of some psychoactive substances (tobacco, alcohol), drugs and doping agents as well as abuse of caffeine and some drugs (especially those affecting the psyche).	Biology	3-year lower secondary schools (2017)

VOCATIONAL CORE CURRICULUM

Exemplary description of learning outcomes in curriculum	Occupation	Unit of learning outcomes (year)
Observes cultural and ethical principles.	All	Personal and social competences (2012)
Is creative and consistent in performing tasks.	All	Personal and social competences (2012)
Anticipates the consequences of enrolment activities.	All	Personal and social competences (2012)
Is open to change.	All	Personal and social competences (2012)
Is able to cope with stress.	All	Personal and social competences (2012)
Updates knowledge and improves professional skills.	All	Personal and social competences (2012)
Ensures professional secrecy.	All	Personal and social competences (2012)
Takes responsibility for undertaking activities.	All	Personal and social competences (2012)
Is able to negotiate the terms of agreements.	All	Personal and social competences (2012)
Is able to work in a team.	All	Personal and social competences (2012)
Adheres to the principles of personal culture and professional ethics: 1) applies the principles of personal culture and generally accepted norms of behaviour in a work environment 2) accepts responsibility for entrusted professional information 3) explains what is ethical behaviour in the profession	Operator of machinery and equipment for plastics processing	CHM.01.7. Personal and social competences (2019)

4) indicates examples of ethical behaviour in the profession		
Plans to perform the task: 1) discusses activities carried out as part of working time 2) determines the time of task completion 3) performs tasks within the prescribed time 4) monitors the implementation of the planned tasks 5) modifies scheduled tasks 6) performs self-assessment of the work performed	Operator of machinery and equipment for plastics processing	CHM.01.7. Personal and social competences (2019)
Is responsible for the actions taken: 1) provides for the effects of actions taken, including legal effects 2) shows awareness of responsibility for the work performed 3) assess the actions taken 4) provides for the consequences of improper performance of professional activities at the workplace, including the use of hazardous substances, and improper operation of machinery and equipment at the workplace	Operator of machinery and equipment for plastics processing	CHM.01.7. Personal and social competences (2019)
Demonstrates creativity and openness to changes: 1) gives examples of the impact of change on various situations of social and economic life 2) indicates examples of the introduction of the change and assesses the effects of its introduction 3) suggests ways of solving problems related to the performance of professional tasks in unpredictable conditions	Operator of machinery and equipment for plastics processing	CHM.01.7. Personal and social competences (2019)
Uses stress coping techniques: 1) recognizes the sources of stress while performing professional tasks 2) choose stress management techniques appropriate to the situation 3) indicates the most common causes of stressful situations at work 4) presents various forms of assertive behaviour as ways of coping with stress 5) distinguishes between conflict resolution techniques related to the performance of professional tasks	Operator of machinery and equipment for plastics processing	CHM.01.7. Personal and social competences (2019)

6) determine the effects of stress		
<p>Excellent professional skills:</p> <ol style="list-style-type: none"> 1) obtain professional information on industry from various sources 2) defines the scope of skills and competences necessary to practice the profession 3) analyses its own competences 4) sets its own goals and plans a path of professional development 5) indicates opportunities for raising professional, personal and social competences 	Operator of machinery and equipment for plastics processing	CHM.01.7. Personal and social competences (2019)
<p>Applies the principles of interpersonal communication:</p> <ol style="list-style-type: none"> 1) identifies verbal and non-verbal signals 2) uses active methods of listening 3) conducts discussions 4) provides feedback 	Operator of machinery and equipment for plastics processing	CHM.01.7. Personal and social competences (2019)
<p>Applies methods and techniques for solving problems:</p> <ol style="list-style-type: none"> 1) describes ways of preventing problems in the team carrying out tasks 2) describes problem solving techniques 3) indicates, on the selected example, methods and techniques for solving the problem 	Operator of machinery and equipment for plastics processing	CHM.01.7. Personal and social competences (2019)
<p>He works in a team:</p> <ol style="list-style-type: none"> 1) works in a team, being responsible for tasks carried out jointly 2) observes the division of roles, tasks and responsibilities in the team 3) is involved in the implementation of joint activities of the team 4) modifies the manner of behaviour, taking into account the position developed jointly with other team members 	Operator of machinery and equipment for plastics processing	CHM.01.7. Personal and social competences (2019)

3.1.2 Civic competences

GENERAL CORE CURRICULUM

Exemplary description of learning outcomes in curriculum	Subject	Relevant curriculum (year of act)
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Explains how divisions are created in the group and in society (for example, "their" and "strangers"), and gives possible ways to oppose the manifestations of intolerance.	Social studies	3-year lower secondary schools (2017)
Characterizes selected communities, communities, communities, societies due to their rules and relationships.	Social studies	3-year lower secondary schools (2017)
Describes the class-layer structure of Polish society and its local community.	Social studies	3-year lower secondary schools (2017)
Characterizes historical forms of the organization of society (primary, traditional, industrial, post-industrial).	Social studies	3-year lower secondary schools (2017)
Discusses the features of modern Western society (open, post-industrial, consumer, mass, information).	Social studies	3-year lower secondary schools (2017)
Explains what the cultural pluralism of contemporary society consists of and where it comes from; analyses the consequences of this phenomenon.	Social studies	3-year lower secondary schools (2017)
Presents the role of school and informal education in contemporary information society.	Social studies	3-year lower secondary schools (2017)
Presents the philosophical origin of the concept of civil society (John Locke, Georg Hegel, Alexis de Tocqueville).	Social studies	3-year lower secondary schools (2017)
Lists entities of civil society.	Social studies	3-year lower secondary schools (2017)
Explains how social capital is created and how important for civil society (trust, cooperation networks and effective standards system).	Social studies	3-year lower secondary schools (2017)
Explains why health is a value for man and a resource for society, and what care for health in youth and early adulthood consists in.	Physical education	I stage sectoral school (2017)
Recognizes national values related to its own cultural heritage, e.g. Homeland, small homeland, community, nation, society, citizenship.	Minority language	I stage sectoral school (2017)
Describes the opportunities and threats to the development of society resulting from the development of information and communication technologies.	Information technology	I stage sectoral school (2017)
Compares fascism with nazism, taking into account the organization of the state, ideology and policy towards society;	History	I stage sectoral school (2017)
Presents - using the results of public opinion polls - a catalogue of values affirmed in Polish society and analyses it; analyses the role of values in the worldview.	Social studies	5-year secondary technical school (2017)
Distinguishes tolerance from acceptance; explains how divisions in society are created between "theirs" and "strangers"; recognizes the causes,	Social studies	5-year secondary technical school (2017)

manifestations and effects of intolerance and stigmatization, and presents possible ways to oppose these phenomena.		
Characterizes contemporary society and analyses its features (open, post-industrial, consumer, mass and information).	Social studies	5-year secondary technical school (2017)
Recognizes the life problems of young people in Polish society and formulates judgments on these matters.	Social studies	5-year secondary technical school (2017)
Explains the concept of globalization and shows its forms and effects in the sphere of politics, culture and society; diagnoses the impact of international law entities on this process; presents the major challenges of the globalization process.	Social studies	5-year secondary technical school (2017)
Analyses various socio-political attitudes and behaviour as well as civil society activities.	Social studies	5-year secondary technical school (2017)
Characterizes collecting, hunting, nomadic and agricultural societies; characterizes the selected contemporary community of this type.	Social studies	5-year secondary technical school (2017)
Characterizes a traditional rural community; points to the differences between industrial and post-industrial society.	Social studies	5-year secondary technical school (2017)
Presents - using the results of opinion polls - the commonality and diversity of values affirmed in European societies.	Social studies	5-year secondary technical school (2017)
Characterizes religion as a social phenomenon; analyses religiousness in contemporary Polish society and compares it with religiousness in another society.	Social studies	5-year secondary technical school (2017)
Presents the layered structure of contemporary Polish society.	Social studies	5-year secondary technical school (2017)
Presents - using the results of public opinion polls - the attitudes of Polish society towards national and ethnic minorities and towards other nations (including immigrants); recognizes the manifestations of xenophobia and justifies the need to oppose this phenomenon.	Social studies	5-year secondary technical school (2017)
Presents the multi-layered national identity on the example of European societies (Kingdom of Belgium, Kingdom of Spain, the Swiss Confederation and the United Kingdom of Great Britain and Northern Ireland).	Social studies	5-year secondary technical school (2017)
Presents the ideas of civil society and characterizes its development in the 20th-century Polish state.	Social studies	5-year secondary technical school (2017)
Explains - using social research results - how social capital and trust are created and how important for civil society; shows how everyday behaviour is conducive to building or destroying social capital.	Social studies	5-year secondary technical school (2017)

Explains what the political culture of society is; characterizes its types in a classic approach.	Social studies	5-year secondary technical school (2017)
Analyses - using the results of opinion polls - the attitudes of Polish society towards public institutions and politicians.	Social studies	5-year secondary technical school (2017)
Explains the relationship between political parties and society; considers, on selected examples, the phenomenon of the crisis of political parties and the relevance of the category of "politics without ideology".	Social studies	5-year secondary technical school (2017)
Shows the relevance of the issue of "aging society"; presents the main assumptions of the state policy towards the elderly; explains the principle of social solidarity in social security in the Republic of Poland.	Social studies	5-year secondary technical school (2017)
Analyses the conditions for the development of the information society; presents a strategy for the development of the information society in the Republic of Poland.	Social studies	5-year secondary technical school (2017)
Demonstrates the possibility of public opinion and society's political behaviour influencing political decisions of authorities at various levels.	Social studies	5-year secondary technical school (2017)
Considers treating punishment as a retribution, social rehabilitation and social impact.	Social studies	5-year secondary technical school (2017)
Characterizes the impact of global corporations on contemporary politics, the economy and society.	Social studies	5-year secondary technical school (2017)
Gives examples of the impact of computer science and computer technology on the most important areas of personal and professional life; uses selected e-services; presents the impact of technology on social well-being and social communication.	Information technology	5-year secondary technical school (2017)
Presents trends in the historical development of IT and technology and their impact on the development of societies.	Information technology	5-year secondary technical school (2017)
Describes the damage that pirate actions on the network can cause to individuals, selected institutions and society as a whole.	Information technology	5-year secondary technical school (2017)
Communicates in matters of social life, including public life, and discusses and presents own arguments in selected matters of this type.	Social studies	Elementary school classes IV-VIII (2017)
Communicates in a group and is able to make contacts with new people.	Music	5-year secondary technical school (2017)
Communicates using information and communication technologies with members of the group cooperating on the project.	Information technology	3-year lower secondary schools (2017)
Discusses the participation of people, organizations and institutions in activities for health.	Physical education	I stage sectoral school (2017)

Gives formal conditions to be met by a citizen to participate in elections.	Social studies	I stage sectoral school (2017)
Takes part in a class, school or internet debate on freedom of expression or other rights and freedoms;	Social studies	I stage sectoral school (2017)
Participates in forum discussions.	Information technology	3-year lower secondary schools (2017)
Participates in online discussions (internet forum, chat).	Information technology	3-year lower secondary schools (2017)
Presents arguments for participation in local, national and European elections.	Social studies	3-year lower secondary schools (2017)
Characterizes Poland's defence policy; NATO membership, participation in international peacekeeping missions and military operations.	Social studies	3-year lower secondary schools (2017)
Presents the characteristics and skills of an entrepreneurial man; takes part in social projects that allow them to develop.	Social studies	3-year lower secondary schools (2017)
Gives formal conditions to be met by a citizen to participate in elections.	Social studies	3-year lower secondary schools (2017)
Takes part in a class, school or internet debate on freedom of expression or other rights and freedoms.	Social studies	3-year lower secondary schools (2017)
Takes active part in artistic, animation, social and other school events (exhibition, happening, school performance, school newsletter, cultural charity).	Cultural studies	3-year lower secondary schools (2017)
Discusses and participates in debates respecting the dignity of other participants.	Social studies	5-year secondary technical school (2017)
Actively participates in exhibitions and actions organized by the creators.	Art	5-year secondary technical school (2017)
Participates in artistic performances organized by local artists and performers on the occasion of charity, occasional or anniversary concerts, as well as in music workshops conducted by various creators and animators.	Music	5-year secondary technical school (2017)
Participates in the discussion, justifies his own opinion, adopts the views of others or disputes with them.	Polish language	3-year lower secondary schools (2017)

VOCATIONAL CORE CURRICULUM

Exemplary description of learning outcomes in curriculum	Occupation	Unit of learning outcomes (year)
Observes cultural and ethical principles;	All	Personal and social competences (2012)

3.1.3 Entrepreneurship competence

GENERAL CORE CURRICULUM

Exemplary description of learning outcomes in curriculum	Subject	Relevant curriculum (year of act)
Uses forms of verbal and non-verbal communication; makes decisions and assesses their effects, both positive and negative	Introduction to entrepreneurship	3-year lower secondary schools (2017)
Explains the principles of enterprise functioning and draws up a simple business plan; characterizes the mechanisms of functioning of the economy and market institutions and the role of the state in the economy; analyses current changes and trends in the world and Polish economy; distinguishes and compares investment forms and the resulting risk	Introduction to entrepreneurship	3-year lower secondary schools (2017)
Describes the strengths of his personality; analyses the availability of the labour market in relation to own competences and professional plans	Introduction to entrepreneurship	3-year lower secondary schools (2017)
Explains ethical principles in business and employee-employer relations, is able to assess ethical behaviour	Introduction to entrepreneurship	3-year lower secondary schools (2017)
Presents the characteristics of an entrepreneur;	Introduction to entrepreneurship	3-year lower secondary schools (2017)
Recognizes assertive, submissive and aggressive behaviour; relates them to the characteristics of an entrepreneurial person;	Introduction to entrepreneurship	3-year lower secondary schools (2017)
Recognizes the strengths and weaknesses of his personality; relates them to the characteristics of an entrepreneurial person;	Introduction to entrepreneurship	3-year lower secondary schools (2017)
Characterizes his social roles and typical behaviours;	Introduction to entrepreneurship	3-year lower secondary schools (2017)
Knows the benefits of planning your own activities and investing in yourself;	Introduction to entrepreneurship	3-year lower secondary schools (2017)
Analyses the professional career of a person who, in accordance with the principles of ethics, has succeeded in his professional life;	Introduction to entrepreneurship	3-year lower secondary schools (2017)
Makes rational decisions based on information available and assesses the effects of its own actions;	Introduction to entrepreneurship	3-year lower secondary schools (2017)
Uses various forms of verbal and non-verbal communication to self-present and present his own position;	Introduction to entrepreneurship	3-year lower secondary schools (2017)
It presents the path that one claims to be entitled to as a team member, employee, consumer;	Introduction to entrepreneurship	3-year lower secondary schools (2017)
He knows the rights of consumers and lists the institutions guarding them; presents rules for	Introduction to entrepreneurship	3-year lower secondary schools (2017)

submitting complaints in the event of non-compliance of the goods with the contract;		
Reads information contained in advertisements, distinguishing them from persuasive elements; indicates positive and negative examples of the impact of advertising on consumers.	Introduction to entrepreneurship	3-year lower secondary schools (2017)
Taking advantage of opportunities arising on the market, taking initiative, ingenuity and the ability to overcome internal and external barriers.	Introduction to entrepreneurship	5-year secondary technical school (2017)
Designing activities in the scope of setting up your own enterprise or undertaking other socio-economic undertakings.	Introduction to entrepreneurship	5-year secondary technical school (2017)
Inspired by the experience of own and well-known entrepreneurs and based on collected information from the market, he finds an idea for his own business or social enterprise, assessing it in terms of innovation;	Introduction to entrepreneurship	5-year secondary technical school (2017)
Prepares in the form of a business plan a project of his own enterprise or other socio-economic undertaking and presents it in writing or in the form of a presentation;	Introduction to entrepreneurship	5-year secondary technical school (2017)
Analyses the micro and macro environment of the enterprise, identifies strengths and weaknesses as well as opportunities and threats of the project being planned, choosing its location;	Introduction to entrepreneurship	5-year secondary technical school (2017)
Characterizes the basic organizational and legal forms of enterprises (individual business, civil law partnership, commercial law companies) and social entrepreneurship (including labour cooperative, social cooperative, association, foundation) and, taking into account the legal and property liability of owners, selects the form for the proposed enterprise or enterprise ;	Introduction to entrepreneurship	5-year secondary technical school (2017)
Finds opportunities for financing business activities or projects being planned (including funds from financial institutions, employment offices, EU funds and venture capital, "business angels") and defines the functions of business incubators in the creation and development of small businesses, including start-ups;	Introduction to entrepreneurship	5-year secondary technical school (2017)
Characterizes the main marketing instruments, understands their role in the functioning of the enterprise and uses their knowledge in this area to design marketing activities in the planned enterprise or undertaking;	Introduction to entrepreneurship	5-year secondary technical school (2017)
Demonstrating creativity, he designs promotional activities, justifies their role in the planned undertaking and discusses the positive and negative examples of the impact of advertising on customers;	Introduction to entrepreneurship	5-year secondary technical school (2017)

He works in a team implementing the project;	Practical economics	3-year lower secondary schools (2017)
Presents the characteristics and skills of an entrepreneurial man; takes part in social projects that allow them to develop;	Social studies	3-year lower secondary schools (2017)
Prepares a budget for a specific project from the student, class or school life; considers expenses and sources of financing;	Social studies	3-year lower secondary schools (2017)
He actively participates in artistic, animation, social and other school events (exhibition, happening, school performance, school newsletter, cultural charity);	Cultural studies	3-year lower secondary schools (2017)
Organizes simple cultural activities (meeting with the creator of the culture, artistic undertaking, presentation of own interests, local or regional tradition);	Cultural studies	3-year lower secondary schools (2017)
Selects the form of student undertaking;	Practical economics	3-year lower secondary schools (2017)
Defines the stages of the project and divides them into partial tasks;	Practical economics	3-year lower secondary schools (2017)
Forecasts financial and non-financial effects of the undertaking, taking into account costs and revenues.	Practical economics	3-year lower secondary schools (2017)
Makes rational decisions based on information available and assesses the effects of its own actions;	Introduction to entrepreneurship	3-year lower secondary schools (2017)
Lists the basic stock market indicators and explains their importance in making decisions about investing in the stock market;	Introduction to entrepreneurship	3-year lower secondary schools (2017)
Makes rational decisions based on information available and assesses the effects of its own actions;	Introduction to entrepreneurship	I stage sectoral school (2017)
Lists the basic stock market indicators and explains their importance in making decisions about investing in the stock market;	Introduction to entrepreneurship	I stage sectoral school (2017)
Uses the terms necessary to characterize the action in terms of its moral assessment: decision, act, agency, conflict, problem, subject of the action (author, perpetrator), recipient of the action, intention of action, motive of action, content of the action, effect (consequence), circumstances of the action .	Ethics	I stage sectoral school (2017)

VOCATIONAL CORE CURRICULUM

Exemplary description of learning outcomes in curriculum	Occupation	Unit of learning outcomes (year)
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Applies concepts from the field of market economy;	All	Starting and operating a business (2012)
Applies regulations from labour law, personal data protection, tax law and copyright;	All	Starting and operating a business (2012)
Applies the legal regulations related to performing business activities;	All	Starting and operating a business (2012)
Distinguishes the enterprises and institutions operating within a branch of industry and the relationships among them;	All	Starting and operating a business (2012)
Analyses the activities of enterprises functioning within a given industry;	All	Starting and operating a business (2012)
Initiates common activities with various enterprises from a given industry;	All	Starting and operating a business (2012)
Prepares the documents required to start and operate a business;	All	Starting and operating a business (2012)
Conducts correspondence related to operating a business;	All	Starting and operating a business (2012)
Operates office equipment and uses computer programs aiding in the operation of a business;	All	Starting and operating a business (2012)
Plans and performs marketing activities related to the elaborate business activities;	All	Starting and operating a business (2012)
Optimises income and expenses related to the elaborate business activities.	All	Starting and operating a business (2012)
Demonstrates creativity and openness to changes: 1) describes methods and ways of solving problems 2) takes the initiative in an unusual situation 3) evaluate various options for action 4) uses methods and ways to solve problems	Fire technician	BPO.03.6. Personal and social competences
Demonstrates creativity and openness to changes: 1) defines the characteristics of creativity 2) justifies the importance of change in human life 3) lists the sources of organizational changes 4) lists the stages of implementing the change 5) identifies the reasons for resistance to changes in the work environment	Dealer; Sales technician; Bookselling technician	HAN.01.6. Personal and social competences

6) indicates the need for change 7) takes the initiative in an unusual situation 8) reacts flexibly to unpredictable situations		
Apply the law on establishing a beauty salon: 1) apply the provisions on the protection of personal data 2) characterizes the types of taxes and the methods of their settlement 3) discusses the forms of insurance for the activities of a beauty salon	Cosmetic technician services	FRK.04.2. Basics of cosmetics
Prepares the documentation necessary to run and run a beauty salon: 1) plans the organizational and legal form of the beauty parlour 2) prepares the application to register the beauty salon 3) performs a cost and revenue analysis of the beauty salon 4) draw up a business plan for a beauty salon 5) prepares letters related to running a beauty salon	Cosmetic technician services	FRK.04.2. Basics of cosmetics
Plans and undertakes marketing activities to run a beauty salon: 1) draws up a marketing plan 2) uses various forms of advertising 3) defines ways to optimize the costs and revenues of a beauty salon	Cosmetic technician services	FRK.04.2. Basics of cosmetics

3.1.4 Cultural awareness and expression competence

GENERAL CORE CURRICULUM

The key subject for development of cultural awareness and expression competence is Polish language. However because of the intangible nature of the cultural competences, it is partially reflected in the introductory part to the core curriculum of 2017:

"Literary and cultural education in secondary general and technical school should emphasize the existential aspects of the experience of oneself, others, the world, open an interesting space for thinking and valuing through contacts with valuable literature and other cultural texts. It should at the same time introduce pupils into tradition, which serves as a guardian of collective memory,

a link between old and modern years - a relay of content distinguished from cultural heritage as socially important and momentous, both in the past and modern time, in tradition, which is an important factor in worldview processes that affect shaping human identity. Reading texts of literature and culture should teach not only dialogue with tradition, but inspire to ask questions conditioned by personal and cultural context, understand the role of the symbol and metaphor related to cultural (spiritual), moral and sacred values. The task of the secondary school is therefore to shape cultural competence: knowledge and skills as well as independence in the perception and interpretation of complex content. This is particularly important for young people's reflection both on contemporary culture and also on the human condition in the modern world; on the important challenges of the world, culture and civilization that humanity should face. " [own translation]

In other subjects information about the role of teachers is presented. Below part of the introductory part to minority language subject (conditions and form of implementation) in core curriculum of 2017:

"The work of a teacher of a national or ethnic minority language consists of creating situations conducive to the development of students interests and their conscious participation in culture. In organizing the teaching process, the teacher is obliged to use methodological solutions that ensure the integration of literary, language and cultural education to students at different levels of intellectual development. In his work he should use activating methods, among others discussion, debate, drama, educational project that support the development of independent access to information and presentation of learning outcomes by students. " [own translation]

Exemplary description of learning outcomes in curriculum	Subject	Relevant curriculum (year of act)
Finds and presents information on cultural differences in the expression of emotions in traditional and modern societies.	Nature	3-year lower secondary schools (2017)
Explains the regularities of social and cultural life and social processes, including ethnic ones, in the modern world;	Social studies	5-year secondary technical school (2017)
Acquires and uses information on socio-cultural and political life, critically analyses it, draws conclusions and formulates opinions independently;	Social studies	5-year secondary technical school (2017)
Analyses the features of individualism and collectivism in the psychosocial and institutional aspect; demonstrates the psychocultural diversity of the world in these aspects;	Social studies	5-year secondary technical school (2017)
Analyses the features of mass culture on examples of cultural phenomena;	Social studies	5-year secondary technical school (2017)

Presents various concepts of the nation (political and ethnic-cultural); characterizes nation-forming factors and favourable for maintaining national identity;	Social studies	5-year secondary technical school (2017)
Presents elements of the cultural heritage of an ethnic minority group in the Republic of Poland (national and ethnic minorities, a group using a regional language, immigrants);	Social studies	5-year secondary technical school (2017)
Presents and compares various models of policy towards immigrants (unification / assimilation, integration, multiculturalism) in European countries;	Social studies	5-year secondary technical school (2017)
It presents the socio-cultural specificity of selected indigenous groups (e.g. On the American continent, in the Australian Union or the Asian part of the Russian Federation) and various policy models for these groups;	Social studies	5-year secondary technical school (2017)
Explains examples of mutual political, economic and cultural relations between countries with different levels of GDP and its structure; explains the significance of the colonial period in these relationships;	Social studies	5-year secondary technical school (2017)
Shows the cultural and historical foundations of European unity;	Social studies	5-year secondary technical school (2017)
Understands the notion of literary and cultural tradition, recognizes elements of tradition in works, understands their role in building universal values;	Polish language	5-year secondary technical school (2017)
Specifies the properties of language as a carrier and transmitter of cultural content;	Polish language	5-year secondary technical school (2017)
Recognizes references to the civilizational and cultural context and the meaning of cultural symbols;	Foreign language	5-year secondary technical school (2017)
It presents cultural and civilization changes in the world during the Cold War.	History	5-year secondary technical school (2017)
Characterizes the socio-political, economic and cultural changes of the 90s;	History	5-year secondary technical school (2017)
It distinguishes the main cultural circles, presents the values of their communities and contribution to the cultural heritage of humanity;	Geography	5-year secondary technical school (2017)
He understands the cultural perception of space by man and, based on source materials, analyses the differences in its perception in different cultural circles;	Geography	5-year secondary technical school (2017)
Participates in culture through contact with monuments and works of contemporary art, having a sense of connection with the national tradition and European cultural heritage and appreciating the achievements of other cultural circles (knows the resources of selected cultural institutions);	Art	3-year lower secondary schools (2017)

Recognizes different patterns of social, moral, national, religious, ethical, cultural attitudes and shapes their identity in their context;	Regional language and Kashubian	3-year lower secondary schools (2017)
Recognizes different patterns of social, moral, national, religious, ethical, cultural attitudes and shapes their identity in their context;	Regional language and Kashubian	I stage sectoral school (2017)
Recognizes basic motifs (e.g. Homeland, poet, mother, land, wandering), literary allusions, cultural symbols and signs of tradition and defines their functions in the work; recognizes rhetorical organization of speech;	Regional language and Kashubian	I stage sectoral school (2017)
In the interpretation, he uses elements that are significant to read the meaning of the work (title, subtitle, points, composition, keywords, motto); literary and cultural contexts;	Regional language and Kashubian	I stage sectoral school (2017)
Recognizes national values related to their own cultural heritage, e.g. Homeland, small homeland, community, nation, society, citizenship;	Minority language	I stage sectoral school (2017)
Understands intercultural relations in Poland;	Minority language	I stage sectoral school (2017)
Distinguishes tolerance from acceptance; explains how divisions in society are created between "theirs" and "strangers"; recognizes the causes, manifestations and effects of intolerance and stigmatization and presents possible ways to oppose these phenomena;	Social studies	5-year secondary technical school (2017)
Explains the legal and cultural foundations of religious tolerance in the territories of the Polish-Lithuanian Commonwealth in the 16th century	History	5-year secondary technical school (2017)
It justifies the need to prevent racial discrimination, xenophobia and other forms of intolerance in the world and presents examples of the impact of exclusion of population groups on the social and economic life of countries.	Geography	5-year secondary technical school (2017)
Explains how divisions are created in the group and in society (for example, "on their" and "strangers") and gives possible ways to counteract the manifestations of intolerance.	Social studies	3-year lower secondary schools (2017)
Recognizes racism, chauvinism, anti-Semitism and xenophobia; justifies the need to oppose them and presents opportunities to engage in selected equality and tolerance activities;	Social studies	3-year lower secondary schools (2017)
Distinguishes tolerance from acceptance; assesses their importance for social life;	Social studies	3-year lower secondary schools (2017)
Lists the constitutional obligations of citizens of the Republic of Poland; justifies the importance of civic attitudes and virtues (concern for the common good, responsibility, activity, solidarity, civil courage, prudence, tolerance);	Social studies	3-year lower secondary schools (2017)

He discusses the biological and social background of various forms of intolerance and presents suggestions on how to counteract it;	Nature	3-year lower secondary schools (2017)
Recognizes racism, chauvinism, anti-Semitism and xenophobia; justifies the need to oppose them and presents opportunities to engage in selected equality and tolerance activities;	Social studies	I stage sectoral school (2017)
He expresses feelings and emotions in relation to reality in artistic works, as well as from musical or literary inspirations (impression and expression); draws, paints, illustrates real and imagined phenomena and events (also in correlation with other objects);	Art	Elementary school classes IV-VIII (2017)

VOCATIONAL CORE CURRICULUM

Exemplary description of learning outcomes in curriculum	Occupation	Unit of learning outcomes (year)
<p>Serves dishes:</p> <p>1) indicates the dish of the day in the gastronomy menu cards of different regions of the world</p> <p>2) indicates the hours of serving individual dishes in the culture of different regions of the world</p> <p>3) characterizes sets of dishes and drinks in different regions of the world</p> <p>4) distinguishes types of dishes served to the table in cultures of different nations</p> <p>4) puts dishes and drinks into dishes, taking into account the wishes of guests and the culture of the country in different regions of the world</p>	Waiter	HGT.01.4. Serving guests (2019)
<p>Serves alcoholic beverages:</p> <p>- promotes the culture of drinking alcoholic beverages</p> <p>1) characterizes alcoholic beverages from different regions of the world</p>	Waiter; Waiter technician (waiter service technician)	HGT.01.4. Serving guests (2019)
<p>Characterizes the factors determining the scope of gastronomic services (segmentation of the service market)</p> <p>1) distinguishes factors determining the scope of catering services provided</p> <p>2) selects gastronomic services to the offer of establishments and catering outlets depending on market demand, taking into account geographical, demographic, socio-economic-cultural and behavioural segmentation of guests</p>	Waiter technician (waiter service technician)	HGT.11.3. Personal and social competences (2019)

3) determines the impact of the type of establishment and its functionality on the scope of complementary catering services provided		
Assesses the offer of gastronomy and catering services: (...) 3) prepares customer-oriented gastronomy and catering services: traditional, regional, ethnic, ecological dishes 4) modifies the offer by adapting it to the client's requirements and needs: his financial possibilities, lifestyle, fashion in gastronomy	Technician of nutrition and catering services	HGT.12.5. Conducting catering services

3.2 Additional transversal competences formulated in the national curricula

3.2.1 Critical thinking

GENERAL CORE CURRICULUM

Exemplary description of learning outcomes in curriculum	Subject	Relevant curriculum (year of act)
Performs critical analysis of materials from election campaigns (e.g. spots, memes, leaflets and slogans);	Social studies	5-year secondary technical school (2017)
Critically analyses media messages and compares media messages about the same events or processes; formulates his own opinion based on known facts; recognizes the manifestations of unethical behaviour of journalists;	Social studies	5-year secondary technical school (2017)
Acquires and uses information on socio-cultural and political life, critically analyses it, draws conclusions and formulates opinions independently;	Social studies	5-year secondary technical school (2017)
He critically analyses his own opinions;	Social studies	5-year secondary technical school (2017)
Critically analyses media messages; explains the basic manipulation mechanisms used in the media; points out the role of the Media Ethics Council in the Republic of Poland;	Social studies	5-year secondary technical school (2017)
Conducts a critical analysis of program elements and other electoral materials of the selected election committee of the last elections in the Republic of Poland.	Social studies	5-year secondary technical school (2017)
Critically analyses the sample loan or loan agreement;	Introduction to entrepreneurship	5-year secondary technical school (2017)

He critically assesses films, presentations and photographs made by himself and other authors.	Art	5-year secondary technical school (2017)
He creates coherent statements in the following genre forms: argumentative character, paper, interpretative sketch, critical sketch, definition, encyclopaedic entry, synthesizing note;	Polish language	5-year secondary technical school (2017)
Performs critical source selection;	Polish language	5-year secondary technical school (2017)
Uses multimedia sources of information and critically assesses them;	Polish language	5-year secondary technical school (2017)
Uses multimedia resources, e.g. From: libraries, on-line dictionaries, e-books, author websites; selects Internet sources, taking into account the substantive criterion, and critically assesses their content;	Polish language	5-year secondary technical school (2017)
Explains the principles of critical analysis and interpretation of various types of historical sources;	History	5-year secondary technical school (2017)
He gives examples of actions aimed at reducing disparities in the economic development of countries and regions of the world, and makes their critical assessment;	Geography	5-year secondary technical school (2017)
Critically reconstructs the Platonic argument for the immortality of the soul from its resemblance to eternal ideas (Fedon, 78 d - 80 b);	Philosophy	5-year secondary technical school (2017)
Critically reconstructs the "five roads";	Philosophy	5-year secondary technical school (2017)
Critically reconstructs the Cartesian argument for the existence of the outside world;	Philosophy	5-year secondary technical school (2017)
Critically reconstructs the Pascal plant;	Philosophy	5-year secondary technical school (2017)
He critically reconstructs the following arguments for God's existence: ontological argument, cosmological argument, teleological argument, moral argument;	Philosophy	5-year secondary technical school (2017)
Critically refers to information obtained from various sources, including online.	Biology	5-year secondary technical school (2017)
Critically refers to information obtained from various sources, including online.	Biology	5-year secondary technical school (2017)
Explains where to look for reliable health and sport information, and critically analyses media information in this regard;	Physical education	3-year lower secondary schools (2017)
Searches in the media for messages on a given topic; indicates differences between messages and distinguishes information from comments; critically analyses advertising messages;	Social studies	3-year lower secondary schools (2017)

Critically analyses leaflets, slogans and spots.	Social studies	3-year lower secondary schools (2017)
Critically analyses media messages, assessing their credibility and impartiality, and distinguishing information from comments;	Social studies	3-year lower secondary schools (2017)
Assesses Internet resources from the point of view of information reliability and credibility; consciously and critically receives the content they contain.	Social studies	3-year lower secondary schools (2017)
He conducts a critical analysis of programs and other electoral materials of political parties, due to the content and form of communication.	Social studies	3-year lower secondary schools (2017)
Critically evaluates media information in terms of their compliance with the current state of scientific knowledge.	Nature	3-year lower secondary schools (2017)
He critically evaluates the artistic work and phenomenon in art.	History of Art	3-year lower secondary schools (2017)
Estimates the value of the expected calculation result, critically analyses the reality of the obtained result;	Physics	3-year lower secondary schools (2017)
Explains where to look for reliable health and sport information, and critically analyses media information in this regard.	Physical education	I stage sectoral school (2017)
Can be critical of content harmful to young people.	Family education life	I stage sectoral school (2017)

VOCATIONAL CORE CURRICULUM

Exemplary description of learning outcomes in curriculum	Occupation	Unit of learning outcomes (year)

3.2.2 Problem solving

GENERAL CORE CURRICULUM

Exemplary description of learning outcomes in curriculum	Subject	Relevant curriculum (year of act)
Uses an algorithmic approach to solve the problem;	Information technology	3-year lower secondary schools (2017)
He uses a greedy approach in solving problems;	Information technology	3-year lower secondary schools (2017)
Designs problem solution (algorithm implementation) and selects the appropriate data structure;	Information technology	3-year lower secondary schools (2017)

Uses the descending and ascending method to solve the problem;	Information technology	3-year lower secondary schools (2017)
Apply the principles of structured and modular programming to solve the problem;	Information technology	3-year lower secondary schools (2017)
Evaluates the compliance of the algorithm with the problem specification;	Information technology	3-year lower secondary schools (2017)
Examines the effectiveness of computer solutions to problems;	Information technology	3-year lower secondary schools (2017)
Carries out the computer implementation of the algorithm and the solution of the problem;	Information technology	3-year lower secondary schools (2017)
Selects the best algorithm, appropriate data structures and software to solve the problem;	Information technology	3-year lower secondary schools (2017)
Assesses the correctness of a computer solution to a problem based on its testing;	Information technology	3-year lower secondary schools (2017)

VOCATIONAL CORE CURRICULUM

Exemplary description of learning outcomes in curriculum	Occupation	Unit of learning outcomes (year)
<p>Applies methods and techniques for solving problems:</p> <ol style="list-style-type: none"> 1) describes how to counteract problems in the team carrying out tasks 2) describes problem solving techniques 3) indicates, on the selected example, methods and techniques for solving the problem 	Majority of occupations	Personal and social competences (2019)
<p>He applies problem solving methods:</p> <ol style="list-style-type: none"> 1) distinguishes problem situations in terms of the source of the problem (e.g. Material, emotional, personal, communication, lack of information or skills) 2) describes problem solving techniques depending on their source 3) describes the problem situation taking into account cultural and social conditions 4) describes alternative techniques for creative problem solving 	Recording technician	AUD.06.7. Personal and social competences (2019)
<p>Applies methods and techniques for solving problems:</p> <ol style="list-style-type: none"> 1) uses negotiation techniques 2) proposes constructive solutions to problems 3) assess the effectiveness of solving the problem 	Cook; Technician of nutrition and catering services.	Personal and social competences - units codes HGT.02.7 .; HGT.12.7. (2019)

<p>Demonstrates creativity and openness to changes:</p> <p>1) gives examples of the impact of change on various situations of social and economic life</p> <p>2) indicates examples of introduction of a change and assesses the effects of its introduction</p> <p>3) suggests ways of solving problems related to the performance of professional tasks in unpredictable conditions</p>	Majority of occupations	Personal and social competences (2019)
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3.2.3 Literary media

GENERAL CORE CURRICULUM

Exemplary description of learning outcomes in curriculum	Subject	Relevant curriculum (year of act)
Performs critical analysis of materials from election campaigns (e.g. spots, memes, leaflets and slogans);	Social studies	5-year secondary technical school (2017)
He uses media messages about knowledge of art and artistic phenomena, uses their products in his creative activities (observing the basic principles of copyright law regarding the protection of intellectual property).	Art	3-year lower secondary schools (2017)
He undertakes creative activities, using means of artistic expression, other fields of art and elements of the form of media communications, designing press publications or television programs (in terms of their editing, editing, preparation for printing and visualization of statements, advertising and shaping the image in contact with the environment);	Art	3-year lower secondary schools (2017)
Explains where to look for reliable health and sport information, and critically analyses media information in this regard;	Physical education	3-year lower secondary schools (2017)
It presents the main entities of public life (citizens, citizens' associations, media, politicians and parties, power, public institutions, business, etc.) And shows how they interact and compete with each other in public life;	Social studies	3-year lower secondary schools (2017)
Searches in the media for messages on a given topic; indicates differences between messages and distinguishes information from comments; critically analyses advertising messages;	Social studies	3-year lower secondary schools (2017)
Presents participants and the course of a civil and criminal trial; justifies the importance of mediation;	Social studies	3-year lower secondary schools (2017)
Explains what they are: the right to privacy, including the protection of personal data and the citizen's right in dealing with the media.	Social studies	3-year lower secondary schools (2017)

Explains the ethical principles of the media and assesses examples of controversial activities of journalists and the media;	Social studies	3-year lower secondary schools (2017)
Presents the most important media in Poland and in the world (recipients, range, form of communication, ideological orientation, type of ownership); characterizes selected local media;	Social studies	3-year lower secondary schools (2017)
Critically analyses media messages, assessing their credibility and impartiality, and distinguishing information from comments;	Social studies	3-year lower secondary schools (2017)
He refers cases of violations of rights or freedoms in Poland to the Constitution of the Republic of Poland;	Social studies	3-year lower secondary schools (2017)
Characterizes basic cultural media (word, image, sound, spectacle);	Cultural studies	3-year lower secondary schools (2017)
Lists various forms of cultural media (spoken word, writing, book, painting image, photography, film, television program, theatre performance) and uses (new media, mass media, interactive media, multimedia);	Cultural studies	3-year lower secondary schools (2017)
Independently searches for information about culture in various media, libraries.	Cultural studies	3-year lower secondary schools (2017)
Prepares a presentation or other form of multimedia expression - a blog, forum, website - on topics related to local and regional culture or the broadly understood problems of contemporary culture;	Cultural studies	3-year lower secondary schools (2017)
Explains where to look for reliable health information and critically analyses media information in this area (trends, fashions, diets, nutritional patterns);	Physical education	5-year secondary technical school (2017)
Presents the basic methods of conflict resolution (mediation, negotiations, arbitration) as well as the pros and cons of the indicated solutions;	Social studies	5-year secondary technical school (2017)
Presents contemporary media in the Republic of Poland - lists major dailies, socio-political weeklies, television and radio stations, internet portals; characterizes the selected title / station / portal due to the specificity, forms and content of the message;	Social studies	5-year secondary technical school (2017)
Critically analyses media messages and compares media messages about the same events or processes; formulates his own opinion based on known facts; recognizes the manifestations of unethical behaviour of journalists;	Social studies	5-year secondary technical school (2017)
Recognizes the manifestations of pathologies of public life and shows their negative impact on public life; presents mechanisms of corruption and analyses - using media materials - its proven example;	Social studies	5-year secondary technical school (2017)
Critically analyses media messages; explains the basic manipulation mechanisms used in the	Social studies	5-year secondary technical school (2017)

media; points out the role of the Media Ethics Council in the Republic of Poland;		
He gives examples of power control by the media; analyses - on modern examples - cases of limiting media rights; explains the role of the National Broadcasting Council in the Republic of Poland; shows that the level of media criticism often depends on their political orientation;	Social studies	5-year secondary technical school (2017)
It presents the specifics of alternative dispute resolution in the Republic of Poland - arbitration in civil proceedings and mediation in administrative, civil and criminal proceedings.	Social studies	5-year secondary technical school (2017)
It presents the division of social sciences and humanities in force in the Republic of Poland; prepares a note on selected sciences (from the sciences of: politics, public policy, security, media, cognition and social communication, administration; legal sciences; sociology, psychology, pedagogy; ethnology, cultural studies);	Social studies	5-year secondary technical school (2017)
Defines the concept of multimedia as a media that combines various forms of information transfer (text, sound, graphics, animation, video);	Art	5-year secondary technical school (2017)
Lists areas in which multimedia apply (art, advertising, education, entertainment);	Art	5-year secondary technical school (2017)
He understands that contemporary creative activities allow the use of various media techniques and tools;	Art	5-year secondary technical school (2017)
Lists the areas in which multimedia using music (film, advertising, art, entertainment, education, religion) applies;	Music	5-year secondary technical school (2017)
Knows musical programs, applications, techniques and multimedia tools in the context of their practical application;	Music	5-year secondary technical school (2017)
Uses multimedia sources of information and critically assesses them;	Polish language	5-year secondary technical school (2017)
Uses multimedia resources, e.g. From: libraries, on-line dictionaries, e-books, author websites; selects Internet sources, taking into account the substantive criterion, and critically assesses their content;	Polish language	5-year secondary technical school (2017)
Safely builds his image in the media;	Information technology	5-year secondary technical school (2017)
Considers the problem of intellectual property; explains what plagiarism is and makes a moral assessment about plagiarism;	Ethics	I stage sectoral school (2017)

VOCATIONAL CORE CURRICULUM

Exemplary description of learning outcomes in curriculum	Occupation	Unit of learning outcomes (year)
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<p>Publishes digital images in digital media and exhibition spaces:</p> <ol style="list-style-type: none"> 1) specify the parameters of graphic files for publication 2) preparing a digital photo gallery 3) selects online publication methods 4) performs activities related to the publication of digital images 5) indicates the operational parameters of consumables for printing a digital image 6) defines the technical parameters of devices for printing digital images 7) selects the method of printing photographs intended for publication in the exhibition spaces 8) prints photos 9) performs activities related to the selection of exhibition systems and photography exposure 10) publish digital images in accordance with the law 	<p>Photographer</p>	<p>AUD.02.4. Image processing and publication (2019)</p>
<p>Specifies the instruments for the promotion of clothing products used on the fashion market:</p> <ol style="list-style-type: none"> 1) selects instruments for the promotion of clothing products 2) indicates tools for the promotion and sale of clothing products 3) defines the objectives of the promotion of clothing products 4) identifies the types of outdoor advertising media 5) select methods for promoting the collection of clothing products 6) identifies types of online advertising media 7) indicates the tools used in public relations 8) indicates the names of social networking sites used to promote the fashion brand 	<p>Fashion industry technician</p>	<p>MOD.11.4. Organizing activities related to the marketing and sale of clothing products</p>
<p>Uses multimedia techniques in the production of advertising elements:</p> <ol style="list-style-type: none"> 1) distinguishes between forms of audio advertising, e.g. Radio advertising, podcast, digital audio 2) distinguishes between forms of video advertising, e.g. Television advertising, cinema advertising, interactive film, music video, top of the series or film, online video advertising, advertising using VR (Virtual reality) 	<p>Advertising technician</p>	<p>PGF.07.4. The use of techniques for producing elements of the advertising message</p>

<p>3) selects the form of multimedia advertising for the advertising message</p> <p>4) performs the audio advertisement script</p> <p>5) performs an advertising movie storyboard and shooting board</p> <p>6) performs radio advertising</p> <p>7) performs video advertising</p>		
<p>Uses digital media in the production of advertising elements:</p> <p>1) distinguishes forms of digital advertising in the media, e.g. Website, online campaign, use of social platforms, mobile devices</p> <p>2) selects digital advertising forms to match the content of the message</p> <p>3) describes the specifics of creating a message adapted to mobile devices</p> <p>4) places elements of the advertising message on websites, including social platforms</p> <p>5) places elements of the advertising message on social media</p> <p>6) places elements of the advertising message on internet portals</p> <p>7) describes methods of building e-mail communication recipient bases</p> <p>8) describes ways to segment email recipients</p> <p>9) sends an e-mail to the recipient database using specialized tools</p>	<p>Advertising technician</p>	<p>PGF.07.4. The use of techniques for producing elements of the advertising message</p>
<p>Characterizes IT systems and distinguishes IT systems in terms of functionality:</p> <p>1) identifies the IT system</p> <p>2) gives examples of electronically processed information systems, including the PESEL system, school recruitment system, e-journal, electronic banking system, trusted profile</p> <p>3) describes the storage locations for information: local server, cloud, data carriers</p> <p>4) selects IT systems in terms of their functionality</p> <p>5) describes the operation of social networking sites</p> <p>6) sets out the rules for the safe use of social networking sites</p> <p>7) gives examples of applications of IT systems in business operations, including e-commerce, e-shop, e-invoice, booking systems</p>	<p>IT specialist; Programmer technician; Broadband electronic communication technician</p>	<p>INF.02.2. Basics of computer science</p> <p>INF.03.2. Basics of computer science</p> <p>INF.04.2. Basics of computer science</p>

3.2.4 Creativity and innovation

GENERAL CORE CURRICULUM

Exemplary description of learning outcomes in curriculum	Subject	Relevant curriculum (year of act)
Characterizes and distinguishes ways of obtaining the illusion of space in flat compositions; recognizes types of perspectives (including, among others: linear, backbone, axonometric, coloured, air, convergent); recognizes and consciously uses chiaroscuro as a way of obtaining the illusion of space; undertakes creative activities from imagination and nature, focused around the issue of space illusion;	Art	Elementary school classes IV-VIII (2017)
Presents the principles and methods of creative problem solving; analyses the conditions of the correct decision-making process, helping to solve personal and group problems.	Social studies	5-year secondary technical school (2017)
Recognizes the importance of entrepreneurship, including innovation and creativity in personal life and socio-economic development on a local, regional, national and global scale;	Introduction to entrepreneurship	5-year secondary technical school (2017)
Demonstrating creativity, he designs promotional activities, justifies their role in the planned undertaking and discusses the positive and negative examples of the impact of advertising on customers;	Introduction to entrepreneurship	5-year secondary technical school (2017)
He is involved and creative in design work and active music making;	Music	5-year secondary technical school (2017)
He creates an extensive multimedia presentation based on an outline and prepares it for the show, transfers the presentation to the document and to the website, conducts the presentation assisted by the presentation;	Information technology	I stage sectoral school (2017)
He creates a longer written or spoken text (essay, review, paper, interpretation of a literary work or fragment) in accordance with the basic rules of his organization, observing the principles of semantic and logical coherence;	Minority language	I stage sectoral school (2017)

VOCATIONAL CORE CURRICULUM

Exemplary description of learning outcomes in curriculum	Occupation	Unit of learning outcomes (year)
Demonstrates creativity and openness to changes: 1) gives examples of the impact of change on various situations of social and economic life;	Majority of occupations	Personal and social competences (2019)

<p>2) indicates examples of the introduction of the change and assesses the effects of its introduction;</p> <p>3) suggests ways of solving problems related to the performance of professional tasks in unpredictable conditions;</p>		
<p>Demonstrates creativity and openness to changes:</p> <p>1) analyse your own creativity</p> <p>2) takes the initiative in an unusual professional situation</p> <p>3) applies the principles of creative problem solving</p> <p>4) explains the importance of change in human life</p>	<p>Photographer;</p> <p>Technician of building and tuning grand pianos;</p> <p>Photographic and multimedia technician;</p>	<p>Personal and social competences (2019) - units codes: AUD.02.6 .;</p> <p>AUD.03.10.; AUD.04.7.</p>
<p>Demonstrates creativity and openness to changes:</p> <p>1) implements innovative activities while performing professional tasks</p> <p>2) justifies the need to be open to changes</p> <p>3) assesses their own creativity and openness to innovation</p> <p>4) justifies the need to be consistent in the implementation of professional tasks</p> <p>5) indicates examples of introduction of the change and assesses the effects of its introduction</p>	<p>Ceramic industry equipment operator;</p> <p>Ceramic technician</p>	<p>Personal and social competences (2019) - units codes: CES.01.6.; CES.03.7.</p>
<p>Demonstrates creativity and openness to changes:</p> <p>1) indicates alternative ways of solving problems</p> <p>2) evaluate various options for action</p> <p>3) examine various sources of information, use available technical equipment</p>	<p>Forest machinery operator</p>	<p>LES.01.8. Personal and social competences (2019)</p>

4 Assessment and validation of TKC

4.1 How is the process of assessment organized in the national system?

Within the whole education system in Poland, including VET, internal assessment is conducted by school teachers, and external assessment by institutions external to the school: the Central Examination Board and eight regional examination boards. The external examination system is supervised by the Education Minister.

Internal assessment

Each school within education system, including VET, adopts its own assessment approach (tools, rules, schedule etc.) in accordance with the national legislation. The assessment is usually organized in subjects with a separate category of 'conduct' (*zachowanie*), which is a wide category relating to ethical and social conduct of a pupil. The latter category is especially relevant for the subject of this report. Both learning achievements and conduct are subject to 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 the teacher of a given subject in. 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.

Conduct is assessed on the following scale: excellent, very good, good, acceptable, unacceptable and inadmissible. The mark for behaviour should not influence subject marks, promotion to the next grade.

According to the Regulation of the Minister of National Education of February 22, 2019 on the assessment, classification and promotion of research and students in public schools⁴²: 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 own and other people's safety and health; 6) dignified, cultural behaviour in and outside of school; 7) showing respect to others.

External assessment within education system

The system of external examinations has significant impact on the quality of the Polish formal general and vocational education system. The external examinations in Poland are simultaneous and identical for all learners, meaning that all examinees taking the

⁴² Rozporządzenie Ministra Edukacji Narodowej z dnia 22 lutego 2019 r. w sprawie oceniania, klasyfikowania i promowania uczniów i słuchaczy w szkołach publicznych (Dz.U. 2019 poz. 373).

same examination throughout the country have the same set of questions and problems to solve. All examination results are assessed according to criteria by specially prepared and certified external examiners.

The assessors do not know the individuals whose exams they are grading. This external examination system ensures objectivity and relative comparability, enabling the results of the educational process to be compared among different schools located in various regions of the country.

The external assessment system is comprised of:

- compulsory eighth-grader exam for all pupils in grade VIII at the end of primary education. Results of the eighth-grader exam have no impact on completion of primary education. However, they serve as one of the criteria in the process of admission to post-primary schools;
- *matura* examination, taken at the same time by graduates of general, technical upper secondary schools;
- vocational examinations, which may be organised at different times, are taken by pupils in vocational school and persons learning in out-of-school venues and at the workplace. Compulsory according to new legislation.

It should be noted that this system enables all of the above examinations to be taken extramurally.

The Central Examination Board (CEB) 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 carry out all external examinations.

External assessment within VET

Learners at technical upper secondary school and stage II sectoral vocational schools may take the maturity exam. The arrangements for the maturity exam for VET learner are the same as for general upper secondary schools;

All IVET learners may take vocational exams and since 2020 VET exams will be obligatory for all IVET learners. CVET learners and adults may take the VET exams (which are the same as for the IVET learners) without the need to be enrolled to any form of training. Before 2012 VET reform persons who completed non-school forms of education, as well as those whose vocational competences were acquired at work or through informal learning, were unable to have their learning outcomes formally validated in the examination system. Since 2012 the School Education Act stipulates

that persons 18 years of age and older who are not in school can take extramural examinations conducted by CEB. After they have been passed, an appropriate vocational qualification is awarded. As a result, all the certificates and diplomas awarded in the Poland's formal education system can be attained through the validation of non-formal and informal learning. However, it should be noted that currently, the only way to validate vocational competences acquired informally and out-of-school is by taking a vocational examination (Polish solutions do not anticipate the use of other methods, such as portfolios, observation or document analysis).

The vocational examination consists of a written part (conducted in the form of a test) and a practical part. Since 2020 the written (test) part will need to be conducted with the use of computer. To pass VET exam a person must achieve 50% from the written part and 75% from the practical part of the exam.

The practical exams can only be conducted in centres with the necessary infrastructure to carry out this part of the examination. Practitioners working in the field in which the exam is being conducted may assess the practical part. Vocational examinations are held twice a year. Vocational qualifications in some occupations learned in schools can also be attained in crafts after passing the journeyman's examination.

4.2 Assessment of TKC – Which competences are assessed and how?

In order to achieve VET diploma a learner needs to obtain a certificate of school completion and vocational certificates after passing external VET exams as indicated in section 2 and on Figure 1.

In order to achieve a certificate of school completion a learner needs to pass all subjects in the VET teaching program, including subjects and classes defined according to general and VET core curricula. The learner passes the subjects based on the teachers' assessment.

In order to achieve a VET certificate a learner needs to pass external VET exams defined by the Central Examination Board. VET exams are defined only according to the VET core curriculum.

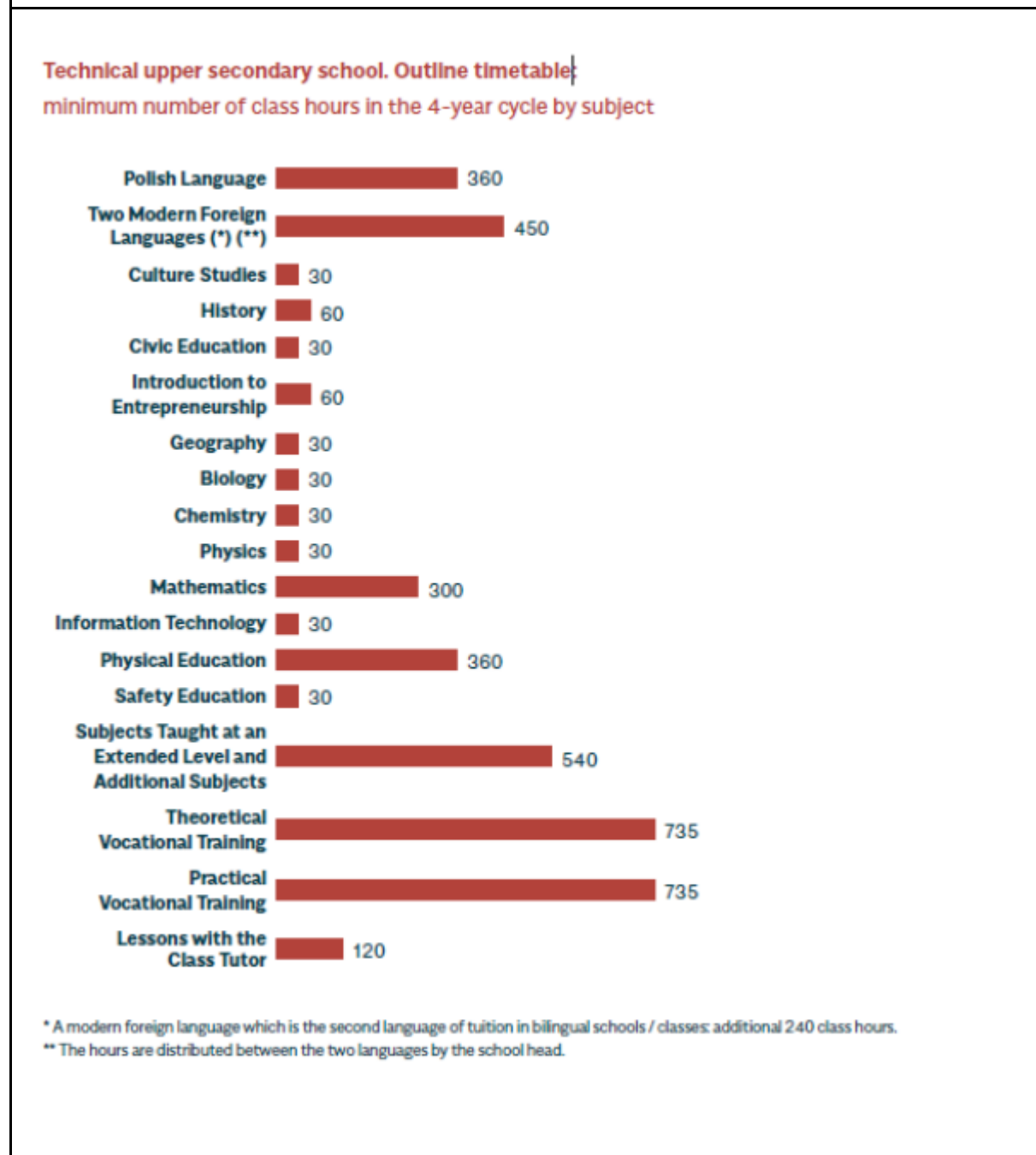
As shown in sections 2 and 3 both general and vocational core curricula refer to all transversal key competences although to different extent.

Formative assessment

Schools have generally large freedom in developing their programs. However, the programs must be in line with the requirements and learning outcomes defined in general core curriculum and VET core curriculum. A school teaching program should be approved by the school principal upon consultation with the teaching council. Figure 8 presents a list of subjects in the outline timetable for technical upper secondary school. In implementing curricula, teachers may choose textbooks from a list approved

by the Minister of National Education or choose to use other educational resources or exercise materials instead of textbooks (for example, contents downloaded from the Internet, copied or created by the teacher such as slide shows, presentations, notes, excerpts from literature, etc.). Teachers also have the statutory right to choose teaching, learning and assessment methods.

Figure 8. Technical upper secondary outline timetable



Source: Kolanowska E., The System of Education in Poland 2018, Foundation for the Development of the Education System, Warsaw 2018, p.59, <https://eurydice.org.pl/wp-content/uploads/2018/09/TheSystem2018.pdf>

To develop transversal key competences teachers should use different techniques and methods (e.g. workshops, presentations, group working) in order to stimulate learners. But according to the studies conducted by Educational Research Institute (IBE 2014) teacher-centred teaching prevails. Therefore it might be said that all the transversal key competences should be assessed formatively within the teaching process in VET schools.

Although there are no comprehensive studies regarding development and assessment of transversal key competences within the formal VET, anecdotal evidence and conducted interviews suggest that VET schools prepare learners for the exam, therefore the content of the VET exam is of crucial importance. Although there are exceptions of VET schools in which VET school principals and teachers devote large portion of time and effort to develop transversal key competence. Example of such good practice is described in Box. 1.

Important element of development and assessment of transversal key competence constitute work based learning at the employers site. As a result of changes in the legislation in 2018/2019 all VET schools providing education in a given occupation must set up formal cooperation with employers from the particular sector. Before such agreement of cooperation was not mandatory. Cooperation may relate to activities such as participation in work based learning, equipping school workshops, patron classes, organisation of vocational exams.

Another sphere in which TKC are being developed and tacitly assessed are the international mobility programs financed mostly by the Erasmus+ and ESF funds. Polish VET schools are outstandingly active in efforts to organize mobility programs for their learners. According to FRSE data more than 1200 VET schools in 2014-2019 applied for funds to organize mobility programs. There are also actions to stimulate development and assessment of personal and social competences by the Centre

Summative assessment

VET exam is developed based on the VET core curriculum content. In 2019 a new VET core curriculum was introduced.

With the new curriculum there were introduced amendments to the organisation of VET exam. Two changes are especially important:

- since 2020 VET exam will be obligatory to all IVET learners,
- since 2020 the written (test part) will be obligatory conducted with the use of a computer.

As shown in sections 2-3 new VET core curriculum introduced changes to the way learning outcomes are defined (adding assessment criteria) and the way units of learning outcomes are structured. This provided additional impulse for the Central Examination to analyse the content and structure of the VET exams.

Central Examination Boards takes effort and conducts pilot works targeted at broadening the scope of VET examinations in order to include transversal key competences. In 2019 Central Examination Board in its new guidelines for authors set obligatory that all VET exams in their written part will need to be covering all units of learning outcomes and all learning outcomes defined in the VET core curriculum this will include the following units of learning outcomes:

- professionally oriented units of learning outcomes (2- 6 units of learning outcomes depending on a qualification),
- occupational health and safety (this ULO is present in all VET qualifications),
- foreign language oriented professionally (this ULO is present in all VET qualifications),
- personal and social competences (this ULO is present in all VET qualifications),
- organization of work of small teams (this ULO is present in all VET qualifications).

As shown in section 3 the above mentioned units of learning outcomes related to transversal key competences categories defined for the TRACK-VET project. Table 7 below indicates which learning outcomes from the above units of learning outcomes relate do transversal key competences. As indicated above authors of the exam questions will need to propose at least one question to each of the units of learning outcomes defined in the VET core curriculum.

<i>Table 7. Definitions of learning outcomes and assessment criteria within the VET core curriculum - example of archivist technician occupation</i>	
Definitions of learning outcomes and assessment criteria within the following units of learning outcomes:	
<ul style="list-style-type: none"> - occupational health and safety, - personal and social competences, - organization of work of small teams 	<ul style="list-style-type: none"> - Personal, social competences and learning competence - Civic competences - Entrepreneurship competence - Cultural awareness and expression competence
EKA.02.1. Occupational Health and Safety	

Learning outcomes	Assessment/verification criteria
Learner:	Learner:
<p>1) applies the principles of occupational health and safety in accordance with the provisions of law on fire protection, environmental protection and ergonomics requirements while performing work in the archive</p>	<p>1) defines the provisions of the law on occupational health and safety, fire protection and environmental protection</p> <p>2) reacts in the event of a fire hazard in accordance with the principles of fire protection in the organizational unit</p> <p>3) describes the consequences of violating the rules and principles of occupational health and safety during the performance of professional tasks</p> <p>4) lists the extinguishing agents and their purpose due to the scope of their use in the organizational unit</p> <p>5) applies the principles of recycling used parts of office equipment and equipment</p> <p>6) defines the scope of ergonomics, e.g. work stations, organization of the work process</p>
<p>2) defines the rights and obligations of the employee and employer in the field of occupational health and safety</p>	<p>1) wymienia prawa i obowiązki pracodawcy w zakresie bezpieczeństwa i higieny pracy</p> <p>2) wymienia prawa i obowiązki pracowników w zakresie bezpieczeństwa i higieny pracy</p>
<p>3) defines the threats and effects associated with the occurrence of harmful, dangerous and disruptive factors in the work environment</p>	<p>1) indicates harmful factors present in the archive</p> <p>2) defines the effects of hazardous and troublesome factors on the human body in the work environment (e.g. lighting, monitors, dust in the archive)</p>
<p>4) applies individual and collective protection measures while performing professional tasks</p>	<p>1) describes ways to prevent health threats and living in the workplace</p> <p>2) selects individual and collective protection measures for the type of professional tasks performed at the workplace</p>

<p>5) organizes the workplace in accordance with ergonomic requirements, regulations and the principles of occupational health and safety, fire protection and environmental protection</p>	<p>1) determines safe and hygienic working conditions at the office workplace</p> <p>2) defines the ergonomic requirements of a seated work place and a computer workstation</p> <p>3) indicates the requirements of office technical measures and office materials conducive to environmental protection</p> <p>4) organizes preventive actions to prevent fire or other threat in the archive office room, archive workshop and warehouse</p>
<p>6) provides first aid in emergencies</p>	<p>1) describes the basic symptoms indicating a state of sudden health risk</p> <p>2) assess the situation of the injured person on the basis of an analysis of the symptoms observed in the injured person</p> <p>3) secures himself, the victim and the place of accident</p> <p>4) puts the victim in a safe position</p> <p>5) notify the relevant departments</p> <p>6) presents first aid in traumatic conditions of sudden health threat, e.g. haemorrhage, crushing, amputation, fracture, burn</p> <p>7) presents first aid in non-traumatic states of sudden health threat, e.g. syncope, heart attack, stroke</p> <p>8) performs cardiopulmonary resuscitation on a phantom in accordance with the guidelines of the Polish Resuscitation Council and the European Resuscitation Council</p>
<p>EKA.02.8. Personal and social competences</p>	
<p>Learning outcomes</p>	<p>Assessment/verification criteria</p>
<p>Learner:</p>	<p>Learner:</p>

	<p>1) respect the principles of culture of personal and professional ethics</p>	<p>1) applies the principles of personal culture and generally accepted norms of behavior in a work environment</p> <p>2) acquires personal data in accordance with the law</p> <p>3) observes the security principles when processing and sending personal data</p> <p>4) stores clients' personal data in accordance with the law</p> <p>5) respects the rules regarding the observance of secrecy related to the profession and place of work</p> <p>6) presents the consequences of non-compliance with confidentiality related to the occupation and place of work</p> <p>7) indicates examples of ethical behavior in the profession</p>
	<p>2) plans to complete the task</p>	<p>1) discusses activities carried out as part of working time</p> <p>2) defines the time for carrying out the tasks</p> <p>3) implements activities within the prescribed time</p> <p>4) monitors the implementation of planned activities</p> <p>5) modifies planned activities</p> <p>6) performs self-assessment of the work performed</p>
	<p>3) bears responsibility for the actions taken</p>	<p>1) anticipates the effects of actions, including legal ones</p> <p>2) shows awareness of responsibility for the work performed</p> <p>3) assess the actions taken</p> <p>4) anticipates consequences of improper performance of professional activities at the workplace</p>
	<p>4) demonstrates creativity and openness to changes</p>	<p>1) gives examples of the impact of change on various situations of social and economic life</p> <p>2) indicates examples of introduction of a change and assesses the effects of its introduction</p>

		3) suggests ways of solving problems related to the performance of professional tasks in unpredictable conditions
	5) uses coping techniques with stress	<p>1) recognizes the sources of stress while performing professional tasks</p> <p>2) choose stress management techniques appropriate to the situation</p> <p>3) indicates the most common causes of stressful situations at work</p> <p>4) presents various forms of assertive behavior as ways of coping with stress</p> <p>5) distinguishes between conflict resolution techniques related to the performance of professional tasks</p> <p>6) determine the effects of stress</p>
	6) improve professional skills	<p>1) defines the scope of skills and competences necessary to practice the profession</p> <p>2) analyses its own competences</p> <p>3) sets its own goals for professional development</p> <p>4) plans a path of professional development</p> <p>5) indicates opportunities for raising professional, personal and social competences</p>
	7) applies the principles of interpersonal communication	<p>1) identifies verbal and non-verbal signals</p> <p>2) uses active methods of listening</p> <p>3) conducts discussions</p> <p>4) provides feedback</p>
	8) negotiates the terms of the agreements	<p>1) characterizes the desired human attitude during negotiations</p> <p>2) indicates the manner of negotiating the terms of the agreement</p>

	9) uses methods and techniques for solving problems	<p>1) describes how to prevent problems in the team carrying out tasks</p> <p>2) describes problem solving techniques</p> <p>3) indicates, on the selected example, methods and techniques for solving the problem</p>
	10) cooperates in a team	<p>1) works in a team, being responsible for tasks carried out jointly</p> <p>2) observes the division of roles, tasks and responsibilities in team</p> <p>3) is involved in the implementation of joint activities of the team</p> <p>4) modifies the manner of behaviour, taking into account the position developed jointly with other team members</p>
EKA.02.9. Organization of work of small teams		
	Learning outcomes	Assessment/verification criteria
	Learner:	Learner:
	1) organizes the team's work to perform the assigned tasks	<p>1) defines the structure of the group</p> <p>2) prepares the team's tasks for implementation</p> <p>3) plans to implement tasks to prevent threats to safety and health protection</p> <p>4) estimates the time needed to complete the task</p> <p>5) communicates with colleagues</p> <p>6) indicates patterns of proper cooperation in a group</p> <p>7) assigns tasks to team members in accordance with the planned work schedule</p>
	2) selects people to perform the assigned tasks	<p>1) assesses the suitability of individual team members to perform the task</p> <p>2) distributes tasks according to the skills and competences of team members</p>

	<p>3) manages the implementation of assigned tasks</p>	<p>1) determines the order of performing tasks in accordance with the work schedule</p> <p>2) formulates the principles of mutual assistance</p> <p>3) coordinates the implementation of tasks to prevent threats to safety and health protection</p> <p>4) issues instructions to persons performing specific tasks</p> <p>5) monitors the process of performing tasks</p> <p>6) develops documentation regarding task implementation according to prevailing standards</p>
	<p>4) assess the quality of the assigned tasks</p>	<p>1) controls the effects of team work</p> <p>2) assesses the work of individual team members in terms of compliance with the technical conditions for the receipt of work</p> <p>3) provides guidelines for the proper performance of assigned tasks</p>
	<p>5) introduces technical solutions and organizational factors improving the conditions and quality of work</p>	<p>1) analyses technical and organizational solutions of work conditions and quality</p> <p>2) proposes technical and organizational solutions aimed at improving the conditions and quality of work</p>

As Table 7 shows all of the learning outcomes related to TKC are from two categories: personal, social competences and learning competence and entrepreneurship competences. Therefore civic competences and cultural awareness competences are not being assessed during VET exams.

New possibilities to verify knowledge, skills and competences give ICT and the fact that VET exam will be obligatory conducted with the use of computer. As a result some test questions might be proposed as videos and or animations.

It must be said however, that these guidelines for authors are very new. It should also be stated that inclusion of test questions related transversal key competences is the first step and does not satisfy ambitions to cover transversal key competences more broadly. Works is being done to conceptualise assessment of transversal key competences within the practical part of the exam.

5 Opinions of key stakeholders on development, assessment and validation of TKC

5.1 Importance of TKC

Experts participating in the study indicated that VET schools should be developing all the transversal key competences as their acquiring is important for functioning on the current labour market and in society. Opinions presented by respondents in the study are in line with other studies in Poland indicating that VET system should be more focused on the development of transversal key competences (Badanie Kapitału Ludzkiego 2018; Lis, Miazga 2016) and in line with the recently adopted Integrated Skills Strategy in Poland (2018). As indicated in chapter 2 many employers in Poland are signalling that graduates of Polish VET schools lack of sufficient skills related to TKC.

Out of the 4 bundles of competences constituting TKC respondents participating in the study were putting strong focus on learning to learn competences, social competences related to team work and attitudes in taking responsibility for own's action. Competences related to cultural awareness were given less significance by most respondents. However, some respondents indicated that in light of societal turbulences in Europe, among others related to radicalisation, also VET schools should be more focused on the development of competences related to cultural awareness.

5.2 Terminology

Most of the interviewed respondents were not familiar with the term *transversal key competences* and it is not being used explicitly in the legislation or strategic documents in Poland. However, each category of competences comprising the TKCs (personal, social competences and learning competence, civic competences, entrepreneurship competence, cultural awareness and expression competence) was well known to respondents and having heard the definitions the concept and definitions were clear. Terminological aspects were not impeding discussions with respondents. Although sometimes not always clear boundaries between categories of competences needed clarifications during discussions.

5.3 Are TKCs sufficiently developed and assessed in the national VET system?

The development of TKC is generally perceived as the responsibility of teachers and trainers. TKCs are assessed to a small extent during external examinations. According to respondents there is still large room for improvements in the area of TKC development in Poland. The following issues were pointed out by the respondents:

1. Preparation of teachers. According to respondents many VET and general education teachers lack knowledge and skills to develop and assess TKC during classes. There are no sufficient didactic materials supporting teachers and no comprehensive system of support, even though there is a number of initiatives promoting development of TKC within the education system in Poland. These initiatives were assessed as too fragmented and not equipping schools with practical measures and skills to develop and assess TKCs at the school level.

2. Competence and motivation of VET teachers. VET directors participating in the study indicated that they face more and more problems with recruitment of competent and motivated professionals to work in schools. It was also indicated that less students are enrolling to pedagogical studies and this negative trend has been exacerbated during the last years. Below respondent's opinion is presented on this issue:

“Private labour market offers significantly higher wages, therefore it is very difficult to hire competent professionals, actually in any profession or sector. Many of VET teachers work almost double shifts and this makes difficult for them to engage in extra activities or training related to development of TKC”.

3. Organisation of teaching in schools. Still too many classes are conducted in traditional form and that teacher-centered teaching prevails. Knowledge and skills should be more developed during interdisciplinary classes and projects. In this context it was pointed out that the approach in which VET teachers cooperate with teachers of general subjects should be promoted. Moreover, more synergies between actions targeted to development of competences within general and VET curricula are needed.

4. Pace of changes in the VET system. Although recently introduced changes in VET are assessed positively, respondents indicated that such number of changes impedes proper planning of the VET studying programmes:

“So many changes have been introduced in a such short period of time that in fact it impedes innovativeness as many VET directors make efforts to be in line with the new requirements and do not have sufficient time to think in a broader perspective how to organise teaching in order to develop more complex skills including TKCs”.

5. Engagement of employers. Many respondents indicated that employers may play important role not only in development of professional skills but also TKC, especially those TKC which are relevant to perform professional tasks, such as team work. Although engagement of employers in the VET system in Poland is considered not sufficient, during the last years significant improvement has occurred – due to labour market shortages of skilled workers, employers are

much more willing than a few years ago to actively participate in VET, especially in taking learners for practical training.

6. Not sufficient foundation skills of VET learners. During interviews experts were pointing out that many IVET learners, especially from the basic vocational schools possess low foundation skills, such as literacy, numeracy and this impedes development of transversal key competences - despite the fact that Polish learners note high results in the PISA survey. As Lis and Miazga (2016) shown, based on the PIAAC data, level of competences of basic vocational schools graduates were on similar level as graduates of lower secondary school (gymnasium), which signals poor contribution of basic vocational school to development of these skills. Much higher level of basic skills is noted in among upper secondary technical school (*technikum*) graduates. Experts in the study were indicating that low levels of foundational skills among VET learners (not all, but many of them) poses limitations in development of TKC and professional skills.

7. VET exams could be more related to assessing TKC. Experts participating in the study indicated that in an ideal world there are competent and motivated VET schools (VET school principals, teachers and learners) along with devoted employers.

VET exams have not been linked with TKC explicitly. Although Central Examination Board started work to include TKC to larger extent in VET exams designed to the new VET curriculum introduced in 2019. All respondents indicated its crucial role for the quality assurance within the VET system.

From the above-listed issues the most important were related to competence and motivation of VET teachers and assessing these skills within VET learning programmes and exams.

Respondents were also signalling positive aspects of the arrangements within the VET system:

1. Presence of TKC, especially relating to personal, social competences and learning competence and entrepreneurship competences in the modernised 2019 VET curricula. Participants in the study indicated that this is a step in the right direction, especially taking into account that this allows central examination board to start work on the assessment tasks to verify these competences.

2. Development of all 8 key competences is included in the ministerial document: "Directions of the state's education policy in the 2019/2020 school year". This means that development of key competences will need to be included in the internal and external evaluation plans of all schools in Poland and Regional Education Authorities (*kurator oświaty*).

3. Projects of the Centre for Education Development (ORE) which are co-financed from the European Social Funds targeted at preparation of materials related to development of key competences in the upper secondary schools including VET schools.

4. Recent reforms targeted at enhancing cooperation with employers. During the last years an increased interest of employers in involvement in the VET system has been observed. At the same time government introduced new measures to enhance cooperation between VET schools and employers.

5. Opportunities given by the mobility projects financed from the Erasmus+ and European Social Funds. These mobility projects are in particular important in development competences related to cultural awareness both to learners and teachers.

VET schools in Poland are very active in applying for these funds and in organisation of mobility projects. VET teachers were indicating that for many VET learners from small towns or villages it is the only chance to go abroad to experience other culture in practice. Apart from EU funds VET schools in Poland might apply to other sources, like Norway Grants or to organisations supporting bilateral cooperation between regions (Brandenburg regional authorities funds promoting mobility projects and exchange of good practices between VET schools in Poland and Germany was given as an example).

6. Professional Olympiads/skills contests organised at the national and international levels. At the national level there are 28 fields in which VET learners might compete. Finalists and winners of these contests are released from the written part of the VET exam. Respondents indicated that EuroSkills and WorldSkills competitions and opportunities to cooperate with eminent professionals and companies in a particular field gives learners great opportunity to develop necessary professional as well as personal and social skills.