

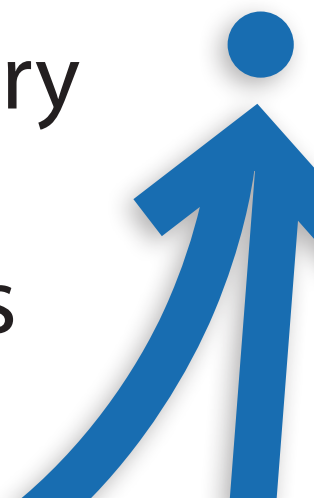


Study
of Human Capital
in Poland

2011

Report from a survey of students
of upper secondary schools and analysis
of fields of education conducted in 2010
as part of Study of Human Capital in Poland

Poland's secondary education: future employees in the making



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HUMAN CAPITAL
NATIONAL COHESION STRATEGY



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1. Introduction

We hereby present a review of the results acquired in the first round of the study which is part of the Study of Human Capital project conducted by the Polish Agency for Enterprise Development (PARP) in partnership with the Jagiellonian University to the people responsible for planning human capital development policies, and all groups and individuals interested in the current situation in the supply and demand of competences on the Polish labour market. The data was collected by Millward Brown SMG/KRC. The study is aimed primarily at the diagnosis of the demand for employees with specific competences and the availability of these competences on the labour market, among both people who have already completed their education and those who are still in education yet are coming to the end of a significant stage of it: upper secondary school or first or second-stage degree education. These are the results of the first round of the study (of the planned five), which will allow a snapshot to be taken of not only the state but also the trends concerning the supply and demand for human capital.

Many economists and development strategists have warned that Poland will gradually exhaust its growth potential, resulting on the one hand from an improvement in the allocation of resources thanks to the operation of market mechanisms, and on the other from the increase in productivity of the capital and labour, thanks to the benefits of technology import, appropriate for the period of catching up with highly developed economies. The availability of employees with qualifications sufficient to absorb technology is one of the conditions for making good use of the catch-up period. At the same time, if our country is to move on to the following phase of development based not only on technology absorption, but also on technology development, changes will have to take place in many dimensions of the economy, society, and operation of the state. It is important that there is an increasing number of firms whose decision-making centres and research and development centres are situated in Poland. One of the conditions for such a scenario to take place is the availability of well-prepared managerial and engineering staff, but also executives furnished with competences necessary for the functioning of an innovative enterprise. Regulatory and fiscal order should assist in the commercialisation of inventions, which still poses a problem. If the development begins to follow such a scenario, we should perceive that by observing a trend in the demand for staff competences. This is why a study that will allow such a trend to be followed is worth embarking on.

Waiting for innovation-based development cannot last forever, which is a threat should the economy not be able to move fluently between the phases of development, providing this passage with the resources developed in the economy of the catch-up phase. Even if the developmental processes of the new type can be triggered, a large part of the economy will be based on the traditional model, and will require – besides other conditions – also an appropriate supply of human resources. This is an argument that proves that it is worthwhile to conduct, besides foresight-type studies, diagnostic ones identifying the current tensions and the deficits in competences in the labour market.

The studies whose results we present here are intended to provide information useful for decision making. The organs of public administration which have at their disposal public funds are expected to conduct a suitable educational policy, or, more broadly, one that will develop human capital. The accuracy of public policies beyond doubt depends on the capacity to create adequate provisions of development, and skill in understanding the challenges, and yet it is also determined by the availability of information that allows problems to be identified, their scope to be defined, and concepts to be formulated for solutions to them. At this stage of the project, we quite naturally have at our disposal only a large-scale diagnosis of the status quo. With the subsequent stages being conducted, opportunities for identifying the changes will also arise. The Study of Human Capital in Poland is a project conceived at the Polish Agency for Enterprise Development (PARP) that reacts to the deficit of information experienced while working on the planned support

Introduction

for the enterprise sector in the development of human resources, using funds from the European Social Fund as part of the Human Capital Operational Programme. Having conducted the pilot initial version of the concept of the study, PARP invited the team of the Centre for Evaluation and Analysis of Public Policies at the Jagiellonian University (CEiAPP), closely related (also personally) to the Department of the Sociology of Economy, Education and Research Methods of the Jagiellonian University – to participate as a partner in the project. From the very beginning, the study was planned as a multi-aspect review of the demand and supply of competences in the labour market repeated in the five successive years. The study is composed of the following modules, distinguished by the group that they investigate:

1. Study of employers (excluding public administration and agriculture, forestry and fisheries, as well as some other small sections, which are listed in the methodological report)
2. Study of people of working age
3. Study of students in last years of upper secondary schools
4. Study of final-year university students (first and second-stage degrees)
5. Study of unemployed people registered in County Employment Offices (PUPs)
6. Study of job offers placed in County Employment Offices and on online portals
7. Study of training firms and institutions

Based on original research, these studies are complemented with an analysis of institutional data collections, including the Educational Information System (SIO) and information collected by the Central Statistical Office (GUS) from reports on tertiary education (S-10). Detailed information concerning the size of the samples and the data collection methods is provided in the methodology report and in individual thematic reports. The above list proves that a universal study was successfully conducted on the factors decisive in the situation of human capital in Poland. It was carried out on very large samples that allow a multitude of analyses, also at the level of regions (voivodeships). In this respect, it is definitely a unique study.

During the concept work and consultations, and also during the subsequent tests, a set of research tools was developed. Such a set is always a compromise between the list of questions to which an answer is sought and the possibility of execution: one cannot conduct a study, going beyond the obligations set forth in acts of law, in which the length of the questionnaire would result in a refusal on the part of the respondent. For this reason we realise that, while some readers may be disappointed by the fact that we did not ask certain questions that we would like to know the answers to, we can say that here we are united in our unsatisfied curiosity. We selected the questions on the grounds of recognition of the needs of the parties planning to use the results of these studies for construction of more effective public interventions in development of human capital resources in Poland. The proper rhythm of these studies will also be adjusted to the needs of these parties: they will take place at the end of the first and beginning of the second quarter, so that the results can be provided by the end of June, and the final report by September, thus allowing it to be used for planning purposes. Exceptionally, the first round of the study was conducted from the end of August to December 2010. The second round is currently being conducted.

The first set of reports that we are supplying to all interested parties are thematic reports that contain summaries of the individual modules. They are a review of the results achieved and provide information about the scope of the information acquired. Moreover, they contain what we hope to be plenty of interesting observations concerning the groups studied. Nevertheless, the major goal is to provide a report on the results, yet still without interlinking them. Such linkages on the scale of the labour market (with the exclusions on the side of the employers pointed to above) will be presented in the main report, which will be delivered as a separate publication.

Quite naturally, general reports must remain at a certain level of generality, especially when it comes to the description of requirements related to members of personnel sought for various positions. These requirements are frequently unique. Moreover, the characteristic features in the operation of a firm are highly specific. The classifications used in the reports are at a relatively high level of aggregation. This results among others from the fact that despite a very large sample of enterprises, only a fifth of them sought employees, which allowed a decidedly smaller field for conducting analyses. And even if – as in the case of research of the sample of population – the size of the analysed data collection was decidedly larger, the number of the possible occupations was a requirement in the classification. The review presented is the first approximation. Interested readers will be able to generate more detailed listings on their own, using an application that will be made available on the project website.

We count on the fact that both the general reports made available and the synthetic report integrating the results of the studies in individual modules for the sake of the balance of competences in the Polish labour

market will provide important data helpful in the planning of operations in the scope of supporting the development of human capital in Poland. We believe that it will also be useful for enterprises – in the scope of planning the development of human resources in firms, and for the sector of training firms – for shaping the range of services offered. We perceive its potential in terms of shaping education policy towards the unemployed, even though representative studies of the registered unemployed encounter significant difficulties. This project is complementary for the other studies in the area, including those conducted by the Educational Research Institute, whose common objective is quality improvement of actions in the field of lifelong education, from early childhood to the late mature age. These actions are one of the strategic development challenges for Poland. To say, quoting Andrzej Frycz-Modrzewski, that the future Republics will be just like the education of their youths, does not go far enough. Because that “education” should now concern not only youth, but also adults. Yet are we, as a society, ready for that?

2. Main conclusions

This chapter presents the most important conclusions from the review of courses in education in upper secondary schools, and key results of the survey of secondary school students conducted as part of the Study of Human Capital in Poland project.

2.1. Trends of education in upper secondary and higher schools

- The aspirations of young people related to education are growing, and the order of preference is: general secondary schools, technical secondary schools, and vocational schools. The sector of upper secondary and higher schools can be divided in a simple manner into schools whose graduation provides occupational licences and rights, and ones that do not provide such rights (general secondary schools and specialised secondary schools). Currently, a vast majority of graduates of lower secondary schools choose the latter option, in most cases with preference for general secondary schools. Among the people who opted for vocational education, there is a visible strong tendency to focus the choice on engineering/technical subjects rather than on crafts and working subjects; with a noticeable strong trend to supplement the qualifications required in basic vocational school in upper secondary schools. Most students attend courses that provide rights to perform jobs in the following group of occupations: science and engineering associate professionals, business and administration associate professionals, health associate professionals, and information and communications technicians. Vocational schools provide education to a highest share of potential employees in personal services, metal, machinery and related trades workers, sales workers, building workers, and food processing, wood working, garment and other craft and related trades workers food processing, wood working, garment and other craft and related trades workers. Education at upper secondary and higher schools is provided mostly in occupations classified in the following groups: health associate professionals, business and administration associate professionals, and personal services workers.
- There is a drop in the total number of students of basic vocational schools, nevertheless, there is no change in the proportion of students learning in basic vocational schools, compared to schools of other types, yet their absolute number is dropping. One may expect that the reason for this status quo are the demographic trends that the entire labour market is concerned about, which – despite continuous interest in vocational education – will result in a systematic shrinking of the market of skilled workers and craftspeople.
- Gender is a factor that strongly differentiated the educational choices of young people, with men relatively more often receiving education in basic vocational schools and technical secondary schools, and women being focused rather on acquiring general secondary education. Women learning in vocational schools more often selected sciences, and less frequently “humanities”, perceiving themselves usually in the role of employees providing services and care, or administrative and support service activities. Men more often opt for “sciences” and worker and craftsman occupations.
- The regional differentiation of educational choices of young people: the largest proportion of students of upper secondary schools learn in basic vocational schools in the following administrative regions: Wielkopolskie, Opolskie, Kujawsko-Pomorskie and Pomorskie, one of the highest proportions of students in technical secondary schools is present in Świętokrzyskie, Lubuskie, Śląskie, and Podkarpackie. It must be remarked that differences in the structure of vocational education between the regions are of incidental nature.

2.2. Education-related plans of students

- Further education is the dominant choice for the students, not fewer than 87% of all the students have decided to continue education after completing the school they currently attend. Such a path is more often selected by women than men, and students of public schools that those of non-public schools,

Main conclusions

and students of general secondary schools more often than post-secondary and basic vocational schools. The proportion of people who declare continuing education grows proportionally to the adaptation of the father.

- HE studies are the form of education that students prefer; continuation of education at HE level, independent of the form of studies, is planned by nearly 3/4 of students of upper secondary schools. A decision to enrol at daytime courses is made by 50% of students, and in extramural studies – by 20%. Daytime studies, as the way to continue education, was most often selected by students of general secondary schools. In the case of students of technical secondary schools, specialised secondary schools and upper secondary schools, the most frequent choices were extramural studies.
- Gender is the fact that differentiates the occupational plans of students of basic schools, with the students learning in basic vocational schools, usually planning to continue their education in technical secondary schools. Yet observable among the women is the tendency to “go humanist” which finds its expression in more frequent declaration of plans to supplement their general education. In turn, the educational path of men is more often a clearly “technical/engineering” one, where a basic school is supplemented with technical education.
- Visible also is a relative balance between the selection of “engineering” and “humanities and social sciences” paths: dominant among the groups of professionals in which students intend to continue education are four groups: 1) science and engineering (19%), 2) legal, social and cultural (18%), 3) health (14%) and 4) business and administration (13%). It is worth to note that among the people going to HE studies, the proportion between those intending to enter the first two paths that, in the way of simplification, may be cold, the “technical” and “humanist and social” does not significantly change.
- The selections of the educational path differ depending on the type of school graduated from and gender, with students of technical schools preferring the first path (as it was pointed to by every fourth students of this type of school. In turn, legal, social and cultural professionals were the dominant choice for students of both types of upper secondary schools. Visible clearly among the students of post-secondary schools is a profiling of educational plans: nearly every other one of them intends to obtain education as healthcare professional, and more than every fourth (28%) as healthcare associate professional. The dominant profile of educational plans of men can be defined as technical/engineering, yet the “non-technical” group of men is not small, as it accounts for 30% of the male population. For women, the structure of educational plans is opposite, with dominant non-technical occupations, and technical ones being just a complementation.

2.3. Supply of competencies among students of upper secondary schools

- There is a clear dependence between the assessment of the level of competencies, had and the likelihood to find on a job that that requires using the competencies, with a higher level on the scale of self-assessment of a given skill corresponding to a higher eagerness to enter occupation in which the given competency or skill is useful. This can be interpreted as the expression of individual rationality of the students who are more eager to perform work which they believe to be predisposed for, and – analogously – being less interested in taking a job that requires skills that they assess somewhat lower.
- The self-assessment of students concerning the competencies they have is high; students assess their competencies at medium and high levels. Interestingly, however, they show tendencies (independent of differentiation of types of schools) to positive, higher assessment of the same competencies, and at the same time, prove a high proclivity to start careers that require the use of such skills. Generally, students’ self-assessment is highest in the case of computer and interpersonal competencies (above the high level, i.e. 4 on a 5-point scale). Ranking lowest on the scale was the only case of self-assessment where the students believed their competency level being below average, i.e. technical competencies. The remaining ones formed a group of competencies assessed above the average, but below the high level.
- Gender is what most strongly differentiates the self-assessment of students’ competencies: men see their greatest forte in computer competencies, with their level of self-assessment being significantly higher than the assessment of the same competencies among women. Women universally believe that

their greatest forte are interpersonal competencies that its contacts with other people with whom they perform tasks together.

- Referring to language competencies, the absolute leader in the number of responses is the English language, whose command was mentioned by as many as 95% of students, and the students assessed as upper intermediate. Second comes German, with 66% of the respondents declaring its our command, yet the level of competence being assessed much lower (between poor and lower intermediary level).

2.4. Competency deficits

- Secondary school students are satisfied with their competencies. Only approximately one in three students perceives and need to complement the competencies before starting work, with the lowest number of such people (29%) studying in general secondary schools. This may result from the fact that due to the general profile of education, and plans of most students to continue education at HE studies, the work they undertake is not related to their profile of education and is rather of temporary nature.
- There is a dominant conviction about the need for language and occupational training in the characteristic division into genders: before embarking on gainful employment, students feel the need to supplement their language skills most. In decidedly far more cases, these are women. The subject of other training is strictly related to the occupations. Nevertheless, there are typically “masculine” and “feminine” areas visible in desired occupational training. Men focus their options on two groups: construction and industry, and driving licence, maintenance and repair of motor vehicles. Women, in turn, focused on occupational training in services, with especially popular choice being courses in beauty, hairdressing, and artistic make-up.

2.5. Additional educational and training activity of students of upper secondary schools

- Every other student participates in classes besides the school curriculum. The definition of additional courses includes courses conducted at school or outside the school that are non-obligatory, e.g. language courses, sport training, private lessons, and interest clubs. Taking into account such an extensive definition of additional education and training, the level of participation of students can be defined as medium. Most active in this area are students of general secondary schools, 69% of whom participated in additional education or training during the last year, with the corresponding rate in basic vocational school being only 19%.
- The subject range of the additional education and training of students of upper secondary schools focuses around three groups: additional classes in school subjects, language classes with absolute domination of the English language, and classes that serve the development of personal interests and hobbies (with sport education in the lead.). The two first groups are a domain of women, with the third attracting mostly men. Classes in school subjects most often attracted students of both types of general secondary schools and technical secondary schools. In this case, the high level of participation is most probably influenced by the final (matriculation) examination that the students of the last form must take, whose results in the current system determine also further options of receiving education at HE level.

2.6. Occupational activity of students of upper secondary schools

- More than every other student was involved in a form of gainful employment during the last year.
- Gender and type of school are the factors that differentiate the percentage of working students. Men (60%) more often than women (47%), combined education and making money. Starting paid work is also correlated with the type of school in which students learn; two main groups can be distinguished:

Main conclusions

- schools where students obtain general education, namely general and specialised secondary schools, with the proportion of the working students being decidedly lower (even though it is still quite high: 47% and 52% correspondingly),
- and schools providing vocational education (basic vocational schools, technical secondary schools, and post-secondary schools), where the proportion of people working in the entire group is significantly higher. The high level is visible especially among students of vocational schools, in whose case nearly 3 out of 4 started paid work during the last year (with the remaining types of schools at 66% each).
- The profile of current gainful activity of students diverges from the profile of education: for the vast majority (78%) of general secondary schools, the work was not at all related to the course of education. The proportion among the students of specialised secondary schools was not much lower. Students of vocational schools – being the ones who already acquire vocational skills at the current stage of education – were the ones most eager to put them to use in the labour market (56%).
- Two key barriers in employment may be characterised as “immanent” and “external”, with the first being related to the fact of being a student of a day school, which renders embarking on gainful employment difficult or impossible. What the students believe in turn to be the key external reason, is lack of appropriate job offers around them (59%). A problem faced, nevertheless, by categorically fewer men than women (51% compared to 62%) and fewer students of vocational schools than students of other types of schools (49% compared to 60%). Worth emphasising is the fact that students did not inform about discrepancies between their remuneration aspirations and the pay offered by the employers. Results prove that the pay was not a frequent obstacle in entering employment, as only 7% of all the students pointed to it.
- The students believe that the best way to find employment is to use contacts and acquaintances, that is to launch what we should refer to as the individual social capital. These are the recommendations and references that are a way to achieve the goal, which is attested by such a high number of references to this category (76%). At the same time, the resulting level of confidence for the efficiency of institutional labour market services as the path of seeking employment through employment office was selected by only 11%, and by other intermediaries – by only 8%. These are marginal groups, when one considers the key significance of the employment office in the institutional environment of the labour market.

2.7. Career plans

- The career plans of the students are to a great degree, coherent with the occupations learnt – in case of post-secondary, vocational, and technical schools (i.e. awarding professional certificates). Most students decide to enter employment in the occupations learnt. Standing out here are especially the students of post-secondary schools, for whom this proportion is as high as 86%. For the remaining two types of schools, it oscillates around 60%.
- There is a clear dependence between career choices and gender: we can point to groups of occupations that are far more eagerly selected by women and ones that are definitely more popular among men. The gender-defined choices made by the groups are complementary to each other rather than similar. Clearly visible among the occupations plant by men is the technical/engineering profile. The dominant group are science and engineering professionals with the complementing groups including science and engineering associate professionals. Women focused their professional choices on a number of traditionally feminised groups of occupations, nevertheless, we can define the profile of their choices as “humanities” on the grounds of the dominant group.

3. Main data on the study

Main data on the study

This report contains a presentation of the key results of the survey of students of upper secondary schools conducted as part of the first round of field research in the Study of Human Capital in Poland, which was complemented with the results of investigation of courses of education at the level of upper secondary education.

The survey was one of the seven modules conducted as part of the project. The study encompassed students, as they participate in the labour market on its supply side. Some of these people are already in employment at the moment, some will enter the labour market after finishing education, which is why it is so important to observe what skills and qualifications they obtain at school, and consequently, what skills and qualifications they already offer and will offer in future. Of no less importance, especially in the investigation of the labour market in the dynamic aspect, are their career plans, paths of education they envisage, and their career aspirations.

For these reasons, the major objectives of the survey of students of upper secondary schools conducted as part of the secondary student survey in the Study of Human Capital in Poland project were formulated as follows:

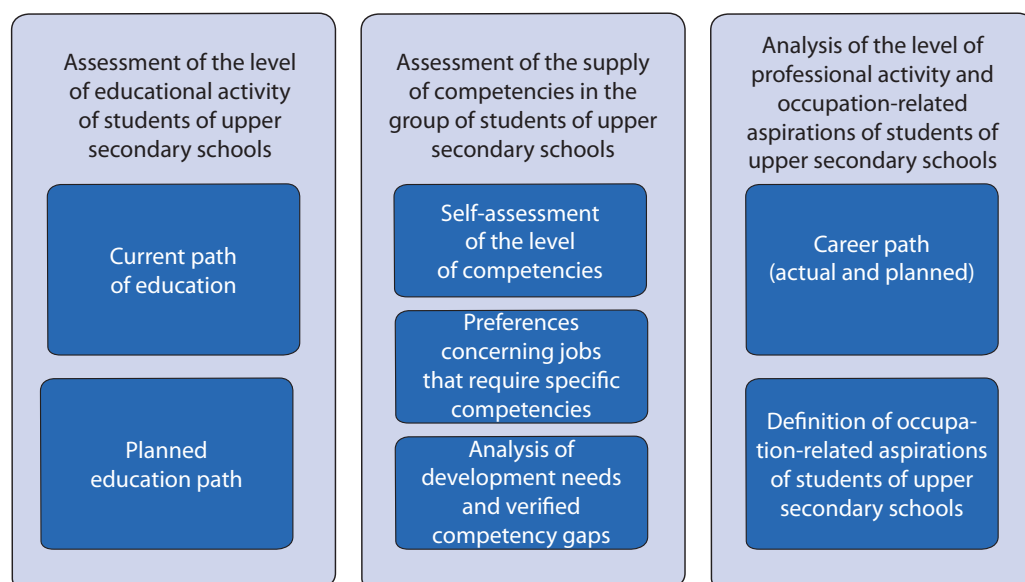
1. Analysis of the level of educational activity of students of upper secondary schools.
2. Analysis of the demand for competencies in the group of students of upper secondary schools
3. Analysis of the level of professional activity of students of upper secondary schools (analysis of the career path: actual and planned) and assessment of occupation-related aspirations of students of upper secondary schools.

For each of these general objectives, specific goals can be pointed to. Their structure is presented in the Figure 1.

Thus defined, the general objectives and specific goals were translated into questionnaire questions, which in turn were the grounds for constructing the indicators used in comparative and cross-sectional analyses. The survey of secondary school students is a module, whose following round will take place in 2015.

Figure 1

General objectives and specific goals (areas) of the survey of students of upper secondary schools



Source: Own study.

The structure of goals presented above, was reflected as far as possible in the division of the report into chapters. The chapter that opens the description of results is the analysis of courses in education of students of upper secondary schools, which – on the one hand – gives the reader an insight into the structure of education activity at the level of upper secondary education, and at the same time provides a context for the presented results of student survey. Nevertheless, this chapter was primarily based on the data gathered in the Educational Information System (SIO).

3.1. Methodology of the study and description of the sample

The survey of the secondary school students proper was conducted from 1st September to 22nd October 2010, using the auditorium questionnaire technique on a sample of last grade students in the following types of upper secondary schools:

- basic vocational schools
- general secondary schools
- specialised secondary schools
- technical secondary schools
- post-secondary schools.¹

Sample selection

The sections (grades) were selected systematically, randomly, stratified by the administrative region from a set sorted by regions and types of school.

Before the sampling, the sampling frame was optimised for the study. Excluded from it were the schools whose last grades had fewer than 20 students and ones which on average had fewer than 20 students per section. Such schools cover a marginal proportion of students – they are specific, and a desire to investigate them would call for developing a separate, overrepresented stratum, which does not correspond to the core objectives of the study.

Description of the sample

The description of the structure of the sample divided into administrative regions is presented in Table 1, while the breakdown into types of schools and sections, and size of the cities, towns and villages – in Table 2. The detailed information concerning the methodology of sampling and its characteristic features is presented in the separate methodological report.

Table 1

The number of schools and sections investigated, and the number of filled in questionnaires by region (voivodeship)

Voivodeship (administrative region)	Number of schools surveyed		Number of sections surveyed	Number of questionnaires
	N	%	N	N
Dolnośląskie	99	6.8%	101	2 192
Kujawsko-pomorskie	99	6.8%	100	2 134
Lubelskie	97	6.6%	100	2 283
Lubuskie	77	5.3%	100	2 115
Łódzkie	99	6.8%	100	2 185
Małopolskie	100	6.8%	100	2 241
Mazowieckie	101	6.9%	101	2 228
Opolskie	65	4.4%	101	2 156
Podkarpackie	99	6.8%	101	2 432
Podlaskie	76	5.2%	104	2 381
Pomorskie	98	6.7%	100	2 232
Śląskie	102	7.0%	102	2 154
Świętokrzyskie	73	5.0%	101	2 389
Warmińsko-mazurskie	83	5.7%	100	2 221
Wielkopolskie	100	6.8%	101	2 300
Zachodniopomorskie	93	6.4%	102	2 069
Total	1 461	100.0%	1 614	35 712

Source: Own study.

¹ The premises for selecting these types of schools are described in a separate methodological report from the study.

Table 2

Description of the sample

Number of sections drawn		2 240
Number of sections surveyed		1 614
– By the type of school	Basic vocational school	250
	General secondary school	752
	Specialised secondary school	51
	Technical secondary school	508
	Post-secondary school)	53
– Public / Non-public	Public	1 579
	Non-public with the rights of public school	35
Number of schools surveyed		1 461
– By city / town / village size class	country	65
	Cities below 10,000	112
	Cities from 10,000 to 19,999	218
	Cities from 20,000 to 49,999	328
	Cities from 50,000 to 99,999	195
	Cities from 100,000 to 199,999	180
	Cities from 200,000 to 499,999	222
	Cities over 500,000	106
	Warsaw	35

Source: Own study.

In result of the study, questionnaires were collected from 35,712 students from five types of schools. The number and proportion of students from the given type of school in the sample is presented in the table below. The most numerous category are the students of general secondary schools – 50% of all the students investigated. The second most numerous group are the students of technical secondary schools – 31%. People learning in basic vocational schools account for 13% of the respondents, and the smallest proportion in the sample is provided by the students of specialised secondary schools and post-secondary schools – 3% each.

Table 3

Number of students surveyed in each school type

Type of school (after adjustment)	Number	%	% valid
Basic vocational school	4691	13%	13%
General secondary school	17909	50%	50%
Specialised secondary school	1011	3%	3%
Technical secondary school	10941	31%	31%
Post-secondary school	1160	3%	3%
Total	35712	100.0%	100.0%

Source: Own study.

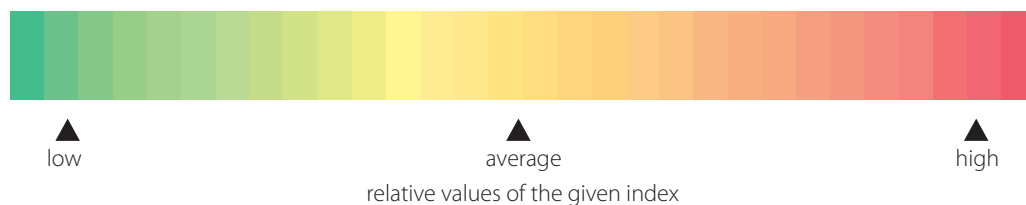
Comments to the interpretation of the results

It must be noted that the results of the study are presented in the form of non-weighted data. Weighting is performed to correct the results to rectify the disproportion between the proportion of individual categories in the sample surveyed and the population, which can influence the results acquired. In the case of the study conducted in the module of secondary school students, a decision was made not to apply weights in the analysis, as they did not significantly influence the resulting distributions. The difference in results between weighted and non-weighted data in most cases amounted to no more than 1% or 2%.

Methodology of the study and description of the sample

All the tables that use colour coding resort to the “topographic” approach that makes reference to the way maps are coloured: relatively low values are expressed by the colour green, average – yellow, and relatively high – red. It is to be emphasised that marked in this way are the relative values of individual indices, that is ones that show the position of a given item against the totality.

Colour codes in the tables



4.1. Analysis of courses of education at levels of upper secondary education

The system of education at upper secondary levels in Poland consists of the following schools: basic vocational school (with tuition lasting for 2 or 3 years), general secondary schools (3 years), specialised secondary schools (3 years), and technical secondary schools (4 years, following upon the programme of lower secondary schools), general secondary art schools giving vocational qualifications, post-secondary schools, and also institutions that originated in 2004/2005, that is 2-year supplementary general secondary schools, 3-year supplementary technical secondary schools (following upon the programme of basic vocational school), and 3-year special upper secondary job-training schools.²

According to the data from the Polish Central Statistical Office (GUS), operating in the school year 2009/2010 were 11,100 secondary upper secondary schools, of which 44% were general secondary schools, 29% – technical and general secondary art schools, 21% – basic vocational schools and job-training schools, and 6% – specialised secondary schools.³ Description of the supply of specific qualifications in the system of upper secondary education requires presenting some preliminary information concerning the sector, which is necessary to understand the processes taking place in the sector:⁴

- First of all, it is a sector that has undergone intensive reforms for 20 years (including decentralisation of management in education, introduction of lower secondary schools in the school year 2001/2002, etc.)
- Secondly, the sector allows acquisition of general as well as vocational education. Most popular among the students are, however, the general secondary schools, providing education for nearly every other student at upper secondary levels. There is also a growing tendency among the graduates of basic vocational schools to supplement education in supplementary general secondary schools.
- Thirdly, the interest in vocational education has for a number of years remained at a fairly stable level (the proportion of people learning in vocational schools is similar to that from a few years ago). What is, however, diminishing is the absolute number of students of the schools, which may have significant consequences for the labour market (the fall is, however, caused by demographic changes, and not by low interest in this type of education). The interest in specialised secondary schools, which do not confer rights to work in certain occupations, but only a general orientation in the given occupation, has been diminishing for a longer time.
- Fourthly, the largest proportion of students of upper secondary schools attend basic vocational schools in the following administrative regions: Wielkopolskie, Opolskie, Kujawsko-Pomorskie and Pomorskie, while the largest proportion of students learning in technical secondary schools is present in Świętokrzyskie, Lubuskie, Śląskie, and Podkarpackie (over 30% of all students of upper secondary schools) regions. It can be said therefore that in these regions, the students of upper secondary schools are most focused on vocational education.
- Fifthly, clear differentiation in the selections of educational paths by gender can be observed (Table 1). Men relatively more often decide to continue learning in basic vocational (net education ratio at the level of 19%) and technical secondary schools (33%) than women (basic vocational schools – 9%, technical secondary schools – 23%). Women more often than men aim at general education (net education ratio at the level of 59%, compared to 35% among men).

² *Oświata and wychowanie w roku szkolnym 2009/2010* (2010), GUS: Warszawa, p. 22.

³ *Ibidem*, p. 61.

⁴ *Ibidem*, p. 17.

Table 4
Education ratios in upper secondary schools

Schools	Gross education ratio ^{a)}			Net education ratio ^{b)}		
	Total	men	women	Total	men	women
Basic vocational	16.5	22.5	10.1	14.2	19.2	8.9
General and specialised secondary schools	60.4	49.3	71.9	46.7	34.6	59.4
Technical secondary schools	39.5	47.3	31	28.1	33	22.9

a) Gross education ratio is the proportion of the number of people learning at the given level of education (independent of age) to the number of people at the age group corresponding to this level of education.

b) Net school education ratio is the proportion of the number of people learning (at the age appropriate for the specific level of education) at the given level of education to the number of people in the age group defined as corresponding to this level of education.

Source: Own study based on GUS.

This chapter is devoted to the analysis of the supply of specific occupational qualifications sought after in the market. It discusses primarily the following problems: the volume of the supply of occupations and its regional variation, and also changes in the supply that have taken place in the most recent years. As the studies are focused on the supply of occupational qualifications, in the report we also accounted for the following types of schools: basic vocational schools, technical schools (including the supplementary technical secondary schools for the graduates of basic vocational schools), and post-secondary schools. Not analysed among the others were the specialised secondary schools, as they provide only general education, together with orientation in the professional manners, without any rights to perform specific occupations. Analysed first was the supply of specific qualifications at the national level (occupations in which upper secondary schools most often provide education, and the number of sections offering education in the given occupation). Secondly, the typical profiles of education of men and women were described by showing what proportion of them select which occupations. Thirdly, presented were the changes in the frequency of education in a specific occupation between 2008 and 2009 (an analysis of the percentage change of the number of graduates entitled/authorised to perform a given occupation). Fourthly, the regional division of education profiles in upper secondary schools was discussed.

The table below (Table 5) clearly proves that the occupational profile of education of students of upper secondary schools is focused on technical rather than crafts and worker occupations. This is hardly surprising, considering higher education ratios in technical schools (approx. 20%) than in vocational schools (approx. 14%). Learning at upper secondary schools are the majority of the future representatives of the science and engineering associate professionals (22% of all people learning in these schools), business and administration associate professionals (16%), health associate professionals (10%) and information and communications technicians (7%). We can assume that a significant proportion of potential technicians and associate professionals will continue education at HE studies to obtain the status of a professional. The supply of technical/engineering education described above does not necessarily need to be related to the desire to become involved in such an occupation in future. At the same time, occupational schools provide the highest percentage of personal services workers (14% of people learning such occupations in all the schools), and slightly fewer metal, machinery and related trades workers (7%). At the same time, a relatively smallest number of students receive education in simple jobs e.g.: cleaners and helpers, handicraft and printing workers, stationary plant and machine operators (below 1%).

Corresponding to every type of school is a specific profile of education. Thus, learning at vocational schools are primarily personal service workers (26% of people learning in these schools) metal, machinery and related trades workers, sales workers, building and related trades workers, excluding electricians, food processing, wood working, garment and other craft and related trades workers. Predominant in technical schools are science and engineering associate professionals (40% of people learning in these schools) business and administration associate professionals, health associate professionals and information and communications technicians. In 2009, learning at the post-secondary schools were most often health associate professionals (24% of people learning in these schools), business and administration associate professionals and potential personal service workers.

Table 5

Occupations in which education in upper secondary schools is offered most frequently

Course of education	Number of students	Percentage of graduates	Number of schools offering the course	% of schools offering the course
Science and engineering associate professionals	59470	21.66%	3075	15.86%
Business and administration associate professionals	42873	15.62%	2250	11.60%
Personal service workers	38131	13.89%	2575	13.28%
Health associate professionals	27532	10.03%	1392	7.18%
Information and communications technicians	19967	7.27%	1121	5.78%
Metal, machinery and related trades workers	18298	6.67%	1739	8.97%
Customer services clerks	12397	4.52%	590	3.04%
Sales and related trade workers	10562	3.85%	666	3.43%
Building and related trades workers, excluding electricians	10363	3.77%	1573	8.11%
Food processing, wood working, garment and other craft and related trades workers	9630	3.51%	2052	10.58%
Legal, social, cultural and related associate professionals	6441	2.35%	393	2.03%
Electrical and electronic trades workers	6086	2.22%	900	4.64%
Personal care workers	3108	1.13%	128	0.66%
Protective services workers	2468	0.90%	188	0.97%
Market-oriented skilled agricultural workers	1866	0.68%	202	1.04%
Numerical and material recording clerks	1790	0.65%	169	0.87%
Drivers and mobile plant operators	1554	0.57%	131	0.68%
General and keyboard clerks	849	0.31%	79	0.41%
Stationary plant and machine operators	387	0.14%	35	0.18%
Handicraft and printing workers	361	0.13%	58	0.30%
Cleaners and helpers	196	0.07%	32	0.17%
Assemblers	143	0.05%	37	0.19%

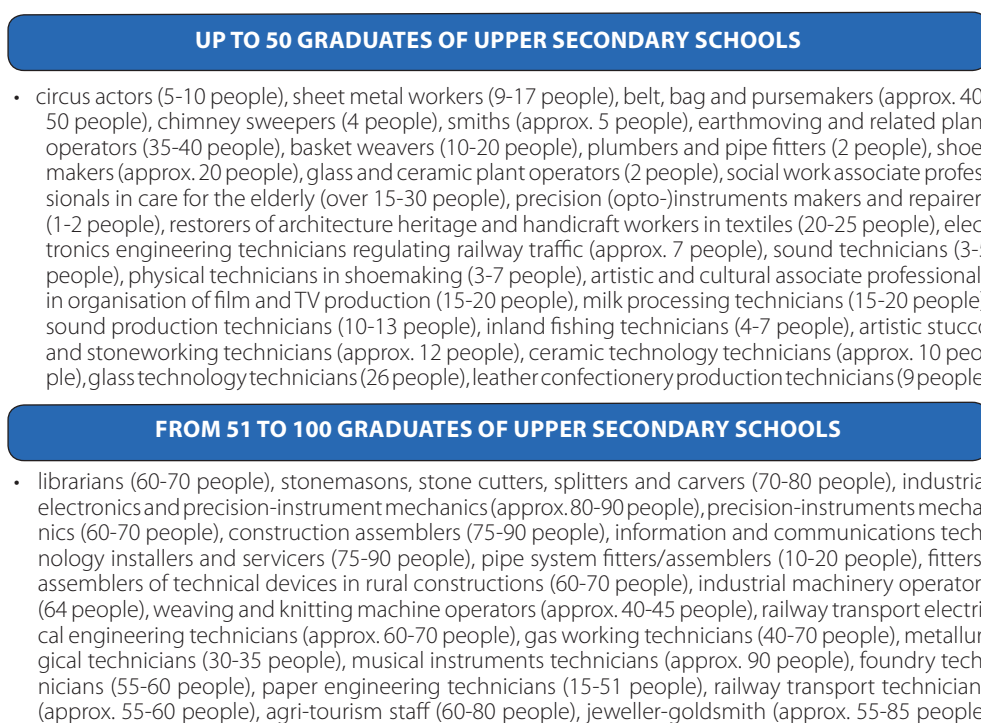
Source: Own study based on Educational Information System (SIO).

The supply of qualifications in upper secondary schools is not limited only to the supply of the largest possible number of graduates of specific occupations. Decidedly more important can be these courses of education that prove to be niche, in this way providing the labour market with the hardly available and rarely found specialists. Such occupations are presented in the figure below, and divided into these occupations in which no more than 50 people acquire qualifications every year, and the occupations to which from 51 to 100 graduates qualify every year. It is puzzling why so few people learn in the following occupations: social work associate professional in care for the elderly (as the demand grows systematically) and plumber and pipe fitter, shoemaker – occupations that have not at all lost their social significance.

Analysis of courses of education at levels of upper secondary education

Figure 2

The most rare courses in education (fewer than 100 graduates a year)⁵



Source: Own study based on Educational Information System (SIO).

It was said that women more often choose general education, which is why they relatively more often opt for general secondary schools having completed lower secondary education. This tendency to “go humanist” among the women is visible also among the women who attend vocational schools. The table below presents clearly the differences between the masculine and feminine profiles of education. Men more often choose the “sciences” (e.g. science and engineering associate professionals, information and communications technicians) and craft-related and worker occupations (e.g. metal, machinery and related trades workers, building and related trades workers, excluding electricians, food processing, wood working, garment and other craft and related trades workers, electrical and electronic trades workers).

Table 6

Occupations with the highest percentage of women and men in education⁶

Occupation	Men	Women
Science and engineering associate professionals	31.60%	8.46%
Metal, machinery and related trades workers	11.66%	0.03%
Information and communications technicians	11.27%	1.96%
Business and administration associate professionals	9.47%	23.78%
Health associate professionals	6.64%	14.53%
Building and related trades workers, excluding electricians	6.59%	0.04%
Personal service workers	6.18%	24.13%
Food processing, wood working, garment and other craft and related trades workers	4.59%	2.08%

⁵ The list is drawn according to the Polish Klasyfikacja Zawodów Szkolnictwa Vokacjonalgo i.e. classification of occupations for the purposes of vocational training, which is not fully compatible with ISCO.

⁶ Marked in red are “masculine” occupations, while “feminine” are marked in blue.

Analysis of courses of education at levels of upper secondary education

Electrical and electronic trades workers	3.87%	0.02%
Customer services clerks	1.95%	7.92%
Legal, social, cultural and related associate professionals	1.30%	3.74%
Protective services workers	1.25%	0.43%
Drivers and mobile plant operators	0.99%	0.00%
Market-oriented skilled agricultural workers	0.89%	0.40%
Sales and related trade workers	0.86%	7.82%
Stationary plant and machine operators	0.24%	0.01%
Handicraft and printing workers	0.16%	0.10%
Numerical and material recording clerks	0.14%	1.33%
Personal care workers	0.12%	2.47%
General and keyboard clerks	0.08%	0.61%
Assemblers	0.08%	0.02%
Cleaners and helpers	0.05%	0.10%

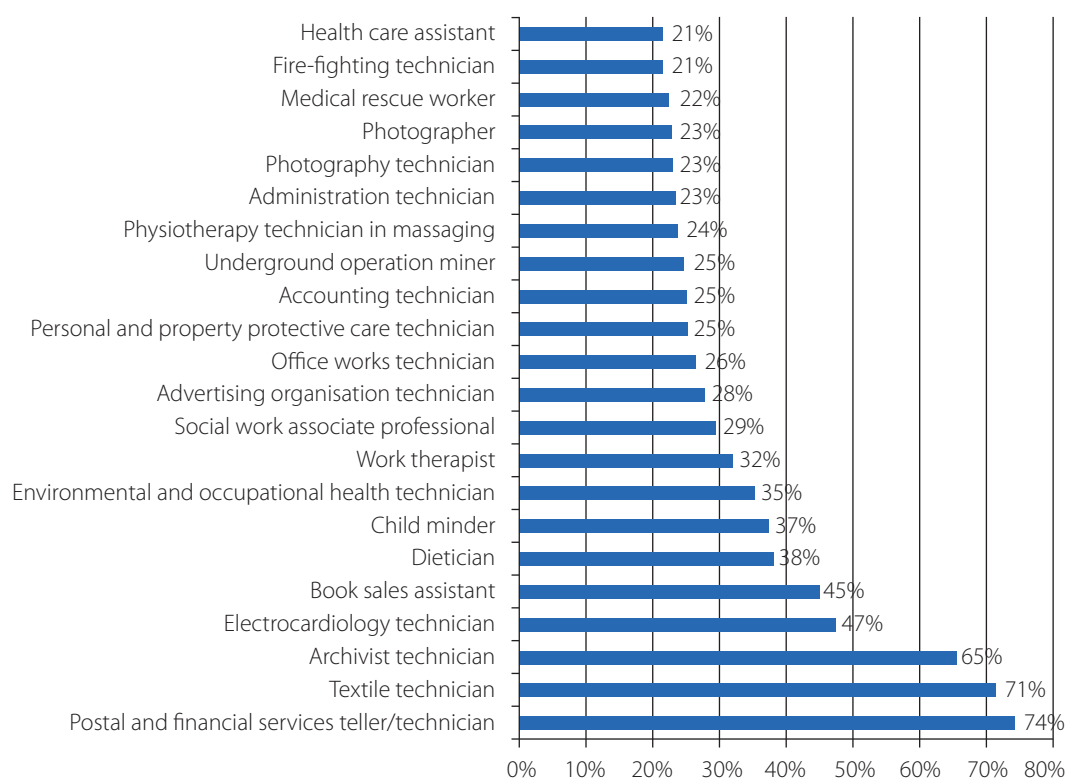
Source: Own study based on Educational Information System (SIO).

Women, in turn, see themselves as playing service and care functions (health associate professionals, personal service workers, customer services clerks, sales workers, personal care workers) or executing tasks in administrative and support service activities (e.g. business and administration associate professionals, numerical and material recording clerks, general and keyboard clerks).

As a rule, profiles of education in upper secondary schools do not undergo drastic transformations, yet they are vulnerable to all and any changes in the preferences of students selecting a specific occupation after completion of the lower secondary school.

Chart 1

The largest increases (in %) in the number of graduates of individual courses in education in upper secondary schools (year 2009 to 2008)



Source: Own study based on Educational Information System (SIO).

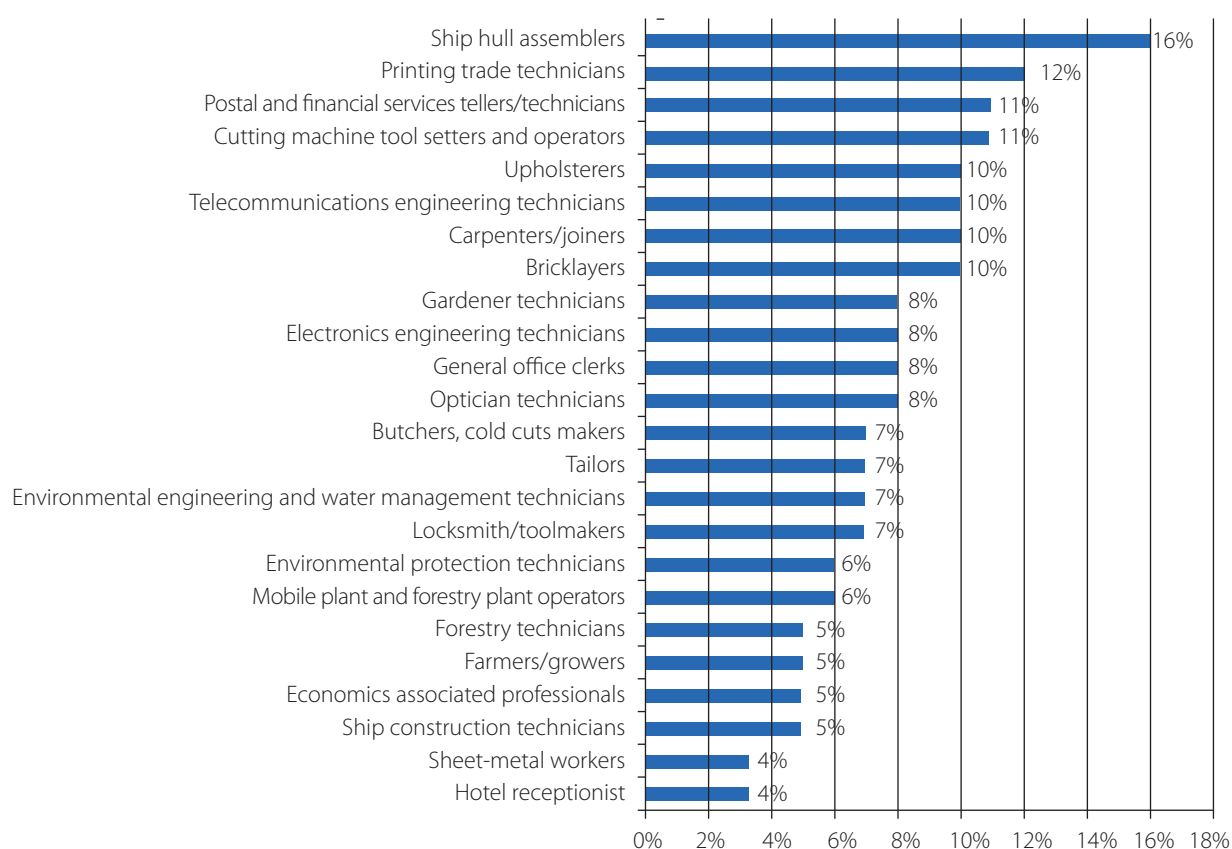
Analysis of courses of education at levels of upper secondary education

Looking at the changes in percentages (year to year), one notices that far more graduates left upper secondary schools with technical education (e.g. postal and financial services tellers/technicians, decorative textiles technicians, archivist technicians, electrocardiology technicians, book sales assistants, dieticians, etc.: Chart 1). If, on top of that, the fact that the year-to-year decrease in the absolute number of people learning at all types of upper secondary schools (due to demographic trends) is accounted for, conclusion about the large increase of demand among the learners for the courses in education listed above can be drawn. This increase does not necessarily need to be related to the occupational focus of students at upper secondary schools, but with the education at higher level becoming a mass phenomenon (interest in technical education, which on the one hand, provides occupational qualifications, and on the other – allows continuation of education at the HE level is increasing).

Not all the occupations enjoy equally high interest. The chart below shows the drop in the demand for specific courses in education (the so-called year to year percentage drop).

Chart 2

The largest drops (in %) in the number of graduates of individual courses in education in upper secondary schools (year 2009 to 2008)



Source: Own study based on Educational Information System (SIO).

As can be seen, in the case of some courses of education, these drops are significantly large so that they cannot be explained by the demographic low. There was a drastic drop in the number of graduates with the following qualifications: ship hull assemblers, printing trade technicians, postal and financial services tellers/technicians, cutting machine tool setters and operators, upholsterers, telecommunications engineering technicians, carpenters/joiners, and bricklayers. The fact that the increases in the supply of graduates of specific courses in education described above concerned mostly technical occupations, while the falling tendency is our far more often related to worker and craft occupations is worth paying attention to.

Knowing already the basic trends in education at the level of upper secondary schools at the scale of the entire country, it is worthwhile to take short glance at the differentiation of supply of qualifications that are

valuable in the market. The table presented below compares the profiles of education in different regions of Poland. As can be seen, they differ significantly between various geographic areas.

An investigation has proved that there is a visible general trend towards increasing the supply of technicians (corresponding to a drop in the supply of workers and craftspeople).

Even though all the regions share a relatively similar profile of school education at upper secondary levels, it is possible to identify a few key differences between them:

- First, the lowest percentage of business and administration associate professionals learn in the southern and eastern supra-regions.⁷ Moreover, these two regions boast the largest number of IT technicians leaving upper secondary schools.
- Secondly, relatively fewest personal services workers were educated in the south-western supra-region, a region that has plenty of electric and electronic mechanics.
- Thirdly, there are far more numerical and material recording clerks learning in southern and northern regions.
- Fourthly, there are relatively fewest drivers and mobile plant operators, and market-oriented skilled agricultural workers being educated in the south western and southern regions.
- Moreover, the largest proportion of sales workers left upper secondary schools in the south-western, northern, and western regions.

⁷ Division into the supra-regions complies with the classification of the Central Statistical Office (GUS).

**Analysis of courses
of education at levels
of upper secondary
education**

Table 7
Structure of education at upper secondary level by the region

24

Occupation	Central	Southern	Eastern	Northwestern	Northern	Eastern
Science and engineering associate professionals	9492 22.2%	14481 24.2%	13710 24.8%	9325 19.7%	7574 17.2%	4888 19.4%
Business and administration associate professionals	7551 17.7%	8529 14.2%	7360 13.3%	7521 15.9%	7577 17.2%	4335 17.2%
Personal service workers	6277 14.7%	8668 14.5%	8036 14.5%	6144 13.0%	6091 13.8%	2915 11.6%
Health associate professionals	4359 10.2%	5931 9.9%	6264 11.3%	4942 10.4%	3838 8.7%	2198 8.7%
Science and engineering associate professionals	2930 6.8%	3321 5.5%	3635 6.6%	3280 6.9%	3128 7.1%	2004 8.0%
Information and communications technicians	2872 6.7%	4750 7.9%	4437 8.0%	3185 6.7%	2919 6.6%	1804 7.2%
Customer services clerks	1628 3.8%	2724 4.5%	2484 4.5%	2154 4.5%	2225 5.1%	1182 4.7%
Food processing, wood working, garment and other craft and related trades workers	1334 3.1%	1855 3.1%	1541 2.8%	1957 4.1%	2001 4.5%	942 3.7%
Building and related trades workers, excluding electricians	1159 2.7%	2663 4.4%	2025 3.7%	1978 4.2%	1425 3.2%	1113 4.4%
Sales and related trade workers	1155 2.7%	1910 3.2%	780 1.4%	2521 5.3%	2847 6.5%	1349 5.4%
Legal, social, cultural and related associate professionals	992 2.3%	1177 2.0%	1224 2.2%	1277 2.7%	1139 2.6%	632 2.5%
Electrical and electronic trades workers	777 1.8%	1250 2.1%	1148 2.1%	1242 2.6%	843 1.9%	826 3.3%
Personal care workers	487 1.1%	536 0.9%	727 1.3%	456 1.0%	609 1.4%	293 1.2%
Protective services workers	473 1.1%	619 1.0%	537 1.0%	334 0.7%	288 0.7%	217 0.9%
Market-oriented skilled agricultural workers	376 0.9%	270 0.5%	438 0.8%	300 0.6%	386 0.9%	96 0.4%
Drivers and mobile plant operators	354 0.8%	146 0.2%	413 0.7%	226 0.5%	356 0.8%	59 0.2%
Numerical and material recording clerks	238 0.6%	478 0.8%	247 0.4%	242 0.5%	452 1.0%	133 0.5%
General and keyboard clerks	132 0.3%	148 0.2%	230 0.4%	118 0.2%	134 0.3%	87 0.3%
Handicraft and printing workers	90 0.2%	101 0.2%	44 0.1%	45 0.1%	64 0.1%	17 0.1%
Stationary plant and machine operators	34 0.1%	198 0.3%	45 0.1%	32 0.1%	48 0.1%	30 0.1%
Assemblers	27 0.1%	50 0.1%	6 0.0%	31 0.1%	21 0.0%	8 0.0%

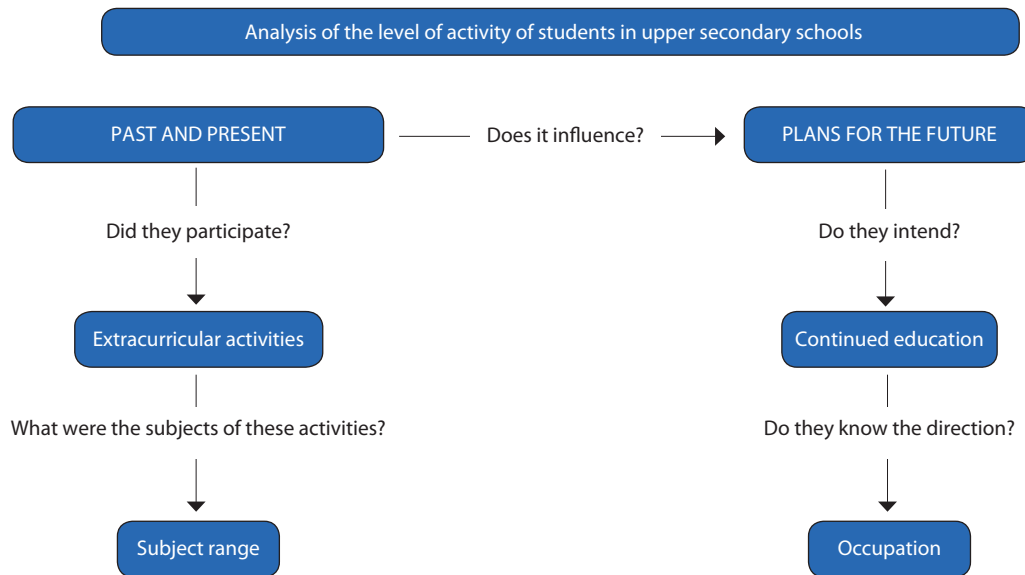
Source: Own study based on Educational Information System (SIO).

4.2. Educational activity of students of upper secondary schools

The analysis of educational activity was focused on two dimensions: the first being the current and past activity in education, and the other – the plans concerning future education.

Figure 3

Educational activity of students of upper secondary schools: diagram of key questions



Source: Own study.

The current educational activity of students can be structured around two aspects:

1. the formal education, accounting for its profile and type of school, in which it is provided, and
2. additional education (not required by the school), i.e. activity focused on improving the skills and qualifications.

The first of the directions above, i.e. a description of school education at upper secondary levels was presented in the first chapter of the report. The proportion of individual types of schools in this study is presented in the section on the sample of the students survey.

Skills and qualifications may also be acquired and complemented outside the system of formal education, which is the focus of this chapter. To grasp this dimension of educational activity, the students were asked about participating in any extracurricular activities during the previous 12 months. Extracurricular activity was defined as classes, courses and activities held at school or outside, but non-obligatory, for example, language courses, sport training, private lessons, interest clubs. Taking into account such an extensive array of additional activity in the definition, the level of participation of students may be defined as medium – only slightly more than half of the students declare that any activity in this field.

The analysis of results in the area of additional educational activity of students allows distinguishing a handful of key factors influencing the level of participation of students in additional education. They include primarily:

- the size of the city/town where the school is situated
- type of school the student currently attends
- level of education of the father/parents.

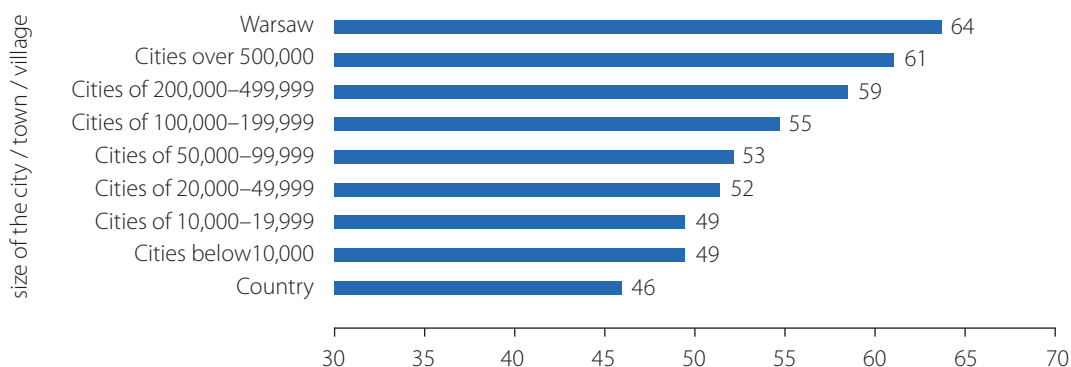
Presented below are the detailed results for each of these factors.

Educational activity of students of upper secondary schools

A linear dependence can be observed between the size class of the town where the school is situated, and the percentage of students participating in additional education. This proportion is lowest in rural areas, where not even every other student (46%) was involved in such additional educational activity, and highest (over 60%) in the largest cities, including Warsaw, where it reached 64%.

Chart 3

The percentage of students participating in additional education and training, broken down by the size of the city/town where the school is situated (N=35712)

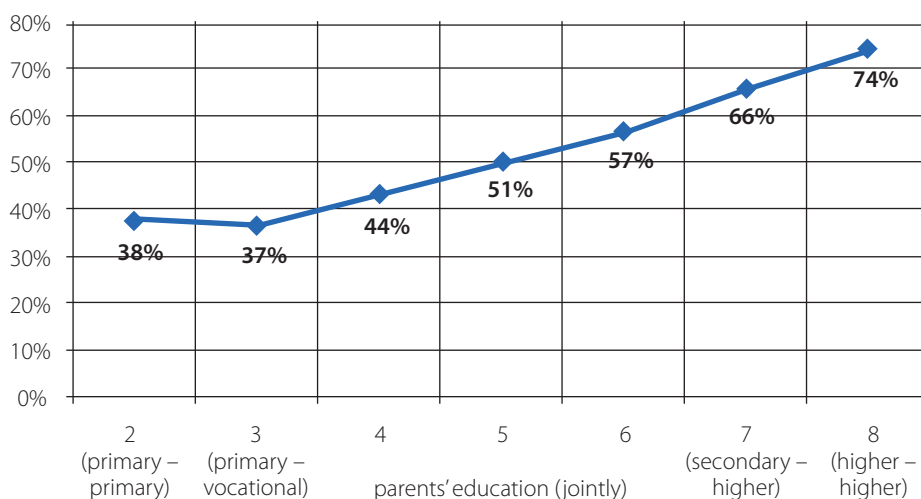


Source: Own study based on: *BKL Study – Secondary Students Survey, 2010*.

There is an even more evident dependence between participation of the student in additional education and training on the one hand, and the level of education of the parents.⁸ The lowest proportion is recorded among students whose both parents have primary or primary and vocational education (approx. 38%) and grows linearly with the education of the parents. In the case of students whose parents have higher education, 3 out of 4 participated in additional education and training in the year preceding the study.

Chart 4

The percentage of students participating in additional education and training vs. the education of the parents (N=35712)



Source: Own study based on: *BKL Study – Secondary Students Survey, 2010*.

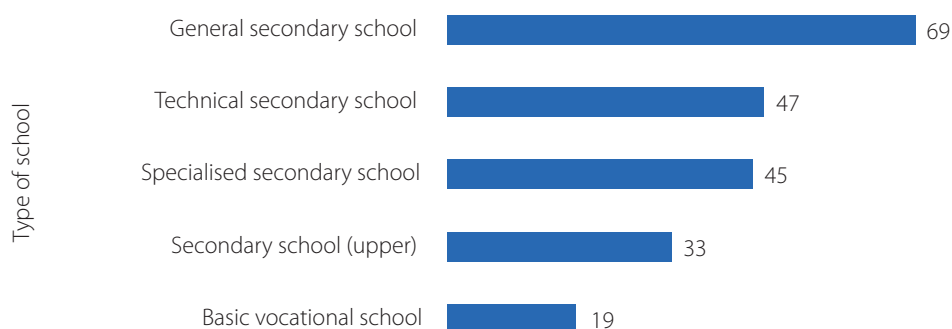
⁸ The education of parents is expressed as the sum of numerical values assigned to the levels of education of father and mother, where 1 corresponds to primary education, 2 – to basic vocational, 3 – to secondary, and 4 – to higher.

Educational activity of students of upper secondary schools

As far as the type of school is concerned, decidedly most active in this area are the students of general secondary schools, 69% of whom participated in additional training and education in the last year. Ranking below them are the students of technical secondary schools and specialised secondary schools – with fewer than 50% of their students involved in such education and training in the previous year. In the case of the post-secondary schools – this was true for every third student, and in basic vocational schools – only for every fifth. Before even the subject range and type of this additional education and training is devoted more time to, it is worth mentioning that a large proportion of this education and training were the private lessons in school subjects, which explains higher educational activity of students in these schools, whose last grades take the final (matriculation) examination. Their increased activity in the field is therefore strongly linked to the coming examination, and the question of the potential “ticket” to the university.

Chart 5

Participation in additional education and training, broken down by the type of school (in %)

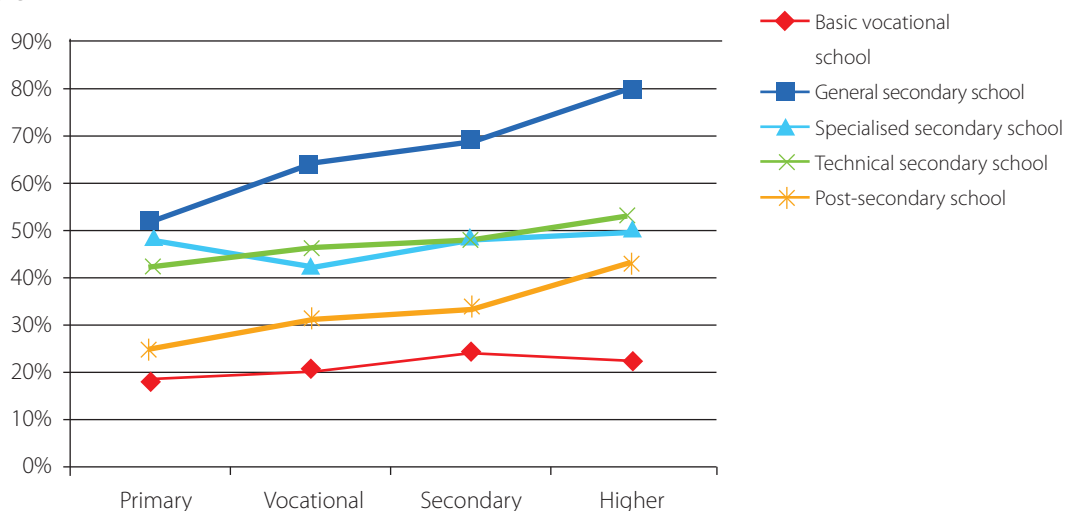


Source: Own study based on: *Study of Human Capital in Poland – BKL Study – Secondary Students Survey, 2010.*

If we put together the type of school and the education of the father (which, as the predictive factor in analysis of educational activity, is more frequently used in analyses than the education of the parents), the gap grows even further: among the students of general secondary schools whose father boasts higher education, the proportion of participants in additional education and training amounts to 80%, with the other extreme being taken by the students of basic vocational schools, whose father has primary education, where the proportion drops down to 18%.

Chart 6

The proportion of students participating in additional education and training, broken down by the type of school and education of the father



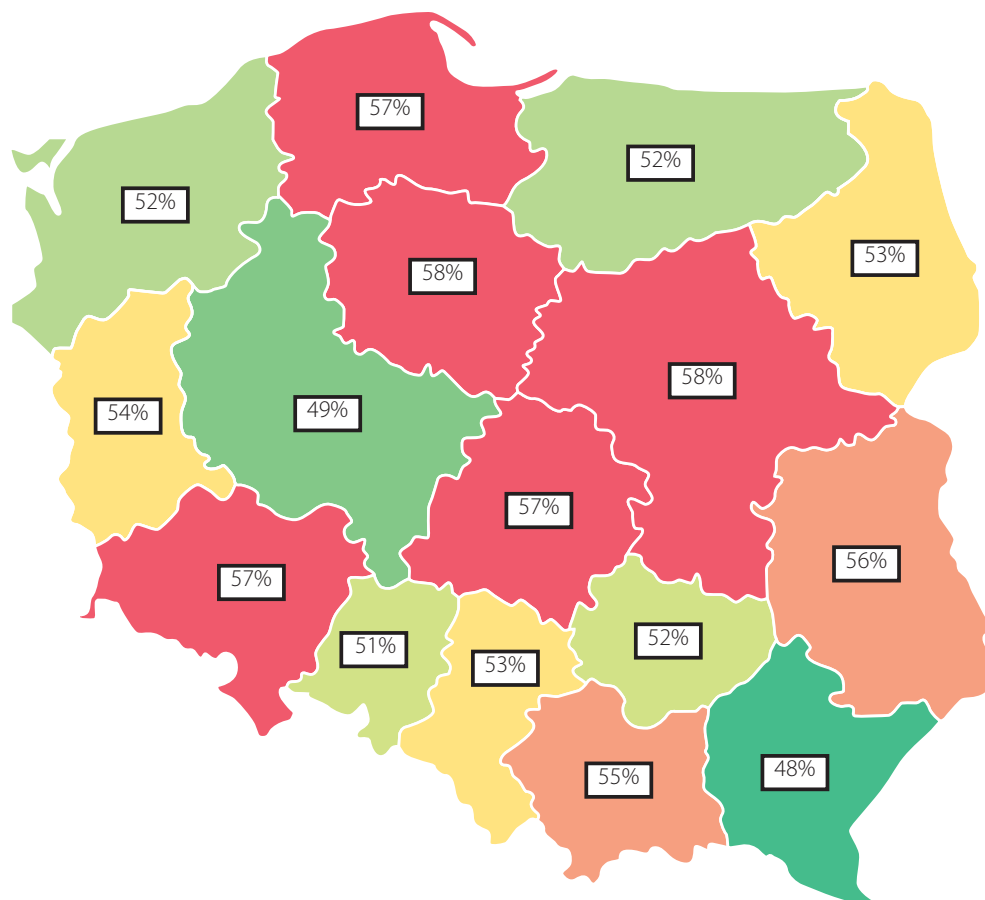
Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

Educational activity of students of upper secondary schools

Among other factors that may potentially differentiate the additional, extracurricular educational activity of students also the following were taken into account: gender, institutional facilities in the school (career counsellor and school careers centre), and the fact of being involved in gainful employment in the year preceding the study. As far as the differentiation of the additional educational activity by gender is concerned, it must be emphasised that even though women participated somewhat more often in additional education and training than men, the difference is not large, as it amounts only to 5 percentage points (56% against 51%). What seems interesting is the fact that no significant link between the participation of students in additional extracurricular education and the institutional facilities in the school, construed as the support of a career counsellor for students and/or the operation of a school career centre, was observed. The results of the study prove also that the schools that have a school career centre do not have a higher proportion of students who resorted to additional education and training outside school than the ones that do not run such a centre – in both the cases, the rate is 54%. In turn, among those who use the services of such centre, there are more people who attended additional education and training than in the group of people who did not use such a service (57% and 52%, respectively) even though it was available at school (N=3604). Also, there were slightly more participants of additional education and training among those who use the services of a school career counsellor (56%) than those who did not, even though they had such an opportunity (52%) (N= 8553). Nevertheless, the schools that employed a career counsellor did not stand out in the participation of students in additional education and training, compared to schools which did not employ one, and the proportion was even slightly higher in the latter (53% against 55%). Another interesting result is the one that shows that the fact of gainful employment performed by the student during the 12 months was of low significance for the additional educational/training activity of the student. For the students who did not work in this time, the proportion of those participating in additional training amounted to 55%, and was only by 2 percentage points lower among the working ones.

Figure 4

Participation in additional training, broken down by administrative regions (voivodeships)



Broken down by the region (Figure 5), the diversity is not high, with the distance of 10% between the extreme values. The highest proportion of people participating in additional education and training is recorded in the north-central supra-region of Poland, that is in the Mazowieckie and Kujawsko-Pomorskie (58%), and Pomorskie and Łódzkie (57%) administrative regions and in the Dolnośląskie (57%). The lowest values are in turn recorded in the Podkarpackie (48%) and Wielkopolskie (49%).

Scope of subjects of additional education and training

4.3. Scope of subjects of additional education and training

Generally, the subjects of additional training and education embarked on by the students of upper secondary schools during the last year focus around four main groups. Most answers pointed to the category of additional private tuition and extracurricular classes in school subjects, which is not surprising as the respondents are the students of the last grades in their schools (including, for example, the students of general, specialised, and technical secondary schools studying for their high school final (matriculation) examinations). The remaining three most frequently represented groups are: language courses and classes, with the absolute dominance of the English language, development of personal interests and hobbies, with sport training in the lead, and training providing artistic development related to culture and art.

As has been indicated above, the proportion of participants in additional education is comparable among men and women, and in both cases exceeds 50%. Yet if participation is component in the breakdown into the subjects of additional education and training, it is noticeable that women far more often concentrated on education related to school subjects, with 56% of them pointing to the category as compared to 44% of men; and on additional classes and courses in foreign languages: 48% compared to 32%. In dominant majority, these were classes in the English language (every third of the total participated in them), with German, French, Russian, and Spanish languages, ranking further.

Women far more often participated also in forms of education, providing artistic development in the field of art and culture: 70% compared to the 7% among men. Two forms of activity in this field may be pointed to as dominant: "dance" and "singing and playing the instruments".

Men, in turn, stood out significantly in additional activity defined as development of interests and hobbies, with nearly twice as many men as women pointing to additional activity in this field (every other male and every fourth female student). Investigation of individual answers allows the statement that these differences result from the fact of a strong domination of training related to sport and physical activity among all the responses. Slightly more men than women participated also in information technology education (5% of men and 1% of women), in driving licence and vehicle maintenance courses (5% of men and 2% of women), and in construction and industry. The detailed values for each category are presented in the table below.

Table 8

Participation in additional education and training, broken down by subject and gender

Subjects of additional education and training	Women		Men	
	% of responses among all the answers	% of students who pointed at a given category	% of responses among all the answers	% of students who pointed at a given category
Additional education/private tuition in school subjects	35%	56%	29%	44%
Languages	30%	48%	21%	32%
Development of interests, hobbies, and other personal development	16%	25%	31%	48%
Culture, art, other artistic	11%	17%	5%	7%
Driving licence, maintenance and repair of motor vehicles	2%	2%	3%	5%
Misc.	2%	3%	2%	4%
IT	1%	1%	3%	5%
Accommodation and food service activities, tourism, recreation, leisure	1%	2%	1%	1%
Construction and industry	0%	0%	2%	3%
Various specialist occupational	0%	0%	1%	1%
Related to services	1%	1%	0%	0%
Bookkeeping and accounting	1%	1%	0%	0%
Managing finance, controlling, cost estimation	0%	1%	0%	1%
Medical, social work, psychology	0%	1%	0%	0%

The table presents the most frequent answers. The students' answers do not add up to 100%, as the respondents were allowed to mention subjects of more than one form of additional education/training.

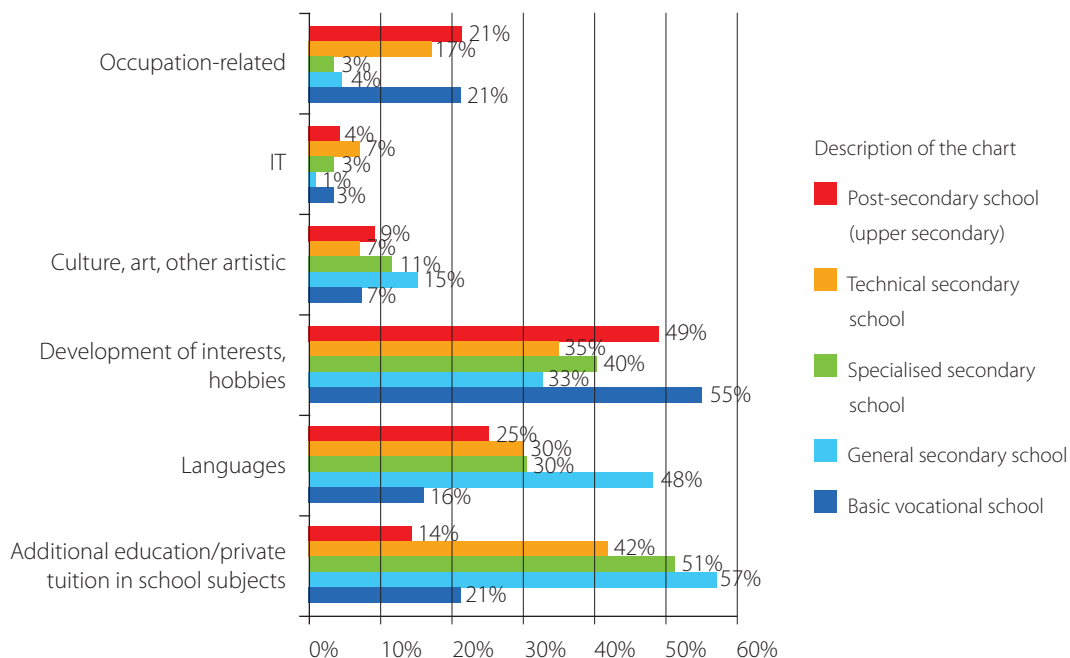
Source: Own study based on: *BKL Study – Secondary Students Survey, 2010*.

Analysing participation in additional education and training by the type of school that a given student attends, the focus was on the groups of categories that were present in the largest number of responses. Moreover, a decision was made to list the "occupation-related training" category in the chart. It is an aggregation of the ones most frequently mentioned: driving licence, maintenance and repair of motor vehicles; accommodation and food service activities, tourism, recreation, leisure; construction and industry; related to services; bookkeeping and accounting; and a category "other specialist, occupation-related". Justification here is the fact that even though they are of low significance when analysed individually, jointly – they account for an already significant group of education and training, especially for certain categories (e.g. basic vocational schools).

Chart 7

The proportion of students who participated in additional education and training, broken down by the subject of education/training and type of school

Scope of subjects of additional education and training



Source: Own study based on: *BKL Study – Secondary Students Survey, 2010*.

Classes and courses in school subjects most frequently attracted students of general (57%), specialised (51%), and also technical (42%) secondary schools, that is all the types of schools where the last year of education ends – in case of most students – with the matriculation examination. Therefore, the conclusion that high activity of students in this field resulted from the motivation to achieve a satisfactory result at the secondary school final examination seems justified. Students of general secondary schools predominated strongly over the others in the frequency of mentioning foreign languages: participating in them was nearly every other student of the general secondary schools, as compared to only every sixth in basic vocational schools. Between these two extreme categories were the students of technical and specialised secondary schools and upper secondary schools, with the results oscillating around 30%. A certain explanation of the high (highest) results of basic vocational schools in the category of developing interests and hobbies is the fact that all forms of sport training (which account for the largest proportion of the answers/responses) were included into the category. The category of culture and art was again dominated by students of general secondary schools (15% of the students) with specialised secondary schools (11%) coming second. There is a reverse tendency in the case of vocational training, where – understandably – the most numerous among the participants were the students of basic vocational schools, specialised secondary schools (21% of each), and technical secondary schools (17%), while both for general and specialised secondary schools such an additional activity was of marginal significance.

In the decomposition of the data by the city/town/village size class, the largest differences can be observed in the category of additional language classes. The lowest proportion is present among people learning in general schools where slightly more than a third (36%) of students participated in such classes and courses, while the ratio among the students of Warsaw schools exceeded a half (52%). A similar trend, even though with the smaller distance between the extreme values can be observed in participation in education and training in culture and art, where the students of rural schools rank lowest, at 9%. This ratio grows parallel to the increase in the size of the town/city and amounts to 16% for large cities, and to 22% for Warsaw. Generally, students of rural schools participated on average slightly more often than their peers from city schools in occupational training (with differences exceeding 4%), yet the absolute number of reported cases in these categories of education and training was not high.

Nevertheless, such a differentiation within the described categories draws certain profiles of educational development, where visible in the rural schools already at this stage is a stronger profiling towards acquisition of a specific job, and related skills. On the other hand, in cities (especially large), a greater emphasis is placed on general development, including language skills and opportunity of developing one's artistic passions.

4.4. Education-related plans of students

From the perspective of analysing the labour market, especially in the dynamic aspect, equally interesting as the current status quo of education and competencies held by students is also the context of the nearest plans concerning education and training. For that reason, students were asked about the following:

- their plans to continue education immediately after completing the current school
- type of school where they would like to/are planning to continue education, and the form of that education
- the occupation/course in which they would like to continue education.

Plans concerning continuation of education in the nearest future

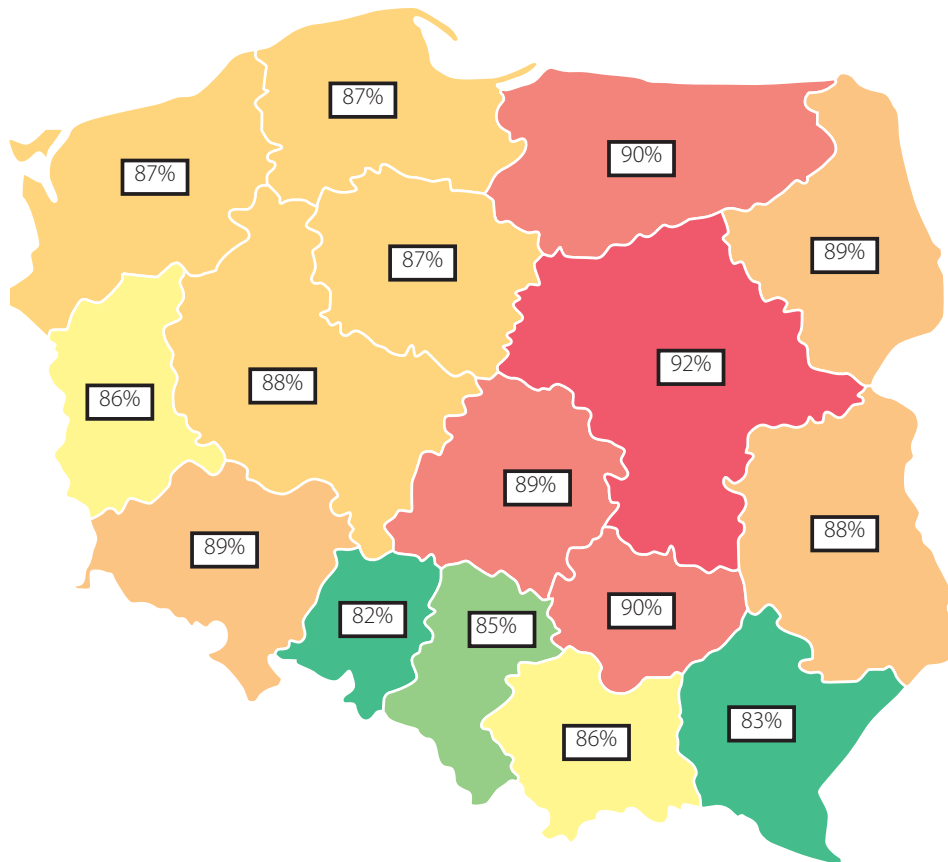
Majority of the total body of students – reaching as high as 87% – have made up their mind to continue education after completing current school, 8% have not decided yet, and only one in every 20 declaring lack of further educational plans in the nearest future. The desire to continue education is more frequently declared by students of public (88%) than non-public (74%) schools.

At the level of individual administrative regions small differentiation can be observed. The highest percentage of students who have decided to continue education is found in the Mazowieckie (92%), where at the same time the proportion of people who have decided to stop education at the current level (3%) is highest. In the Świętokrzyskie and Warmińsko-Mazurskie, the percentage of those who declare continuation of education is lower by two percentage points. The lowest proportions are recorded in the Opolskie and Podkarpackie administrative regions, where they amount to 82% and 83%, respectively.

Figure 5

The proportion of students declaring the desire to continue education immediately after the completion of the current school

Education-related plans of students

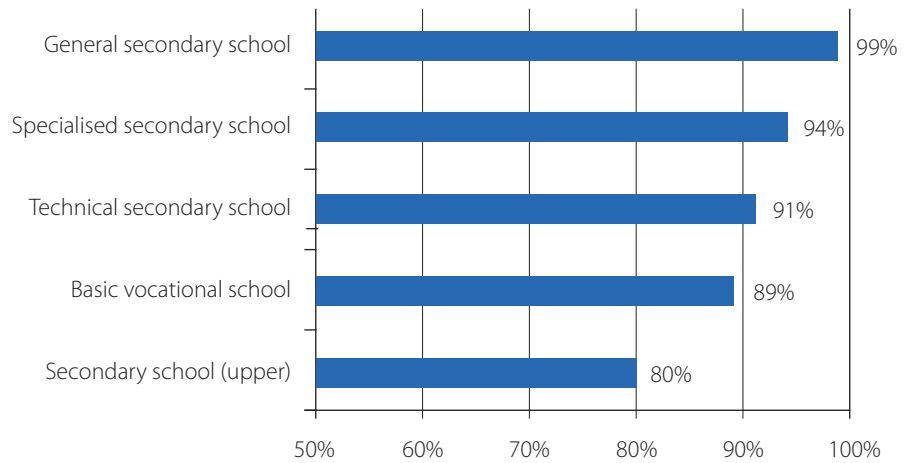


Source: Own study based on: *BKL Study – Secondary Students Survey, 2010*.

Analysing the desire to continue education in the breakdown by the school where the student is currently learning, a clear distinction between individual categories is visible. Nearly all the students of general secondary schools intend to continue education. Slightly fewer (by 5%) people have decided to follow such a path among the students of specialised secondary schools. The proportion of students planning to continue education drops again by a few per cent in the case of students of technical secondary schools, and basic vocational schools, and is lowest among the students of post-secondary schools (80%).

Chart 8

The percentage of students declaring the desire to continue education broken down by school type (n=35712)

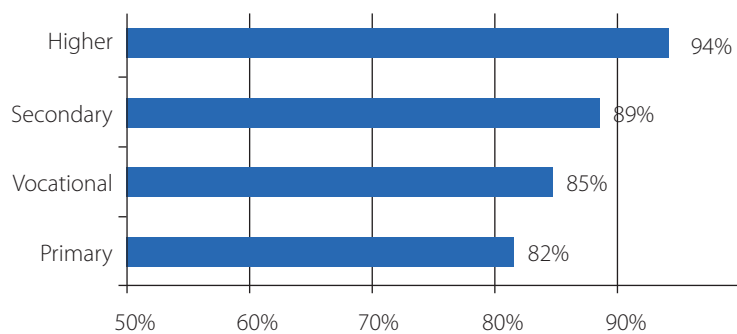


Source: Own study based on: BKL Study – Secondary Students Survey, 2010.

Much like in the case of participating in additional forms of education, there is a positive link between the desire to continue education in the nearest future (immediately after graduation from the current school) and the education of the father: people whose father has basic education least frequently declared eagerness to continue education (82%), while the proportion of people who have decided to continue education was highest among the children of fathers with higher education. Worth emphasising, however, is the fact that this influence diminishes if the type of school that the student attends is taken into account.

Chart 9

The percentage of students declaring eagerness to continue education vs. the education of the father (n=35712)



Source: Own study based on: BKL Study – Secondary Students Survey, 2010.

Form of further education

The education of the father remains dependent not only on the declaration to continue education, but also differentiates the declarations of the respondents towards the place where education will be embarked on.

Table 9

Where does the student intend to continue education: breakdown by education of the father

Where does the student intend to continue education?	Education of the father			
	Primary	Basic	Secondary	Higher
Day studies	33%	42%	53%	76%
I don't know yet	28%	24%	19%	10%
Extramural studies (weekend)	26%	24%	21%	10%
Technical secondary school	7%	6%	5%	3%
Post-secondary school	4%	3%	3%	2%
General secondary school	2%	2%	2%	1%
Evening studies	1%	2%	2%	1%
Specialised secondary school	0%	0%	0%	0%

Source: Own study based on: *BKL Study – Secondary Students Survey, 2010*.

A great majority (76%) of children of fathers with higher education intend to study at day studies after graduation from the current school. Among those whose father has secondary education, the percentage of decisions to enter day studies is visibly lower, even though they are still the majority in the category (53%). Children of the fathers with vocational and basic education reported planning to continue education at day studies at the rate of 42% and 33%, respectively. Worth emphasising is the fact that day studies were the dominant choice in each group selected by the education of the father. Nevertheless, in the groups of children of fathers with secondary and lower education, the importance of extramural studies was on the rise, as the category was selected by 26% of students of fathers with primary education, 24% of students with fathers with vocational education, and 19% – with secondary.

In the group of fathers with higher education, this form of continued learning was considered by only every tenth student. This data is worth analysing in a broader context; for example *Social Situation in the European Union 2007* proves that in the EU countries the probability that a person aged from 25 to 65 has higher education, if the person's father had higher education, is more than twice as high than in the case of people whose father had only basic education. In Poland, the probability that a person will acquire higher education in the situation when the person's father had primary education is very low, and amounts to less than 10%, while in countries including Germany, Finland, and the United Kingdom, it amounts to nearly 30%. This probability is seven times as low as in the case of people whose father had higher education.⁹ This dependence results among others from the material possibility of ensuring children appropriate conditions of education (there are, obviously, also other circumstances, including transmission of certain patterns of functioning in the labour market and, more broadly, in the society, the type of attitude assumed, etc.).

Interesting for the complementation of the image of the phenomenon is a look at the relationship between the declaration of further education and the occupational situation of the father. Among people whose father works this proportion is highest (88%), among children of nonworking, retired and pensioners fathers, it amounts to 85%, and is lowest among children of the unemployed fathers (82%). Those differences increase even further, should the situation of the student be analysed according to the occupational situation of both the parents: in case of both father and mother working, as many as 90% of their children will continue education, while in the case of parents remaining without employment, the proportion amounts to 77%.

An analysis of the choices of forms of further education through the perspective of current schools and student's gender (Table 3) allows the comment that day studies were most often pointed to by students of general secondary schools (76% of women, and 75% of men).

Disregarding the category of the undecided, in the case of students of technical and specialised secondary schools and post-secondary schools, the most frequent option were extramural studies, with the percentage of people declaring such a choice being slightly higher for women than men (41%, 41%, and 33% respectively for women, compared to 30%, 26%, and 29% in the case of men) in all categories. The second most frequent choice in these types of schools were day studies, where the tendency was reversed: such a choice was made by more men than women. technical secondary schools were selected most often by

⁹ Quoted after: A. Kurowska, *Skąd się bierze bieda?*, Zeszyty FOR Warszawa 2008.

Education-related plans of students

students of basic vocational schools. Here, such a choice was nevertheless made more often by men (43%) than women (37%). In turn, women learning in this type of school far more often than men pointed to the plans of further general education, selecting education in a general secondary school (17% as compared to 9%). To conclude, visible among women is the tendency to “go humanist” by supplementing their general education, while the path of education of men is the “technical/engineering” one, with the vocational school being supplemented with technical/engineering education.

The proportion of people planning studies in the group of vocational school students was low, and amounts to 7% in case of women and men planning extramural studies, and to 3% in case of day studies, and 1% – evening studies. Concentration on schools other than institutions of higher education results from the need to complement the general education by students of vocational schools and passing the secondary school final (majority) examination before embarking on a career in higher education. Among the students of specialised secondary schools, every seventh woman planned further education in a post-secondary school, with 7% of men intending to follow the same path. Generally, in the short time perspective, least interesting were the specialised secondary schools and evening studies.

Table 10

Place of intended continuation of education, broken down by type of school, and gender

Place of intended continuation of education	Type of school currently attended											
	Basic vocational school		General secondary school		Specialised secondary school		Technical secondary school		Post-secondary school (upper secondary))		Total	
	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men
Day studies	3%	3%	76%	75%	30%	19%	23%	34%	19%	23%	55%	45%
I don't know yet	34%	36%	8%	12%	19%	43%	44%	34%	43%	44%	17%	25%
Extramural (weekend) studies	7%	7%	15%	11%	41%	33%	29%	30%	33%	29%	22%	17%
Technical secondary school	37%	43%	0%	0%	0%	1%	0%	1%	1%	0%	3%	9%
Post-secondary school	2%	2%	3%	2%	14%	3%	3%	1%	3%	3%	4%	2%
General secondary school	17%	9%	0%	1%	0%	0%	0%	0%	0%	0%	1%	2%
Evening studies	1%	1%	1%	1%	3%	3%	4%	2%	3%	4%	2%	2%
Specialised secondary school	2%	2%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%

The percentages do not add up to 100 in the columns, because the respondents were allowed to point to more than one answer.

Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

Occupations in which students intend to continue education

The question that completes the picture of educational plans of the students is the question about the occupation and the further education related to it. The number of the occupations that students are interested in is dominated by four groups:

1. Science and engineering professionals (19%).
2. Legal, social and cultural professionals (18%).
3. Health professionals (14%).
4. Business and administration professionals (13%).

Education-related plans of students

As can be seen, most attractive from the perspective of students are two groups of occupations that, according to the classification of occupations for the needs of the labour market (ISCO-08), lie within the major group of professionals. The dominance of these groups stems from the fact that most occupations from this level of classification are selected by students of general secondary schools, who account for a large proportion in the structure of the sample (and population). A detailed distribution of the choices, broken down by the type of the school, is presented in the table below.

Table 11

Planned course of further education, broken down by the type of school (N=17479)

Occupation (ISCO) in which education is intended	Basic vocational school	General secondary school	Specialised secondary school	Technical secondary school	Upper secondary school	Total
Chief executives senior officials	1%	2%	3%	3%	1%	2%
Science and engineering professionals	6%	20%	9%	26%	5%	19%
Health professionals	2%	17%	13%	7%	45%	14%
Teaching professionals	0%	9%	13%	5%	4%	7%
Business and administration professionals	1%	13%	16%	21%	5%	13%
Information and communications technology professionals	1%	3%	6%	9%	0%	4%
Legal, social and cultural professionals	1%	25%	16%	8%	2%	18%
Science and engineering associate professionals	26%	1%	1%	4%	1%	5%
Health associate professionals	2%	2%	3%	2%	28%	2%
Business and administration associate professionals	2%	3%	4%	4%	1%	3%
Legal, social, cultural and related associate professionals	2%	2%	4%	2%	1%	2%
Information and communications technicians	1%	0%	1%	1%	0%	1%
Personal service workers	24%	1%	6%	4%	5%	5%
Sales and related trade workers	6%	0%	0%	0%	0%	1%
Protective services workers	1%	1%	2%	1%	1%	1%
Building and related trades workers, excluding electricians	6%	0%	0%	0%	0%	1%
Metal, machinery, and related trades workers	10%	0%	0%	1%	0%	1%
Food processing, wood working, garment and other craft and related trades workers	5%	0%	0%	0%	0%	1%

The percentages do not add up to 100, because the table includes only these groups of occupations, which received at least 1% of responses.

Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

Education-related plans of students

Interestingly, science and engineering professionals came first. This course was the most frequent choice for the students of technical secondary schools, and every fourth student of this type of school pointed to it. Worth emphasising, however, is the fact that a large proportion of people declaring this course of education were present also among the students of general secondary schools (every fifth student). The second choice of students of technical secondary schools by the number of decisions were the occupations in business and administration professionals group (21%). Referring this to the supply side of the labour market, that is the demand of employers for specific education, it can be claimed that students of technical secondary schools will have good prospects for finding employment after completion of the education they plan (with the assumption that the profile of demand remains constant in the meantime), as the two groups they mentioned most often are among the occupations where employees are sought most often.¹⁰ In turn, the group of legal, social and cultural professionals was the dominant choice for the students of both general and specialised secondary schools: in the case of general secondary school, the proportion was 25%, and in the case of specialised – 16%. Worth mentioning here is a potential problem that may appear when these people enter the labour market. The serious interest in this section of occupations among the largest category of students, namely the students of general secondary schools, does not find a reflection on the demand side, that is among the occupations sought by the employers, as only 2% of employers seeking staff mentioned the group.

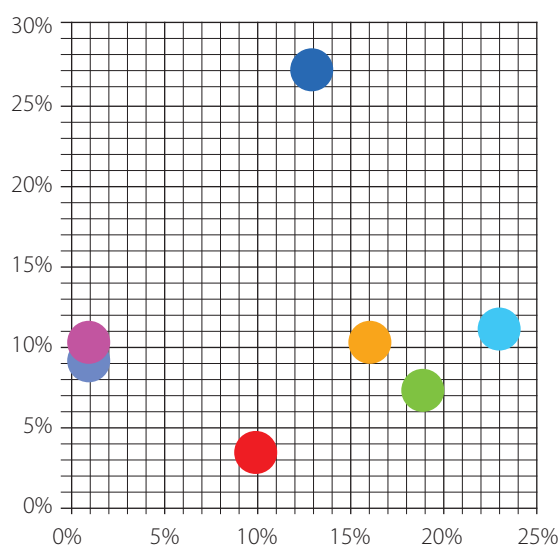
In turn, visible strongly among the students of post-secondary schools is the clear profiling of educational plans: nearly every other one of them intends to go into education of health professionals, and more than every fourth (28%) – of health associate professionals.

Two groups of occupations were dominant among the decisions of students of basic vocational schools concerning their further education: science and engineering associate professionals, and personal service workers (26% and 24% of responses), neither of which is classified high in the ranking of sought after occupations (4% in the employers study). Yet every tenth pointed to the eagerness to continue education in the field of metal, machinery and related trades, that is the group most frequently sought after in the labour market (12%).

Education-related plans of students are also conditioned by gender (Chart 10).

Chart 10

Occupation in which the students intend to continue education by gender



Description of the chart

- Science and engineering professionals
- Health professionals
- Teaching professionals
- Business and administration professionals
- Legal, social and cultural professionals
- information and communications technology professionals
- Science and engineering associate professionals

Source: Own study based on: *BKL Study – Secondary Students Survey, 2010*.

¹⁰ See: Report from the employer survey, conducted as part of the "Study of Human Capital in Poland" study.

Analysis of competencies supply among students of upper secondary schools

The profile of educational plans of men can be described as technical/engineering. This path is defined by sciences and engineering, with the dominant course of education being science and engineering professionals (as high as 27%), followed by two categories: information and communications technology professionals, and science and engineering associate professionals (9% and 10% responses respectively). Business and humanities less often belong to the educational preferences of men (10% and 12%), yet it must be emphasised that every fifth student opted for one of these courses. If this group is complemented with the students of health and education, the “non-technical” group of men does not prove to be that small, as it accounts for 30% of the total male population.

Among women, the structure of educational plans is quite the opposite: dominated by non-technical courses. Besides specialisations in sciences, present in the plans of 13% of women, other technical courses are of marginal significance. The dominant choice among women are humanities, with 23% mentioning plans to learn to become legal, social and cultural professionals. The number of preferred specialisations includes also health and business and administration.

4.5. Analysis of competencies supply among students of upper secondary schools

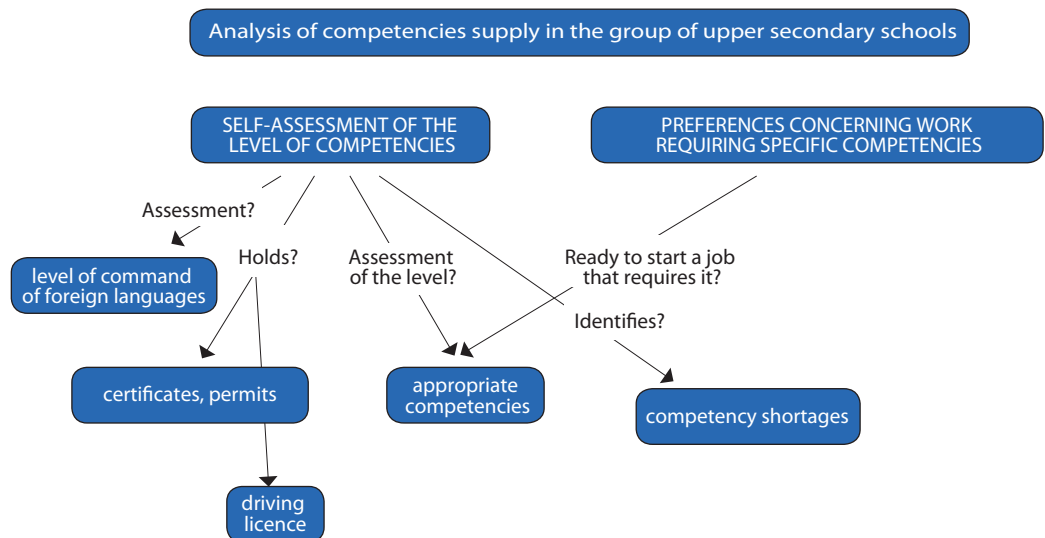
The analysis of competencies supply among students focuses around a number of elements that build the “competency profile” of the group, namely:

- self-assessment of the level of competencies on predefined scales for 11 competency groups
- self-assessment of students in competency deficits
- the degree of command of foreign languages
- additional qualifications: certificates useful in future work and/or driving licence.

An element that compliments the profile and is equally important from the perspective of the students’ functioning in the labour market are preferences to perform work that requires using specific skills.

Figure 6

Area analysis chart



Source: Own study based on: BKL Study – Secondary Students Survey, 2010.

Assessment of competencies and readiness to perform a job that requires a given competency

While conducting conceptualisation works, 11 general classes of competences referring to different realms of work were assumed for the needs of the project:¹¹

Competencies	Present in the questionnaire as
Cognitive	Finding information and drawing conclusions
Technical	Operating, assembling, and repairing machines
Mathematical	Performing calculations
Computer	Working with computers and using the Internet
Artistic	Artistic and creative skills
Physical	Physical fitness
Self-organising	Self-organisation, initiative, punctuality
Interpersonal	Contacts with other people
Office	Organisation and conducting office works
Managerial	Managerial skills and organisation of work
Availability	Availability

Analysis of competencies supply among students of upper secondary schools

The assessment of student competencies was based on subjective declarations concerning the level of the given competency on a five-point scale (corresponding to levels: low, basic, intermediate, high, and very high). Assessment was performed for the 11 main classes of competencies, with some of them being also broken into individual constituents skills. Moreover, students assessed their readiness to perform work that requires the use of the given skill for a range of analogous competencies. Some explanation of the manner of interpretation of the results is due: in the definition assumed, competencies are the resultant of knowledge, skills, and attitudes related to the performance of specific activities independent of the way they were acquired and of being (or not) confirmed by a validation procedure. Nevertheless, considering the results of the study, and specifically the high correlation between the degree to which one has a skill and the readiness to use it at work, the assessment of the degree of having a given skill was considered an indicator of the given competency in further analyses.

An analysis of the results of this part makes it possible to formulate the following basic conclusions:

1. There is a clear dependence between the assessment of the level of competencies the individual has and the readiness to enter employment that requires its use. Higher levels on the scale of assessment of the skill correspond to higher levels of eagerness to undertake a job in which the given competency can be used. This can be interpreted as an expression of individual rationality of students: they are more eager to perform work which they believe to be predisposed for, and – analogously – their desire drops in case of jobs that require skills that they assess lower.
2. Nevertheless, independent of the type of school, students show tendencies to positive, high assessment of the same competencies, and simultaneously point to the high readiness to enter employment that requires their use.
3. Students assess all their competencies relatively highly. Most of them rank them at intermediary and high levels.

Presented in the further part of the chapter are detailed results obtained in the area. Generally, at highest levels (on average, slightly above “high” on the scale) the students assessed the competencies including working with the computer and using the Internet (4.09) and contacts with other people with whom we

¹¹ The proposed classification of competencies was designed after an analysis of various arrangements of occupational competencies as used by numerous institutions all over the world: beginning with institutions dealing with statistical data (e.g. Australian Bureau of Statistics), via ones focusing on building competency standards (e.g. National Standards of Occupational Classification (NSKZ)), to projects focusing on the development of occupational competencies (e.g. O*NET. The Occupational Information Network). A complete discussion of the classification developed is discussed in the report summing up the first round of the study.

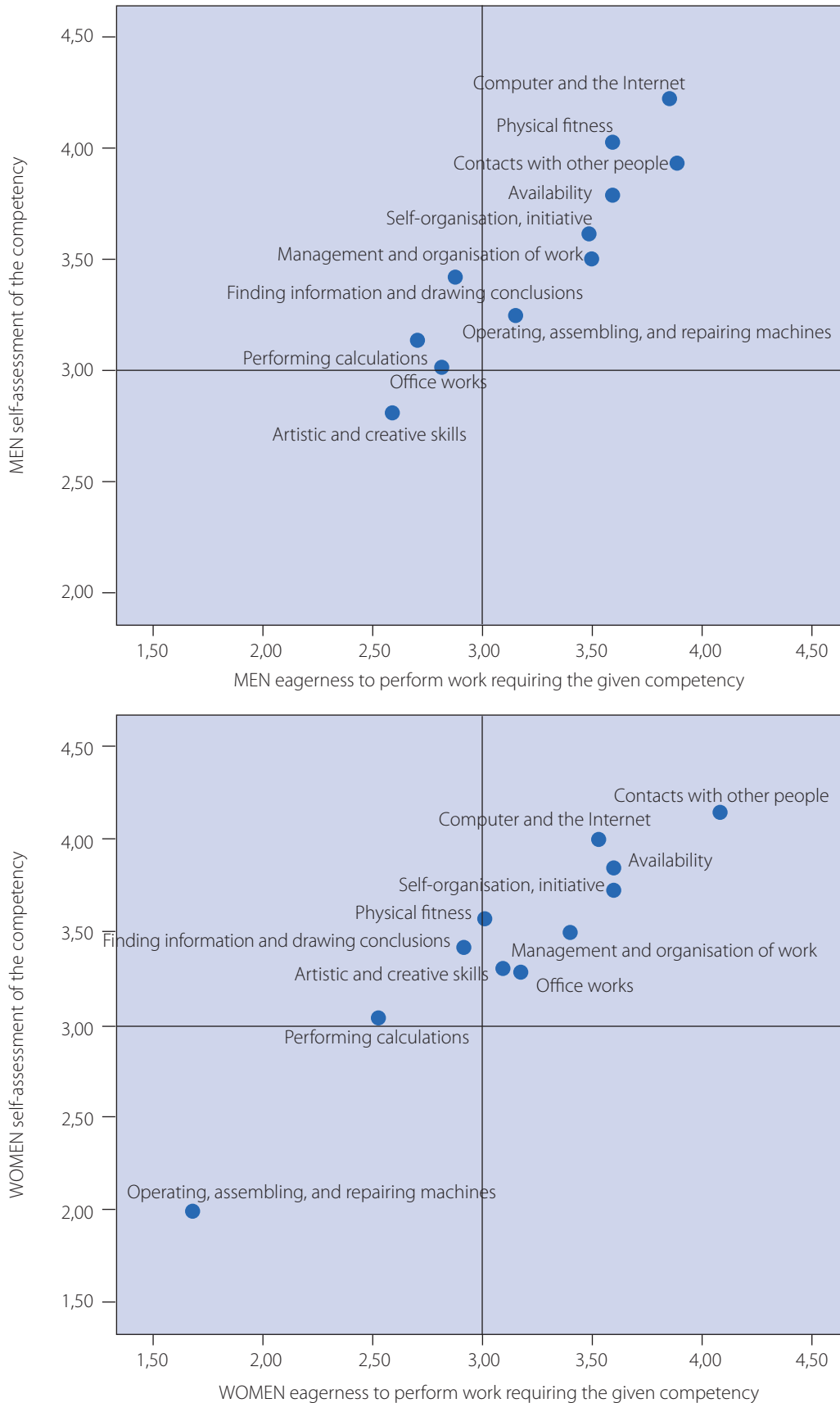
**Analysis of
competencies
supply among
students of upper
secondary schools**

run tasks together (4.03). Ranking lowest in this list, as the only competency whose average rating remained below "intermediary" (2.58), was operating, assembling, and repairing machines. Ranking only slightly above, yet still in the group of deficit skills were artistic and creative skills (3.05) and performing calculations (3.08). The remaining ones formed a group of competencies assessed above the average, yet below the high level. The greatest variety is observed between the assessments made by women and men. The maps and table below present the comparison of competency assessment and the desire to perform occupations related to a given competency for these two groups.

Figure 7

Self-assessment of competencies vs. the readiness to perform work that requires that competency (by gender)

Analysis of competencies supply among students of upper secondary schools



Source: Own study based on: BKL Study – Secondary Students Survey, 2010.

Table 12

Average assessment of competencies and eagerness to perform related work, broken down by gender

Competency	Men		Women	
	Self-assessment of the competency	Eagerness to perform work requiring the given competency	Self-assessment of the competency	Eagerness to perform work requiring the given competency
Availability	3.8	3.57	3.82	3.65
Management and organisation of work	3.51	3.46	3.46	3.46
Computer and the Internet	4.24	3.84	3.97	3.6
Contacts with other people	3.94	3.86	4.12	4.12
Operating, assembling, and repairing machines	3.26	3.14	1.97	1.76
Office works	3.02	2.81	3.28	3.19
Self-organisation, initiative	3.61	3.44	3.73	3.64
Physical fitness	4.02	3.58	3.57	3.07
Performing calculations	3.14	2.7	3.03	2.62
Finding information and drawing conclusions	3.43	2.89	3.4	2.96
Artistic and creative skills	2.8	2.59	3.28	3.13

Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

Among their strongest advantages, men perceive the skill of working with the computer and the Internet. The average for these competencies exceeds 4, which corresponds to a high level and is significantly higher than the self-assessment of these competencies among women. The group of competencies receiving highest marks is complemented with contacts with other people and availability. The most “deficit” of competencies, which is furthermore accompanied by the lowest readiness to embark on work in the area are the artistic and creative skills, being the only to receive the average rating below the intermediate level. Rated as intermediate were also office works and performing calculations. Even though the differences are subtle, it is worth noticing that performing calculations was rated higher than office competencies, yet the readiness to embark on a work that requires their use was lower.

Analogously, three groups of competencies positioned on different levels of the scale can be differentiated among the women: the group rated most highly is similar to that among the men, yet in the case of women, physical fitness is replaced by self-organisation, initiative. Moreover, significance is distributed differently within this group. Women consistently agreed that their greatest strength are interpersonal competencies, i.e. contacts with other people, with whom they perform tasks together. They see themselves as having especially high level (above the average) of two constituent interpersonal competencies: the skill of collaborating within the group, and ease in establishing contacts.¹² Women considered the skill of working with the computer and the Internet their second forte, yet their self-assessment was clearly lower than in the case of men. It is worth emphasising that the high assessment of computer and Internet skills in both the groups does not

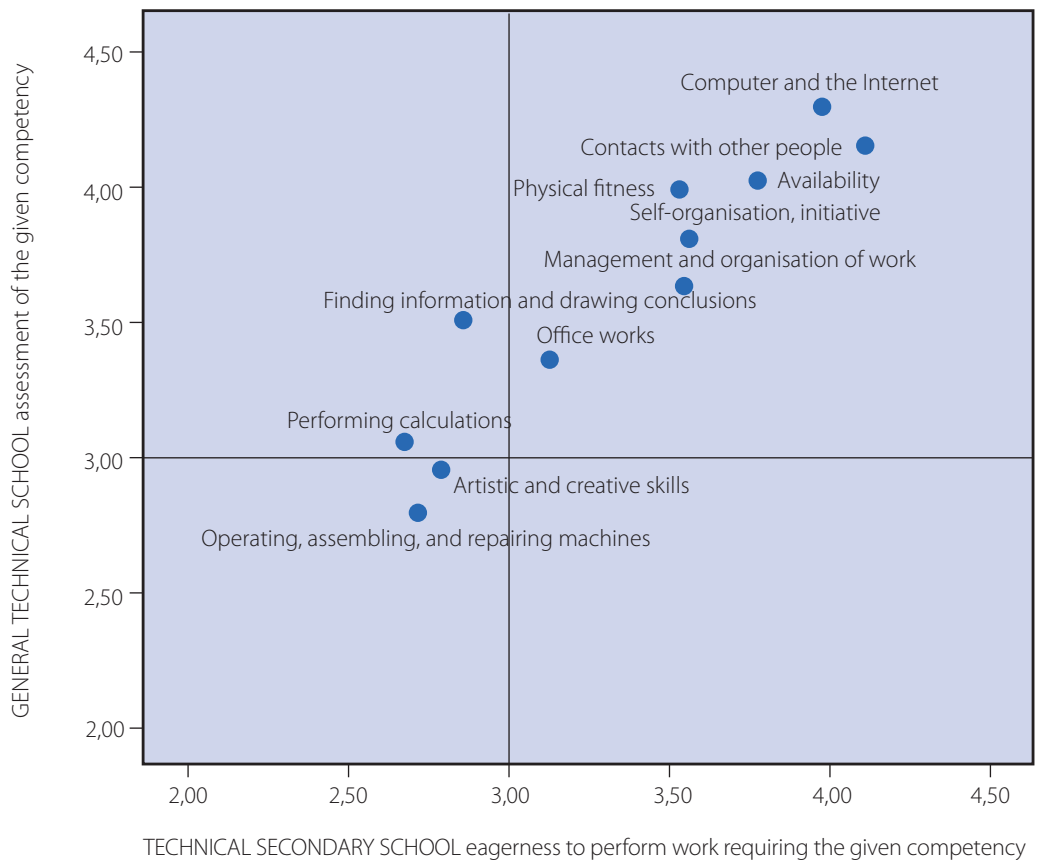
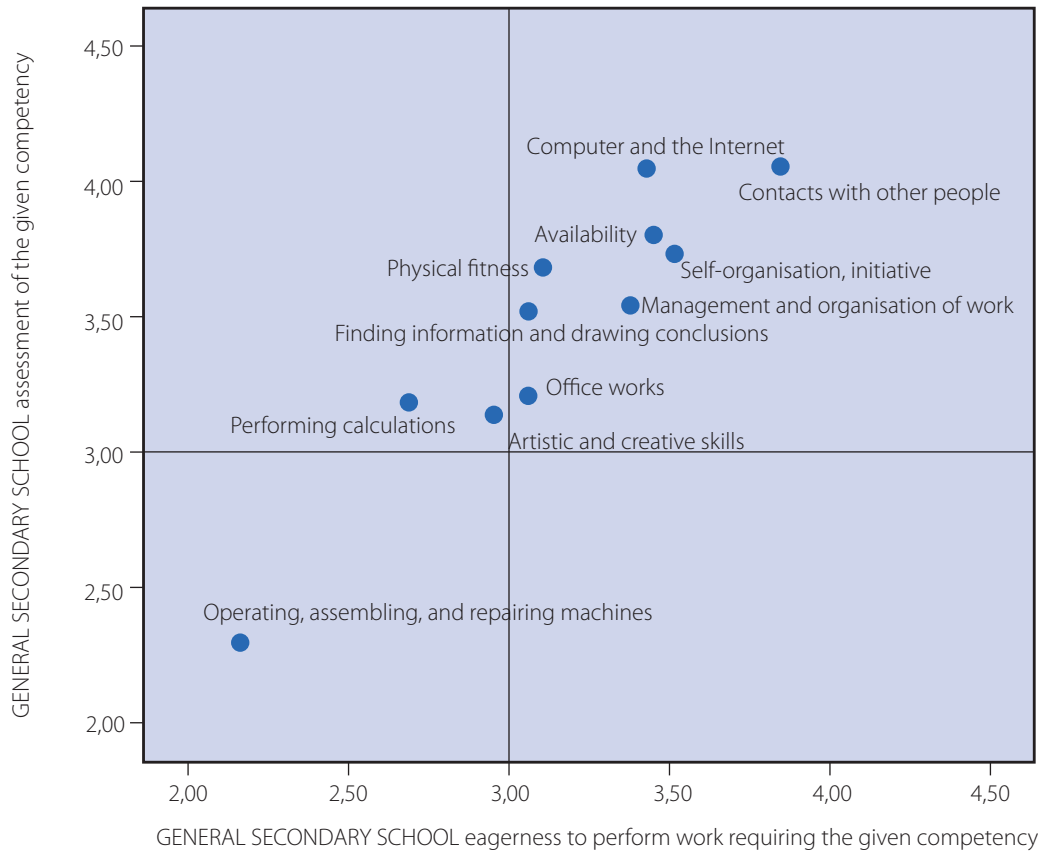
¹² The average values in competencies subcategories are included in the table available in the Annex (Table A5).

go hand-in-hand with more advanced skills in the area. The high rating results most probably from the fact that most of the students are Internet users, and they feel at ease checking e-mails and browsing websites (this subcategory received the highest marks). On the other hand, the knowledge of specialist software, the skill of writing it, and website authoring were rated as no more than basic: among men, it was the lowest rating skill in the whole range of competencies together with their subcategories, while among women it ranked penultimate. The largest differences between competencies of women and men are observed in two cases: 1) operating, assembling, and repairing machines (among women, the rate dropped below the basic level, and diverged strongly from the rest), and 2) artistic and creative skills (i.e. the greatest competency deficit in men, which was assessed above the intermediate level among women).

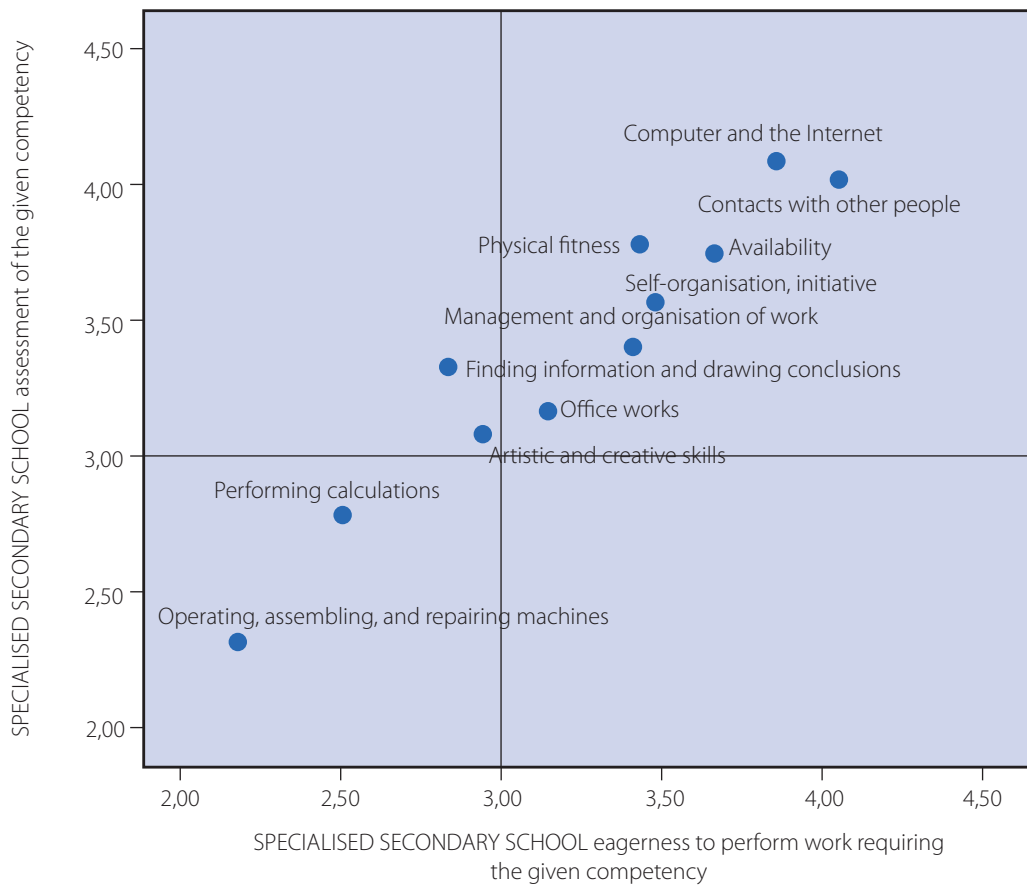
**Analysis of
competencies
supply among
students of upper
secondary schools**

Figure 8

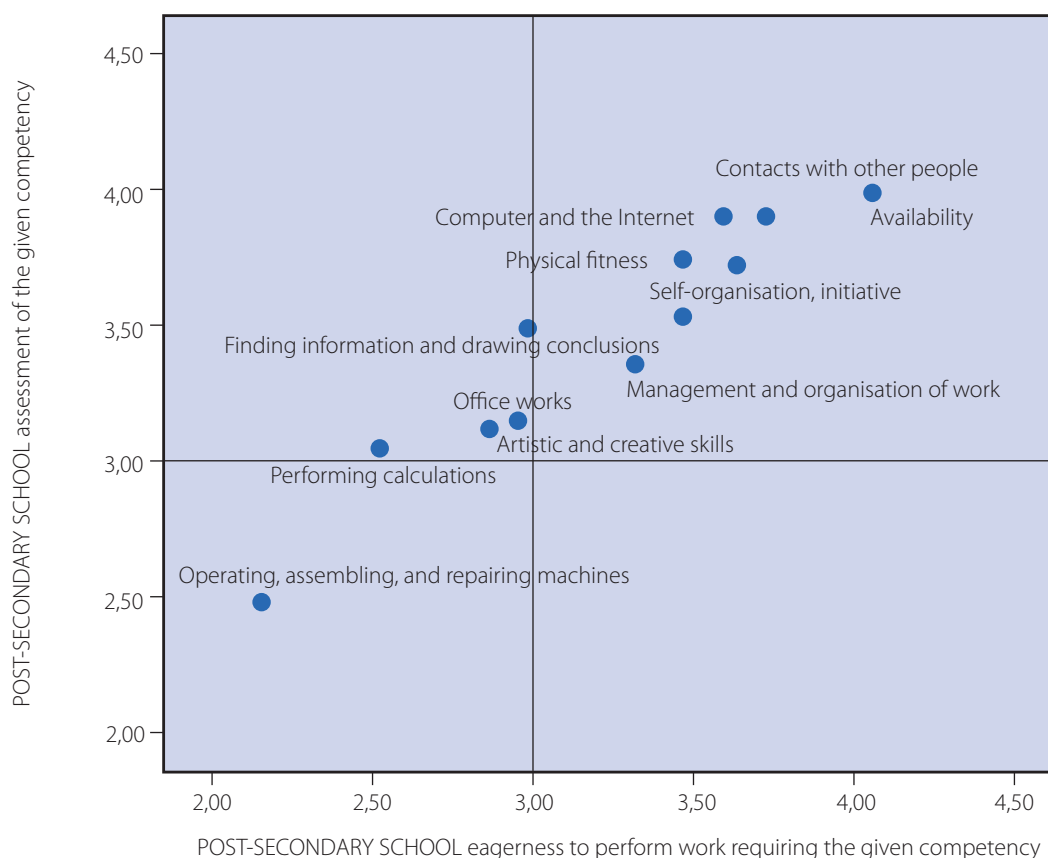
Self-assessment of competencies vs. readiness to perform work that requires the competency (broken down by the type of school)



Analysis of competencies supply among students of upper secondary schools



Analysis of competencies supply among students of upper secondary schools



Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

Analysing competencies in the breakdown by type of school graduated from, it can be ascertained that:

- students of general secondary schools and post-secondary schools have the highest self-assessment of their competencies, with the lowest being those of students of vocational schools
- there is a visible tendency for the engineering and science related competencies to be the non-preferred path in the occupational development of students; operating, assembling, and repairing machines, and performing calculations are the most deficits skills among students, accompanied by the low eagerness to start work related to them (answer “rather not” for the first, and somewhat higher for the latter)
- the competencies that the students would most eagerly see as key in their professional career are contacts with other people, and especially cooperation within the group
- the subcategories in the competencies in computer and Internet use group was assessed with greatest variance, with students assessing highly the level of skills in basic use of the Internet (browsing websites, using e-mail), yet the specialist skills in the area being assessed lowest among all the types of detailed competencies.

In general, in secondary and post-secondary schools, only one of the competency classes received assessments below the intermediate level. In the case of both these types of schools, the most deficit competency is operating, assembling, and repairing machines, which is lowest in the case of students of general secondary schools as it ranks at the basic level (2.32).

Besides the above mentioned category, three more competency groups can be differentiated among the students of general secondary schools according to the level of the assessment. Ranking highest are the skills in computer and Internet use, and interpersonal skills that rank above 4, that is at level “high”. Interestingly, the eagerness to enter employment that requires interpersonal competencies is slightly higher than in the case of computer and Internet use. This probably results from the fact that the high assessment of this competency is the consequence of a very high mark for the skills of Internet use, browsing websites, and using e-mail, but finds no translation into specialist skills in the area. The assessment of the command of spe-

cialist software, skill of writing software and authoring websites was the single dimension of the competency that was ranked lowest (even below operating machines, identified as deficit).

The second group are the competencies that rank around "intermediate". They are office works, performing calculations and artistic and creative skills. In their case, the students of general secondary schools are least eager to enter employment related to performing calculations. It must be noticed, on the other hand, that – compared to students of other times of schools – the students of general secondary schools rank this competency highest, both at the general level, and at the levels of individual categories. The most deficit skill within the area is the performing advanced mathematical calculations: students from all types of schools assessed their level as the basic and lower intermediate, yet in their case the students of general secondary schools assess their skill somewhat higher than the others.

Students of vocational schools find organisation and conducting office works the greatest deficit among their skills (i.e. ranking lowest among all), followed by performing calculations and artistic and creative skills. This was the only group of students that assessed operating machines at intermediaries level, while in the remaining ones it moved down the scale towards the basic level. A forte of the students of technical and post-secondary schools is availability, which they ranked highest, declaring at the same time the highest eagerness to start work that would require their availability. In turn, physical fitness is the domain of students of vocational and technical secondary schools, yet it is worth noticing that the variation in the assessment of the competency was lower than the eagerness to use it at work. It was lowest in the case of students of general secondary schools, even though their self-assessment of its level was only slightly lower.

Analysis of competencies supply among students of upper secondary schools

Table 13

Assessment of the level of competencies and readiness to use them in practice, broken down by the type of school

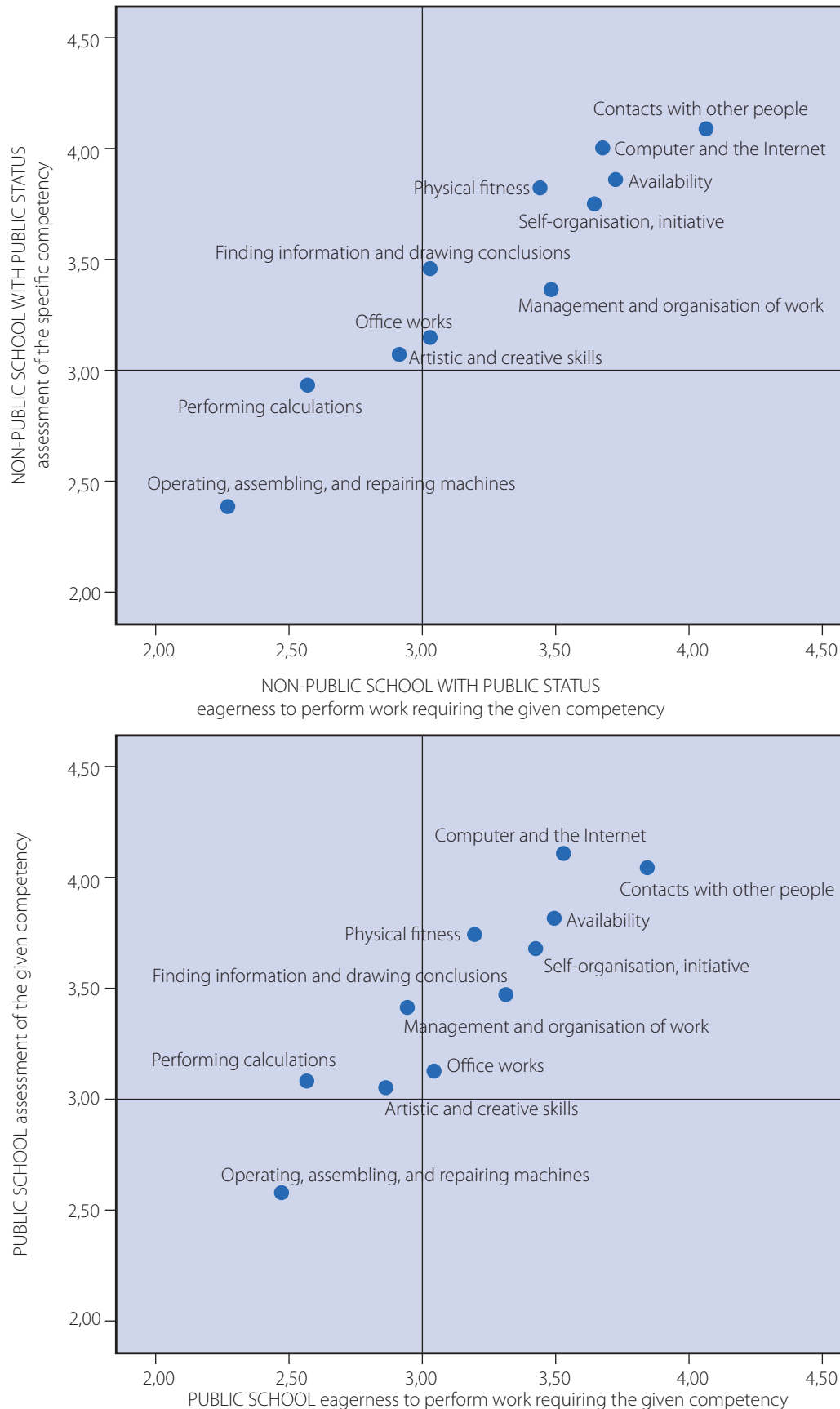
Competency	Vocational school		General secondary school		Specialised secondary school		Technical secondary school		Post-secondary school	
	Self-assessment of the competency	Eagerness to perform work requiring the given competency	Self-assessment of the competency	Eagerness to perform work requiring the given competency	Self-assessment of the competency	Eagerness to perform work requiring the given competency	Self-assessment of the competency	Eagerness to perform work requiring the given competency	Self-assessment of the competency	Eagerness to perform work requiring the given competency
Finding information and drawing conclusions	3.16	2.75	3.53	3.04	3.32	2.82	3.33	2.82	3.53	2.99
Operating, assembling, and repairing machines	3.07	3.06	2.32	2.07	2.35	2.18	2.81	2.71	2.47	2.19
Performing calculations	2.86	2.55	3.2	2.7	2.83	2.49	3.03	2.66	3.04	2.55
Computer and the Internet	4.02	3.66	4.07	3.61	4.15	3.82	4.17	3.89	4	3.61
Artistic and creative skills	2.94	2.8	3.14	2.95	3.06	2.93	2.96	2.79	3.11	2.89
Physical fitness	3.94	3.61	3.69	3.12	3.8	3.41	3.86	3.45	3.81	3.48
Self-organisation, initiative	3.45	3.27	3.75	3.65	3.57	3.45	3.65	3.5	3.78	3.66
Contacts with other people	3.94	3.85	4.05	4.03	4.05	4.02	4.03	4.01	4.08	4.08
Office works	2.82	2.75	3.22	3.04	3.17	3.12	3.2	3.08	3.16	2.96
Management and organisation of work	3.28	3.26	3.56	3.52	3.4	3.37	3.48	3.47	3.36	3.33
Availability	3.61	3.45	3.81	3.59	3.78	3.63	3.88	3.7	3.97	3.76

Source: Own study based on: BKL Study – Secondary Students Survey, 2010.

Figure 9

Self-assessment of competencies vs. the readiness to perform work that requires the competency, broken down by the type of school (public/non-public)

Analysis of competencies supply among students of upper secondary schools



Source: Own study based on: BKL Study – Secondary Students Survey, 2010.

Table 14

Assessment of the level of competencies and readiness to use them in practice, broken down by the type of school (public/private)

Competency	Public school		Private school	
	Self-assessment of the competency	Eagerness to perform work requiring the given competency	Self-assessment of the competency	Eagerness to perform work requiring the given competency
Finding information and drawing conclusions	3.41	2.93	3.45	3.02
Operating, assembling, and repairing machines	2.58	2.41	2.44	2.26
Performing calculations	3.09	2.66	2.95	2.56
Computer and the Internet	4.09	3.71	4.01	3.66
Artistic and creative skills	3.05	2.88	3.05	2.9
Physical fitness	3.78	3.31	3.82	3.45
Self-organisation, initiative	3.67	3.54	3.75	3.66
Contacts with other people	4.03	4	4.09	4.08
Office works	3.15	3.01	3.12	3.01
Management and organisation of work	3.49	3.46	3.4	3.45
Availability	3.81	3.61	3.86	3.71

Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

The division between public and non-public schools was the strongest distinguishing factor for two competencies: 1) operating, assembling, and repairing machines and 2) performing calculations. In both the cases, these were the students of public schools who declared the higher level of the skills. Moreover, in both the cases, they were more ready to use these competencies at work than the students of non-public schools (even though that readiness was very low in the absolute categories). In turn, the students of non-public schools declared a slightly higher level of self-organisation and initiative, and contacts with other people. Analogous to the above, a higher readiness to embark on such work followed this tendency.

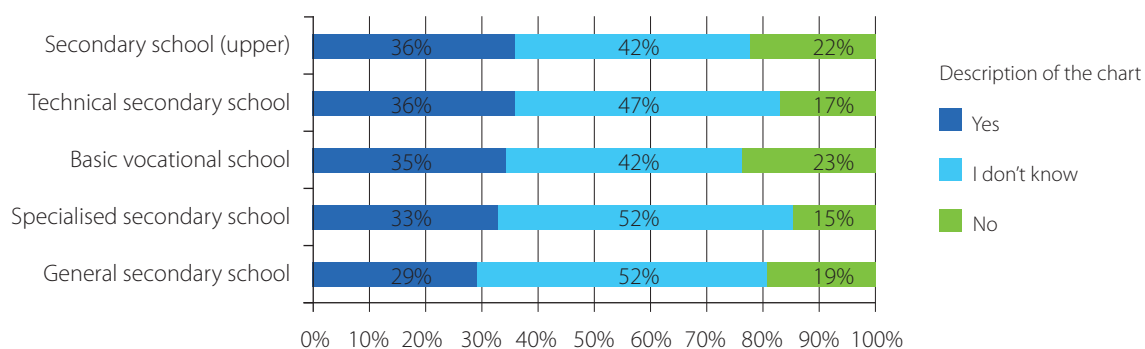
Competency deficits

The self-assessment of competencies by students was complemented with an attempt at the students' self-identification of their competency deficits. The proportions of people who admitted to such a need, broken down by the type of school they are currently learning in, are presented in the chart below.

Chart 11

The need to complement competencies before entering employment, broken down by the type of school

Analysis of competencies supply among students of upper secondary schools



Source: Own study based on: *BKL Study – Secondary Students Survey, 2010*.

A large proportion of students (approximately a third) feel the need to complement the competencies before embarking on employment, yet – interestingly – they are least numerous in general secondary schools (29%). This can result from the fact that due to the general profile of their education and plans to continue it in most cases at a higher level, the work they start is not related to their profile of education and is of rather temporary nature. To enter employment in the planned occupation, they therefore need continuation of education at school, and increasing the level of formal education rather than training courses. More frequent references to the need to complement the competencies through courses and training are made by students of schools that award vocational qualifications and where the possibility of entering employment depends on possession of specific licences e.g. to drive a forklift truck (one of the most frequent responses described below). An argument supporting this interpretation is the fact that the need for training was more frequently experienced by the ones who performed work strongly related to the occupation (40% of the group) and less often by those who worked, but in an occupation absolutely not associated with what they learn at school (34%).

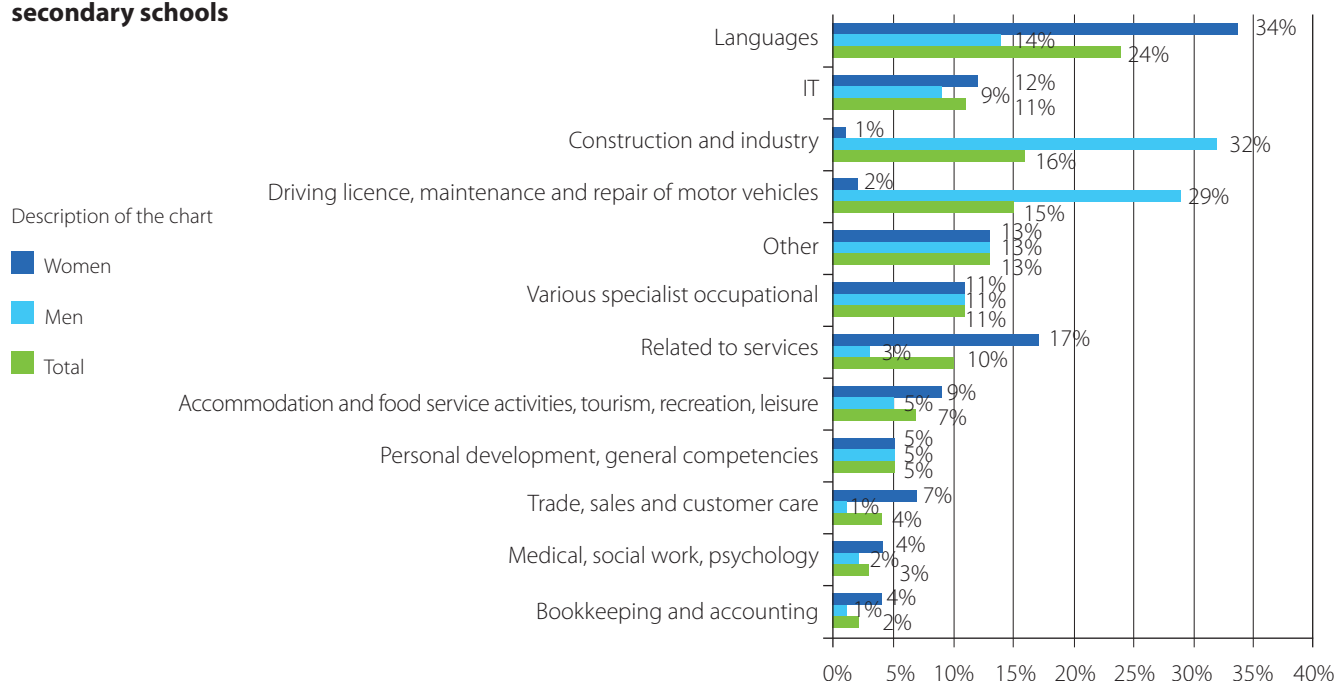
In turn, every fifth student on average believes that he or she needs no additional training or courses. To the least degree such a need is experienced by the students of vocational schools, with nearly every fourth perceiving no need to go into training. In their case, these were most often students receiving education in occupations where the licences and titles received at school are sufficient to start working, e.g. services and sales workers (point of sale operators, cooks), and metal, machinery and related trades workers (motor vehicles drivers and repairers, agricultural and industrial machinery mechanics and repairers).

Nevertheless, students are to a great degree not capable of assessing their competency deficits in relation to their future work. The answer “I don't know.” dominated all categories, and in the case of general and specialised secondary schools, it exceeded 50%. In the case of students of general and specialised secondary schools, this can result from the uncertainty concerning the occupation they will enter in future, yet in the case of students of schools that provide vocational qualifications and licences, this may prove the lack of understanding of the employers' expectations concerning the qualifications and skills sought in individual occupations.

Analysis of competencies supply among students of upper secondary schools

Chart 12

Subjects of training needed by students, broken down by gender



Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

As far as subjects of training are concerned, students feel the strongest need to complement their language skills. This is true far more often about women, with every third seeing the need to participate in language course before embarking on employment. In case of men, the proportion was far lower (14%). The analysis of the level of language competency of students is presented further in the chapter.

The subject range of the remaining training is strictly occupation/vocation-related. Students see no need to develop their general competencies and/or participation in soft training, which is related to the high self-assessment in interpersonal competencies described above. Clearly visible among the number of desired occupational training are typically “masculine” and “feminine” groups. The answers of men pertained largely to two groups, in whose case, the total number of responses exceeded 60%:

- construction and industry – here, many responses concerned, e.g. courses for welders, for crane, hoist and related plant operators, machine operators, electrical and electronic trade workers, and electric installers,
- driving licence, maintenance and repair of motor vehicles – dominant here were courses that provide driving licences (various categories of the driving licence, frequently combined with the category E and courses for forklift truck operators).

Women were only to a marginal extent interested in participating in courses in this area. Their choices focused on occupational training in services, with especially popular choices being beautician, hairdressing, and artistic make-up courses.

Worth paying attention is the fact that a relatively high proportion of responses in both the genders were IT courses, despite the fact that the students assessed their relevant competencies at a high level. This, therefore, may result from the need to improve their skills in specific dimensions required to professional career (e.g. operating specific software).

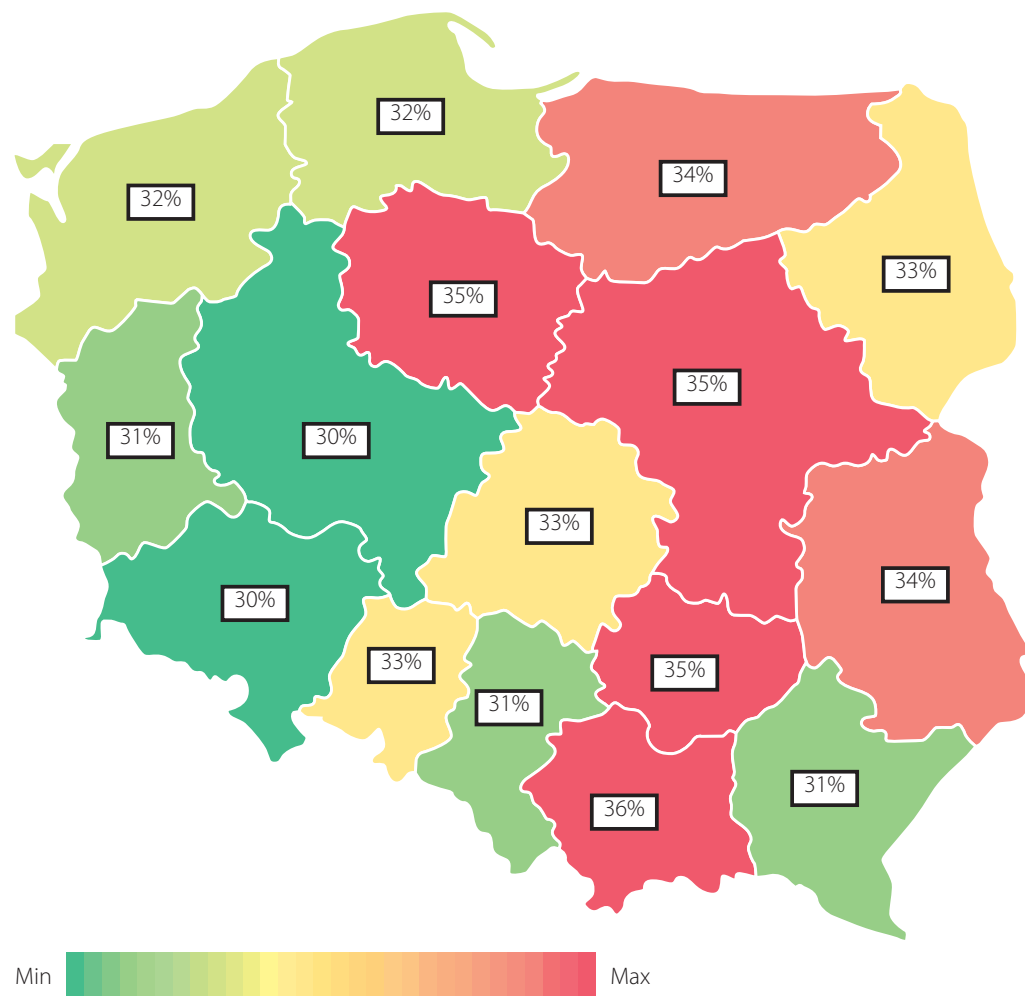
Training required for driving licence, and maintenance and repair of motor vehicles was most needed in the Opolskie and Lubuskie administrative regions. The highest number of responses of language training is present in Mazowieckie and Świętokrzyskie, while IT training is most needed in Małopolskie and Mazowieckie. Training related to services is most needed for the residents of the Wielkopolskie and Kujawsko-Pomorskie administrative regions.

The highest proportion of people declaring the need to participate in any training before entering employment are present in the following administrative regions: Kujawsko-Pomorskie, Mazowieckie, Świętokrzyskie, and Małopolskie.

Analysis of competencies supply among students of upper secondary schools

Figure 10

Percentage of respondents indicating the need for additional training before embarking on employment



Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

The picture of competencies held by the students is complemented with an analysis of the command of foreign languages. The students were asked about the languages they know, and the level of their command of foreign languages broken into reading, writing, speaking, and listening skills.

No fewer than 94% of students declared that they know a foreign language (at least one), while one in 20 cannot boast the knowledge of any foreign languages. The knowledge (any degree) of two foreign languages was reported by 74% of the respondents, and of three – by 16% of students.

Two languages are absolute leaders in the number of responses: English, whose command was declared by 96% of women and 95 of men, and German, whose command was declared by 68% of women and 63% of men surveyed. The distance between these two languages, and further ones is very clear: third comes Russian, mentioned by only 15% of students. French, which holds the following place was mentioned by some more women (12%) than men (7%). Approximately 2%–3% of students reported the command of Italian and Spanish. Differences between women and men in the case of these languages are slight, and do not exceed one percentage point. No other language was named by more than 1% of respondents..

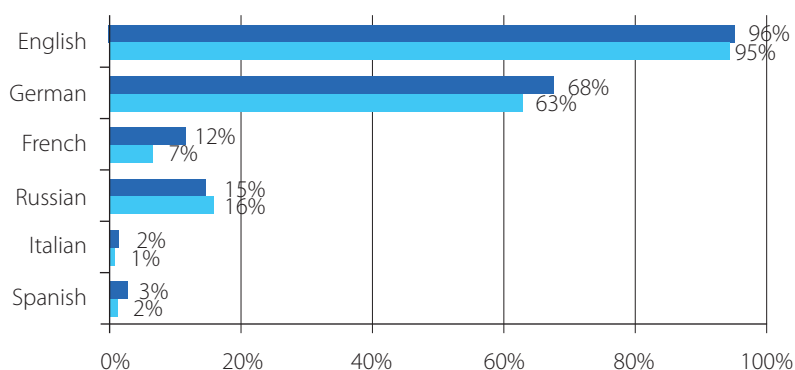
Analysis of competencies supply among students of upper secondary schools

Description of the chart

- Women
- Men

Chart 13

Command of foreign languages. The percentage of respondents reporting command of a given foreign language, broken down by gender (N=33160)



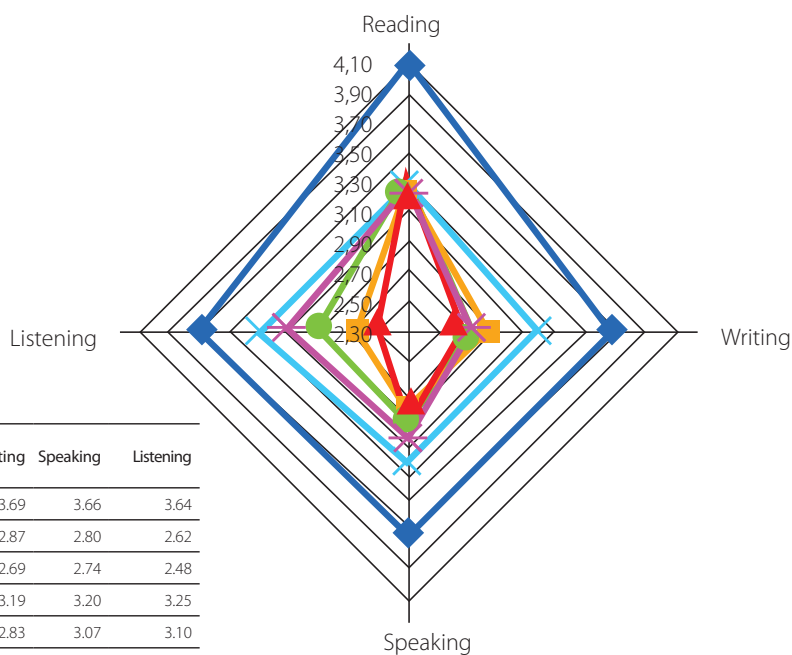
Source: Own study based on: BKL Study – Secondary Students Survey, 2010.

Language competencies of students can be defined as intermediate and – in the case of English – as upper intermediate (corresponding to 4 on a six-point scale used in the study). The students' self-assessment proves that they coped best with reading in foreign languages, this dimension of command of foreign language corresponds to intermediate level, and in the case of English – to upper intermediate. The poorest results are present in the case of listening skills, even though the value is very close to the assessments concerning speaking and writing skills, (3 on a six-point scale). There is a clear distinction between the declared level of command of English and the remaining languages in all the four skills (see: Chart 11). Worth noticing is the fact that in the case of German, its popularity (66%) does not correspond (unlike in English) to the degree of its command. The average value for all the skills (2.88) places it between beginner and lower intermediate, with only the command of French (2.74) ranking somewhat lower.

Chart 14

Average assessment for the four skills in languages named most frequently

- ◆ English
- German
- ▲ French
- × Russian
- ✱ Italian
- Spanish



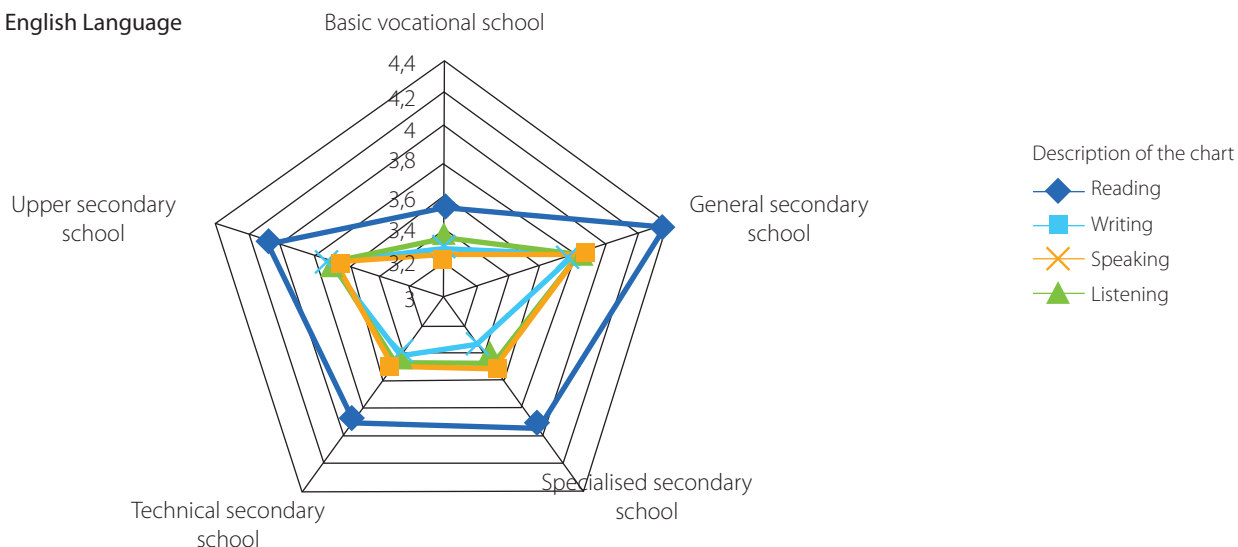
Presented in the charts below are the average levels of command of the two most frequently mentioned foreign languages: English and German, broken down by the type of school students graduated from.

Analysis of competencies supply among students of upper secondary schools

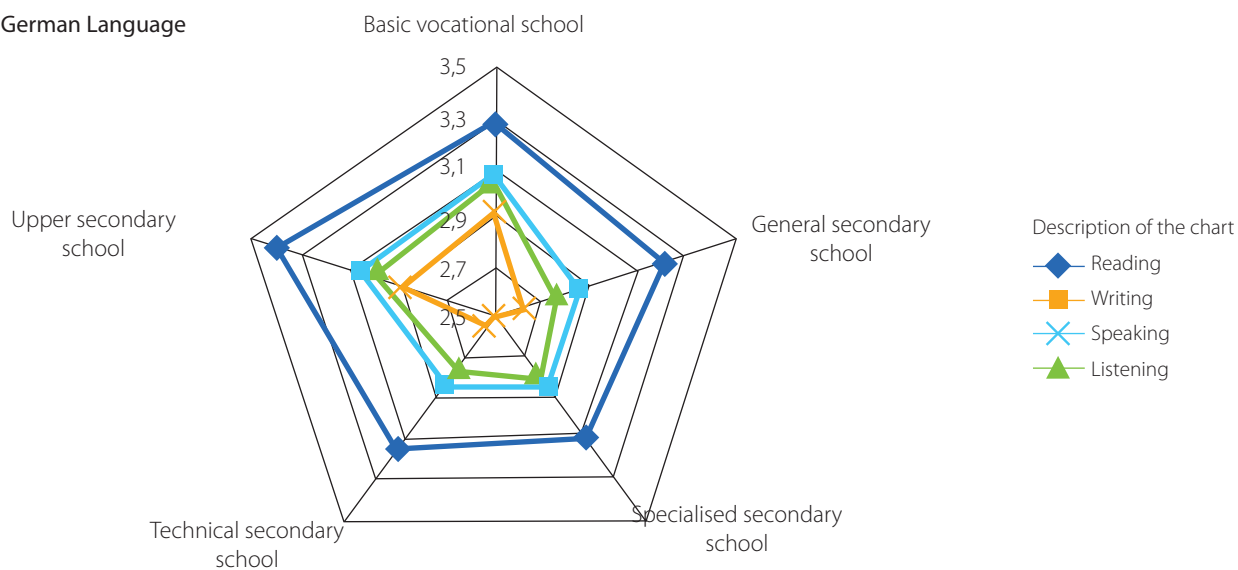
Chart 15

Average command of English and German, in the division into the 4 skills, broken down by the type of school

English Language



German Language



Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

The analysis of the information above makes it possible to conclude the following:

- English is the foreign language that students, independent of the type of school, declared to have mastered at a level higher than the second most frequently reported language, i.e. German.
- The reading skills are assessed highest, both in the case of English and German, independent of the type of school.
- In the case of English, the remaining skills are assessed similarly, yet in the case of German, the other extremity is taken by listening – the skill which was assessed lowest by students of all types of schools: between beginner and lower intermediate levels.
- The best command of the English language (in their self-assessment) is present among students of

Analysis of competencies supply among students of upper secondary schools

general and specialised secondary schools (the highest level of the average assessment for each scale), and is decidedly poorest among students of vocational schools; students of general and specialised secondary schools assess their reading skills between upper intermediate and advanced, and the remaining skills as upper intermediate, while students of vocational schools see themselves around the lower intermediary level.

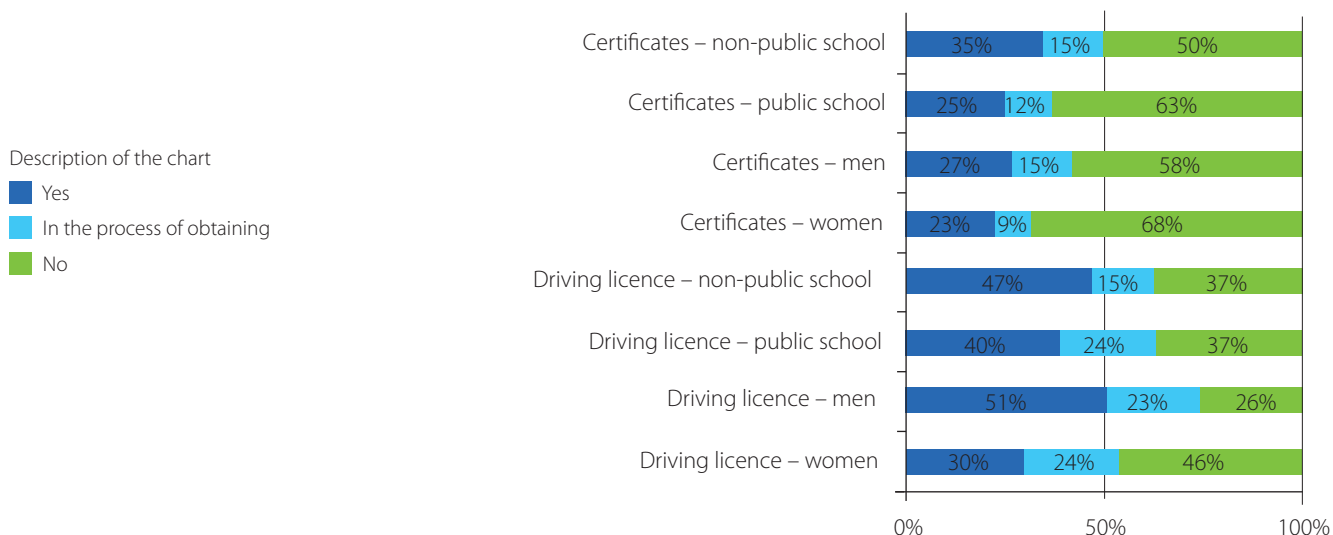
- The assessments of language competencies in the case of English in the remaining types of schools are comparable, with its average command ranging from 3.56 to 3.77 on a six-point scale.
- Besides students of post-secondary schools, the students of vocational schools have the best command of the German language when compared to students of the remaining types of schools, yet the difference is not as evident as in the case of English (the average assessment for all the skills is 3.07, as compared to the students of general secondary schools and technical secondary schools, ranking lowest in this case, with the average of 2.82).

Additional qualifications of the students

To complement the picture of students' competencies, questions about having any additional certificates or licences that could be useful in seeking future employment and – separately – about possession of a driving licence were also asked. The chart below presents the percentages of answers, broken down by gender and type of school (public/non-public).

Chart 16

Driving licences (N=35598) and other certificates (N=35613); percentages broken down by gender



Source: Own study based on: *BKL Study – Secondary Students Survey, 2010*.

In the case of additional certificates, we observed no significant differences (4 percentage points) between women and men in upper secondary schools. Approximately every fourth person already has at least one such document. There were also 15% of male and 9% of female students in the process of obtaining such licences at the time of the study. More often than their public counterparts, these were the students of non-public schools, and specifically students of general secondary and basic vocational schools,¹³ who had the certificates.

In the case of driving licences, the proportion of people without the licence is the same for students of public and non-public schools. There is, however, a major difference between the genders, which is no surprise: possession of a driving licence was declared by every other man, and fewer than every third woman. Presented

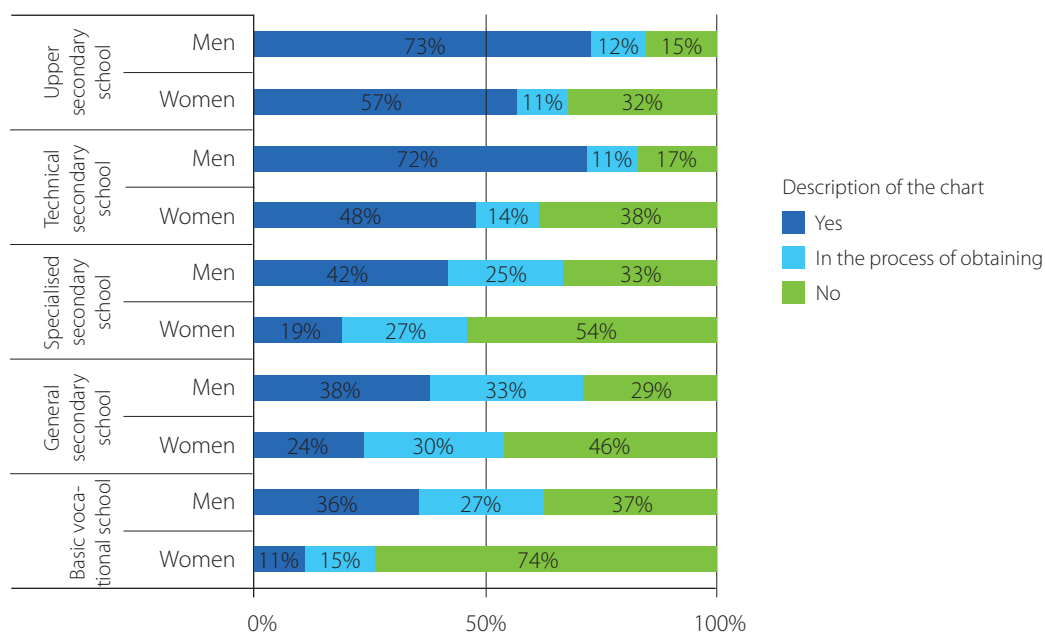
¹³ What, however, limits the drawing of conclusions and making of interpretations in this case is the small count of these schools in the sample: 34 and 37 answers 'yes' for the non-public vocational schools and non-public general secondary schools respectively.

below is the penetration of driving licences among students of both genders in various types of schools. In this list, standing out clearly against the remaining types of schools are the students of upper secondary and technical secondary schools, both men (nearly 3 in 4 with driving licences) and women (more or less every other). Interestingly, the poorest results were obtained by students of vocational schools, which is true for both genders (36% of men and 11% of women). Worth paying attention to, however, is the fact that in the categories where the percentage of driving licence holders is relatively low, there is a high rate of the people who currently try to acquire such licences: in the case of general secondary school students, on average every third is going through the process (33% of men and 30% of women). Analysing these two categories (licence holders and people in the process of acquisition) the only significantly outstanding group are women learning in vocational schools, with nearly 3 in 4 having no driving licence and not doing anything to acquire it.

Occupational activity of students of upper secondary schools

Chart 17

Driving licences (N=35697); percentages broken down by type of school



Source: Own study based on: BKL Study – Secondary Students Survey, 2010.

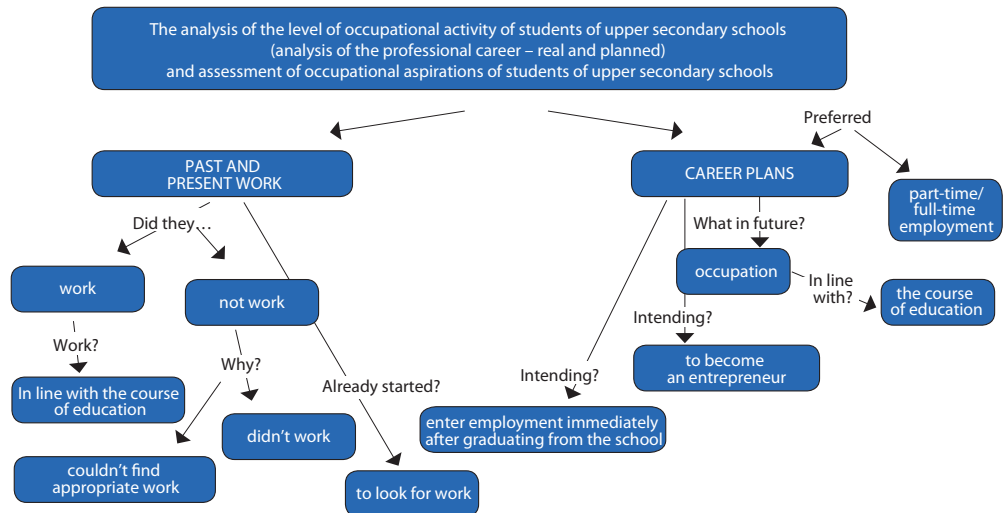
4.6. Occupational activity of students of upper secondary schools

The survey of occupational activity of students was focused on two dimensions, first being their past and current activity in the labour market, and related experiences (seeking employment, problems with finding it, and profile of employment found), and their future experiences, which obviously remain in the declarative realm, but make it possible to learn the aspirations and plans of students who in not-too-distant future will become active actors in the labour market, offering their skills and qualifications to employers. The key questions that were accounted for in the study are presented in the Figure 11 below.

Occupational activity of students of upper secondary schools

Figure 11

Key aspects in analysing the occupational activity of students

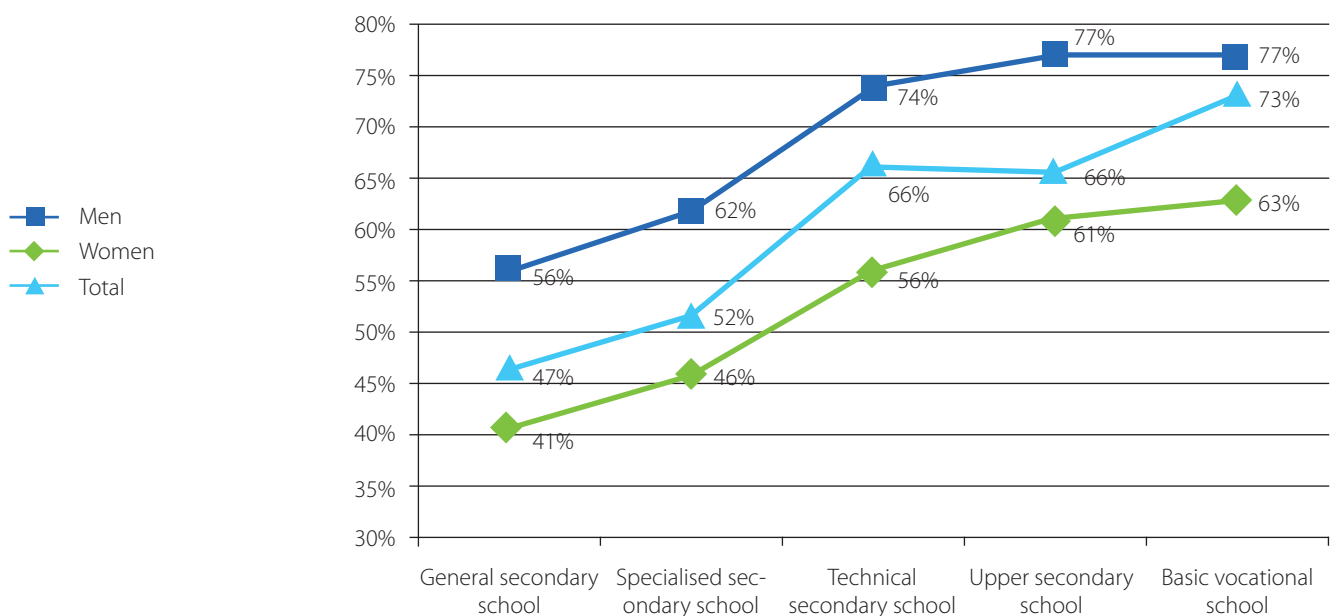


Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

Independent of their basic activity, namely learning, most of the students are already active participants in the labour market: 57% of all students undertook various forms of gainful employment during the year preceding the study. Combining the two forms of activity (learning and work) was far more often practised by men (68%) than women (47%). The tendency remains also when the type of school is included into the analysis, and the difference between the working men and women remains at the level of over 10%, independent of the school in question (see: Chart 18).

Chart 18

The proportions of women and men working during the last year, broken down by the type of school



Entering gainful employment is correlated with the type of school where the students learn. Two main groups can be distinguished:

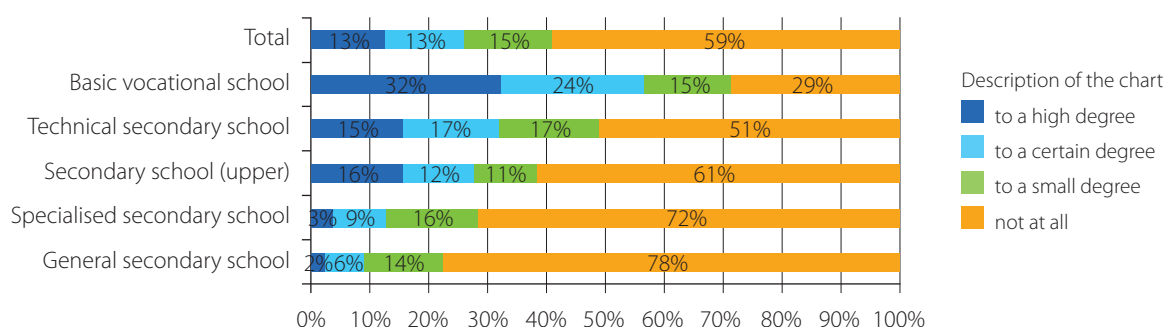
- schools where general education is obtained, namely general and specialised secondary schools; here, the proportion of working people is much lower, even though still quite high: 47 and 52%, respectively, and
- schools providing vocational education (basic vocational schools, technical schools, and post-secondary schools), with the proportion of students working in the whole group being decidedly higher; dominant here are the students of vocational schools, of whom nearly 3/4 entered gainful employment in the last year, while each of the remaining types of schools reached 66%.

Worth emphasising also is the fact that the proportion of people who learn and at the same time enter gainful employment during the previous year increases inversely to the size of the city/village where the school is situated. The two extremities are defined by students from rural schools, of whom 62% have worked, and students of Warsaw schools, where the percentage amounted to 57%.

The image is complemented with a comparison of the percentage of working students in the groups differentiated by the education of the father: entering gainful employment most often were the children of parents with primary and vocational education (60% and 59%, respectively), with the proportion being lower in the group whose fathers have secondary education (57%). Children of fathers with higher education were least frequently in gainful employment (49%). This can result from their better financial situation, which can be indicated by the education of the father. As has been claimed in the section analysing the profiles of education of students, these people in most cases learn at schools providing comprehensive education, and in most cases their plans include further education. In this situation, the motivation to enter employment is usually not to obtain experience in the area of the professional interest, as the work they perform is usually unrelated to the profession to be performed (which is corroborated by the results presented in the Chart 20). For the overwhelming majority of general secondary school students (70%) work was not at all related to the course of education. A slightly lower proportion was present also among the students of specialised secondary schools. Students of vocational schools, i.e. those who acquire vocational skills already at the current stage of education, were the ones to use them most often in the labour market (56% of responses confirmed work to a high and certain degree related with the course of education).

Chart 19

To what degree the work performed was aligned with the course of education, broken down by the type of school



Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

The most frequent reason for lack of students' activity in gainful employment was the fact of learning at a day school (see: Table 15). It was the dominant reason for students in all types of schools, yet the highest proportion of responses was present among the students of post-secondary schools (57%), and was least often mentioned by the students of general secondary schools (39%). The second most popular reason was the lack of the desire to enter gainful employment at this moment of life. Such a situation was most often reported by students of general secondary schools (32%) and least often – by the students of post-secondary schools (every fifth). For one in every three students, the obstacle in entering gainful employment was not the lack of eagerness, but the impossibility of finding an appropriate job; this case was least frequently encountered by the students of post-secondary schools.

Table 15

The reason for not entering employment, broken down by the type of school

The reason for not entering employment	Type of school				
	Basic vocational school	General secondary school	Specialised secondary school	Technical secondary school	Post-secondary school (ponadgimnazjalna)
I didn't want to work, yet	29%	32%	28%	27%	21%
I wanted to work, but I couldn't find anything appropriate	27%	29%	30%	31%	22%
I learn at a day school, and cannot work	44%	39%	42%	41%	57%
Total	100%	100%	100%	100%	100%

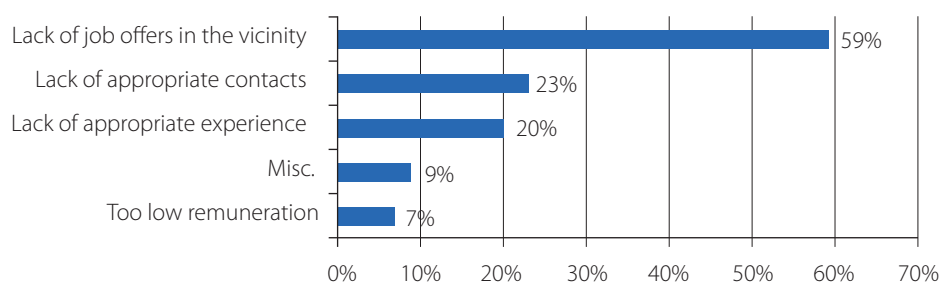
Note: The percentages do not add up to 100%, as multiple answers could be chosen

Source: Own study based on: *BKL Study – Secondary Students Survey, 2010*.

Reasons for the inability to find an appropriate job that were listed by students who wanted to work are presented in the chart below.

Chart 20

Reasons for not finding work



Source: Own study based on: *BKL Study – Secondary Students Survey, 2010*.

The key reason for not entering employment in the case when the student wanted to start working was – in the opinion of the students – lack of job offers in the vicinity (59%). The problem was, however, experienced by far fewer men than women (51% compared to 62%), and fewer students of vocational than of other types of schools (49% compared to 60%). It was also a significantly more important problem for the students from the Podkarpackie (66%) than Śląskie and Zachodniopomorskie (44% each) administrative regions. The proportion of students, pointing to lack of job offers being the reason for lack of activity in the field, broken down by administrative region, is presented in the Figure 12.

The second significant reason in the eyes of the students was the fact of lack of appropriate contacts: students of vocational schools (17%) believe it to be a lesser problem, as compared to those from general secondary schools (25%) who pointed to that category most often.

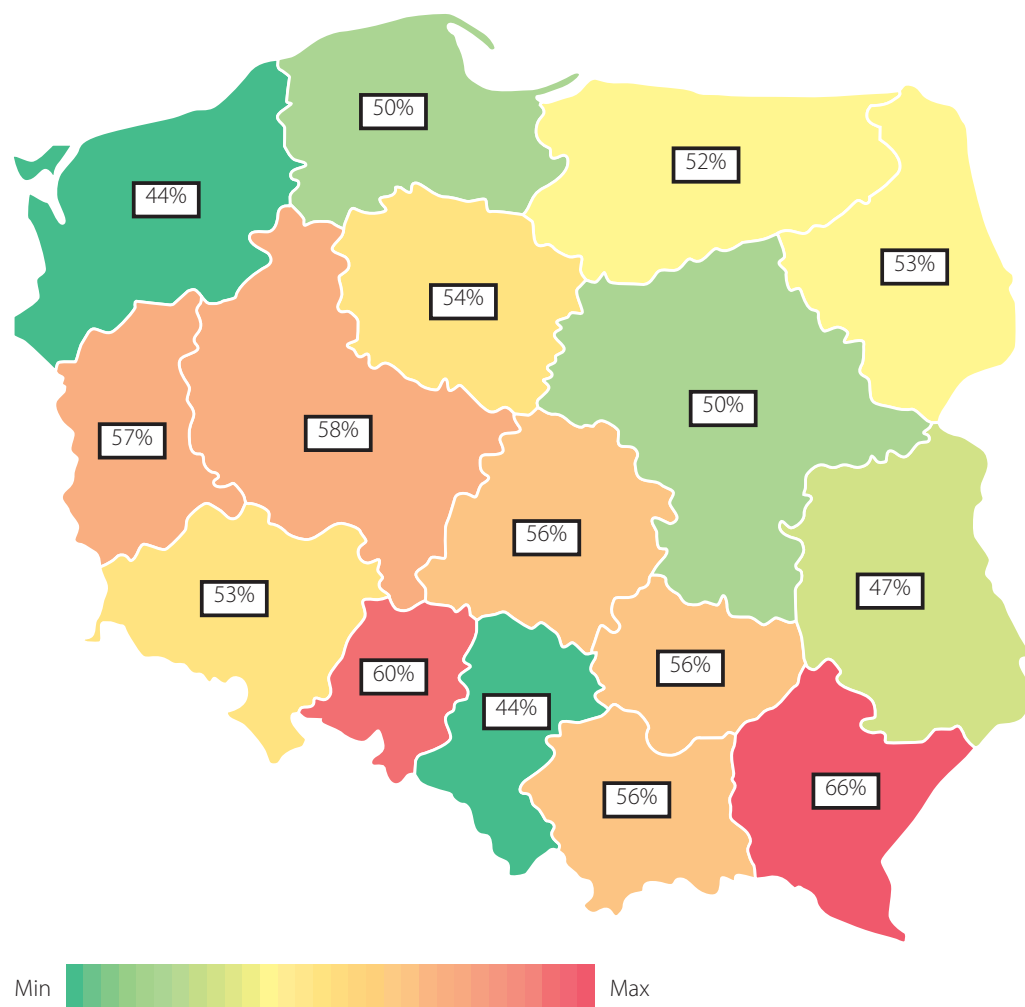
The lack of experience in the labour market was a moderate obstacle for students. It was mentioned by every fifth student who wanted to work, but has not yet embarked on employment. It was the least problem for students of vocational and technical schools.

It is worth emphasising that students did not report discrepancies between their pay aspirations and the remuneration offered by the employers. The pay was not frequently an obstacle for the students to enter employment, and was reported by only 7% of all the students. Nevertheless, the proportion was much higher in the case of students of vocational schools (15%) than the students of general secondary schools, who least often reported this reason as an obstacle (6%). This can be explained by the fact that – as has been mentioned before – the work chosen by students of vocational schools was more often related to the profile of their education, and was to a greater degree treated as a potential target employment, which will be their basic source of income. In the case of students of general and specialised schools, the employment of an overwhelming majority was still unrelated to their expectations concerning the occupation to be performed in future, for which reason it could more often be treated as temporary and irregular.

The number of other reasons for staying without employment mentioned by students included: age below the required 18, lack of time (general secondary school students), and health-related reasons.

Figure 12

Lack of appropriate job offers in the vicinity



Occupational activity of students of upper secondary schools

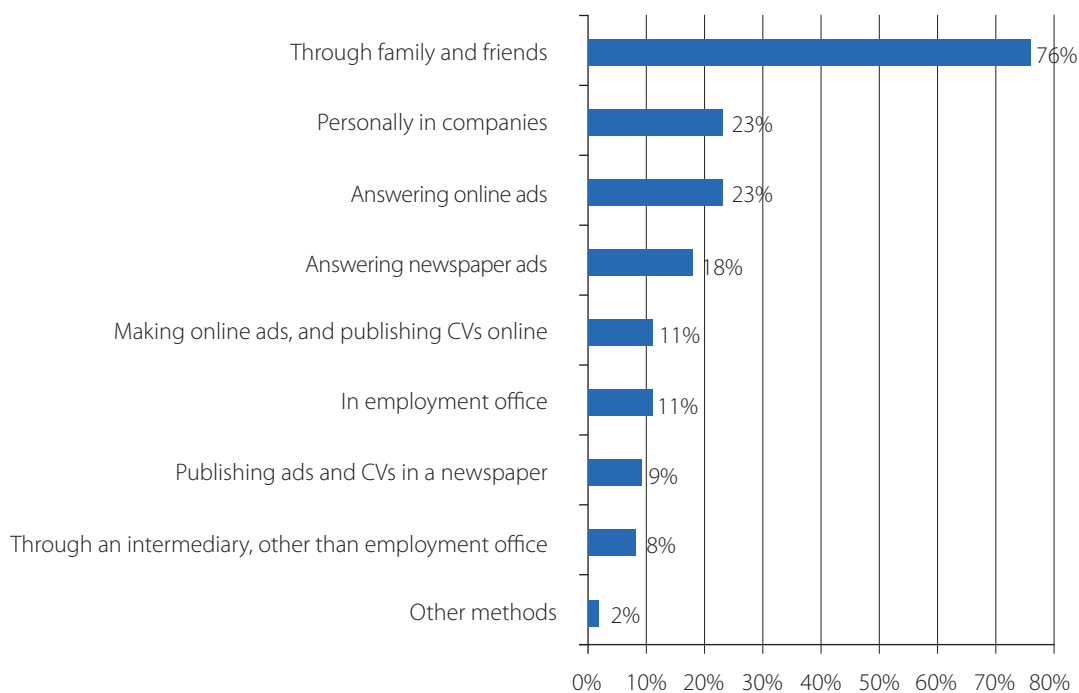
As has been mentioned above, the greater proportion of people reporting the problem of too poor pay among the students of vocational schools may result from the fact that these students concentrate to a greater degree on seeking permanent employment. Suggesting such a reason is also the greater proportion of students from this category among people seeking permanent employment.

On average, every third of all students is seeking permanent employment, with the proportion being higher in the case of vocational school students, as it amounts to 41%. This category is least numerous among the students of general secondary schools (30%), with the proportion oscillating between 36% and 37% in the remaining types of schools. In an analysis of ways of seeking employment by the students (see: Chart 21), two conclusions come to the fore:

1. The best way to find employment is to use contacts and relations, i.e. to launch what can be called the individual social capital. Recommendations are the way to achieve the goal, which is corroborated by such a high number of references to this category (76%).
2. Characteristic is the low level of trust in the efficiency of the institutional labour market services: seeking employment through an employment office was the option for only 11%, and by other intermediaries – by only 8%. These are marginal rates, especially when the key significance of employment offices in the institutional labour market environment is taken into account.

Chart 21

Ways of seeking employment



Source: Own study based on: *BKL Study – Secondary Students Survey, 2010*.

A certain alternative for seeking work in the labour market is building such an opportunity for yourself by starting your own business. Such a prospect, however, exists only for a small proportion of students, with only 11% having decided to choose that path. They are more often students who acquire vocational qualifications on completion of the current school, i.e. students of vocational and technical schools (12%–13%), and more often men than women (15% compared to 8%) who see themselves in this form of professional career.

At this point in their lives, a majority of students have not, however, made the decision yet: a large proportion of the students do not exclude such a possibility as 38% answered that “it is hard to say”, and every fourth was considering the opportunity (answer: “rather yes”).

A great majority of students in turn focus on starting gainful employment soon (in no more than 3 months) after completion of the current school. Such an intention was declared more often by women (3 out of 4)

graduating from post-secondary schools. The second group most often declaring such intentions are men graduating from vocational schools, where the rate amounts to 68%. Students of general secondary schools were the ones to declare the intention to start work immediately after graduation from the current school least often.

Table 16

Intention to start working immediately (up to 3 months) after graduation from the current school

		I don't know yet	Yes	No	I already work at the moment	Total
Basic vocational school	Women	23%	63%	11%	3%	100%
	Men	18%	68%	10%	4%	100%
	Total	19%	67%	10%	4%	100%
General secondary school	Women	26%	55%	17%	2%	100%
	Men	25%	48%	25%	2%	100%
	Total	26%	52%	20%	2%	100%
Specialised secondary school	Women	24%	64%	11%	1%	100%
	Men	27%	59%	12%	3%	100%
	Total	25%	62%	11%	2%	100%
Technical secondary school	Women	22%	67%	8%	3%	100%
	Men	21%	63%	12%	4%	100%
	Total	21%	65%	10%	4%	100%
Post-secondary school	Women	15%	73%	5%	8%	100%
	Men	15%	65%	6%	14%	100%
	Total	15%	70%	5%	10%	100%

Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

The preferred form among people who want to work is full-time employment (65%). Such a choice is dominant in all the categories. Nevertheless, women more often than men are eager to start part-time or temporary work (10% and 7%, compared to 5% in the case of men in both categories). Visibly less often, full-time jobs are preferred by students of general secondary schools (54% compared to the average 65%), for the sake of a higher rate of interest in part-time jobs and temporary work: 12% and 10% respectively, as compared to, for example, students of vocational schools in whose case the proportions are 4% (part-time) and 1.5% (temporary). This probably results from the fact that, as has been mentioned earlier, the people with vocational and technical education are looking for the target employment.

Students' career plans

Already at this moment, students participate in the labour market, with nearly 60% having worked for profit during the year preceding the study, yet they are an interesting group also from the perspective of long-term investigations of skill and competency supply in the labour market. This is why it is important to take a closer look also at the occupational plans of the students. It is important to take a look at how many of them have decided to start (now or in future) working in an occupation that they are learning at school, and how many want to change their occupation. The answer to this is presented below.

Among all the students covered by the study, i.e. also students of general and specialised secondary schools, 40% intend to start working in a profession they learned at school. The percentage of people with other plans is less than a half of this number, yet even despite that they account for 22% of all the students surveyed, which means that every fifth has no intention to work in the occupation learnt. Students of general secondary schools due to the general profile of their current education (independent of the specialised sections), did not as a rule declare their preferences concerning working in the profession, so that the category was excluded in some of the analyses below.

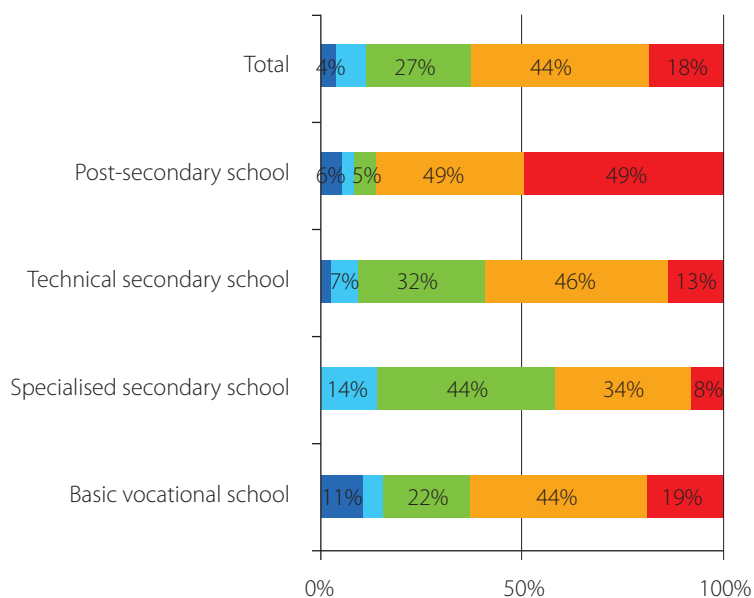
Occupational activity of students of upper secondary schools

Chart 22

Will you try to start working in the occupation/profession you are learning at school now or in the future?

Description of the chart

- I already work in the occupation/profession I am learning at school
- Definitely not
- Rather not
- Rather yes
- Definitely yes



Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

Currently, there are still few students who work in the occupation they are learning at school. The ratio is highest in the case of students of vocational schools, and amounts to 11%, while for upper secondary and technical schools, it amounts to 6% and 3% respectively. The proportion is slightly different for men and women, as it amounts to 5% and 3%. Intending to work in the occupation learnt are most often the students of upper secondary schools (altogether 86% of people who have definitely and probably made up their minds). Second come the people learning in basic vocational schools (61%), followed closely by students of technical schools (59%), that is the types of schools that prepare young people directly to an occupation. Worth paying attention to is a high proportion among the students of specialised secondary schools, who already now declare that they have not decided to work in their occupation, with more than every other pointing to such an answer (58% jointly for the responses “Definitely not.” and “Rather not.”).

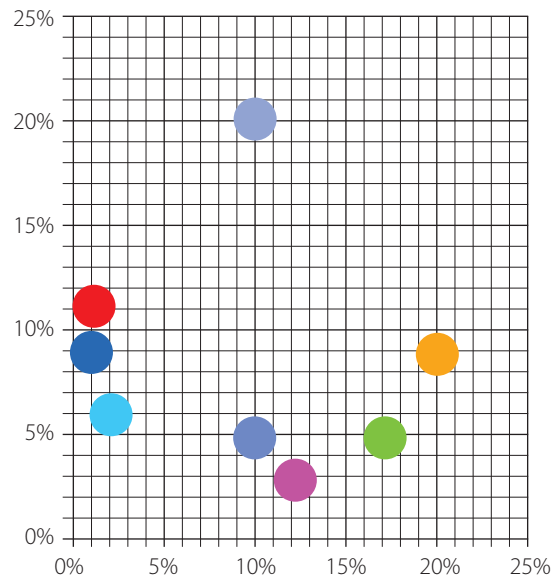
Occupations in which students intend to start work

The core of the “feminine” areas are two groups of occupations, with the first being humanities (legal, social, cultural) and the other one being health occupations. A relatively high proportion among the choices made by women were also teaching professionals, business and administration professionals, and engineering professionals. In turn, the “masculine” choices are especially the engineering occupations, both in the group of professionals and associate professionals.

Worth mentioning among the options in future preferred career choices are those made most frequently: legal, social and cultural professionals is the decidedly more often a “feminine” option, with every fifth woman student interesting in starting working in an occupation from within the group, as compared to fewer than every 10th men. Moreover, women more often preferred occupations of health professionals (17%, compared to 5% of men) and teaching professionals (10%, compared to 3%). In turn, twice as many men than women intend to join the group of science and engineering professionals (20%, compared to 10% of women) – a group that stands ahead others when it comes to the number of men eager to join it. Two of the three groups of “average frequency of choice” i.e. oscillating around 10% are also engineering occupations, namely science and engineering associate professionals (11%) and information and communications technology professionals (9%).

Chart 23

Intended future occupations, broken down by gender



Occupational activity of students of upper secondary schools

- Chief executives and senior officials
- Science and engineering professionals
- Health professionals
- Teaching professionals
- Business and administration professionals
- Information and communications technology professionals
- Legal, social and cultural professionals
- Science and engineering associate professionals

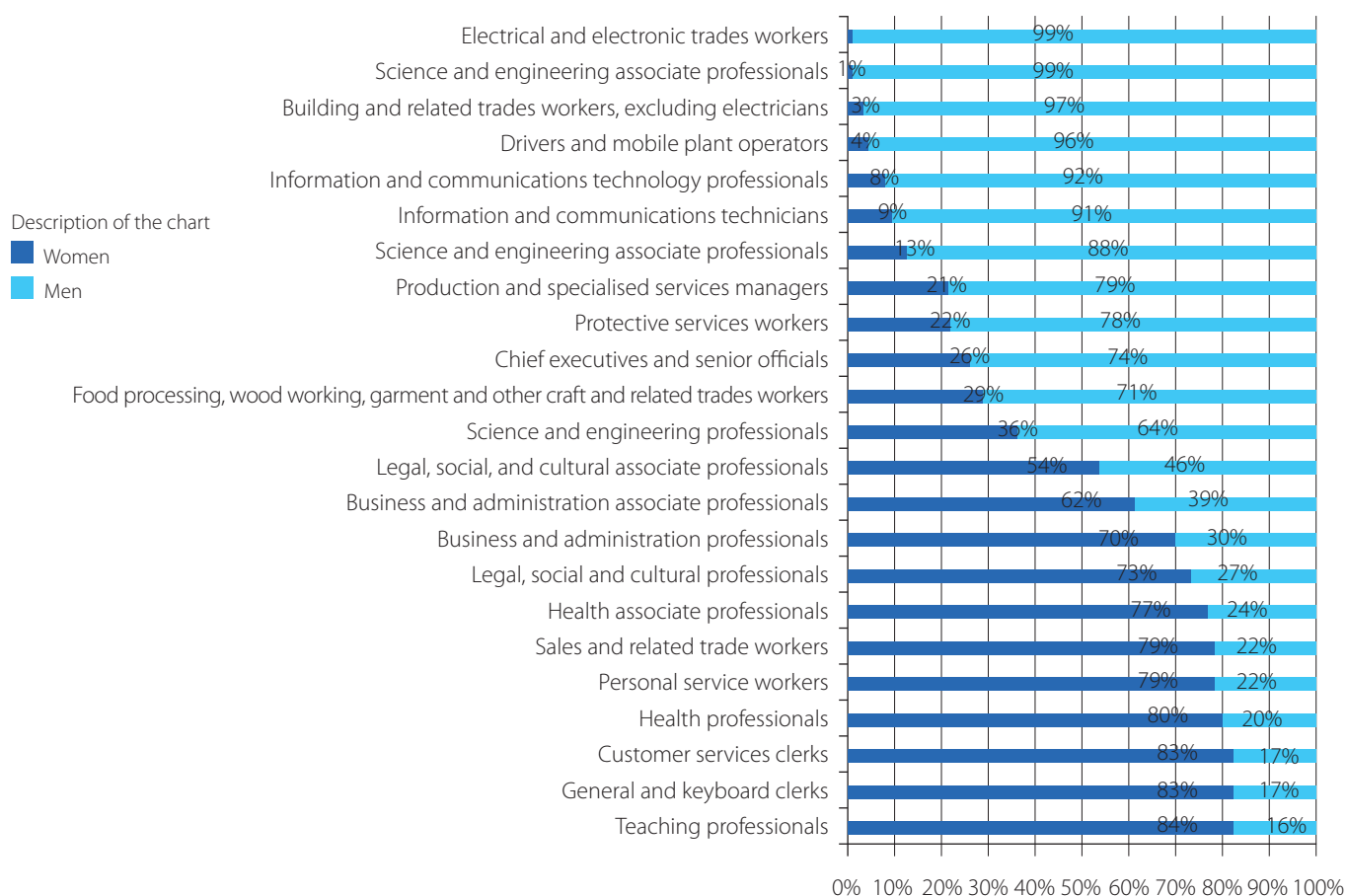
Source: Own study based on: *BKL Study – Secondary Students Survey, 2010*.

Following the analysis of intended career choices broken down by gender, four principal conclusions can be made:

1. The selection of the career is clearly correlated with gender, i.e. we can point at groups of occupations that are far more eagerly selected by women and ones that are decidedly more popular among men. The selections made by groups defined by gender are complementary to each other rather than similar.
2. The occupations selected by men share a clear engineering profile. There is one clearly dominant group, namely science and engineering professionals, complemented by information and communications technology professionals, and science and engineering associate professionals.
3. Women make their occupational choices in a number of groups that have traditionally been feminised; following the cluster dominant among those, they can be defined as humanities.
4. The choices of women, however, are distributed over a larger number of groups of similar popularity. There are four groups of occupations with popularity between 10% and 20%. The ones most frequently subscribed to being legal, social and cultural professionals, health professionals, teaching professionals, and business and administration professionals.

Chart 24

Proportion of women and men in occupations they want to work in



Source: Own study based on: *BKL Study – BKL Study – Secondary Students Survey, 2010.*

The dependence between the occupation selected, and gender can also be examined from a different perspective: the proportion of both genders in the group of all people selecting the given course and/or occupation (see: Chart 24). This allows perceiving that there are strongly feminised occupations, e.g. secretaries (83% of women), health professionals (8%), teaching professionals (84%), and customer services clerks (83%). Thus, the proportion of women is greater than that of men in the category of specialists as such, yet this results from the strong domination in a number of specific groups of occupations. There are groups of specialists that are strongly dominated by men, e.g. information and communications technology professionals (93% of men) and ones that are dominated to a moderate degree e.g. engineering professionals, where there are 59% of men and 41% of women among the people who have decided to follow such a career.

Besides the professionals mentioned above, there are other groups of occupations dominated by men, including the occupations within the group of skilled workers (the proportion of men in the entire group amounts to 93%), stationary plant and machine operators (95%), and labourers in elementary occupations. The worker occupations are traditionally dominated by men, with one of the number of reasons certainly being the physical predispositions, which are frequently necessary in the case of people performing such jobs. Moreover, the number of typical masculine occupations, includes also the engineering occupations (information and communications technicians, electrical and electronic trades workers) and ones related to sciences (science and engineering associate professionals).

What should not escape attention is the fact that the group that selected the highest category in the classification, namely managers is composed of 74% of men. In the case of students, it is, however, difficult to use this information to draw conclusions as to whether such a proportion will actually be reflected in the future occupational activity. Nevertheless, it is already now worth paying attention to, as this is a testimony to the aspirations of students and the roles that they build for themselves in the labour market.

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Annex

Table A1

A change in the number of graduates of upper secondary schools with specific occupational qualifications¹⁴

Polish name of the occupation	English counterpart	ISCO	Current year	Last year	Absolute change	Change (in %)
Technik usług pocztowych i finansowych	Postal and financial service clerks	4211	101	58	43	74%
Technik włókienniczych wyrobów dekoracyjnych	Decorative textile technicians	3119	113	66	47	71%
Technik archiwista	Archiving clerks	4115	139	84	55	65%
Technik elektroradiolog	Electrocardiologist technicians	3211	731	496	235	47%
Technik księgarstwa	Book sales assistants	5223	113	78	35	45%
Dietetyk	Dieticians	2265	189	137	52	38%
Opiekunka dziecięca	Child minder (nurse)	3259	628	458	170	37%
Technik bezpieczeństwa i higieny pracy	Safety at work inspectors and associates	3257	16436	12176	4260	35%
Terapeuta zajęciowy	Occupational therapy associate professionals	3259	1024	777	247	32%
Opiekunka środowiskowa	Community social care technicians	3412	277	214	63	29%
Technik organizacji reklamy	Advertising organisation agents	3339	5886	4610	1276	28%
Technik prac biurowych	General office clerks	4110	3470	2745	725	26%
Technik ochrony fizycznej osób i mienia	Personal and property protective care guards	5414	7086	5659	1427	25%
Technik rachunkowości	Accounting and bookkeeping clerks	4311	4935	3950	985	25%
Górnik eksploatacji podziemnej	Underground operation miners	8111	1341	1077	264	25%
Technik masażysta	Massage therapy technicians and assistants	3255	6273	5077	1196	24%
Technik administracji	Administrative and executive secretaries	3343	30232	24516	5716	23%
Fototechnik	Photography technician	3431	2798	2277	521	23%
Fotograf	Photographer	3431	371	302	69	23%
Ratownik medyczny	Paramedical rescue practitioner	2240	5791	4734	1057	22%
Technik pożarnictwa	Fire-fighting technicians	3119	533	439	94	21%
Opiekun medyczny	Health care assistants	5321	2931	2417	514	21%
Technik eksploatacji portów i terminali	Port and terminal operation agents	3331	210	176	34	19%
Betoniarz-zbrojarz	Concrete placers, concrete finishers and related workers	7114	434	364	70	19%
Higienistka stomatologiczna	Dental assistants	3251	669	571	98	17%
Asystent operatora dźwięku	Sound engineer assisting technicians	3521	435	373	62	17%
Technik usług kosmetycznych	Beauticians and related workers	5142	20469	17742	2727	15%
Technik farmaceutyczny	Pharmaceutical technicians and assistants	3213	9701	8450	1251	15%
Protetyk słuchu	Hearing prosthetic technicians	3214	294	258	36	14%
Animator kultury	Artistic and cultural animation technicians	3439	597	526	71	13%
Aktor scen muzycznych	Actors in musical productions	2652	741	657	84	13%
Technik obsługi turystycznej	Travel consultants and clerks	4221	11566	10310	1256	12%
Technik nawigator morski	Ships' deck officers and pilots	3152	727	651	76	12%
Technik urządzeń sanitarnych	Civil engineering technicians	3112	2200	1982	218	11%
Technik spedytor	Clearing and forwarding agents	3331	3103	2802	301	11%
Lakiernik	Spray painters and varnishers	7132	2012	1826	186	10%
Technik cyfrowych procesów graficznych	Digital graphic processes technicians	3119	1104	1006	98	10%
Technik technologii chemicznej	Chemical engineering technicians	3116	621	568	53	9%

¹⁴ The table accounts only for the occupations in which more than 100 students train during the year of the study. The English-language version uses names from the Polish Klasyfikacja Zawodów Szkolnictwa Zawodowego i.e. classification of occupations for the purposes of vocational training, which is not fully compatible with ISCO, hence the English names are rather translations of the Polish entries, and ISCO numbers quoted are the "nearest matches".

Polish name of the occupation	English counterpart	ISCO	Current year	Last year	Absolute change	Change (in %)
Technik geodeta	Surveyor technicians	3111	6567	6012	555	9%
Technik logistyk	Clearing and forwarding agents	3331	22685	20812	1873	9%
Technik wiertnik	Drilling technicians	3117	244	224	20	9%
Technik żeglugi śródlądowej	Inland ships' deck officers	3152	261	240	21	9%
Pracownik pomocniczy obsługi hotelowej	Cleaners and helpers in hotels and other establishments	9112	680	630	50	8%
Technik dentystryczny	Dental prosthetic technicians	3214	1392	1291	101	8%
Technik budownictwa	Civil engineering technicians	3112	35938	33349	2589	8%
Technik górnictwa podziemnego	Underground mining technicians	3117	4733	4406	327	7%
Nauczanie początkowe z wychowaniem przedszkolnym	Primary school teachers	2341	374	349	25	7%
Technik usług fryzjerskich	Hairdressing workers	5141	18618	17416	1202	7%
Monter mechatronik	Mechatronics mechanics and servicers	7421	772	724	48	7%
Technik pojazdów samochodowych	Automotive engineering technicians	3115	16027	15056	971	6%
Technik górnictwa otworowego	Borehole mining technicians	3117	201	189	12	6%
Malarz-tapeciarz	Painters and wallpaper layers	7131	2164	2036	128	6%
Technik elektryk	Electrical engineering technicians	3113	12519	11806	713	6%
Kucharz	Cooks	5120	15479	14616	863	6%
Fryzjer	Hairdressers	5141	23915	22603	1312	6%
Asystent osoby niepełnosprawnej	Disabled assistance technician	3412	500	474	26	5%
Mechanik pojazdów samochodowych	Motor vehicle mechanics and repairers	7231	38087	36181	1906	5%
Kucharz małej gastronomii	Cooks in minor establishments	5120	27244	25975	1269	5%
Technik górnictwa odkrywkowego	Opencast quarrying technicians	3117	130	125	5	4%
Pracownik socjalny	Social work technicians	3412	1513	1455	58	4%
Elektromechanik pojazdów samochodowych	Electrical mechanics and fitters	7412	6218	5981	237	4%
Technik drogownictwa	Road building technicians	3112	2960	2848	112	4%
Drukarz	Printers	7322	190	183	7	4%
Muzyk	Musicians	2652	44125	42631	1494	4%
Plastyk	Interior designers and decorators	3432	8765	8478	287	3%
Technik informatyk	Information and communications technicians	3512	75323	72945	2378	3%
Technik weterynarii	Veterinary technicians and assistants	3240	2063	2000	63	3%
Blacharz samochodowy	Automotive sheet-metal worker	7213	2577	2509	68	3%
Technik architektury krajobrazu	Landscape architecture technicians	3142	15813	15430	383	2%
Technik pszczelarz	Apiarist technicians	3142	129	126	3	2%
Technik analityk	Analyst technicians	3111	1842	1809	33	2%
Dekarz	Roofers	7121	174	171	3	2%
Technik ortopeda	Medical and dental prosthetic technicians	3214	306	301	5	2%
Cukiernik	Confectionery makers	7512	7682	7559	123	2%
Technik hodowca koni	Horse breeding technicians	3142	1181	1163	18	2%
Technik handlowiec	Shop sales assistants	5223	19795	19533	262	1%
Monter izolacji budowlanych	Construction insulation workers	7124	170	168	2	1%
Sprzedawca	Vendors	9520	19751	19562	189	1%
Florysta	Florists	3432	213	211	2	1%
Opiekun w domu pomocy społecznej	Care centre technicians	3412	1375	1364	11	1%
Elektroniczny			133	132	1	1%
Mechanik-monter maszyn i urządzeń	Agricultural and industrial machinery mechanics and repairers	7233	2588	2571	17	1%
Piekarz	Bakers	7512	3888	3867	21	1%
Ogrodnik	Gardeners	6113	1347	1340	7	1%
Kelner	Waiters	5131	4670	4647	23	0%

Polish name of the occupation	English counterpart	ISCO	Current year	Last year	Absolute change	Change (in %)
Technik organizacji usług gastronomicznych	Food preparation services technicians	3434	16063	15997	66	0%
Introligator	Print finishing and binding workers	7323	275	275	0	0%
Mechatronicy	Mechatronics engineering technicians	2152	145	145	0	0%
Technik geolog	Geology technicians	3111	140	140	0	0%
Monter-elektronik	Electronics mechanics and servicers	7421	1598	1602	-4	0%
Elektryk	Electricians	7411	5656	5674	-18	0%
Technik mechanik	Mechanical engineering technicians	3115	38122	38283	-161	0%
Elektromechanik	Electrical mechanics and fitters	7412	2478	2489	-11	0%
Technik mechanizacji rolnictwa	Agricultural mechanical engineering technicians	3115	5588	5650	-62	-1%
Technik rolnik	Agricultural technicians	3142	13210	13357	-147	-1%
Technik mechatronik	Mechatronics technicians	3114	12534	12679	-145	-1%
Tancerz	Dancers	2652	875	886	-11	-1%
Asystentka stomatologiczna	Dental assistants	3251	1063	1082	-19	-2%
Technik teleinformatyk	Information and communications technology operations technicians	3511	5394	5493	-99	-2%
Technik mechanik lotniczy	Aircraft systems technicians	3153	694	707	-13	-2%
Technik technologii odzieży	Clothing technologies technicians	3119	2502	2554	-52	-2%
Technik awionik	Avionics technician	3153	283	289	-6	-2%
Posadzkarz	Floor layers and tile setters	7122	1653	1696	-43	-3%
Technik technologii żywności	Nutrition technicians	3116	5964	6120	-156	-3%
Technik agrobiznesu	Agri-business technicians	3314	9816	10087	-271	-3%
Technik dróg i mostów kolejowych	Road and railway bridges engineering technicians	3112	100	103	-3	-3%
Technik technologii drewna	Wood technologies technicians	3119	2164	2230	-66	-3%
Stolarz	Carpenter/Joiner	7522	7660	7904	-244	-3%
Monter instalacji i urządzeń sanitarnych	Plumbers and pipe fitters	7126	4486	4629	-143	-3%
Technik żywienia i gospodarstwa domowego	Dieticians and nutritionists	2265	30157	31189	-1032	-3%
Technik hotelarstwa	Hotel industry technicians	4224	41275	42806	-1531	-4%
Blacharz	Sheet-metal worker	7213	106	110	-4	-4%
Technik budownictwa okrętowego	Ship construction technicians	3119	126	132	-6	-5%
Technik ekonomista	Economics associate professionals	3314	61746	65039	-3293	-5%
Rolnik	Farmers/growers	6130	2093	2206	-113	-5%
Technik leśnik	Forestry technicians	3143	3621	3828	-207	-5%
Mechanik-operator pojazdów i maszyn rolniczych	Mobile farm and forestry plant operators	8341	3462	3686	-224	-6%
Technik ochrony środowiska	Environmental associates	3257	5748	6132	-384	-6%
Ślusarz	Locksmith/toolmaker	7222	7117	7615	-498	-7%
Technik inżynierii środowiska i melioracji	Environmental and water engineering technicians	3112	628	672	-44	-7%
Krawiec	Tailors and dressmakers	7531	727	779	-52	-7%
Rzeźnik-wędliniarz	Butchers, meat processing (smoking) workers	7511	669	720	-51	-7%
Technik optyk	Dispensing opticians	3254	514	556	-42	-8%
Technik elektronik	Electronics engineering technicians	3114	18476	20015	-1539	-8%
Technik ogrodnik	Gardening technicians	3142	1643	1790	-147	-8%
Murarz	Bricklayers	7112	8403	9294	-891	-10%
Cieśla	Carpenters/joiners	7115	199	221	-22	-10%
Technik telekomunikacji	Telecommunications engineering technicians	3522	1266	1406	-140	-10%
Tapicer	Upholsterers	7534	1086	1210	-124	-10%

Polish name of the occupation	English counterpart	ISCO	Current year	Last year	Absolute change	Change (in %)
Operator obrabiarek skrawających	Metal working machine tool setters and operators	7223	2232	2505	-273	-11%
Technik usług pocztowych i telekomunikacyjnych	Postal and telecommunication services tellers/technicians	4211	271	305	-34	-11%
Technik poligraf	Polygraphy technicians	3119	1385	1566	-181	-12%
Monter kadłubów okrętowych	Ship hull assemblers	7214	158	187	-29	-16%

Source: Own study based on Educational Information System (SIO).

Table A2

Where education will continue vs. current school type

Where to continue education?	Current school type					
	Basic vocational school	General secondary school	Specialised secondary school	Technical secondary school	Post-secondary school)	Total
I don't know yet	35%	10%	23%	32%	43%	21%
Technical secondary school	41%	0%	0%	1%	0%	5%
General secondary school	12%	0%	0%	0%	0%	2%
Specialised secondary school	2%	0%	1%	0%	0%	0%
Post-secondary school	2%	3%	12%	2%	3%	3%
Day studies	3%	75%	32%	31%	20%	50%
Evening studies	1%	1%	2%	2%	3%	2%
Extramural studies (weekend)	7%	13%	36%	35%	32%	20%

Table A3

Percentage of women and men in occupations planned by secondary school students (ISCO 40)

		Gender		
		Women	Men	Total
Chief executives, senior officials and legislators	Count in the sample	69	304	373
	% in the profession	18.5%	81.5%	100.0%
Science and engineering professionals	Count in the sample	1361	1952	3313
	% in the profession	41.1%	58.9%	100.0%
Health professionals	Count in the sample	1921	487	2408
	% in the profession	79.8%	20.2%	100.0%
Teaching professionals	Count in the sample	991	196	1187
	% in the profession	83.5%	16.5%	100.0%
Business and administration professionals	Count in the sample	1596	702	2298
	% in the profession	69.5%	30.5%	100.0%
Information and communications technology professionals	Count in the sample	54	677	731
	% in the profession	7.4%	92.6%	100.0%
Legal, social and cultural professionals	Count in the sample	2275	795	3070
	% in the profession	74.1%	25.9%	100.0%
Science and engineering associate professionals	Count in the sample	64	712	776
	% in the profession	8.2%	91.8%	100.0%
Health associate professionals	Count in the sample	291	128	419
	% in the profession	69.5%	30.5%	100.0%
Business and administration associate professionals	Count in the sample	351	215	566
	% in the profession	62.0%	38.0%	100.0%
Science and engineering associate professionals	Count in the sample	187	140	327
	% in the profession	57.2%	42.8%	100.0%
Information and communications technicians	Count in the sample	8	86	94
	% in the profession	8.5%	91.5%	100.0%
General and keyboard clerks	Count in the sample	42	6	48
	% in the profession	87.5%	12.5%	100.0%
Customer services clerks	Count in the sample	46	13	59
	% in the profession	78.0%	22.0%	100.0%
Personal service workers	Count in the sample	624	173	797
	% in the profession	78.3%	21.7%	100.0%
Sales and related trade workers	Count in the sample	107	14	121
	% in the profession	88.4%	11.6%	100.0%
Protective services workers	Count in the sample	32	134	166
	% in the profession	19.3%	80.7%	100.0%
Building and related trades workers, excluding electricians	Count in the sample	4	127	131
	% in the profession	3.1%	96.9%	100.0%
Metal, machinery and related trades workers	Count in the sample	4	241	245
	% in the profession	1.6%	98.4%	100.0%
Electrical and electronic trades workers	Count in the sample	0	35	35
	% in the profession	.0%	100.0%	100.0%
Food processing, wood working, garment and other craft and related trades workers	Count in the sample	30	90	120
	% in the profession	25.0%	75.0%	100.0%
Drivers and mobile plant operators	Count in the sample	3	46	49
	% in the profession	6.1%	93.9%	100.0%

Note: Groups of occupations with numbers of counts below 20 were not included in the table.

Source: Own study based on Educational Information System (SIO).

Table A4

Percentage of people planning further education, broken down by form of education and administrative region (voivodeship)

Administrative region (voivodeship)	Where to continue education?							
	Day studies	I don't know yet	Extramural (weekend) studies	Technical secondary school	Post-secondary school	General secondary school	Evening studies	Specialised secondary school
Dolnośląskie	50%	19%	21%	6%	3%	2%	1%	0%
Kujawsko-pomorskie	47%	20%	19%	9%	4%	3%	1%	0%
Lubelskie	57%	21%	17%	2%	3%	1%	2%	0%
Lubuskie	51%	24%	14%	7%	3%	2%	1%	1%
Łódzkie	54%	18%	21%	4%	2%	0%	2%	0%
Małopolskie	45%	24%	25%	3%	2%	1%	2%	0%
Mazowieckie	50%	17%	26%	5%	2%	1%	2%	0%
Opolskie	51%	23%	17%	5%	3%	2%	1%	0%
Podkarpackie	49%	27%	18%	4%	4%	1%	2%	0%
Podlaskie	56%	19%	19%	5%	2%	1%	1%	0%
Pomorskie	46%	20%	22%	8%	3%	2%	2%	1%
Śląskie	48%	23%	19%	6%	4%	1%	2%	0%
Świętokrzyskie	51%	19%	22%	5%	2%	1%	1%	0%
Warmińsko-mazurskie	52%	19%	18%	7%	3%	3%	2%	1%
Wielkopolskie	43%	21%	27%	7%	3%	2%	1%	0%
Zachodniopomorskie	53%	20%	16%	4%	2%	4%	2%	0%

Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

Table A5

Assessment of competency level, broken down by gender

	M1. Gender					
	Women		Men			Total
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
1. Finding information and drawing conclusions	3.40	.799	3.43	.875	3.41	.835
1.1. Quick summarising of large amount of text	3.08	.926	2.93	.985	3.01	.957
1.2. Logical thinking, factual analysis	3.49	.872	3.69	.899	3.58	.890
1.3. Continuous learning of new things	3.56	.882	3.56	.916	3.56	.898
2. Operating, assembling, and repairing machines	1.97	1.024	3.26	1.154	2.57	1.262
3. Performing calculations	3.03	1.143	3.14	1.135	3.08	1.141
3.1. Performing simple calculations	3.68	1.086	3.74	1.079	3.71	1.083
3.2. Performing advanced mathematical calculations	2.38	1.149	2.56	1.200	2.47	1.176
4. Working with computers and using the Internet	3.97	.908	4.24	.880	4.09	.905
4.1. Basic knowledge of MS Office-type package	3.51	1.120	3.80	1.080	3.64	1.111
4.2. Knowledge of specialist software, writing software, authoring of websites	2.17	1.095	2.59	1.221	2.37	1.174
4.3. Using the Internet: browsing the web, using e-mail	4.31	.896	4.31	.932	4.31	.913
5. Artistic and creative skills	3.28	1.223	2.80	1.268	3.06	1.267
6. Physical fitness	3.57	1.065	4.02	1.018	3.78	1.067
7. Self-organisation, initiative (planning and timely completion of actions, efficiency in reaching goals)	3.73	.931	3.61	.955	3.68	.944
7.1. Independent making of decisions	3.95	.851	3.93	.839	3.94	.846
7.2. Entrepreneurial spirit and showing initiative	3.39	.949	3.42	.966	3.41	.957
7.3. Creativity (being innovative, inventing new solutions)	3.62	.955	3.62	.970	3.62	.962
7.4. Resilience to stress	3.09	1.117	3.55	1.065	3.30	1.117
7.5. Timely completion of planned actions	3.72	.949	3.61	.984	3.67	.967
8. Contacts with other people, with whom we run tasks together	4.12	.807	3.94	.874	4.03	.844
8.1. Cooperation within the group	4.07	.820	3.94	.865	4.01	.844
8.2. Ease in establishing contacts	4.07	.914	3.88	.965	3.98	.943
8.3. Being communicative and sharing ideas clearly	3.87	.875	3.70	.918	3.79	.899
8.4. Solving conflicts between people	3.73	.915	3.49	1.001	3.62	.963
9. Organisation and conducting work at the office	3.28	1.005	3.02	1.032	3.15	1.026
10. Managerial skills and organisation of work of others	3.46	1.053	3.51	1.046	3.48	1.050
10.1. Awarding tasks to other people	3.62	1.022	3.67	1.015	3.64	1.019
10.2. Coordination of work of other people	3.50	1.015	3.55	1.019	3.52	1.017
10.3. Disciplining and reproofing other people.	3.46	1.085	3.50	1.078	3.48	1.082
11. Availability	3.82	.907	3.80	.948	3.81	.926
11.1. Frequent travels	3.70	1.114	3.84	1.095	3.77	1.107
11.2. Flexible working hours (no fixed working times)	3.36	1.196	3.65	1.167	3.50	1.191

Source: Own study based on: BKL Study – Secondary Students Survey, 2010.

Table A6

Assessment of competency class levels broken down by the size of the town/village, where the school is situated

Town class	Average competency rate										
	Finding information and drawing conclusions	Operating, assembling, and repairing machines	Performing calculations	Working with computers and using the Internet	Artistic and creative skills	Physical fitness	Self-organisation, initiative (planning and timely completion of actions, efficiency in reaching goals)	Contacts with other people, with whom we run tasks together	Organisation and conducting office works	Managerial skills and organisation of work of others	Availability
Country	3.25	2.60	2.82	3.97	2.99	3.82	3.59	3.99	3.07	3.40	3.77
Cities below 10,000	3.34	2.58	2.96	4.01	3.04	3.83	3.67	4.04	3.08	3.42	3.76
Cities from 10,000 to 19,999	3.34	2.62	3.12	4.07	3.02	3.77	3.61	4.01	3.17	3.45	3.77
Cities from 20,000 to 49,999	3.40	2.57	3.11	4.09	3.02	3.78	3.67	4.05	3.16	3.47	3.83
Cities from 50,000 to 99,999	3.42	2.50	3.03	4.12	3.06	3.80	3.68	4.06	3.17	3.50	3.84
Cities from 100,000 to 199,999	3.42	2.58	3.07	4.11	3.08	3.78	3.70	4.01	3.13	3.48	3.81
Cities from 200,000 to 499,999	3.47	2.61	3.13	4.11	3.08	3.77	3.71	4.04	3.17	3.54	3.84
Cities over 500,000	3.56	2.60	3.20	4.14	3.12	3.77	3.73	4.02	3.19	3.53	3.75
Warsaw	3.52	2.32	3.12	4.08	3.24	3.66	3.68	4.01	3.14	3.52	3.78
Total	3.41	2.58	3.08	4.09	3.05	3.78	3.67	4.03	3.15	3.48	3.81

Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

Table A7

Assessment of competency class levels broken down by administrative regions (voivodeships)

Administrative region (voivodeship)	Average competency rate										
	Finding information and drawing conclusions	Operating, assembling, and repairing machines	Performing calculations	Working with computers and using the Internet	Artistic and creative skills	Physical fitness	Self-organisation, initiative, (planning and timely completion of actions, efficiency in reaching goals)	Contacts with other people, with whom we run tasks together	Organisation and conducting office works	Managerial skills and organisation of work of others	Availability
Dolnośląskie	3.5	2.56	3.08	4.17	3.1	3.82	3.74	4.06	3.12	3.47	3.85
Kujawsko-pomorskie	3.43	2.52	3.02	4.08	3.14	3.73	3.69	4.03	3.22	3.53	3.83
Lubelskie	3.42	2.5	2.99	4.03	3	3.79	3.66	4.04	3.1	3.43	3.79
Lubuskie	3.45	2.55	3.05	4.13	3.08	3.74	3.7	4.08	3.14	3.48	3.82
Łódzkie	3.41	2.56	3.08	4.08	3.04	3.75	3.66	3.99	3.19	3.46	3.72
Małopolskie	3.41	2.6	3.14	4.07	3.09	3.84	3.7	4.06	3.14	3.5	3.8
Mazowieckie	3.45	2.53	3.12	4.11	3.05	3.74	3.69	4.03	3.16	3.53	3.81
Opolskie	3.36	2.58	3.05	4.07	3.07	3.74	3.64	4	3.11	3.44	3.77
Podkarpackie	3.37	2.55	2.99	4.01	2.98	3.84	3.6	4.01	3.09	3.42	3.79
Podlaskie	3.42	2.62	3.12	4.15	3.04	3.84	3.66	4.05	3.15	3.5	3.83
Pomorskie	3.37	2.69	3.12	4.05	3.06	3.78	3.64	4	3.13	3.47	3.79
Śląskie	3.37	2.53	3.05	4.15	3.08	3.78	3.67	4.02	3.2	3.47	3.82
Świętokrzyskie	3.44	2.62	3.16	4.13	3.02	3.88	3.7	4.06	3.23	3.55	3.85
Warmińsko-mazurskie	3.37	2.55	3.13	4.07	3.01	3.73	3.68	4.03	3.15	3.52	3.8
Wielkopolskie	3.38	2.54	2.99	4.11	3.05	3.73	3.67	4.01	3.15	3.46	3.83
Zachodniopomorskie	3.46	2.71	3.24	4.07	3.1	3.73	3.71	4.03	3.19	3.55	3.82
Total	3.41	2.58	3.08	4.09	3.05	3.78	3.67	4.03	3.15	3.48	3.81

Source: Own study based on: BKL Study – Secondary Students Survey, 2010.

Table A8

Assessment of competency class levels broken down by education of the father

Level of education of the father	Average competency rate										
	Finding information and drawing conclusions	Operating, assembling, and repairing machines	Performing calculations	Working with computers and using the Internet	Artistic and creative skills	Physical fitness	Self-organisation, initiative, (planning and timely completion of actions, efficiency in reaching goals)	Contacts with other people, with whom we run tasks together	Organisation and conducting office works	Managerial skills and organisation of work of others	Availability
Primary	3.23	2.4	2.96	3.84	2.88	3.71	3.55	3.93	3.07	3.27	3.74
Vocational	3.32	2.54	3.02	4.05	2.99	3.76	3.63	4.02	3.11	3.42	3.8
Secondary	3.46	2.64	3.1	4.16	3.06	3.81	3.72	4.06	3.21	3.54	3.84
Higher	3.65	2.61	3.29	4.17	3.25	3.79	3.8	4.07	3.24	3.66	3.81

Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

Table A9

Assessment of individual competencies, broken down by school type

	Average competency rate					
	Type of school					
	Basic vocational school	General secondary school	Specialised secondary school	Technical secondary school	Post-secondary school)	Total
1. Finding information and drawing conclusions	3.14	3.53	3.32	3.33	3.53	3.41
quick summarising of large amount of text	2.78	3.13	2.92	2.91	3.21	3.01
logical thinking, factual analysis	3.32	3.70	3.38	3.52	3.66	3.58
continuous learning of new things	3.53	3.59	3.40	3.52	3.69	3.56
2. Operating, assembling, and repairing machines	3.11	2.31	2.35	2.81	2.47	2.58
3. Performing calculations	2.86	3.19	2.83	3.03	3.04	3.08
performing simple calculations	3.31	3.87	3.45	3.64	3.66	3.71
performing advanced mathematical calculations	2.37	2.56	2.24	2.38	2.35	2.47
4. Working with computers and using the Internet	4.01	4.06	4.15	4.18	4.00	4.09
basic knowledge of MS Office-type package	3.24	3.70	3.59	3.74	3.59	3.64
knowledge of specialist software, writing software, authoring of websites	2.58	2.26	2.53	2.47	2.15	2.37
using the Internet: browsing the web, using e-mail	3.94	4.41	4.34	4.31	4.19	4.31
5. Artistic and creative skills	2.93	3.14	3.06	2.96	3.11	3.05
6. Physical fitness	3.95	3.69	3.80	3.86	3.81	3.78
7. Self-organisation, initiative, (planning and timely completion of actions, efficiency in reaching goals)	3.44	3.75	3.57	3.65	3.78	3.67
independent making of decisions	3.84	3.96	3.95	3.93	3.93	3.94
entrepreneurial spirit and showing initiative	3.14	3.49	3.32	3.38	3.46	3.40
creativity (being innovative, inventing new solutions)	3.34	3.73	3.55	3.56	3.59	3.62
resilience to stress	3.38	3.27	3.23	3.33	3.45	3.30
timely completion of planned actions	3.53	3.68	3.57	3.70	3.83	3.67
8. Contacts with other people, with whom we run tasks together	3.93	4.06	4.05	4.03	4.08	4.03
cooperation within the group	3.96	4.00	4.06	4.04	4.08	4.01
ease in establishing contacts	3.94	3.98	4.09	3.98	4.03	3.98
being communicative and sharing ideas clearly	3.60	3.85	3.83	3.76	3.84	3.79
solving conflicts between people	3.47	3.68	3.63	3.58	3.60	3.62
9. Organisation and conducting work at the office	2.79	3.22	3.17	3.20	3.16	3.15
10. Managerial skills and organisation of work of others	3.26	3.56	3.40	3.48	3.36	3.48
awarding tasks to other people	3.49	3.70	3.57	3.63	3.52	3.64
coordination of work of other people	3.35	3.59	3.46	3.50	3.43	3.52
disciplining and reprovig other people	3.41	3.51	3.47	3.47	3.40	3.48
11. Availability	3.59	3.81	3.78	3.88	3.97	3.81
frequent travels	3.80	3.74	3.83	3.80	3.60	3.77
flexible working hours (no fixed working times)	3.54	3.49	3.46	3.50	3.41	3.50

Source: Own study based on: BKL Study – Secondary Students Survey, 2010.

Table A10

Assessment of competency class levels broken down by occupations (ISCO) in selected types of schools (w/out general and specialised secondary schools)

Occupation	Average competency rate										
	Finding information and drawing conclusions	Operating, assembling, and repairing machines	Performing calculations	Working with computers and using the Internet	Artistic and creative skills	Physical fitness	Self-organisation, initiative, (planning and timely completion of actions, efficiency in reaching goals)	Contacts with other people, with whom we run tasks together	Organisation and conducting office works	Managerial skills and organisation of work of others	Availability
Professionals	3.35	3.59	3.09	4.31	2.91	4.33	4.09	4.19	3.09	3.81	3.94
Associate professionals	3.46	2.49	3.13	4.11	3.07	3.75	3.71	4.05	3.22	3.52	3.84
Clerical support workers	3.25	2	3.23	3.96	2.87	3.44	3.45	3.85	3.34	3.4	3.6
Services and sales workers	3.19	2.31	2.77	3.98	3.16	3.77	3.46	4.07	2.85	3.24	3.62
Skilled agricultural, forestry and fishery workers	2.73	2.36	2.27	3.09	2.18	3.2	3	2.82	2.36	2.4	2.82
Crafts and related trades workers	3.12	3.47	2.84	4.05	2.8	4.05	3.48	3.9	2.72	3.29	3.64
Plant and machine operators and assemblers	3.1	3.05	3	4.11	3.25	4.1	3.35	4.1	3.05	3.2	3.6

Note: The list does not include the category "Managers" due to their low count.

Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

Table A11

Assessment of competency class levels broken down by planned occupations (ISCO) in selected types of schools (w/out general and specialised secondary schools)

Occupation	Average competency rate								
	Managers	Professionals	Associate professionals	Clerical support workers	Services and sales workers	Skilled agricultural, forestry and fishery workers	Crafts and related trades workers	Plant and machine operators and assemblers	Elementary occupations
Finding information and drawing conclusions	3.6	3.6	3.4	3.4	3.2	3.3	3.2	3.4	3.8
Operating, assembling, and repairing machines	3	2.4	2.9	2	2.4	3.4	3.5	3.4	2.8
Performing calculations	3.2	3.2	2.9	2.9	2.7	3.4	2.9	2.6	2.6
Computer and the Internet	4.3	4.2	4.2	4	4	3.7	4	4.2	3.8
Artistic and creative skills	2.9	3.2	3.1	3.1	3.3	2.3	2.9	2.7	3
Physical fitness	4.4	3.7	4.1	3.6	3.9	4.1	4.1	4.1	4
Self-organisation, initiative	3.9	3.9	3.8	3.7	3.5	3.7	3.6	3.6	3.6
Contacts with other people	4.2	4.1	4.1	4.2	4.1	3.7	4	3.9	4
Office works	3	3.3	3.1	3.4	2.9	3	2.7	3	3.5
Management and organisation of work	3.8	3.6	3.5	3.5	3.3	3.5	3.4	3.5	4
Availability	4.1	3.9	3.9	4	3.7	3.5	3.7	3.6	3.8

Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

Table A12

Average command of English and German, broken down by type of school

Command of foreign languages	Type of school	reading skills	writing skills	speaking skills	listening skills
English	Basic vocational school	3.53	3.24	3.34	3.30
	General secondary school	4.32	3.87	3.84	3.83
	Specialised secondary school	3.93	3.50	3.48	3.34
	Technical secondary school	3.89	3.50	3.47	3.43
	Upper secondary school	4.07	3.65	3.64	3.71
	Total	4.09	3.69	3.66	3.64
German	Basic vocational school	3.28	3.04	3.06	2.91
	General secondary school	3.22	2.86	2.78	2.63
	Specialised secondary school	3.11	2.86	2.81	2.51
	Technical secondary school	3.15	2.84	2.77	2.53
	Upper secondary school	3.42	3.05	3.01	2.87
	Total	3.21	2.87	2.80	2.62

Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.***Table A13**

Command of foreign languages broken down by administrative regions (voivodeships)

Administrative region (voivodeship)	English	German	French	Russian	Italian	Spanish
	% of N in the row	% of N in the row	% of N in the row	% of N in the row	% of N in the row	% of N in the row
Dolnośląskie	94%	74%	9%	6%	1%	3%
Kujawsko-pomorskie	97%	59%	15%	18%	1%	2%
Lubelskie	97%	48%	7%	35%	2%	6%
Lubuskie	89%	80%	9%	5%	1%	2%
Łódzkie	94%	65%	11%	14%	1%	4%
Małopolskie	98%	70%	10%	8%	4%	3%
Mazowieckie	97%	53%	17%	27%	4%	3%
Opolskie	96%	78%	8%	5%	1%	2%
Podkarpackie	97%	71%	9%	12%	1%	3%
Podlaskie	97%	52%	6%	37%	1%	2%
Pomorskie	97%	64%	8%	12%	1%	3%
Śląskie	97%	63%	17%	9%	3%	3%
Świętokrzyskie	97%	61%	7%	23%	3%	5%
Warmińsko-mazurskie	94%	68%	5%	17%	2%	2%
Wielkopolskie	91%	79%	9%	8%	2%	2%
Zachodniopomorskie	93%	75%	5%	5%	1%	2%

The percentages do not add up to 100%, because respondents were allowed to name multiple languages.

Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

Table A14

Subjects of training considered needed before starting work, broken down by students' gender

Subjects of training	Women	Men	Total
	% of N n the column	% of N n the column	% of N n the column
Languages	34%	14%	24%
IT	12%	9%	11%
Construction and industry	1%	32%	16%
Driving licence, maintenance and repair of motor vehicles	2%	29%	15%
Misc.	13%	13%	13%
Various specialist occupational	11%	11%	11%
IT	12%	9%	11%
Related to services	17%	3%	10%
Accommodation and food service activities, tourism, recreation, leisure	9%	5%	7%
Personal development, general competencies	5%	5%	5%
Trade, sales and customer care	7%	1%	4%
Bookkeeping and accounting	4%	1%	2%
Medical, social work, psychology	4%	2%	3%
Safety at work, first aid, fire protection	2%	2%	2%
Education, training, teacher training	2%	1%	2%
Culture, art, other artistic	3%	2%	2%
Managing finance, controlling, cost estimation	1%	1%	1%
Administrative and support service activities	2%	0%	1%
Enterprise management	1%	1%	1%
Marketing	1%	1%	1%
Financial services, real estate	1%	0%	1%

Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

Table A15**Planned occupations by gender**

		Gender		
		Women	Men	Total
Managers	% of N in the row	28%	72%	100%
	% of N in the column	2%	7%	4%
Professionals	% of N in the row	61%	39%	100%
	% of N in the column	64%	48%	57%
Associate professionals	% of N in the row	48%	52%	100%
	% of N in the column	18%	23%	21%
Clerical support workers	% of N in the row	80%	20%	100%
	% of N in the column	5%	1%	3%
Services and sales workers	% of N in the row	70%	30%	100%
	% of N in the column	17%	8%	13%
Skilled agricultural, forestry and fishery workers	% of N in the row	18%	82%	100%
	% of N in the column	0%	1%	0%
Crafts and related trades workers	% of N in the row	7%	93%	100%
	% of N in the column	1%	14%	7%
Plant and machine operators and assemblers	% of N in the row	4%	96%	100%
	% of N in the column	0%	5%	2%
Elementary occupations	% of N in the row	30%	70%	100%
	% of N in the column	0%	1%	0%
Total	% of N in the row	54%	46%	100%
	% of N in the column	100%	100%	100%

Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

Table A16**Town class vs. being involved in gainful employment in the last year**

	Did you work for profit in the last year?		
	Yes	No	Total
Country	62.0%	38.0%	100.0%
Cities below 10,000	59.4%	40.6%	100.0%
Cities from 10,000 to 19,000	57.3%	42.7%	100.0%
Cities from 20 to 49,000	54.5%	45.5%	100.0%
Cities from 50 to 99,000	56.2%	43.8%	100.0%
Cities from 100 to 199,000	57.2%	42.8%	100.0%
Cities from 200 to 499,000	57.6%	42.4%	100.0%
Cities over 500,000	56.0%	44.0%	100.0%
Warsaw	55.9%	44.1%	100.0%
Total	56.8%	43.2%	100.0%

Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

Table A17

Education of the father vs. performing gainful employment in the last year

	Did you work for profit in the last year?		Total
	Yes	No	100,0%
Primary	60.0%	40.0%	100.0%
Vocational	59.2%	40.8%	100.0%
Secondary	57.0%	43.0%	100.0%
Higher	48.6%	51.4%	100.0%
Total	56.8%	43.2%	100.0%

Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.***Table A18**

Being involved in gainful employment in the last year, broken down by administrative region (voivodeship)

	Did you work for profit in the last year?		
	tak	nie	Total
	% of N in the row	% of N in the row	% of N in the row
Dolnośląskie	57%	43%	100%
Kujawsko-pomorskie	57%	43%	100%
Lubelskie	56%	44%	100%
Lubuskie	59%	41%	100%
Łódzkie	52%	48%	100%
Małopolskie	55%	45%	100%
Mazowieckie	57%	43%	100%
Opolskie	58%	42%	100%
Podkarpackie	53%	47%	100%
Podlaskie	55%	45%	100%
Pomorskie	63%	37%	100%
Śląskie	55%	45%	100%
Świętokrzyskie	54%	46%	100%
Warmińsko-mazurskie	56%	44%	100%
Wielkopolskie	62%	38%	100%
Zachodniopomorskie	60%	40%	100%

Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

Table A19

Reasons for the inability to start work, broken down by type of school

Reasons for the inability to start work	% of N in the column	Type of school					Total
		Basic vocational school	General secondary school	Specialised secondary school	Technical secondary school	Post-secondary school)	
The pay offered was too low	% of N in the column	15%	6%	8%	8%	12%	7%
Due to lack of appropriate experience	% of N in the column	19%	22%	21%	17%	19%	20%
There were no job offers in the vicinity	% of N in the column	49%	59%	61%	61%	59%	59%
There were no appropriate contacts	% of N in the column	17%	25%	20%	22%	21%	23%
For other reasons	% of N in the column	9%	11%	7%	5%	1%	9%

Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

Table A20

Plans to start own business in future, broken down by type of school

Do you intend to start your own business in future?	Type of school					
	Basic vocational school	General secondary school	Specialised secondary school	Technical secondary school	Post-secondary school)	Total
It's hard to say	35.1%	39.0%	38.7%	38.1%	38.2%	38.2%
Definitely not	5.2%	3.8%	6.2%	3.8%	5.8%	4.1%
Rather not	20.8%	24.2%	28.1%	21.7%	22.8%	23.0%
Rather yes	26.3%	22.8%	18.3%	24.2%	21.8%	23.5%
Definitely yes	12.5%	10.2%	8.7%	12.2%	11.4%	11.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Own study based on: *BKL Study – Secondary Students Survey, 2010.*

The Polish Agency for Enterprise Development (Polska Agencja Rozwoju Przedsiębiorczości, PARP) is a government agency reporting to the Minister of Economy. It was established on the power of the Act of 9th November 2000. The task of the agency is to manage funds received from the State Treasury and the European Union allocated to manage entrepreneurship and innovativeness and to develop human resources.

For over a decade, PARP has supported entrepreneurs in implementing competitive and innovative projects. The goal of the agency is to conduct programmes aimed at developing the economy, supporting innovation and research activity in small and medium-size enterprises (SMEs), regional development, growth of export, development of human resources, and the use of new technologies.

The Agency's mission is to establish favourable conditions for sustained development of the Polish economy by supporting innovation and international activity of businesses and promotion of environmentally friendly forms of production and consumption.

In the financial perspective 2007–2013, PARP is responsible for the implementation of tasks in three operational programmes: **Innovative Economy, Human Capital, and Development of Eastern Poland.**

One of the Agency's priorities is the promotion of innovative attitudes and encouraging entrepreneurs to apply state-of-the-art technologies in their businesses. To achieve this, PARP operates a web portal devoted to innovation – www.pi.gov.pl – and organises the annual competition **Polish Product of the Future (Polski Produkt Przyszłości)**. Representatives of SMEs are welcome to participate in regular meetings of the **Club of Innovative Enterprises**. The objective of the educational portal **Akademia PARP** (PARP Academy, www.akademiarparp.gov.pl) is facilitation of access and dissemination of business knowledge through e-learning among micro-, small and medium-sized businesses. Moreover, PARP supports the development of e-business through its website web.gov.pl. Operating at the agency is a centre of the **Enterprise Europe Network**, offering entrepreneurs information on EU law and the principles of conducting business in the Single Market.

PARP initiated the development of the **National SMEs Service Network (Krajowy System Usług, KSU)**, which helps business start-ups and companies developing their business activity. In over 150 KSU centres (including KSU Consultation Points, KSU National Innovation Network, and loan and guarantee funds collaborating within the KSU) situated all over Poland, enterprises and start-ups are welcome to acquire information, participate in training on how to run business, and receive loans and/or guarantees. Besides the above, the agency runs the KSU website (www.ksu.parp.gov.pl). PARP's regional partners in the implementation of selected activities are the Regional Financing Institutions (RFIs).

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