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*Opracowanie i upowszechnienie  
krajowych standardów kwalifikacji zawodowych*

**NATIONAL VOCATIONAL QUALIFICATIONS STANDARDS – ANALYSIS OF  
USAGE AND NEEDS IDENTIFICATION**

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**Introduction**

Qualification requirements for various professions assume the form of professional qualifications standards, necessary to shape the defined skills, which are often equated with the ability to perform specific activities, allowing to achieve a professional task. The professional qualifications standard is defined as the norm describing qualifications necessary to perform typical occupational tasks which constitute a profession. This norm is approved by representatives of professional and sectoral organizations, employers, employees and other key social partners.

In order to meet the expectations towards professional qualifications standards, a uniform and objective system of verifying the skills, knowledge and psychophysical features (defined as professional qualifications) must be in place. This system must be independent of the individual educational establishments and labor market institutions. The model of standard adopted in Poland is based on occupational tasks, which build the system of “constituents of professional qualifications” (scopes of work), useful in promoting the idea of modular vocational training.

There is the need to use the standards during the design of modular programs of vocational education and training, during the defining of training needs of employees, and also during the description of positions together with list of tasks in enterprises. For this reason, the purpose of this publication is to present the course and results of research on the usage of the 35 professional qualifications standards which have been developed so far, as well as the approach to the manner for defining demand for further standards in the areas of: employment policy, vocational education, personnel policy of enterprises and social insurance.

The research and project works so far were carried out under the following programs:

- a) PHARE 98 “Training needs analysis – building professional qualifications standards in Poland” (development of the methodology and standards for 8 professions), which was initiated by Ministry of Labor and Social Policy and the Ministry of National Education, and supported by the European Training Foundation from Turin; project duration: 1998-2000;
- b) PHARE 2000 “National Vocational Education System” (update of methodology and development of standards for 40 professions. This project was supervised by the Ministry of Economy and Labor. The work carried out under this project covered the development of 40 national professional qualifications standards based on analysis of work requirements. Project duration: 2002-2004;
- c) PHARE 2002 “Development of the skills of public employment services in the area of implementing the European Employment Strategy and participation in the EURES system” (development of 7 standards for the professions and job descriptions found in labor offices), supervised also by the Ministry of Economy and Labor; project duration: 2004-2005.

The solutions for organizational and legal issues, pertaining to professional qualifications standards, are reflected in legal documents and national initiatives undertaken by the ministries of labor and education. Documents of fundamental importance for these projects include:

- “National strategy for employment growth and human resources development in the years 2000-2006”,
- the Law dated 20 April 2004, on employment promotion and labor market institutions (Journal of Laws no.99, item 1001, as amended),
- „Strategy for the development of continuous education until year 2010”, adopted by the Council of Ministers on July 8, 2003.

*The National Strategy for employment growth and human resources development in the years 2000-2006* points to the urgent need to adapt the school system to the labor market needs. It also assumes the propagation of secondary education, and fast preparation to the performance of profession under the dominant modular training system – oriented on performance of occupational tasks in a given position, described in the qualifications standard.

„*The Law on employment promotion and labor market institutions*” states that minister responsible for labor issues performs tasks for the labor market by coordinating the development of professional qualifications standards for professions included in the

classification of professions and specializations. Within this scope, the minister can define – by way of a regulation – the manner for developing standards and their list, taking into account the need of vocational education and training.

*Strategy for the development of continuous education until the year 2010* places the issues tied to national professional qualification standards among priorities of the broadly defined educational policy. It formulates strategic goals, such as:

- increasing access to continuous training,
- taking into account the adaptation to varied needs of persons who want to supplement their knowledge and increase qualifications,
- taking into account the needs resulting from changes in the labor market,
- increasing the quality of the labor market.

The project implemented in the years 2005-2007 under the SOP DHR by the Labor Market Department of the Ministry of Labor and Social Policy, “Development and propagation of national professional qualification standards” covers preparation of descriptions for 200 national professional qualification standards, promulgation of information on standards, and conducting research on the use of standards by various groups of users.

The main goal of the project is to create premises for the broad application of professional qualifications standards, as an important tool which supports the development of human resources. One of the detailed goals is to define national standards required by employers in the area of professional qualifications, in order to assure the high quality of vocational and continuous training, linking it to the labor market, as well as building systems for the transparency and recognition of qualifications obtained in formal manner, and through professional experience. The project should improve the decision-making process in the area of employment policy and education. It is meant also to contribute to higher professional mobility of adults.

The expected project results focus on priorities adopted for the active policy of the labor market, as well as professional and social integration. This includes: development of job description, job valuation, selection and recruitment, employee assessments/ evaluation, planning of professional development, vocational consulting.

## **Research on the usage of the professional qualifications standards, developed to date**

### ***Research concept – methodological assumptions***

The methodological assumptions for research provided for the diagnostics of the usage of the developed earlier, 53 national standards, by the groups of their potential users, and for capturing changes occurring over time in their usage. This research allowed to determine the scope of standards' usage in the employment policy, vocational education, personnel policy of enterprises and in social insurance system. It allowed also to identify barriers which limited the usage of standards in the above named areas.

Detailed purposes of the research focused on the following issues:

- determining the opportunity for using the standards in the employment policy, vocational education, personnel policy of enterprises and in social insurance system,
- identification of benefits resulting from application of standards in the said areas,
- defining factors influencing the usage of standards,
- defining problems encountered during the implementation of standards in the employment policy, vocational education, personnel policy of enterprises and in social insurance system,
- defining the type of necessary changes with respect to the current organizational and legal solutions, that would support the use of standards in the areas named above.

The research activities covered the following areas:

- use of standards to develop programs for vocational education and training, as the basis for preparing examination standards for graduates of all types of vocational schools;
- use of standards in the recruitment of employment candidates;
- use of standards in the selection of employees, tied to changes in job positions;
- using the standards to develop and update descriptions for specific jobs;
- using the standards to construct a system of employee evaluation;
- use of the standards to determine requirements regarding the training and vocational development of employees.

The differentiation of professional tasks of the potential users within a given area required the development of appropriate questionnaires, which contained questions for the specific group of respondents.

In order to diagnose the status of usage of professional qualifications standards in the vocational education and training, as well as in the job market, the following research methods were applied:

- diagnostic poll, using the techniques of questionnaire and interview – with this method, a purposefully selected group of respondents was analyzed;
- analysis of documents (of available literature, program documents, information booklets), which supplemented the primary research.

The subjects of the research were the users of standards – potential beneficiaries of the project outcomes, which include: enterprises, organizations of employers and employees, schools, examination centers. The research sample consisted of 114 participants, representatives of the following institutions: public employment services (provincial and district labor offices, Centers for Information and Career Planning), employment agencies, professional associations, examination boards (Central Examination Board, District Examination Boards), centers for continuous and practical training, upper secondary vocational schools, universities and colleges, units of the Voluntary Labor Corps, centers for vocational development, nationwide trade unions and organizations of employers, central offices and their branches, institutions responsible for the so-called „regulated professions”, as well as institutions tied to social insurance.

### ***Diagnostic research - qualitative and quantitative analysis***

In order to diagnose the status of professional qualifications standards' usage, the first diagnostic test was planned, in the form of a diagnostic poll (questionnaire, interviews, analysis of documents). Aside from information obtained from respondents with the individual interview technique, with the help of interview questionnaires, the researchers analyzed also publications and theoretical studies covering the issue of application of professional qualifications standards. The following sources of published information were taken into account during the research:

- theoretical publications, including articles and books, discussing the issue of usage professional qualification standards in Poland,
- result of conducted empirical research, covering the application of national professional qualification standards,
- program documentation of vocational development,
- brochures and information booklets on professions,

- the website of the Ministry of Labor and Social Policy and information services of the labor offices.

The empirical research covered the potential recipients of national professional qualifications standards, that is, persons employed in those institutions where the standards should be, could be and possibly are applied. It was decided that the interviews would be conducted with persons who due to their functions offer an opportunity to obtain reliable information on the use of standards developed so far. This included, in particular, persons managing a given institution or persons designated by the director, manager or president of the given institution, as well as employees dealing directly with the analyzed issues (including teachers, specialists, vocational advisors). If a post-secondary, or higher education vocational school was selected for the research, the researchers paid attention the relevance of the area/profile of education for the professions for which the 53 qualifications standards were developed.

The research tools were adapted to varied groups of research participants, that is representatives of the education institutions and of the labor market. Isolation of effectiveness ratios of standards' usage allowed to identify factors which influence their functioning in institutions of vocational education and training, with the employers, employees and other key social partners.

The most important effectiveness ratios of standards' usage were:

- the number of programs of vocational education and training, designed with the use of qualifications standards (in scholar and extra-scholar forms);
- the number of programs of vocational education and training, in which goals and contents of training were modified on the basis of analysis of professional qualifications standards;
- number of professions for which standards of examination requirements and examination exercises were developed on the basis of professional qualifications standards;
- the number of employees for whom training needs were diagnosed on the basis of differences between the requirements of the qualifications standards, and the actual qualifications of the employee;
- the number and type of information materials on professions and positions, used by units of public employment services, that were developed on the basis of professional qualifications standards;

- the number of qualifications descriptions in regulated professions, prepared for the purposes of recognition of diplomas, certificates and qualifications, on the basis of qualifications standards;
- qualifications descriptions, prepared for professions included in the vocational education classification of professions, prepared for the purpose of “supplement to professional diploma”, under the EUROPASS formula;
- the number of advice and information provided to individuals or groups by vocational consultants, with the use of professional qualification standards;
- descriptions of positions with the list of occupational tasks, functioning in enterprises and prepared with the use of professional qualifications standards;
- descriptions of positions with the list of occupational tasks, functioning in enterprises and prepared with the use of professional qualifications standards;
- number of visits to the database of qualifications standards and download of standard descriptions ([www.standardyiszkolenia.praca.gov.pl](http://www.standardyiszkolenia.praca.gov.pl)).

Results of the research was subjected to quantitative analysis – adding up the results of questionnaires and the effectiveness ratios of standards’ usage. Next, a qualitative analysis was conducted – determining the influence of individual ratios on the functioning of qualifications standards among representatives of education (institutions of vocational education and training) and of the labor market (employers, employees and other key social partners).

Analysis of results assumed that the various empirical data would be compared, the relations among them illustrated, and justification for them would be sought in the known pedagogical experiences and theoretical assumptions. It also assumed the reaching of general conclusions, and suggesting opportunities for their practical application.

After the analytical works, a table of results was built, whose main features included:

- the level of effectiveness of standards’ usage among the potential recipients of the vocational and continuous education systems and of the labor market,
- characteristics of expectations in the field of educational activity and employment.

Results of research of the usage of professional qualifications standards in the four areas of activity (employment policy, vocational education, personnel policy of enterprises, social insurance) show a varied level of knowledge among the participants, on the usefulness of standards for their potential users. Results of analysis with respect to individual problem categories are presented in the following sections.

### ***1. Sources of knowledge and scope of standards' usage***

On the basis of research results, it can be stated that almost half of the respondents obtained information on standards from materials accessible in their institution. A significant proportion of respondents (over 60%) obtained knowledge on standards from the website of the Ministry of Labor and Social Policy. The most active group included persons employed in institutions from the areas of employment policy (73%) and of vocational education (65%). Other sources of knowledge on standards included book publications, professional magazines, seminars and conferences at which the standards and opportunities for their application were presented.

The scope of standards' usage is small. Only very few respondents believed that the standards are absolutely necessary for proper delivery of their professional duties - especially in institutions of vocational education. For over one-third of respondents, the standards facilitate their work – this applies in particular to employment policy institutions. About 40% of respondents state the standards are necessary for proper performance of professional duties, and 11% admitted they do not use those materials at all – this group includes the largest proportion of respondents from the social security area. Also, those who state the standards are absolutely necessary or facilitate their work, know the standards at least for a year.

The main reason for lack of standards' usage is the lack of awareness of their application – the largest number of persons providing this answer came from institutions dealing with personnel policy.

On the other hand, lack of awareness on where the standards can be found is represented in equal proportions in all areas, aside from personnel policy.

### ***2. Degree of professional qualifications standards' usage***

Due to the significant differences between sectors and sections of economy, and the standards' users, the results of research is presented separately for the four areas of standards' application.

In the area covering employment policy, research was conducted in labor offices, Centers for Information and Career Planning, employment agencies, units of the Voluntary Labor Corps and centers for vocational development. The highest degree of standards' usage was observed among the vocational consultants. As many as 38% of respondents from this group use them very often, 15% with average frequency, and 6% very rarely. The degree of standards' usage is only slightly smaller in the following professions: specialist in

marketing and commerce (sales), employee of the national EURES network. The largest number of persons using the standards were found among the following professions: IT technician, employment agent, computer graphic, software specialist, employment club leader. Almost 30% of respondents in the following professions use the standards: employee of self-government administration, professional development specialist and course lecturer (educator, trainer), and specialist of occupational safety and hygiene. In some professions, the standards are used to a very small extent. Those professions include: labor inspector, geodesy technician, environment engineering and land improvement technician, landscape architecture technician, assistant for postal and telecommunication services.

In the area covering vocational education, research was conducted in centers for continuous education, centers for vocational development, central and district examination boards, upper secondary vocational schools, Ministry of National Education and Ministry of Health. The largest degree of standards' usage in this area is found among vocational consultants and course lecturers (educators, trainers). The respondents named also European integration specialist, locksmith and carpenter. Professional standards are not used by respondents from the following professions: firefighting engineer, employment club leader, employee of the national EURES network and fireman.

In the area covering employment policy of enterprises, research was conducted in vocational associations, nationwide trade union organizations, organizations of employers and in enterprises. Standards are used frequently by the employees of financial and accounting departments. They are also used in the following professions: specialist in marketing and commerce (sales) and course lecturers. According to the respondents' opinions, standards for the following professions are not used: European integration specialist, telecommunication technician, mechatronics technician, computer graphic, firefighting technician, occupational safety and hygiene specialist, landscape architecture technician, organizer of tourist services, employee of the national EURES network, assistant for postal and telecommunication services, fireman, employee in the protection of assets and people, layer of road surfaces, fitter of municipal networks, technician for finishing works in construction, fitter – installer of technical equipment in rural construction, fitter of telecommunications network and equipment, operator of numerically controlled machine tools.

In the area covering **social insurance**, research was conducted in social insurance institutions and in units of the Agricultural Social Insurance Fund. It turned out that very

few employees of financial and accounting department, and of training departments, use the standards.

The majority of respondents provided no answer to this question. It could be assumed that those persons either did not encounter the standards, or do not use them in their work.

### ***3. The results of application of national professional qualification standards***

The key outcomes of professional qualification standards' application can be summarized in the following manner for the individual areas:

- **in the area of employment policy** - with respect to preparing information materials on professions, developed in the basis of standards, about 40% of respondents confirmed their usage of standards. With respect to the number of individual and group advice provided with the use of standards, affirmative answers were obtained from: employment agents (38%), vocational consultants (56%) and personnel consultants (26%). The respondents have information on the standards, but they lack knowledge on the scope of their usage.
- **in the area of vocational education** – with respect to the number of training programs, developed or updated with the use of standards, only 27% of institutions confirmed their usage. This is a highly insufficient proportion, which proves very low level of knowledge on the potential applications of standards. It turned out that programs of training in extra-scholar forms, developed with the use of standards, are used by only 10% of researched institutions. This is a very small number, resulting probably from the low level of knowledge on standards, as well as from the rather narrow scope of delivering this form of training among respondents.
- **in the area of personnel policy of enterprises** - the usage of standards is the largest in this area. The respondents were aware of the opportunities for practical use of standards. It can be assumed that their knowledge does not come from the effective policy for information dissemination, but is the result of search performed by the interested people themselves. In 26% of cases, standards were used to describe only one position – which proves the number of standards is too small. It should be assumed that as the number of developed standards grows, their usage in the area of personnel policy would rise significantly.
- **in the area of social insurance** – standards are used mainly for issuing decisions on partial or full incapability for work, and on invalidity. It should be added that in both cases, usage of standards was very slight. The small degree of standards' usage in this

area results from low level of knowledge on standards, and from using tools other than standards to issue decisions on ability to work (instructions in the form of guides, information brochures). The open question remains, are those tools sufficient and to what degree they could be replaced by professional qualifications standards?

#### ***4. Potential benefits tied to standards' application***

Among the numerous factors identified for the area of employment policy, the most significant benefits tied to standards' usage covered several issues. In the area of **employment agency services**, the largest benefits, according to respondents, can be obtained through increasing labor effectiveness (23%), better evaluation of professional qualifications of job seekers (20%), more effective search for employees for specific positions (15%) and better matching of employee qualifications to positions (12%). In the area of **vocational consulting**, benefits can be obtained through the provision of basic information: on requirements for a profession (35%), on tasks performed in a given profession (29%), on positions at which employees in a given profession can be hired (23%). The same number of respondents stated that the standards would allow for better management of group classes with the unemployed, and 18% believe that the standards would help vocational consultants to supplement information contained in the files on professions. In the area of vocational consulting, the respondents see a lot more benefits than in employment agency services. In the development of programs for activation or professional mobility of employees, benefits were seen resulting from better assessment of professional qualifications, provision of information on requirements posed for employees in particular professions, and development of training programs for the unemployed.

Specific benefits tied to standards' application were identified also in the area of vocational education. In the area of development of **examination standards**, respondents saw the benefits in uniformity of examination requirements (16%) and building examination requirements on the basis of professional qualifications standards (11%). With respect to the development of **education standards and quality of education**, benefits were seen in terms of creating good conditions for the education process, and defining uniform criteria of requirements towards teachers. In terms of **comparability and recognition of professional qualifications**, the identified benefits covered increased transparency of the system for training and development in a given profession, enabling the assessment of students' professional qualifications and comparing them against the standard, increasing

the credibility of qualifications, as well as assistance in selecting the best candidates and graduates.

In the area of personnel policy, benefits cited by respondents included the **development of job description and competency profiles**, and specifically the organization and uniformity of knowledge on the individual professions, as well as introduction of clear, unambiguous requirement criteria for professions. In the area of **employee recruitment**, the benefits include the opportunity to improve recruitment system, and the drawing of qualification requirements on the basis of standards, as well as the opportunity to hire employees with the appropriate qualifications. The standards could contribute to a better selection of employees for specific positions, proper use of their qualifications and precise definition of job descriptions. In the **planning of professional development**, the benefits for employees resulting from the use of standards include: increase of professional qualifications, better use of employees' potential, improvement of the training system, and the opportunity to define career paths for employees.

Finally, in the area of social insurance, the respondents cited benefits tied to **assessment of occupational risk**. Standards could contribute to more flexibility in changing job positions for persons threatened with accidents, better matching of persons with specific illnesses to given positions, better assessment of employee's qualifications to perform a specific profession. The respondents dealing with **matching the type of work to employee's incapacity** stated that standards can facilitate employment "under normal conditions" for the disabled persons - not only in special workplaces for the disabled. They also stressed the opportunity for precise definition of counter-indications for the disabled to work in a given profession, and easier classification for performing given professions. It is worth noting that respondents from this area - despite their rather small knowledge of standards – see the benefits tied to standards' application more frequently than respondents from other areas.

##### ***5. Barriers to standards' usage***

The conducted research suggests that the largest number of persons encounter difficulties in the use of standards in the area of personnel policy, and problems are the least frequent in the area of employment policy. Statements on barriers could be organized and summarized in the following manner:

- difficult access and opportunity of using standards in the daily practice,

- interpretation of standards' provisions – lack of reference among occupational tasks and skills, knowledge and psychophysical features,
- lack of specialist preparation of the persons using the professional qualifications standards,
- not very transparent form, which makes their application difficult,
- lack of financial means to implement the standards,
- lack of standards for new or deficit professions.

The need to develop new **organizational and legal solutions** to disseminate the standards, that appears in the research, results from the fact that there are no legal regulations obliging the potential users to apply the standards, and setting forth the rules and manner for their usage. Also in the area of vocational education, lack of such legislation does not support the use of standards for the purpose of developing education and training programs, and for the development of requirements standards for examinations confirming professional qualifications.

Full estimate of the degree of usage of professional qualifications' standards would be performed after the **second diagnostic research** is carried out on the same research sample (during the project's final phase). This will allow to observe changes in the individual ratios and the scope of standards' usage among representatives of education (institutions of vocational education and training) and of the labor market (employers, employees and other key social partners), as well as capturing the changes occurring over time, especially in such areas as: benefits resulting from the application of standards, difficulties found during the implementation of standards in the labor market and in education, and the expectations of the standards' potential users.

### ***Conclusions from the research, covering the application of 53 standards***

On the basis of the collected research material, the postulate can be formulated to increase the scope of influence and application of the professional qualifications standards, developed to date. For each of the described areas of activity, the use of professional qualifications standards depends largely on their dissemination and the opportunity to influence the education environment and the labor market. Linking professional qualifications standards with the current vocational training, and especially with the syllabus foundations for vocational training, the curricula and examination standards is the fundamental feature of the

universal and complete source of information on a given profession, in the opinion of representatives of the education area.

Representatives of the labor market see the need to apply standards especially for the description of qualification requirements for professions, that would be the basis for employee assessments or drawing job descriptions appropriate for positions in a given profession. Given the standards' structure, the element that is the most useful for personnel services in the area of employees' recruitment or their professional development is the list of occupational tasks which enables the building of employee's competence profile.

### **Determining demand for further professional qualifications standards**

The achievements of the undertakings performed to date, whose goal was to develop professional qualifications standards, covers only a very small portion of professions listed in under the classification of professions and specializations. Descriptions of standards for 53 professions contributed to increase of interest in the standards, and to the taking of further steps meant to develop more standards, for a larger number of professional areas, characterized by high dynamics of development and demand for personnel. In order to enlarge the scope of influence of the standards developed on the basis of requirements tied to specific jobs, research was undertaken to diagnose expectations in the areas of vocational consulting, employment agency services, vocational education and human resources management.

### ***Manner for determining demand for further professional qualifications standards – methodology assumptions***

The methodology assumptions for the research provided for needs analysis of potential users, regarding the development of further 200 qualifications standards, in the context of expectations of their beneficiaries and of the labor market.

Detailed goals of the research focused on the following issues:

1. Diagnosing the situation where respondents meet professional qualifications standards, due to type of organization and position held.
2. Defining criteria for identification of professions for which standards should be developed.
3. Analyzing the professions designated by respondents, preparing a preliminary ranking of professions according to the specified criteria.
4. Drawing a list of 200 professions, for which the professional qualifications standards would be developed.

In order to achieve the above described goals, and to verify the research assumptions, the following working hypotheses were formulated:

- ***The use of professional qualifications standards is tied to the professional duties and tasks performed by respondents.*** Situations, in which the respondents encounter the standards, depend on the type of institution in which they work and on the type of position held.
- ***The most frequently named criteria for selection of professions for which standards should be developed include: high dynamics of increasing demand for qualified personnel, development opportunities of a given profession and list of professions taught in vocational education system.***

The basic research method was the **diagnostic poll** – obtaining opinions of respondents, for which the interview technique was used. The research tool was the interview questionnaire, „Recognition of needs – professions for which standards should be developed”, in which for each criterion of profession selection, a list of professions from the classification of professions and specializations was attached.

The research sample covered 149 people, representing the following institutions:

- professional associations and organizations of employers – about 35% of respondents, trade union organizations – about 15% of respondents,
- units of the public employment services (province and district labor offices) – about 20% of respondents,
- vocational schools, centers for lifelong education, centers for practical training – about 20% of respondents,
- central institutions and their agencies, Central Examination Board, Regional Examination Board – about 10% of respondents.

The supplementary method was the **analysis of documents**, which was used to draw a list of professions. It constituted the basis for selection for the respondents participating in the research.

The selection of research sample was purposeful. It covered respondents from institutions representing the four areas, described earlier, in which professional qualification standards are used. The main area of research were seminars, carried out as part of the information campaign promoting the idea of development and usage of professional qualification standards.

### *Characteristics of professions' selection criteria, included in the research tools*

The adopted criteria for identification of professions for which qualification standards should be developed were tied to situations in which the respondents encounter standards. Those situations were tied to their professional duties, type of organization and position held.

In order to facilitate the selection of standardized professions by respondents, criteria were selected according to which the final list of professions was drawn:

- large dynamics of growth in the demand for personnel (professions from the area of information science, health protection, financial operations and commerce);
- developing professions – professions with a future (very frequently this group includes new professions, which are not included in the classification of professions, tied to areas where new professions are created intensely, such as information and communication technologies, biotechnology, environment protection, financial operations and commerce, transport and logistics, health protection and welfare, education);
- strategic importance for the enterprise's competitiveness in the labor market (professions from the area of human resource management, financial operations and commerce, transport and logistics);
- important changes in the area of legislation occurred (the so-called regulated professions, whose performance depends on meeting qualification requirements and conditions set forth in separate regulations);
- „mass” professions, with large groups of employees (the professions found the most frequently in the labor market, representing such areas as: commerce, gastronomy and hotel services, construction, office administration, crafts);
- large demand in the European labor market <sup>1</sup> (professions from the area of information technology, gastronomy and hotel services, health protection and home-based healthcare, construction);
- difficulties with proper performance of the learned profession by graduates (professions from the field of vehicle mechanics, electro-technology and electronics, gastronomy and hotel services);
- education under the system of vocational education (the so-called “school professions”, identified under the classification of professions in vocational training).

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<sup>1</sup> The consequence of Poland's accession to the European Union is the need to take into account the conditions and requirements of the European labor market.

The project assumptions stated that the list of professions for which new standards would be developed would include the names and symbols (codes), adopted in line with the regulation of the Minister of Labor and Social Policy dated December 8, 2002 on the classification of professions and specialties for the needs of the labor market, and the scope of its application (Journal of Laws no.265, item 2644). For this reason many new professions functioning in the economy could not be included in the work on description of new standards for professional qualifications.

***Identification of needs tied to the development of new standards (poll research and analysis of documents)***

The poll research on demand for professional qualifications standards were not the only one or decisive criterion for determining the final list of 200 professions for which standards would be developed. Important influence on the identification of professions was also exerted by the analyses of publications and studies referring to demand for standards, as well as proposals put forward by interested institutions (ministries, associations, training centers, trade unions).

Actions meant to prepare list of professions for which qualification standards should be developed commenced with the analysis of demand for labor. The analysis was performed on the basis of statistical data, existing studies and research reports, including reports drawn by the Government Center for Strategic Studies:

- “New professions and flexible forms of employment”,
- „Dynamics of the structure of employment and of employed per professions in Poland – preliminary forecast for the years 2005-2013”.

More information, important for the process of drawing this list of professions, came from such sources as:

- „On education for the labor market”. Part I. Biblioteczka reformy nr 38. Ministry of National Education, Warsaw 2001;
- Schumacher C., Schwarz S.: „100 professions with a future”. Adamantan publishing house, Warsaw 1998.
- “Proposed directions for the development of science and technology in Poland until 2010”. Ministry of Science and IT Technology. Warsaw 2004;
- Multi-Annual Program PW-004/ITE/2004, „Improvement of the systems for innovation development in the production and exploitation in the years 2004-2008”, task:

„Development of model assumptions for qualifications’ standardization in professions of high opportunities and advanced technologies”. Reports from the Action SP-5. ITeE-PIB, Radom 2006.

During the setting up of list of professions designated for standardization, the following factors were taken into account: preferences of respondents established through polls conducted among seminar participants; interviews with representatives of central institutions; requests from institutions interested in the standardization of specific professions; analysis of job offers and rankings of deficit and surplus professions from 2005 and the 1<sup>st</sup> half of 2006, which were provided by the Ministry of Labor and Social Policy.

On the basis of the above named materials, documents and diagnostic tests, it was possible to isolate additional factors, taking into account the criteria for selection of professions for which qualification standards would be developed:

- popularity of the profession, established on the basis of offers submitted by employers to labor offices and employment agencies;
- professions’ popularity among participants of vocational training, delivered by institutions of extra-scholar vocational training;
- the profession’s presence on the list of the so-called future professions;
- demand for the „export professions”, which are popular and in demand in other countries;
- the profession’s belonging to the group of „regulated professions” which require the recognition of certificates, diplomas and qualifications abroad.

In order to establish demand for standards in the optimum manner, aside from analyzing the available literature, **identification research of professions** was also conducted in the course of the **information campaign**, which covered demand for qualifications standards and was conducted among representatives of institutions from the area of education and the labor market. Those representatives are the potential users of standards and constitute a source of information on the current and forecasted popularity of the professions, as well as on the potential usefulness of standards.

The analyzed professions include:

- Units of the public employment services: provincial and district labor offices, including centers of information and career planning, employment agencies,
- schools and public institutions of lifelong education: lifelong education centers, practical training centers, centers for vocational development and training, upper secondary vocational schools and vocational tertiary education,
- non-public training institutions, e.g. vocational development centers,

- organizational units of the Voluntary Labor Corps,
- nation-wide organizations of employers and trade unions (including the Polish Crafts Union, the Polish Chamber of Commerce, etc.), professional associations,
- ministries, central institutions and their agencies, and specifically: the Central Examination Board, Regional Examination Boards and bodies responsible for the „regulated professions”.

As a result of the research work, the rankings of professions prepared for standardization include also numerous comments put forward by various institutions, which demonstrate the need to develop qualifications standards in professions which determine the competitiveness and innovation of the Polish economy.

Comments that were particularly relevant for the final outcome of the actions were put forward by:

- the Polish Roofers’ Association;
- the Conference of Financial Enterprises;
- Ministry of Economy,
- the Supreme Chamber of Nurses and Midwives;
- the National Agricultural Advisory Center in Brwinów,
- Provincial Headquarters of the Voluntary Labor Corps,
- Trade union of the construction sector "Budowlani”.

Among those who draw the forecasts for directions of science and technology development, there exists a belief that development of those areas would be the main factor determining the increased innovativeness of the Polish economy – which means it would fuel the process of creating many new enterprises and modern jobs.<sup>2</sup> This applies, in particular, to such professional areas as: information technology, mechanics, electro technology, light industry, construction, environment engineering, health protection, social welfare, tourism, finance, commerce, transport, warehousing, gastronomy, hotel services, office administration, crafts.

The selection of professions from these areas was motivated, aside from social needs, by their modern nature, the current rapid development all over the world, the existing scientific and technological potential in Poland, as well as the technology background and developed export and cooperation with leading companies and R&D centers from other countries.

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<sup>2</sup> Proposed directions for the development of science and technology in Poland until 2010. The Ministry of Science and IT Technology, Warsaw 2004.

The conducted diagnostic research – both the polls and analysis of documents, whose goal was to define demand for qualification standards - allowed to determine the needs and expectations of various professional groups. The list of professions, adopted as a result of research and analyses, takes into account preferences of the education and labor market communities.

As a result of the polling research, taking into account proposals submitted by the interested institutions, the final list of 200 professions was drawn up that are recommended for the development of national professional qualifications standards (**attachment no. 1**).

### ***Conclusions on demand for professional qualifications standards***

On the basis of material collected in the course of empirical research and the analysis of documents, the researchers established that the expectations and preferences of professional communities, interested in the standardization of professional qualifications, are similar to the opinions contained in those publications which speak of directions for professions' development, and demand for personnel in that respect.

The list of 200 professions to be standardized, developed as a result of the research, evolved during the course of the project. Not all professions identified in the process of research and analyses, could be included in the list. An example are the professions covering the group of policemen, as well as the profession of investment advisor. In the first case, representatives of the Police withdrew from the project works due to changes in the Police's organizational structure – resulting in the lack of match between the classification of professions and specializations with the current scope of job descriptions. In the second case, the researchers met with lack of interest from persons performing the profession of investment advisor.

### **Conclusions and recommendations**

The research on the use of existing standards in the various areas (employment policy, vocational education, personnel policy of enterprises, social insurance), research diagnosing demand for further standards, as well as dissemination activities including seminars and conferences confirmed the significant interest among social partners, especially units of public employment services, continuous education center, trade unions and organizations of employers. They pointed out to the benefits that the use of standards offers for: career

planning and professional development of employees, the process of vocational consulting and advice, design of teaching programs, development of professional activation programs, setting the national framework of professional qualifications under educational standards, and the system of quality of vocational education and training.

On the basis of analysis of the existing professional qualifications standards, it can be stated that they contribute to bringing the requirements of vocational education closer to the labor market demands. Groups of authors who design the innovative vocational training programs under a modular structure use the standards' descriptions as a source of information on the skills and knowledge needed to carry out occupational tasks in the given profession. Those programs in turn are the resource of content which influence the teaching syllabus in the form of an educational package.

The identification of needs for development of further qualifications standards suggests that representatives of many professional areas express their willingness to cooperate on the design, assessment and implementation of standards. Expectations of potential users, including employees of enterprises, refer in particular to personnel services, management of human resources, planning of professional development. The authors often met with the demand to extent project works to cover jobs found in new professions, which do not yet have their legal status in the classification of professions and specializations.

The education community expects also the development of standards for examination requirements, to confirm professional qualifications. Requirements contained in this document should be formulated on the basis of actual descriptions of occupational tasks, functioning at particular positions. The proper instrument to assure objective and complete lists of necessary skills are the professional qualifications standards.

On the basis of the above considerations, which refer to diagnostic tests on the usage of national professional qualifications standards, and the identification of demand for further standards among the groups and institutions seen as their potential users, we can recommend the following proposals that should be taken into consideration when defining the development directions for vocational education and labor market policy:

- it would be justified to establish a separate institution or official body, whose nature would be inter-institutional and inter-disciplinary. Its employees or members, with the necessary professional and methodology background, would deal with the development of new standards, as well as the improvement and update of each of the existing standards;

- it is recommended that for each sector of the economy, a separate team of experts, researchers, performers and evaluators would be established, with appropriate background, education and professional experience, tied to the relevant sector, and guaranteeing the development of high quality standards;
- it is necessary to introduce legal regulations on the rules and manner for the functioning of professional qualifications standards in the labor market;
- it is necessary and purposeful to organize broad campaigns informing of the functioning of national professional qualifications standards, and on the opportunities for their application;
- the professional qualifications standards should be modified and updated every three to five years (depending on the sector). The process of identifying the labor market needs and expectations of employers should be performed on a continuous basis.

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Table 2. List of professions to be developed in the form of national professional qualifications standards, financed by the European Social Fund, broken down per sector.

| <b>Item</b> | <b>PROFESSIONS</b>   |
|-------------|--|
|             | <b>Information technology</b>  |
| 1.          | 213101 Computer database administrator   |
| 2.          | 213102 Computer systems administrator  |
| 3.          | 213103 Computer systems analyst  |
| 4.          | 213105 Designer of computer systems  |
| 5.          | 213201 Programmer  |
| 6.          | 213202 Website designer (webmaster)  |
| 7.          | 213901 IT network administrator  |
| 8.          | 213102 Maintenance technician of computer systems and networks   |
| 9.          | 312201 Computer equipment operator   |
| 10.         | 312202 Telecommunication technician  |
| 11.         | 411301 Data entry operator   |
|             | <b>Processing of metals, mechanics, electro technology, electronics</b>                                |
| 12.         | 311302 Electricity technician  |
| 13.         | 311401 Electronics technician  |
| 14.         | 315201 Car diagnostics specialist  |
| 15.         | 714201 Car varnisher   |
| 16.         | 7213 Sheet metal workers (school profession: Sheet metal worker - covering elementary group 7213)      |
| 17.         | 721303 Car body worker   |
| 18.         | 722301 Milling machine operator  |
| 19.         | 722304 Turner  |
| 20.         | 7231 Vehicle mechanics (school profession: vehicle mechanic - covering elementary group 7231)          |
| 21.         | 723307 Mechanic – internal combustion engines  |
| 22.         | 723309 Mechanic – air conditioning devices   |
| 23.         | 724102 Vehicle electro-mechanical technician   |
| 24.         | 724103 Electro-mechanical technician of household appliances   |
| 25.         | 724201 In-company power specialist (electrician-wireman, electrician)                                  |
| 26.         | 724301 Fitter of electric installations  |
| 27.         | 724302 Fitter – electrician of luminous advertising  |
| 28.         | 724404 Electrician-wireman in a power emergency unit   |
| 29.         | 7251 Assembler-electronic (school profession: Assembler – electronic - covering elementary group 7251) |
| 30.         | 725301 Assembler – mechatronics specialist   |
| 31.         | 731102 Mechanic of automatic control engineering and precise tools                                     |
|             | <b>Light industry and crafts</b>   |
| 32.         | 214919 Textile engineer  |
| 33.         | 3111103 Technician analyst   |
| 34.         | 311209 Environment protection technician   |
| 35.         | 311603 Chemical technology technician  |
| 36.         | 311907 Footwear technician   |
| 37.         | 311909 Printing technician   |
| 38.         | 311911 Wood technology technician  |
| 39.         | 311913 Clothing technology specialist  |
| 40.         | 311918 Textile technician  |
| 41.         | 313104 Photographer  |
| 42.         | 347101 Florist   |
| 43.         | 514102 Hairdresser (school professions: hairdresser, hairdressing services technician)                 |
| 44.         | 514106 Beautician/ visage specialist   |
| 45.         | 722102 Blacksmith  |
| 46.         | 722205 Locksmith - metal fancy goods   |
| 47.         | 731103 Optician mechanic   |
| 48.         | 731105 Watchmaker  |
| 49.         | 731306 Goldsmith – jeweler   |
| 50.         | 734502 Bookbinder  |
| 51.         | 741102 Fish processing specialist  |
| 52.         | 741104 Butcher   |
| 53.         | 741201 Confectioner/ pastry cook   |
| 54.         | 741203 Baker   |

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| 55.  | 742205 Carpenter – small objects   |
| 56.  | 742207 Furniture carpenter   |
| 57.  | 742401 Basket maker - weaver   |
| 58.  | 743203 Lace maker  |
| 59.  | 743304 Tailor  |
| 60.  | 743402 Furrier   |
| 61.  | 743604 Seamstress  |
| 62.  | 743702 Upholsterer   |
| 63.  | 744202 Purse- and bag-maker  |
| 64.  | 744305 Cobbler   |
| 65.  | 814101 Operator of machines producing boards   |
| 66.  | 823205 Operator of devices for plastic forming   |
| 67.  | 823206 Operator of devices for plastic foaming   |
| 68.  | 825102 Operator of offset printing machines  |
| 69.  | 826301 Operator of sewing machines   |
| 70.  | 828403 Assembler of plastic products   |
|      | <b>Construction, environment engineering</b>   |
| 71.  | 214211 Environmental engineer – water supply and sewage systems  |
| 72.  | 311210 Sanitary equipment technician   |
| 73.  | 315010 Construction inspector  |
| 74.  | 711301 Stonemason  |
| 75.  | 712202 Concrete placer/ reinforcement fitter   |
| 76.  | 712301 Carpenter   |
| 77.  | 712302 Construction joiner   |
| 78.  | 712401 Pavement layer  |
| 79.  | 713101 Roofer  |
| 80.  | 713201 Glazer  |
| 81.  | 713202 Wood floorer (flooring fitter)  |
| 82.  | 713302 Plasterer   |
| 83.  | 714101 Construction painter  |
| 84.  | 714303 Chimney sweeper   |
| 85.  | 833202 Operator of road building machines (school profession: mechanic of road building machinery and equipment) |
| 86.  | 833204 Operator of earthworks equipment  |
|      | <b>Agriculture, forestry and related areas</b>   |
| 87.  | 221201 Biotechnologist   |
| 88.  | 222101 Agricultural advisor  |
| 89.  | 222108 Environment protection specialist   |
| 90.  | 321205 Forestry technician   |
| 91.  | 613101 Farmer specializing in plant and animal production (school profession: Farmer)                            |
| 92.  | 631101 Lumberjack  |
|      | <b>Health protection and related areas</b>   |
| 93.  | 222203 Dietetic specialist   |
| 94.  | 223903 Physiotherapist   |
| 95.  | 223912 Cosmetologist   |
| 96.  | 224102 Nurse specializing in anesthesiology nursing and intensive care   |
| 97.  | 224103 Nurse specializing in surgical care   |
| 98.  | 224104 Nurse specializing in diabetes care   |
| 99.  | 224105 Nurse specializing in epidemiology nursing  |
| 100. | 224106 Nurse specializing in geriatric care  |
| 101. | 224107 Nurse specializing in heart diseases care   |
| 102. | 224108 Nurse specializing in nephrological care  |
| 103. | 224109 Nurse specializing in neo-natology nursing  |
| 104. | 224110 Nurse specializing in neurology care  |
| 105. | 224111 Nurse specializing in oncology nursing  |
| 106. | 224112 Nurse – specialist in surgery care  |
| 107. | 224113 Nurse specializing in long-term care  |
| 108. | 224114 Nurse specializing in palliative nursing  |
| 109. | 224115 Nurse specializing in pediatric nursing   |
| 110. | 224116 Nurse specializing in psychiatric care  |
| 111. | 224117 Nurse specializing in emergency nursing   |
| 112. | 224118 Nurse specializing in family care   |
| 113. | 224119 Nurse specializing in education and teaching environment  |
| 114. | 224120 Nurse – specialist in occupational health protection  |

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| 115 | 224121 Nurse – specialist in preventive nursing  |
| 116 | 224122 Nurse - specialists in organization and management                                      |
| 117 | 224123 Nurse – specialist in health promotion and education                                    |
| 118 | 224201 Midwife   |
| 119 | 244403 Psychotherapist   |
| 120 | 321401 Dietetician   |
| 121 | 322201 Optician (school profession: optical technician)  |
| 122 | 322303 Dental technician   |
| 123 | 322401 Masseur (school profession: massage technician)   |
| 124 | 322402 Physiotherapy technician  |
| 125 | 322404 Occupational therapist  |
| 126 | 322601 Pharmaceutical technician   |
| 127 | 322703 Medical electronics technician  |
| 128 | 322905 Paramedic (medical rescuer)   |
| 129 | 343102 Medical secretary   |
| 130 | 513202 Dentist’s assistant   |
| 131 | 515903 Mountain rescuer  |
| 132 | 913206 Ward attendant  |
|     | <b>Personal care, social welfare</b>   |
| 133 | 244502 Social work specialist  |
| 134 | 346101 Assistant of a disabled person  |
| 135 | 346102 Care provider in a nursing home   |
| 136 | 346103 Community social worker   |
| 137 | 513102 Child care provider   |
| 138 | 513103 Home-based child care provider  |
| 139 | 513301 Home-based care provider  |
|     | <b>Education, cultural activities, tourism</b>   |
| 140 | 232110 Mathematics teacher   |
| 141 | 2321119 Entrepreneurship teacher   |
| 142 | 347601 Animator of cultural events   |
| 143 | 348201 Scientific information assistant (school profession: scientific information technician) |
| 144 | 348202 Librarian   |
| 145 | 422104 Employee of tourist information center  |
| 146 | 511301 Tour guide  |
|     | <b>Finances and related areas</b>  |
| 147 | 241203 Banking specialist  |
| 148 | 241204 Financial specialist (financial analyst)  |
| 149 | 241205 Accounting specialist   |
| 150 | 241206 Specialist in property and personal insurance   |
| 151 | 241903 Tax advisor   |
| 152 | 341201 Insurance agent   |
| 153 | 341202 Reinsurance broker  |
| 154 | 341203 Insurance broker  |
| 155 | 343201 Accountant (independent)  |
| 156 | 412102 Accounting assistant (school profession: accounting technician)                         |
|     | <b>Commerce and related areas</b>  |
| 157 | 214906 Quality control specialist  |
| 158 | 241910 Market analysis specialist  |
| 159 | 241917 Advertising specialist  |
| 160 | 341501 Trader (school profession: trade technician)  |
| 161 | 341502 Organizer of internet sales services  |
| 162 | 341504 Tele-marketing specialist   |
| 163 | 342901 Advertising agent (school profession: advertising organization technician)              |
| 164 | 413104 Employee of a purchasing center   |
| 165 | 414201 Poller  |
| 166 | 421102 Cashier, checker  |
| 167 | 522102 Flower arranger   |
| 168 | 522105 Shipping agent in mail order/Internet sales   |
| 169 | 522107 Salesperson   |
|     | <b>Transport, warehousing</b>  |
| 170 | 214917 Transport engineer (logistics specialist)   |
| 171 | 342204 Freight forwarder (school profession: freight forwarding technician)                    |
| 172 | 342205 Logistics technician  |
| 173 | 413103 Storeman  |

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| 174 | 832101 Car driver  |
| 175 | 832201 Bus driver  |
| 176 | 832302 Truck driver  |
| 177 | 833401 Driver – operator of forklift trucks  |
|     | <b>Gastronomy and hotel services</b>   |
| 178 | 241915 Specialist for the organization of gastronomy, hotel and tourism services                         |
| 179 | 341402 Organizer of catering services  |
| 180 | 341403 Organizer of gastronomy services (school profession: gastronomy services organization technician) |
| 181 | 341404 Organizer of hotel services (school profession: Hotel services technician)                        |
| 182 | 512104 Manager of a hotel/ restaurant / gastronomy outlet  |
| 183 | 512201 Cook  |
| 184 | 512202 Short-order cook  |
| 185 | 512203 Chef  |
| 186 | 512301 Bartender   |
| 187 | 512302 Waiter  |
| 188 | 913203 Chambermaid (in hotel)  |
| 189 | 913210 Assistant worker in hotel services  |
| 190 | 914101 Concierge (janitor)   |
|     | <b>Administration, employment, office work</b>   |
| 191 | 241302 Human resource advisor  |
| 192 | 241304 Recruitment specialist  |
| 193 | 343101 Administration employee (school profession: administration technician)                            |
| 194 | 344101 Customs officer   |
| 195 | 411101 Secretary   |
| 196 | 413102 Stock taker   |
| 197 | 419101 Office clerk (school profession: office work technician)  |
| 198 | 419102 Census clerk  |
| 199 | 515908 Municipal guard   |
| 200 | 825105 Copying machine operator  |