

4. Higher Education Evaluation & Accreditation Council of Taiwan (HEEACT) (2015). *HEEACT Website*.http://www.heeact.edu.tw/sp.asp?xdurl=appraise/appraise_list.asp&ctNode=491&mp=2
5. Hou, A. Y. C. (2016). *Principle 1: Quality and Higher Education Providers*. In *The CIQG International Quality Principles: Toward a Shared Understanding of Quality*, Uvalić-Trumbić, Stamenka, ed. Washington, D.C., CHEA, 7-14.
6. Hou, A. Y.C., Chen, K, and Morse, R. (2014). *Transforming the Quality Assurance Framework for Taiwanese Higher Education: A Glonacal Context*. *Policy and Society*, 33, 275-285.
7. Hou, A. Y.C., Chen, K, and Morse, R. (2014). *Transforming the Quality Assurance Framework for Taiwanese Higher Education: A Glonacal Context*. *Policy and Society*, 33, 275-285.
8. International Network for Quality Assurance Agencies in Higher Education (INQAAHE) (2013). *Analytic quality glossary*. Retrieved Dec. 1, 2013, from <http://www.qualityresearchinternational.com/glossary/selfaccreditation.htm>
9. Kinser, K. (2011). *Multinational quality assurance*. *New Directions for Higher Education*, 155, 53-64
10. Miles, M., & Huberman, M. (1994). *Qualitative data analysis (2nd ed.)*. Beverly Hills, CA: Sage.
11. Patton, M.Q. (2001). *Qualitative evaluation and research methods*. Thousand oaks, CA: Sage Publications.
12. Sanyal, B. C., & Martin, M.(2007). *Quality Assurance and the Role of Accreditation: An Overview*. In *Global University Network for Innovation (ed.)*, *Higher Education in the World 2007: Accreditation for Quality Assurance: What Is at Stake?* (pp. 3–17). New York: Palgrave Macmillan.
13. Stensaker, B., Langfeldt, L., Harvey, L., Huisman, J., & Westerheijden, D. (2011). *An in-depth study on the impact of external quality assurance*. *Assessment & Evaluation in Higher Education*, 36(4), 465-478.

HOW TO LINK STUDENTS' LEARNING OUTCOMES AND OCCUPATIONAL STANDARDS

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Abstract

Many countries are trying to improve the cooperation between education and labor market. Russia is not an exception. The paper aims at drawing attention to the growing need to provide tight links between these two worlds. The effective mechanism to achieve this linking is to embed requirements of occupational standards into educational programmes, namely to develop competencies and learning outcomes in correspondence with occupational standards.

1. Introduction

In 2009, the Russian system of higher education underwent great changes, and namely the transition to the federal state educational standards of new generation (FSES). FSES required adoption of a new educational paradigm, i.e. the shift from the knowledge-based model to the model of competence-based education. Thus, for the past eight years Russian universities have been facing the challenge of the development and implementation of new competence-oriented educational programs, including the addition to the list of professional competencies, the development of new curricula, working programs of academic disciplines, funds of assessment tools. Herewith one of the main requirements is to adjust new educational programs to the needs of the labor market (employers).

2. Employers' participation in the sphere of education

Today Russian employers have the opportunity to participate actually in every stage of organization and implementation of a HEI's learning process, including participation in the development of requirements of student learning outcomes (SLOs), learning content, network training, final examinations, giving masterclasses and workshops.

At the same time some of the most frequent negative comments from the experts in the sphere of higher education are as following:

- the educational institution does not involve any employers in the training process, thus does not ensure education of appropriate quality;
- the educational institution does not adjust the monitoring of students' progress and assessment of SLO to the terms of their future careers.

The reasons for that can be quite different. For example, HEIs consider it is not obligatory and may be too tough to involve employers in educational process, or, on the contrary, employers are not ready for such an activity and even more - they do not know how to get engaged.

What would encourage more employers to become engaged in education and training? These are a few of the many possible ways.

Firstly, HEIs and other relevant bodies should be more proactive in approaching employers. Many employers are willing to help but have limited time or have no idea how. In this case development of simple guidance for employers could be for education and business relation a good finding.

Secondly, employers should be aware and be sure that they have an opportunity to influence the quality of the students' educational outcomes, and thus their potential employees.

Thirdly, education-business links are not clearly evaluated, which means that there is little evidence to demonstrate to employers the value of their involvement. If HEIs developed some form of evaluation of the opportunities provided by businesses then this might help employers to see the value arising from their efforts. It could serve as a good basis for incentives for employers to cooperate with the education sphere.

3. Relationship between occupational standards and training

Educational process needs to be linked to OS if training is to be relevant to the real world of work. This linkage is sometimes absent or is not always clear because HEIs have not explicitly linked their training programs to labor market needs. For instance, OS do not exist, or educational institutions do not use existing standards. Here a quite reasonable question may arise 'Why? What are the reasons?' The answer may be that the worlds of employment and education are different and separate so far. They exist independently of each other. Employers are interested in what people need to do, how they will do it, and how well they do it. They are interested in outcomes.

Education is also outcomes/competence-oriented but HEIs traditionally are overloaded with such routine activities as developing and updating of learning content (curriculum, working programmes of disciplines), teaching/learning process (methods), assessment, research, writing different reports and many others. Educators are interested in what people learn, how they will learn it, and how the quality and content of learning will be assessed. Herewith there are cases when HEIs demonstrate antagonism and keep guarding their independence and their ability to design educa-

tional programs as they see fit. Also, they may regard the use of OSs defined by employers as too narrow in scope and consider such standards as an invasion of their area of responsibility.

Despite all the above-mentioned reasons, it is wrong to assert absolutely that there is no linkage between the worlds of work and education. There is linkage, yet not so strong and tight. The situation is not static. It is constantly developing. More and more employers are involved by HEIs in the process of developing or updating the list of competences and learning content. The number of occupational standards approved by the state has grown up to 835 (rosmintrud.ru). And the process is underway.

To achieve better employability and ensure that training is relevant to the needs of the labour market, the worlds of work and education must cooperate closely (Figure 1.).

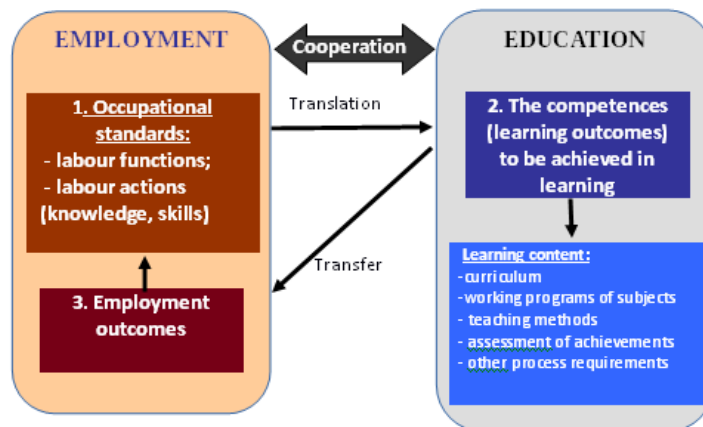


Figure 1. Translating occupational standards into education

To make this cooperation effective the needs of employment (occupational standards) must be translated into a language that can be understood in the educational sphere. The goal is to translate the language of actions in OS into the language which will enable education professionals to plan and deliver learning programs. One immediate step that can be taken by HEIs is to develop new lists of competences that describe what people will be able to do at the end of educational programs. The competences should be linked to the requirements defined in occupational standards (Fretwell, p.31).

4. How it works: methodology of linking

The algorithm of linking can be presented as a system of ten steps:

Ensuring the quality of the work on the development of the program

Step 1. Establishing the working team

Analyzing occupational standards and their aligning with educational standards

Step 2. Identifying the volume of embedding occupational standards in the educational programme

Step 3. Analyzing the general job descriptors

Step 4. Analyzing the labor functions

Results of analyzing occupational standards

Step 5. Writing up a list of competences to be added to the competences from the FSES

Step 6. Formulating programme learning outcomes (competences) linked with the OS

Developing/updating educational programme

Step 7. Developing a pool of assessment tools embedding the requirements of the OS

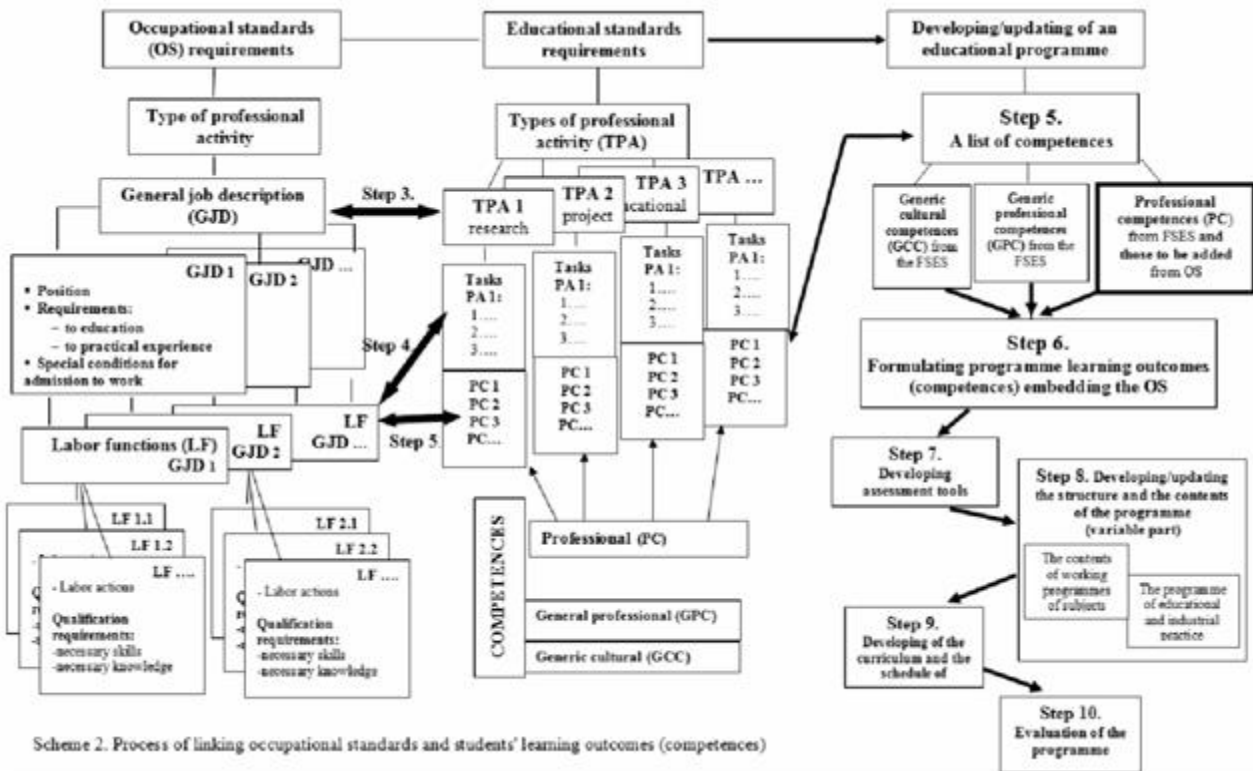
Step 8. Designing a structure and content of an educational programme embedding the qualification requirements of the OS

Step 9. Developing a curriculum and a training schedule

Using Quality assurance procedure

Step 10. External evaluation of the educational programme

The Scheme in Figure 2. presents the entire process of linking occupational standards and SLOs (competences) including the subsequent updating of assessment tools, the content and other parts of the educational program. But in the context of the paper the steps 2,3,4,5,6 are of our special attention.



Scheme 2. Process of linking occupational standards and students' learning outcomes (competences)

Step 2. Identifying the volume of embedding occupational standards in the educational programme

Educational programmes should reflect real needs of the labor market, employers' associations and society. Successful completion of an educational programme must result in award of the qualification, relevant to the level of development of science, technologies, economy and society. Thus, programme developers should relate the requirements of the OS, requirements of the FSES and programme objectives for the purpose of developing the key competence model of a graduate, who is ready for professional performance and able to demonstrate sufficient level of knowledge, skills, and competences.

Step 3. Analyzing the general job descriptors

It is recommended to:

- analyze the list of general labor functions of the OS as relevant to the educational programme;
- choose the most relevant general labor functions that are not represented in the FSES;
- define types of professional activity relevant to the chosen general labor functions, and then align these to the types of professional activities in the FSES.

During the process of alignment, it is important to understand whether the general labor function, which is not represented in the FSES, needs to be taken into account in the educational programme.

Step 4. Analyzing the labor functions

This step specifies the professional activities that a graduate should be ready to perform.

It is recommended to:

- analyze the list of labor functions as relevant to the educational programme;
 - choose the most relevant labor functions;
 - write a general list of tasks of professional activity of a graduate of the educational programme
- The results of such analysis can be described in a table (Table 2.).

Table 2. Aligning professional tasks from the FSES with the labor functions of the OS

Requirements of the FSES	Requirements of the OS	Findings
Professional tasks	General labor functions (GLF), labor functions (LF)	

Step 5. Writing up a list of competences to be added to the competences from the FSES

The FSES already have a minimum set of competences a graduate should be ready to demonstrate upon completion of an educational programme.

Although the competences are described in the FSES, the need to expand the list may arise, while aligning the educational programme with the OS. For that purpose it is recommended to:

- analyze Part II ‘Description of the labor functions (functional map of a type of professional activity)’ and Part III ‘Profile of a type of professional activity’ taken from all the OS, which were previously selected for the alignment with the educational programme;
- choose labor functions, that are most relevant for the specific educational programme;
- analyze qualification requirements to the chosen labor functions;
- write up professional competences based on the chosen OS and qualification requirements.

The results of such an analysis can be described in a table (Table 3).

Table 3. Aligning professional competences from the FSES with the labor functions of the OS

Requirements of FSES	Requirements of OS	Findings
Professional competences specific for each kind of activity	Qualification requirements to the chosen labor functions	

Step 6. Formulating programme learning outcomes embedding the OS

The alignment done with the previous steps can help formulate programme learning outcomes. The programme learning outcomes should include generic (GC), and general professional competences (GPC), as well as professional competences (PC).

The requirements for formulating programme learning outcomes in correspondence with the requirements of the OS can be better described with the help of the Table 4 below.

Table 4. Programme learning outcomes

Types of professional activity	Professional tasks	Professional competences
1	2	3
TPA 1 ...		PC ...
		PC ...
TPA 2 ...		PC...
		PC...
General Professional Competences (GPC):		
Generic Competences (GC):		

5. Measuring the quality of educational programmes linked with the relevant occupational standards

The last step of the linking process is Step 10. External evaluation of the educational programme. The step assures the quality of the educational programme. This part of the paper gives brief information on measuring the quality of the linkage between educational programmes and the relevant occupational standards and results of such work done by the National Centre for Public Accreditation (NCPA) (www.ncpa.ru).

NCPA is a participant of the Tempus project ALIGN (Achieving and checking the alignment between programmes learning outcomes and qualification frameworks). Within this project NCPA in cooperation with other participants (Volga State University of Technology, Northern (Arctic) Federal University after M.V. Lomonosov, Moscow State Pedagogical University, the regional office of the Russian Union of Industrialists and Entrepreneurs, the Russian Student Union) developed the Guidelines for aligning and checking the alignment of programme learning outcomes with European Qualifications Framework, the draft National Qualifications Framework and OS.

The part of the Guidance devoted to aligning learning outcomes to occupational standards was agreed with the above-mentioned recommendations (issued by Ministry of Education and Science of the Russian Federation).

The external evaluation procedures, devoted to checking the accomplishments of the alignment process, involved all stakeholders:

–representatives of professional associations, employers, including those from the working team, who set the basic rules of aligning the educational programmes with qualification requirements of occupational standards;

–representatives of the student community (students, post graduate students) and alumni;

–representatives of the academic community, from those who were involved in the process of educational programme implementation (European and Russian experts).

Below are some of the conclusions of the Review team:

The learning outcomes approach is new for Russia. The input of the occupational standards is very important; however, the learning outcomes can be made much more specific by including also descriptors such as those included in the Dublin Descriptors. The most important elements of the level 7 are included, but there is too much focus on occupational competencies and not enough on generic and generic professional competencies. Currently, the learning outcomes do not include knowledge in a sufficient measure. However, good work was done on the domain-specific competencies. In Russia there is the draft NQF; all the programmes are developed in accordance with FSES. We have received a good and clear list of learning outcomes which were up-to-date. They are aligned with EQF and FSES, with the draft NQF which specifies 3 types of competence, and they are in fact specific for the two programs. Now, of course, they have to be assessed continuously and in cooperation with the stakeholders. SLOs are at the level of Masters education and fitting domain-specific demands.

6. Conclusions

So, OS are valuable tools for bringing together employment and education. They serve as benchmarks for competences and learning outcomes as well as for defining roles at work, staff recruitment, supervision and appraisal. There's still very much work to overcome the existing resistance between educators and employers. However, these two worlds can be linked only with the help of a prospective employee able to demonstrate the knowledge, skills and abilities on the one hand given and developed at a HEI and on the other hand demanded in the labor market. The achieved linkage will destroy the boundaries between education and employment and open up new horizons for improving the quality in these spheres.

References

1. Decree of the RF Government "On the Rules of the development, approval and implementation of occupational standards", 22.01.2013 № 23
2. Federal service for supervision in education and science (Rosobrnadzor): obrnadzor.gov.ru
3. Fretwell, David H., Lewis, Morgan V., and Deij, Arjen (2001). *A Framework for Defining and Assessing Occupational and Training Standards in Developing Countries*. Information Series No. 386, p. 31
4. *Methodological recommendations for developing educational programmes of higher education and the additional professional educational programmes in accordance with occupational standards, issued by Ministry of Education and Science of the Russian Federation, 22.01.2015 №ДЛ-1/056Н*
5. Ministry of Labor and Social Protection: rosmintrud.ru
6. National Centre for Public Accreditation: www.ncpa.ru