

Support to strengthening the higher education system in Azerbaijan



Twinning project ENI/2018/395-401

Mission Report

Short-Term Mission on Activity 1.6 Provide recommendations for improvement of methodology for developing national classifications of programmes in higher education

(April 22 – 26, 2019)

1. Name and Function of the Expert:

Full name of expert

Mr Gintautas Jakštas

Signature



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2. Objective and Tasks of the Mission:

The mission is carried out within the framework of:

COMPONENT 1: SELECTED NATIONAL EDUCATION STANDARDS ARE ALIGNED TO INCLUDE A COMPETENCE-BASED FOCUS

Activity 1.6 Provide recommendations for improvement of methodology for developing national classifications of programmes in higher education

Benchmarks for this activity are:

- Minutes of working sessions
- Recommendations for improvement of methodology for national classifications of programmes are developed



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3. Time schedule of mission:

Date and Time	Activity
15 April 2019	<ul style="list-style-type: none"> - Deskwork. The STE reviews the national classification of study programmes for bachelor level in Azerbaijani higher education. - A meeting with HE Department to discuss the classification of study programmes for master level which is planned to be developed. <p>Stakeholders: Mr. Yashar Omarov, RTA Counterpart; Ms. Vusala Gurbanova, Component Leader I; Ms. Nargiz Garakhanova, Component Leader IV.</p>
16 April 2019	<ul style="list-style-type: none"> - Workshop on best practices of developing classification of study programmes for bachelor and master level in Lithuania. - Stakeholders: Ms. Vusala Gurbanova, Senior Adviser at HE Department, Component Leader I; Mr. Yashar Omarov, Head of HE Unit at HE Department, RTA Counterpart; Mr. Azad Akhundov, Chief Advisor at HE Department, Component Leader II; Ms. Nargiz Garakhanova, Senior Adviser at HE Department, Component Leader IV; Ms. Nushaba Mammadbayova, Chief Advisor at HE Department, Science Unit, MoE; Mr. Samir Hamidov, Leading Advisor at HE Department, MoE; Mr. Parviz Dadashov, Leading Advisor at Economy of Education Unit, MoE; Mr. Mirbaba Gasimov, Senior Advisor, Statistics and Analysis Unit, MoE.
17 April 2019	<ul style="list-style-type: none"> - Deskwork. The STE drafts the guidelines for developing national classification of study programmes for master level.
18 April 2019	<ul style="list-style-type: none"> - Meeting with Mr. Azad Akhundov, Chief Advisor at HE Department to discuss the current classification of study programmes in Azerbaijani higher education system.
19 April 2019	<p>Workshop for the staff of the HE Department to present recommendations for improvement of methodology for developing national classifications of programmes in higher education</p> <ul style="list-style-type: none"> - Stakeholders: Mr. Shahin Bayramov, Deputy Head of HE Department, BC Project Leader; Mr. Yashar Omarov, Head of HE Unit at HE Department, RTA Counterpart; Mr. Azad Akhundov, Chief Advisor at HE Department, Component Leader II; Ms. Nargiz Garakhanova, Senior Adviser at HE Department, Component Leader IV; Ms. Vusala Gurbanova, Senior Adviser at HE Department, Component Leader I; Mr. Samir Hamidov, Leading Advisor at HE Department.

4. Relevant Background Information/State of Affairs regarding the mission

Azerbaijan Ministry of Education (MOE) provided all information essential for the mission:

- Classification of Bachelor study programmes, 2011 (BA 2011)
- Classification of Bachelor study programmes, 2019 (BA 2019)
- Classification of Master level specialities, 2011 (MA 2011)



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However, methodology for national classifications of programmes in higher education does not exist in a written form. During the meetings with representatives from Azerbaijan MOE was clarified a procedure how classification was constructed:

1. MOE established an expert group and with their help Groups of specialities (1st level in classification) are defined. The main principle for defining groups was international comparability and adoption of best practices in other countries.
2. For each of the Group of specialities working groups were gathered, which were responsible for the 2nd level of classification – specialities. These groups mainly consist of academic staff; however, it also includes representatives from the labour market.

In a discussion with project RTA and representatives from MOE common agreement about the essence of the goal was met. Mission goal was divided in two parts:

1. Provide guidelines for creating a methodology for national classifications of programmes.
2. Provide insights and recommendation for improvement current Classification of Bachelor study programmes (2019) and Classification of Master level specialities (2011).

5. Achievement of the Expected Results

5.1. Comparison between classifications

5.1.1. Comparison between BA and MA classifications (2011)

National classifications in European countries and international classifications usually have one classification for both Bachelor and Master level programs. In Azerbaijan Classification of Bachelor study programmes and Classification of Master level specialities are separate. In order to understand the need of separate classifications, a comparison between Bachelor and Master specialities classification were made. It was found that:

1. Classification of Bachelor study programmes has two levels (Group of specialities and specialities), while Classification of Master level specialities has three levels (Group of specialities and specialities)
2. Comparison of the classifications:

Indicators	BA classification (2011)	MA classification (2011)
Number of specialities groups (1 st level)	8	8
Part of specialities groups with a perfect match in opposing classification	100 percent	100 percent
Number of specialities (2 nd level)	169	143
Part of specialities with a perfect match in opposing classification	60 percent	71 percent
Number of unique specialisations	0	798

3. Perfect match on specialities group level
4. Some specialities which exists only in one of the classifications, have similar specialities in another one, but they cannot be automatically matched. Some examples:

BA classification (2011)	MA classification (2011)
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Artistic creativity and screen dramaturgy	Artistic creativity and on-screen dramaturgy
Antropology	Anthropology
Conductor	Conducting
Decorative art	Decorative arts
Ecology engineering	Ecological engineering

5. Some specialisations in MA 2011 appears in more than one speciality, which is not natural in classifications. Some examples:

Specialisation	Corresponding speciality	Corresponding speciality group
Lithology	Geology	Group of Natural Specialties
Lithology	Hydrogeology engineering	Group of Technical and Technological Specialties
Regional geology	Geology	Group of Natural Specialties
Regional geology	Hydrogeology engineering	Group of Technical and Technological Specialties
Intelligent measuring tools	Device engineering	Group of Technical and Technological Specialties
Intelligent measuring tools	Electronics, telecommunications and radio engineering	Group of Technical and Technological Specialties

5.1.2. Comparison between 2011 and 2019 BA classifications

Indicators	BA classification (2011)	BA classification (2019)
Number of specialties groups (1 st level)	8	10
Part of specialties groups with a perfect match in opposing classification	100 percent	80 percent
Number of specialties (2 nd level)	169	148
Part of specialties with a perfect match in opposing classification	40 percent	45 percent
Part of specialties with a good* match in opposing classification	63 percent	72 percent

* Many specialisations have a slight change in their name, but potentially similar content. Assumptions made in matching specialties can be found in excel file annexed to this report (named *BA 2011 vs 2019 (2)*)

Analysis of attribution of specialties to the groups showed that:

- **System engineering** 2011 was on Technical and Technological Specialties group and 2019 was moved to the new Special Specialties Group
- **Agro-engineering** 2011 was on Group of Agricultural Specialties and 2019 was moved to Technical and Technological Specialties group
- Other **105** matching specialties remained on the same group.



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Changing groups for specialities may cause incomparability between years and estimation of old data based on new classification is necessary. Illustrative example of not doing so was presented to the representatives of MOE in 23rd of April.

5.2. Methodology guidelines

A purpose of methodology is simply to describe how results were achieved and where/how to use them. Classifications usually complete methodology for inside use and sometimes manuals for public users.

5.2.1. Structure of methodology

Suggested structure of methodology for Higher education classification in Azerbaijan:

1. Aim of the classification
 - Principles
2. Units of classification
 - Specialities/specialization?
 - Terminology used in methodology
3. Scope and structure of the classification
 - Levels of classification
 - Purpose and application of each level
4. Creation procedures
 - Who is involved in creation of classification?
 - What are the roles?
 - What is composition of the working groups?
 - Principles and procedures in the working groups.
5. Update conditions
 - Procedure for updating classification
 - How often classification will be updated?

5.2.2. Aim of classification

In this section aim of the classification should be developed. It should help to answer questions such as 'Why do we need this classification?', 'Where classification can be used?', 'What are the principles of this classification?'

These are the principles, which could be considered:

- Interdisciplinarity.

Interdisciplinary studies seek to synthesize broad perspectives, knowledge, skills, interconnections, and epistemology in an educational setting. Interdisciplinary programs may be founded in order to facilitate the study of subjects which have some coherence, but which cannot be adequately understood from a single disciplinary perspective. Since such studies programs are becoming more and more common, it is important to consider an opportunity to make classification applicable for interdisciplinary studies.

- Relations with other classifications.

It is very important to have classification which can be mapped with other classifications. Having well designed classifications allows to answer complex questions by using statistics from the registries. Here are possible classifications, which could be mappable with study classification:

- Previous versions of study classification;



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- International classifications, such as ISCED;
 - One step ahead after making study classification is to consider skills which are gained after graduating different studies. These skills should be part of skills classification;
 - Science is foundation of high-quality programs and R&D classification should be mappable with study classification;
 - Labour market outcomes are one of the most important outcomes of education and in order to have a proper measurement it is essential to have links with classification of occupations;
 - It is recommended to have the same classification for all study levels, however if it is not possible, at least links between classifications should be ensured.
- Possibility to include new specialities.

Along side with technology evolution, competencies required in the labour market constantly changes and sometimes a need of new specialities emerges. Seeking to respond these needs, classification needs to be flexible enough and have possibilities to include new specialities.

- Broad qualification degrees.

Too narrow qualification degrees remain behind the needs of the labour market and cannot keep up with best practices as it takes too much time to apply changes.

5.2.3. Units of classification

The basic units of classification usually are education programmes or fields of education. This section should also include definitions of all terms used in methodology. For example, an education programme in ISCED 2011 is defined as “a coherent set or sequence of educational activities designed and organized to achieve pre-determined learning objectives or accomplish a specific set of educational tasks over a sustained period of time”. A field of study is the “broad domain, branch or area of content covered by an education programme or qualification. Fields of education and training and levels of education or educational attainment are cross-classification variables and are therefore independent of each other”.

In Lithuanian new classification, units of classification are Study fields. Each of the study field have detailed description and standards. HEI are free to create programs in the study fields if they meet the requirements and then Centre for Quality Assessment in Higher Education evaluates programme and gives accreditation.

Since the labour market is changing very quickly in the recent years it is not efficient to include programs to the classification as they are too detailed, and classification would need to be changed too often.

I recommend Azerbaijan to consider an option to have one classification for both MA and BA level without specialisation level.

5.2.4. Scope and structure of the classification

In this section scope of the classification should be described. For example, ISCED classification “has been designed principally to describe and categorise fields of education and training at the secondary, post-secondary and tertiary levels of formal education as defined in ISCED 2011, though it may be used for classifying programmes and qualifications offered at other levels. The



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classification may also be used in other contexts, for example to classify the subject matter of non-formal education, initial and continuing vocational training, or informal learning.”

Each level of the structure needs to be described along with their usability. ISCED “has been designed as a three-level hierarchy between broad fields (the highest level), narrow fields (the second level) and detailed fields (the third level) and uses a four-digit coding scheme. There are 11 broad fields, 29 narrow fields and about 80 detailed fields of education and training. The detailed fields (the third hierarchical level of the classification) are intended mainly for use at the tertiary level of education and, for vocational education and training programmes and qualifications at secondary and post-secondary non-tertiary levels. The classification can also be used for programmes and qualifications of general education where there is a subject specialisation. However, general education programmes and qualifications which cover a broad range of subjects with little or no specialisation in a particular field or fields will typically be classified within the broad field 00 ‘Generic programmes and qualifications’.”

This section should clearly indicate how specialities are assigned to the groups. In some cases, it is not clear to which group specialities should be assigned (For example, Agro-engineering 2011 was on Group of Agricultural Specialties and 2019 was moved to Technical and Technological Specialties group). For example, in ISCED “All education programmes and qualifications are associated with a blend of theoretical understanding, factual knowledge and practical skills. Two programmes or qualifications at different levels of education will belong to the same field of education and training if they cover similar types of theoretical, factual and practical knowledge or skills, even if the relative emphasis given to each may be different.”

Since interdisciplinarity is becoming more and more popular, it is important to describe borderline cases. “Borderline cases occur where a programme or qualification is closely related to two different fields in the classification. For example, veterinary studies has similarities both with medicine (theoretical knowledge especially but also purpose of learning) and animal husbandry (the objects of interest, methods and techniques, and tools and equipment). The latter has been chosen for classifying veterinary studies in order to maintain correspondence between previous versions of ISCED, with key related classifications (e.g. the Fields of Science and the International Standard Industrial Classification of All Economic Activities (ISIC)) and to preserve a broad field devoted to (Human) Health and Welfare which is important for national policy analysis.”

5.2.5. Creation procedures

It is necessary to have written responsibilities for working groups, MOE and other involved parties. Based on information received from the representatives of the MOE, working groups play a huge role in classification development. Composition of these groups should be described in this section of methodology along with working procedures.

In order to have decisions in the working group based both on argumentation from the experts and objective data, indicators from the labour market should be provided to the experts in the working groups. These indicators could include:

- Average salary of the graduates by study speciality and institution graduated;
- Percentage of employed graduates by study speciality and institution graduated;



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- Percentage of graduates working in positions which requires higher education, by study speciality and institution graduated;
- Percentage of graduates working in relevant positions (only for selected specialities, which can be linked with occupations) by study speciality and institution graduated;
- Tendencies of open positions by occupations;
- Tendencies of skills demand in the labour market.

5.2.6. Update conditions

In order to avoid having chaotic and not well design changes of classification it is important to have listed rules and procedures which should be followed in order to change classification. If classification doesn't go too deep into specialisations, changes should not be needed too often.

In case of merging BA and MA classifications and abandoning 3rd level of classification (specialisations level), classification could be reviewed on a regular basis once in a year or few years. However, it can be a case only if specialities (2nd level of classification) are wide enough, so HEI could be able to adjust curricula based on newest international practices and labour market needs.

6. Unexpected Results

Some specialisations in MA 2011 appears in more than one speciality, which is not natural in classifications. Some examples:

Specialisation	Corresponding speciality	Corresponding speciality group
Lithology	Geology	Group of Natural Specialties
Lithology	Hydrogeology engineering	Group of Technical and Technological Specialties
Regional geology	Geology	Group of Natural Specialties
Regional geology	Hydrogeology engineering	Group of Technical and Technological Specialties
Intelligent measuring tools	Device engineering	Group of Technical and Technological Specialties
Intelligent measuring tools	Electronics, telecommunications and radio engineering	Group of Technical and Technological Specialties

7. Issues Left Open After the Mission

8. Recommendations (including recommendation for future missions)

1. On the 1st level of classification there was a perfect match between MA and BA classifications (2011), slight differences on the 2nd level and the 3rd level appears only in



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MA classification. However, despite these differences the recommendation is to have one classification for both BA and MA specialities. 2019 BA classification could be foundation of this classification.

2. Recommendation to consider an option to have classification without specialisation level.
3. Recommendation to consider creating methodology for classification of HE.

9. Acknowledgments (if any)

I would like to express my special thanks of gratitude to project RTA Lisa Bydanova as well as other team members Tarlan Arzumanov and Aytaj Atakishiyeva who helped me during preparation for the mission and supported during the mission period.

Secondly I would also like to thank representatives from MOE who kindly shared all information and their knowledge related to the topic and showed great interest in the mission.

Annexes (if any)

(2011). *Classification of Bachelor study programmes.*

(2019). *Classification of Bachelor study programmes.*

(2011). *Classification of Master level specialities.*

BA 2011 vs 2019 lvl 1.xlsx

BA 2011 vs 2019 lvl 2.xlsx

BA 2011 vs 2019 lvl 3.xlsx

BA 2011.xlsx

BA 2019.xlsx

MA 2011.xlsx

BA vs MA (2011) lvl 1.xlsx

BA vs MA (2011) lvl 2.xlsx

presentation april 23.pptx

presentation april 26.pptx



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