Support to strengthening the higher education system in Azerbaijan

Twinning project ENI/2018/395-401

Mission Report

Short-Term Mission on Activity 1.5. Provide recommendations for improvement of education standards for qualification for programmes in the priority areas (incl. legislative arrangements) with a view to describing achievements based on competences and skills, considering the AzQF

(October 7 - 11, 2019)

1. **Name and Function of the Expert:**

Full name of expert

Ms. Antra Ozola, Latvia

Ozola

Signature

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 1.5. Provide recommendations for improvement of education standards for qualification for programmes in the priority areas (incl. legislative arrangements) with a view to describing achievements based on competences and skills, considering the AzQF

Benchmarks for this activity are:

- **State standards for selected study programmes (Informatics teacher state standard) are revised**, with a view to describing achievements based on competences and learning outcomes, considering AzQF;
- **Other relevant documents/ methodology materials are prepared**.

3. Time schedule of the mission:

Date and Time	Activity
Monday 7th of October 2019	Meeting with RTA Ms. Elizaveta Bydanova and Ms. Vusala Gurbanova, Component Leader I, Senior Advisor at Higher Education Department, Ministry of Education
Tuesday 8th of October 2019	Meeting with Working Group on Informatics Teacher. (See the Annex …. for the list of participants)
Wednesday 9th of October 2019	Meeting with Working Group on Math Teacher (See the Annex …. for the list of participants)
Thursday 10th of October 2019	A visit to Azerbaijan State Pedagogical University, Baku State University and Baku Engineering University to meet with academic staff from relevant chairs to learn their views and suggestions regarding the state standard for the study programmes in Informatics Teacher and Math Teacher.
Friday 11th of October 2019	1) Report writing 2) Meeting with RTA Ms. Elizaveta Bydanova and staff of the MoE Higher Education Department to debrief about the results of the mission (Ms. Vusala Gurbanova, CL I and Mr. Yashar Omarov, RTA Counterpart)

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

1. Classification of master level specialties (programmes) of higher education

2. Classification of bachelor level (main (basic) medical education) specialties (programmes) of higher education

3. A methodological compendium on identifying and defining learning outcomes

4. Twinning Project SUPPORT TO STRENGTHENING THE HIGHER EDUCATION SYSTEM IN AZERBAIJAN ENI/2018/395-401 2018-2020 BRIEF INTRODUCTION INTO MAIN STAKEHOLDERS

5. Standards of higher education of Bachelor level in Physics, Ecology, Foreign language teacher elaborated within the TWINNING project

6. Standards of higher education of Bachelor level for Informatics teacher and Ecology.

7. Decree of the Cabinet of Ministers "On the approval of the 'National Qualifications Framework for Lifelong Learning of the Republic of Azerbaijan"

8. STE Welcome Package. AZERBAIJAN

5. Achievement of the Expected Results

Planned action was achieved. Three universities (Azerbaijan State Pedagogical University, Baku State University and Baku Engineering University) were visited and views on State standard of Informatics Teacher programme were discussed with professionals from local universities and recommendations were received.

At the Ministry of Education of Azerbaijan a meeting with working group on Informatics Teacher programme standard and relevant employers was organized and opinion on existing standard of Bachelor level programme for Informatics teacher was obtained.

6. Unexpected Results

No unexpected results were obtained during the mission.

7. Issues Left Open After the Mission

Huge differences in ICT infrastructure among visited universities were noticed. For implementation of the new state standards for Informatics teacher study programme it is strongly recommended that all universities which will implement the standard would be fully equipped with the necessary ICT resources including robots and other programmable devices like microchips etc., fast internet connection, sufficient number of computers per student, peripherals for laboratory works and updated software.

8. Recommendations (including recommendation for future missions)

It is recommended:

1. To introduce online learning management systems at all universities. This would foster availability of learning materials for students, solutions for insufficient internet access and provide a database of student achievement.

2. To split subjects in smaller amount of ECTS which allows to have a wider range of different subjects, and subject content area can be distributed along the study programme so some important issues are repeated during 4 years of studying giving students an opportunity to strengthen and complement the relevant knowledge and skills. For example it is recommended to have 3 different 3 ECTS courses of programming in various semesters instead of one 9 ECTS course once.

3. To split internship in parts among study semesters and divided in observational and teaching parts where the absolute majority of time is devoted to actual teaching at school.

4. To introduce a small amount (e.g. 9 ECTS per programme) of totally free choice study courses which would facilitate recognition of ECTS gained in mobility and enrich students' study experience.

5. To introduce or restore a study course "Introduction to the teacher profession" for all teacher programmes.

6. To add teaching methodology as part of all ICT and computer science courses so students would not only learn a content of the course but also how to deliver that content to their pupils in future professional life.

7. To use all study courses to develop students' skill of learning to learn.

8. To reduce amount of theoretical courses of mathematics and add practical ICT courses with topical content instead (e.g. practical problem solving of hardware or software issues, development of mobile apps etc.)

9. To form a local team of professionals who simultaneously master teaching, computer science and use of ICT and have an international experience in higher education in foreign countries to prepare the most suitable and updated version for standard of informatics teacher study programme.

10. To take the competencies of teacher profession as basis when preparing the standard of a study programme.

11. To prepare the national standard consulting appropriate study programmes of modern world universities.

12. To avoid subjects inappropriate for the specialty in the block of compulsory subjects.

13. To compose the study programme in a way that it covers the content of secondary education's curriculum in a more in-depth way.

14. To devote more attention to instruction techniques and methods of different topics of computer science and application of ICT.

9. Acknowledgments (if any)

Expert thanks the Twinning Project team of Azerbaijan. Special thanks for support and cooperation to prof. Hamzaga Orucov, Saadat Mazanova, Budanova Lisa and Aytaj Atakishiyeva.

Annexes

Appendix 1
Professional Bachelor's Degree in Education, Teacher of Informatics and Programming (University of Latvia)

Qualification Information:

To master courses in pedagogy, psychology, didactics and in the fields of science of the chosen qualifications;
- to learn and acquire practical skills of the chosen qualifications teacher during pedagogical practice (26 credit points);
- to pass State examination which includes state exam (2 credit points), and written and defended diploma paper (10 credit points) – a practical research with theoretical and practical part where research methods, research results, its analysis and conclusions are presented.
The aim of the Program is to educate qualified teachers being able to teach students in two school subjects in educational institutions of the Republic of Latvia as well as provide the would-be-teachers with the opportunity to acquire the required competences and qualifications of the Professional Bachelor's Degree in Education.

The main objectives to reach the aim are:
- To create the conditions for the acquisition of knowledge and skills required by the teachers to carry out educational programs according to the State Standards of Education;
- To provide opportunities to apply theoretical knowledge in teaching practice, thus, facilitating the improvement of students' skills in organisation and evaluation of the teaching/learning process;
- To involve students in applied research, thus, developing their research skills according to the methodology of the respective science;
- To develop pedagogical and methodological competences to participate in sustaining national culture and traditions;
- To facilitate the development of creative and responsible personality motivated for lifelong learning;

- To provide possibilities for students to continue studies for Master's degree in Latvia as well as abroad.
Successfully completing the study program (160 CP), defending the Diploma Paper in the first qualification and passing the qualification exam in the second specialisation, the student receives the Professional Bachelor's degree in Education and two professional teacher's qualifications.
The graduators are competitive teachers who have:
- Professional competences necessary for professional work;
- The skills required to achieve objectives of professional work;
- The knowledge necessary to carry out professional work.

The graduator who has successfully mastered the program will think strategically and analytically thus being able to solve pedagogical, psychological and social problems and will be able to prepare young people for life and work in society of information technologies thus facilitating the development of sustainable environment.
Upon the completion of the study program, the students will:
- understand the cognitive and socio-emotional development of children and adolescence;
- understand the link of various cognitive processes (perception, memory, attention, logical thinking) with learning process;
- be able to notice and identify the potential problems in children's cognitive and socio-emotional development and provide solutions cooperating with other professionals (psychologists, social pedagogues, etc);
- understand and facilitate learners' inquisitiveness; learning motivation; creativity and active involvement in learning process;
- be able to communicate and involve learners of mixed abilities, various interests and experience in

learning process and communication with other students;
- be able to discuss topicalities in education and their professional work with learners of various other contexts and audiences Environment;
- understand cultural and contextual differences;
- demonstrate social skills and emotional intelligence;
- be able to reflect and evaluate own professionalism, work, values, convictions and behaviour;
- be able to analyse educational concepts, theories and topicalities in educational policies;
- understand personal ethical responsibility for the potential impact of teacher's professional work on relationships in the society encouraging changes and transformation in education and society

Learning outcomes

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– understand personal ethical responsibility for the potential impact of teacher's professional work on relationships in the society encouraging changes and transformation in education and society.

Appendix 2
Lithuanian University of Education - Mathematics and Informatics Teacher

Objective(s) of a study programme:
To train responsible and initiative educator, which will acquire first level university education, will be competent in the field of education of mathematics and informatics, will understand systematically the change of mathematics, informatics and education in today's global information society, will be able to organize the quality education of pupils, will be able to create new training (learning) environments, enriched by modern training (learning) information technologies.

Learning outcomes:
1. The outcomes in the area of knowledge and their applications:

1.1. The graduates will accumulate the theoretical cognition enabling knowledge about pedagogical events and educational activities; knowledge enabling to see the place and importance of informatics science in the global information society; knowledge about mathematics as a significant part of world science, technologies and human culture; knowledge about mathematics as an instrument of abstract, deductive, inductive, empirical and experimental cognition.
1.2. The graduates will be able to apply the acquired logical thinking, knowledge and skills in the professional activities; in the learner group and social environment the graduates will be able to evaluate critically and implement the education and cultural values of nation and European community, humanistic, democratic and civil society principles, achievements of education, mathematics and technologies and their designing in school education.
1.3. The graduates will acquire the theoretical basics of mathematics and informatics, will realize the tendencies of changes of these sciences, will envisage the possibilities of application of mastered theories, conceptions, models in the interdisciplinary studies and/or professional activities.

2. The outcomes in the area of abilities to carry out a research:

2.1. Taking into account the modern achievements of science of the education, psychology, subject and its didactics, the factors determining the quality of education and the data of accomplished empirical educational research, the graduates will be able to make effective solutions related to education of pupil or pupil group.
2.2. The graduates will be able to prepare a research plan, collect and analyze data required for the solutions of the problems of the professional activities, will be able to prepare a research report, present and interpret the results, obtained from a survey.

3. The outcomes in the area of special abilities:

3.1. The graduates will motivate the objectives and outcomes of pupil's mathematics and informatics education by the advanced educational, pedagogical, psychological conceptions and theories of the general and subject didactic. The graduates will be able to make mathematics and informatics education plans, helping to achieve the expected results.
3.2. The graduates will be able to organize the education process by providing the professional educational assistance and taking into account the objectives of education, the acquired abilities of pupils and their age possibilities, different educational needs, educational style and the factors determining the quality of education.
3.3. The graduates will be able to evaluate properly and reflect on the pupils achievements and the education quality, and to predict and design of pupils progress in learning the subject.
3.4. The graduates will be able to think logically, to program, to evaluate critically the arguments of the area of mathematics and information technologies.

4. The outcomes in the area of social abilities:

The graduates will be able to use correctly the mathematical language in the real and/or virtual professional environment, to convey the ideas of education, mathematics and informatics, to integrate into the communities of professional and subject activities.