Kosovo

Division for Quality Assurance, Standards, Assessment and Licensing
Ministry of Education, Science, and Technology

Introduction

Overview of Education System

Kosovo's Ministry of Education, Science, and Technology (MEST) has the primary responsibility for planning the preuniversity education system, setting standards, and ensuring the quality of preuniversity education.[1] The Ministry promotes a nondiscriminatory education system with lifelong learning opportunities and encourages the inclusion of special needs students and the protection of vulnerable groups within the education system. The Ministry is responsible for drafting policies and implementing legislation for education development, including the development of higher education and science in Kosovo. It determines the outcomes of the various levels of preuniversity education and provides qualifications to those who have completed preuniversity programs. It is also responsible for the development of the Kosovo Curriculum Framework, core curricula, and subject programs.[2] It approves school textbooks and other teaching resources to ensure materials used in publicly funded education and training institutions meet the appropriate education and quality standards. In addition, the Ministry defines the criteria for all teachers and manages a licensing and certification system.

MEST is also responsible for planning and managing policies, as well as monitoring the education system, where decision making based on data is essential. MEST oversees several agencies and supporting authorities, including: the Division for Quality Assurance, Standards, Assessment and Licensing (DQASAL); Education Management Information Systems (EMIS); Education Inspectorate (EI); Kosovo Pedagogical Institute (KPI); the Division for Curriculum and Teacher Support; National Qualifications Authority (NQA); and the Agency for Vocational Education and Training and Adult Education (AVETAE). These organizations continue to have institutional roles based on their fields of action to prepare analysis, research, and reports related to system evaluation. Primary legislation (laws) and secondary legislation (regulations and sublegal acts) regulate the competencies of these agencies to assess the system and to use the assessment results. MEST is obliged to improve the quality, importance, and efficiency of education at all levels and to facilitate the qualitative development and improvement of the education system through quality assurance mechanisms, such as the education inspectorate.[3,4,5]

Municipalities enroll and accept students. They monitor and report student progress to parents and other authorities. They oversee and inspect the education process in accordance with instructions from the Ministry. Municipalities are also responsible for hiring teachers and other

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school staff in accordance with the legal recruitment, selection, and employment procedures of public employees and for selecting directors. In accordance with the guidelines, principles, and standards of the Ministry, municipalities also take care of the training of educators and other professional staff. They pay management staff as well as other staff. Other responsibilities of municipalities that are organized and supervised by the MED include supporting schools and teachers in implementing curricular reform and implementing school autonomy according to legal regulations.[6]

The Kosovo education system, which is in line with the International Standard for Classification of Education (ISCED), consists of preschool education, primary education, lower secondary education, and tertiary education:

- Preschool education (ISCED 0) is for children from birth until age 5.
- Primary School (ISCED 1) lasts five years, from Grade 1 to Grade 5 (ages 6 to 10).
- Lower secondary education (ISCED 2) lasts four years from Grade 6 to Grade 9 (ages 11 to 14).
- Upper secondary education (ISCED 3) students can attend general secondary education (Gymnasium) or vocational education for three years in Grades 10 to 12.

In Kosovo, primary and lower secondary education is mandatory. An external assessment is conducted at the end of primary education, the end of lower secondary education, and the end of upper secondary education. After lower secondary education, students can attend either vocational education or gymnasium. At the end of the gymnasium, students undergo the Matura exam. Students of vocational education who have passed the final exam may also take part in the Matura exam. After completing secondary education, students can attend tertiary education or enter the labor market. Throughout the formal three-level education phase, students are being prepared continually for lifelong learning as well as for the labor market.

Exhibit 1 presents the overall structure of the education system in Kosovo and Exhibit 2 presents the levels of education.

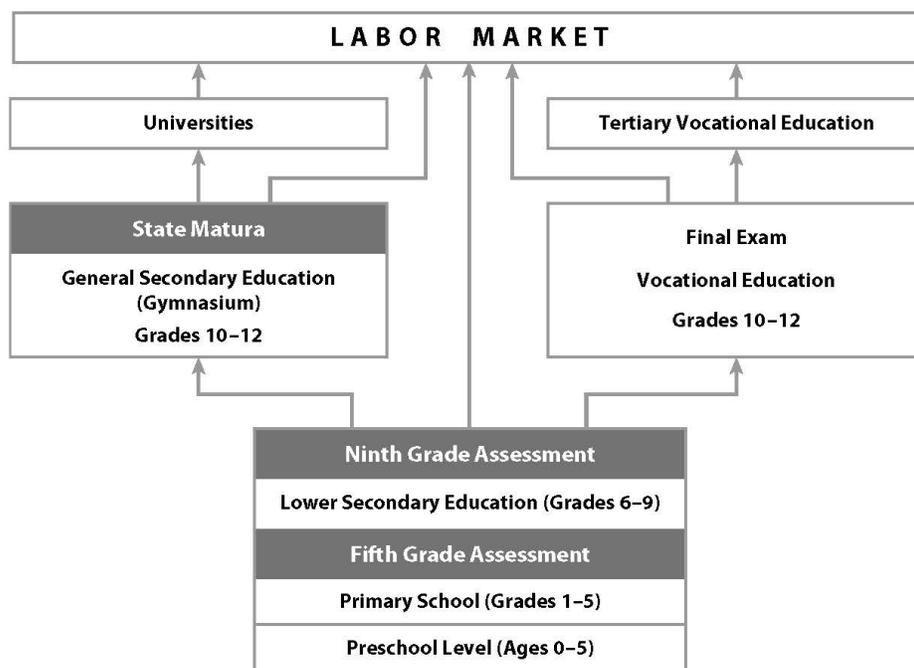**Exhibit 1: Overall Structure of the Education System**

Exhibit 2: Levels of Education in Kosovo

ISCED Level		Formal Levels of Education		Ages
ISCED 0		Preschool education		Birth–5
		Preparatory class		5–6
ISCED 1		Primary education 　　Grades 1–5		6–10
ISCED 2		Lower secondary education 　　Grades 6–9		11–14
ISCED 3	Level 3 according to National Qualifications Framework	Upper secondary education 　　Vocational schools (Grades 10–11)		15–16
	Level 4 according to National Qualifications Framework	Upper secondary education 　　Gymnasium (Grades 10–12) 　　Vocational schools (Grades 10–12)	Matura	15–17
ISCED 4	Level 5 according to National Qualifications Framework	Post-secondary education (nonuniversity)		18+
ISCED 5		University education		
ISCED 6		Postgraduate education		23/24+
		Adult education/Full-scale, lifelong learning (formal and informal)		23/24+

The official languages in the Republic of Kosovo are Albanian and Serbian. Members of national minorities are guaranteed the right to education in their native language. The minority languages in Kosovo are Serbian, Bosnian, and Turkish.

Use and Impact of TIMSS

Kosovo participated in TIMSS for first time in 2019. International comparative studies like TIMSS mainly serve to inform the national education system. Each school can use the data from such studies or other similar studies also for internal analysis and comparison, especially if the data present a comprehensive school sample and provide detailed databases for different schools.

Overview of the Curriculum

The curriculum is a fundamental document that regulates preuniversity education in Kosovo.[7] It is competency-based to provide a sound basis for education, foster lifelong learning, improve the quality of education, and build a knowledge society. Following this basic document, the core curricula were developed for the three levels of preuniversity education. These curricula aim to increase autonomy and accountability at the school level for defining and distributing education content.

The following principles underpin curricular development and implementation in preuniversity education in Kosovo: inclusion; integrated and coherent learning that enables autonomous and flexible implementation of the curriculum at the school level; and responsibility and accountability reflected in the creation of a culture of continuous assessment and the development of key competencies.

Key competencies determine the main learning outcomes that students must achieve progressively and sustainably throughout the preuniversity education system. Competencies refer to an interrelated set of knowledge, skills, attitudes, and values that are applicable and transferable, which enables students to cope with the challenges of the digital era and knowledge-based labor market in an interdependent world. The Kosovo curriculum framework includes competencies in: communication and expression; thinking; learning; life, work and environment; personal; and civic.

The curriculum framework has six main stages that represent time periods with common characteristics in terms of child/student development and curricular requirements. Each level of preuniversity education comprises two main stages, shown in Exhibit 3.

Exhibit 3: Main Stages of the Curriculum

ISCED Level	Formal Level of Preuniversity Education	Key Curriculum Stage
ISCED 0	Preschool education	Early Childhood Education
		Preparatory
	Preparatory grade	Stage 1: Basic acquisition
ISCED 1	Primary education Grades 1–2	
	Primary education Grades 3–5	Stage 2: Reinforcement and development
ISCED 2	Lower secondary education Grades 6–7	Stage 3: Further development and orientation
	Lower secondary education Grades 8–9	Stage 4: Reinforcement and orientation
ISCED 3	Upper secondary education Grades 10–11	Stage 5: Basic general and professional development
	Upper secondary education Grade 12	Stage 6: Consolidation and specialization

Students who participated in TIMSS 2019 were not included in the competency-based new curriculum, as they were still using the previous curriculum. Implementation of the New Competency-Based Curriculum for Preuniversity Education began in the 2017–2018 academic year, but not in all schools and classes.

In 2014, the pilot phase of the curriculum began in Kosovo, though the curriculum is not being implemented as planned (according to the report of the Kosovo Strategic Plan Assessment 2011–2016). The first curriculum was implemented during 2014–2015 in 10 schools; after one year, implementation was expanded to 92 schools in 30 municipalities. After the piloting, together with the working groups, MEST has reviewed all curriculum documents that were approved by the Ministry in 2016. During the academic year 2017–2018, implementation of the new curriculum began in all schools, starting with the preparatory grade and Grades 1, 6, and 10. Curriculum implementation in the other grades is continuing on the basis of the guidelines for curriculum implementation for 2016–2021, as well as the Kosovo Education Strategic Plan 2017–2021.[8,9]

The Mathematics Curriculum in Primary and Lower Secondary Grades

The mathematics curriculum is in harmony with the principles defined in the Curriculum Framework. The mathematics curriculum outlines the competencies to be taught and specifies how to assess and report on student performance. The mathematics curriculum allows students to develop essential skills in mathematics while fostering their creativity and providing them the guaranteed right of learning. The curriculum itself is carefully designed to protect cultural knowledge and experiences while also being flexible so that teachers can inspire their students to engage with the pleasure of learning. The curriculum gives students, teachers, parents, and the

wider community a clear understanding of the skills that students should acquire at school. It also demonstrates a model in which all the partners in education can support students in the process of learning.

Mathematics is taught at all stages of the curriculum. In primary school, the mathematics curriculum has an emphasis on number and algebra; shape, space, measurement and geometry; statistics and probability; and the use and application of mathematics. Exhibit 4 shows the learning area outcomes for preprimary to grade 5.

Exhibit 4: Learning Area Outcomes for Mathematics, Preprimary to Grade 5[10]

Learning Area Outcomes	
Knowledge	▪ Problem solving ▪ Mathematical justification and evidence ▪ Communication in and through mathematics ▪ Mathematical linkages ▪ Mathematical representation ▪ Promotion of mathematical modelling ▪ Structuring of mathematical thinking ▪ Use of ICT in mathematics
Structured attitudes and values	▪ Curiosity ▪ Motivation to study mathematics ▪ Imagination and creativity for solving problems ▪ Persistence, perseverance and strength in focusing on problems ▪ Independence in thinking and in action ▪ Initiative and interest in various approaches ▪ Confidence in ones' own strength ▪ Confidence in using technology ▪ Willingness ▪ Human development and personality development ▪ Readiness for cooperation ▪ Readiness for fair play ▪ Courage to ask for help or support ▪ Open attitude to support others ▪ Tolerance
Skills and abilities	▪ Identification ▪ Description ▪ Application ▪ Calculation ▪ Measurement ▪ Evaluation ▪ Outlining ▪ Modelling ▪ Approaching problems from various perspectives

Lower secondary education provides students with new challenges for their cognitive, physical, personal, social and moral development. Their natural curiosity is further encouraged in order to ensure that the knowledge, skills, values and attitudes gained at this level provide a sustainable foundation for further levels of education. The main goal of this level is to prepare students for further education and career orientation with the help of a mentor/professional counsellor. This level helps students develop their personal interests and defines their expectations for the future. At this level, the curriculum is enriched by exposing students to a wider scope of experiences through a combination of conceptual and practical approaches, abstract thinking and contextualized actions, and contact with actual and virtual reality in order to help them identify their own interests.

In lower secondary school mathematics, the main concepts are number and algebra; form, space; measurement and geometry; processing of data and probability; and use and application of mathematics. Exhibit 5 shows the knowledge learning area outcomes for grades 6 to 9.

Exhibit 5: Learning Area Outcomes for Mathematics, Grades 6 to 9[11]

Learning Area Outcomes	
Knowledge	- Mathematical problem solving - Mathematical justification and evidence - Mathematical communication - Connections in matheamtics - Mathematical representation - Mathematical modelling - Mathematical thinking - Use of technology in mathematics

The Science Curriculum in Primary and Lower Secondary Grades

At the primary and lower secondary levels, the science curriculum falls under the umbrella of natural sciences. Chemistry, physics, biology, and astronomy are taught as integrated subjects. The aim of the natural science curriculum is to enable students to recognize, understand, and research living and nonliving systems such as: food production and other material goods, medicine, transportation, communication, energy production, use of natural resources, preservation of the living environment, and innovation.

All content in the natural sciences curriculum falls under one of six main concepts: scientific research; application of science and technology; matter and its characteristics and transformations; physical processes; life processes; and the Earth and the universe. Exhibit 6 presents the learning area outcomes in the natural sciences curriculum for primary school students.

Exhibit 6: Learning Area Outcomes for Natural Sciences, Preprimary to Grade 5[12]

Learning Area Outcomes	
Knowledge	- Developing scientific opinion about the concepts, models, theories and laws, matter, processes and phenomena in nature: - Living and nonliving matter and its characteristics - Physical, chemical and biological phenomena on the Earth and in the universe - The development of scientific research skills on the structure of matter, processes and phenomena in nature - Relationships between science and other subjects - Application of science and technology in everyday life - The development of communication skills in science and through science
Attitudes and values	- Curiosity to explore living and nonliving nature - Attitudes toward questions and efforts to find answers - Interest to know the characteristics and life needs of living beings - Respect for all forms of life - Care for personal life and health and for others Care when using them and respecting of safety rules at work
Skills and abilities	- Identification - Description - Application - Counting - Measuring - Evaluation - Sketching - Creation of models
Concepts and subjects	- Nature and the natural environment: landscapes, orienting oneself in the landscape, latitude and longitude, exploration, bodies of water, deserts, glaciers, valleys, weather, wind, precipitation, erosion, drought, floods, earthquakes - Living things and life processes: plants, animals, humans, food - Physical science: matter, energy, transformations, movement, force, electricity, magnetism, light, sound - Technology

Exhibit 7 shows the knowledge learning area outcomes in the natural sciences for grades 6 to 9.

Exhibit 7: Learning Area Outcomes for Natural Sciences, Grades 6 to 9[13]

Learning Area Outcomes	
Knowledge	- Developing scientific opinion about the concepts, models, theories and laws, matter, processes and phenomena in nature: - Living and nonliving matter and its characteristics - Physical, chemical and biological phenomena on the Earth and in the universe - The development of scientific research skills on the structure of matter, processes and phenomena in nature - Relationships between science and other subjects - Application of science and technology in everyday life - The development of communication skills in science and through science

Professional Development Requirements and Programs

MEST funds and manages the Advancement of Teacher Qualification (ATQ) and a program for the requalification of preschool or primary school teachers who have completed studies of general pedagogy. The ATQ is for teachers with a Bachelor's degree who have attended an additional two years of study.

GIZ (German Agency for International Cooperation) conducted ongoing training programs in mathematics and natural sciences for teachers in grades 1 to 9. However, this program ended in 2017.

Monitoring Student Progress in Mathematics and Science

During preuniversity education, the ongoing progress and achievement level of students, as defined by the Kosovo curriculum framework, core curriculum for the curriculum key stages, and subject syllabi are assessed. The assessment process is based on the Kosovo curriculum framework and is oriented toward internal and external assessment. Internal, or school-based, assessment aims to support and strengthen the learning and the regular reporting of individual student progress. External assessment, on the other hand, is a standardized assessment to measure achievement in learning outcomes and competencies at the end of levels 1, 2 and 3 of preuniversity education. Since 2012, Kosovo has participated in international educational surveys that assess the competencies and skills of students at a national level: the Program for International Student Assessment (PISA) 2015, 2018, and 2021; TIMSS 2019; and the Progress in International Reading Literacy Study (PIRLS) 2021.

The student evaluation system in Kosovo is regulated by legislation based on the Curriculum Framework of Preuniversity Education in the Republic of Kosovo, the Core Curricula for Three Levels of Preuniversity Education, and the Administrative Instruction on Evaluation of Students according to the Curricula of Preuniversity Education of the Republic of Kosovo.[14,15] The system

applies to all students, all public and private schools, and institutions of other education levels in Kosovo. It relies on learning outcomes defined in the curriculum framework, core curricula, and syllabi.

Internal assessment is conducted at the school/classroom level by subject teachers according to procedural description and criteria for each type of internal assessment, regulated by AI 8/2016.[16,17] The focus of internal assessment is to support students in learning to master competencies. This objective is achieved by combining formative assessment (for learning) with a summative assessment (of learning).[18] The curriculum framework for each level of education defines the period of implementation for each type of assessment, the assessment carrier/responsible person, the main goals, and ways of documenting student achievement. Exhibit 8 describes these aspects of assessment.

Exhibit 8: Internal Assessment: Goals and Documenting Outcomes

Types of Assessment and Period of Implementation	Carrier	Key Goals of the Assessment	Documenting Assessment Outcomes
Continuous assessment during the learning process (formative assessment) and at the end of every learning topic, thematic unit, or learning period (summative assessment)	Subject teachers	- Supporting learning - Information and reporting - Assigning grades - Planning for the support of continuous learning	- Documented in the teacher's register - Documented in a grade book and/or electronic journal for certain periods of school year
Final assessment, conducted at the end of the school year	Subject teachers	- Assigning the final grade at the end of the school year - Information and reporting - Planning for the support of student learning in the following year	Final grades documented in the class book, school register, and/or electronic diary, as well as in the classroom certificate
Key stage assessment, conducted at the end of each curriculum stage, at the end of Grades 2, 5, 7, and 11	MEST/DQASAL/ professional team/teachers' council within a curricular stage	- Verification of the level of achievement of learning outcomes and mastery of key competencies at the level of a curriculum stage and area - Planning for the support of student learning in the following year - Information and reporting for parents and educational institutions	- Descriptive evidencing in class books on special abstracts for the conclusive assessment of each stage being evaluated - In summary reports of professional assets and class councils

Source: Curriculum Framework for Preuniversity Education in the Republic of Kosovo.

External assessment is standardized to measure the level of achievement of learning outcomes and competencies at the end of Levels I, II, and III of preuniversity education. All of these external assessments are paper and pencil tests with multiple-choice questions. MEST/DQASAL scans the answers electronically with an optical reader.

Exhibit 9: Goals and Documentation for Each State Assessment

Standardized State Assessments	Assessment Goals	Documentation/Evidence
State assessment at the end of Grade 5	Research on aspects of education, identification of student support needs in lower secondary education, and improvement of primary level education. A comprehensive sample of 10 to 15 percent of students is assessed.	Evidenced by the central/municipal authorities for research and identification of student support needs at this level
State assessment at the end of Grade 9	Measuring the level of competency achievement and orientation for enrollment in upper secondary schools serving local/state authorities to develop the quality of teaching and learning.	Certificate at the end of Grade 9
State assessment at the end of Grade 12 State Matura Examination	Measuring the level of competency achievement and certification for continuing opportunities in higher university studies. Students who pass the Matura examination obtain the certificate of Matura examination.	State Matura Certificate

Marks for summative assessments for certain teaching/learning periods are based on two summative assessments (SA1, SA2). Summative assessments are administered in three teaching periods: September to December, January to March, and April to June. Final marks for the summative assessment of a subject for a certain teaching period are based on SA1 (60 percent) and SA2 (40 percent). Final marks of a subject are based on the arithmetic average of marks during three periods:

- Mark (1) marks average (1.00–1.49)
- Mark (2) marks average (1.50–2.49)
- Mark (3) marks average (2.50–3.49)
- Mark (4) marks average (3.50–4.49)
- Mark (5) marks average (4.50–5.00)

In 2001, the Division for Standards, Assessment, and Monitoring (DSAM) was established to develop education policies, and to develop and conduct national and international assessments in Kosovo. DSAM, now DQASAL, continues to be the main authority responsible for conducting national and international student assessments organized in Kosovo. DQASAL carries out

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professional, developmental, organizational, and technical tasks related to national and international assessments in preuniversity education.

The organization of national assessments is supported by various commissions—for example, the State Matura Commission, monitoring commissions established annually for national tests, and others. Based on institutional competencies, MED and schools contribute greatly to organizing national assessments through commission representatives and the fulfilment of the legal competencies from the framework of national assessments.

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