

Armenia

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Introduction

Overview of Education System

Article 35 of the first Constitution of the Republic of Armenia,¹ adopted in 1995, stipulates that every citizen has the right to education, education is free of charge in state secondary educational institutions, and every citizen has the right to receive professional education free of charge on a competitive basis in state professional educational institutions. The National Assembly of the Republic of Armenia adopted the Law on Education² on April 14, 1999; this law has guided the subsequent development and reform of Armenia's education system.

Use and Impact of TIMSS

In the former Soviet Union, assessments were traditional paper-and-pencil tests. Curricula and test items were more theoretical and less practical. Armenia's participation in TIMSS 2003 continued a process of reform that began in 1999, as Armenia gradually introduced the practice of testing for national assessment. Armenia's education reform included reviewing curricula and textbooks in addition to introducing new methods of assessment.

Armenia gained experience with the TIMSS testing process when the country participated in TIMSS 2007, TIMSS 2011, TIMSS 2015, TIMSS 2019, and TIMSS 2023. Participation in these TIMSS assessments led to the introduction of national assessments for different subjects. Using TIMSS methods and procedures as a guide, Armenia has implemented national assessments in Armenian language, literature, and history (known in Armenia as HAAS). Armenia has also developed and piloted national assessments in science subjects (physics, chemistry, biology, and geography; known as BAAS) and in foreign languages (known as OLAS). TIMSS has had a great impact on the process of education reform in Armenia, not only spurring the development of national assessments, but also in informing reforms related to secondary school graduation and university entrance examinations.

Due to the impact of TIMSS on pedagogical reforms in Armenia, the testing process is used widely for all subjects and includes several methods (e.g., continual assessments, final and unified exams, and national and classroom assessments). The Ministry of Education, Science, Culture and Sports has based decisions regarding curricula, textbooks, methods of assessment, and continual assessment on TIMSS results.

The Mathematics Curriculum in Primary and Lower Secondary Grades

Exhibit 1 shows the mathematics curriculum for Grades 1 to 4 and the number of hours of instruction for each topic.³

Exhibit 1: Mathematics Curriculum for Grades 1 to 4 and Associated Hours of Instruction

Grade	Topic	Hours
1	Preliminary mathematical ideas, objects, and their sets	26
	The first 10	40
	Second 10	40
2	Two-digit numbers	40
	Three-digit numbers	16
	Expressions	5
	Multiplication and division	44
	Measurements and quantities	10
	Geometry	8
3	Multidigit numbers	22
	Arithmetic operations with multidigit numbers	62
	Data, data collection, and data processing	38
4	Operations with natural numbers	50
	Fractions	22
	Geometry	22
	Quantities	26

The Science Curriculum in Primary and Lower Secondary Grades

Exhibit 2 shows the science curriculum for Grades 2 to 4 and the number of hours of instruction for each topic.⁴

Exhibit 2: Science Curriculum for Grades 2 to 4 and Associated Hours of Instruction

Grade	Topic	Hours
2	Me	15
	Me and people around me	13
	Me and nature	14
	Me and space	15
3	Me	16
	Me and people around me	12
	Me and nature	26
	Me and space	8
4	Me	8
	Me and people around me	25
	Me and nature	8
	Me and space	19

Teacher Professional Development Requirements and Programs

Since 2005, extensive teacher education courses have been conducted with the aim of making teachers leaders in education reform. To ensure effective implementation of new curricula, syllabi, standards, and assessment tools, subject-based teacher education programs were introduced in 2005, following the sequence of syllabi development. The programs have been conducted using the training of trainers model (i.e., a core group of central trainers is trained by international experts, the central trainers in turn train local trainers, and the local trainers train teachers). School-based training is conducted by school centers selected from all *Marzes* (regions) of Armenia and the National Center for Education Development and Innovation and its 11 *Marz* branches. Approximately 4,000 teachers have participated in professional development courses in various subjects, creating potential for the expansion of teacher education programs.

In the information age, as knowledge is expanding at an ever-increasing rate, the main goal of education is to produce independent learners. In the past, education emphasized rote learning; now, it is more important to navigate information and information sources, acquire practical skills, and develop and apply competencies. This process requires students to actively participate in the learning process and develop their ability to organize the learning process independently. Students may achieve these goals using both interactive and cooperative learning methods. To support teachers in implementing new cooperative learning methods in the education process, three 3-day seminars on these methods are being offered in Armenia. Additionally, ongoing courses are held to improve teachers' computer literacy.

The Yerevan Brusov State University of Languages and Social Sciences established a master's degree program in professional pedagogy in 2019. The initiation of the program has been long awaited and is extremely important for the future of assessment in Armenia, as graduates of the program will be trained professionals fully qualified in assessment and testing.

Monitoring Student Progress in Mathematics and Science

The Assessment and Testing Center organizes and implements the following:

- school graduation examinations at Grade 12
- final examinations in Grades 4 and 9
- university entrance examinations
- external assessments in sampled schools twice yearly to monitor student progress and to assist teachers in preparing classroom assessments using various testing methods
- national surveys
- international surveys (e.g., TIMSS, the Programme for International Student Assessment [PISA])

Suggested Reading

Assessment and Testing Center. (n.d.). Retrieved from <http://www.atc.am>

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- ² Ministry of Justice of the Republic of Armenia. (2015). *Law of the Republic of Armenia on education (1999)* (H. Manoukian, Trans.). Yerevan. Retrieved from <https://www.anqa.am/en/about-us/legal-field/laws/law-of-the-republic-of-armenia-on-education/#:~:text=4.,of%20the%20Republic%20of%20Armenia>
- ³ Ministry of Education and Science of the Republic of Armenia. (2004). *The national curriculum framework*. Yerevan: Author.
- ⁴ Ministry of Education and Science of the Republic of Armenia. (2004). *The national curriculum framework*. Yerevan: Author.