

Kuwait

The National Centre for Education Development

Introduction

Overview of Education System

Kuwait is an Arab Gulf state where the dream is to provide ample free education for all children regardless of gender, social class, or special education needs. The education system comprises kindergarten, primary, intermediate, and secondary schooling, followed by tertiary education, all of which are provided free of charge.¹

Despite government schooling being readily available, many Kuwaitis choose not to send their children to government schools but instead enroll them in private schools. Although private education is not funded fully by the government, it is subsidized generously.²

Kuwait has a centralized education system. Within the Ministry of Education, decision making rests with few people: assistant undersecretaries, district heads, managers, and supervisors.

Public schools in Kuwait are distributed among six education districts. Each district has a district officer who takes responsibility for teacher allocation, student assessment, and local administration. Private schools must be accredited by the Private Education Administration of the Ministry of Education, which monitors staff qualifications and school conditions.

The Kuwait education system consists of three stages: the primary stage, which lasts five years (Grades 1 to 5, ages 6 to 10), the intermediate stage, which lasts four years (Grades 6 to 9, ages 11 to 14), and the secondary stage, which lasts three years (Grades 10 to 12, ages 15 to 17). Although the government provides two years of kindergarten (ages 4 to 5), it is not compulsory.

Public schools in Kuwait and private Arabic schools follow a national curriculum in all subjects. Non-Arabic private schools follow the common curriculum for the subject of Arabic only, and follow curricula similar to those of their affiliate countries for religion and other subjects.

The official language of instruction in Kuwaiti public schools and Arabic private schools is Arabic, throughout all the stages of education and for all subjects except foreign language subjects (i.e., English, and in the arts section of secondary schools, French). Foreign private schools in Kuwait use English or the language of their affiliate country for teaching mathematics and science.

Use and Impact of TIMSS

Students in Kuwait participated in TIMSS during the 1995, 2007, 2011, and 2015 cycles. Kuwait's participation in TIMSS has been helpful in identifying the strengths and weaknesses of its education system and has led to changes in its science and mathematics curricula for public

schools. In 2015, enhanced curricula for mathematics and science were introduced. These curricula depend on competencies and standards (the National Curriculum).

TIMSS results have informed developing projects at the National Center for Education Development (e.g., school excellence, teacher licenses, and national tests), and TIMSS has changed Kuwait's views and attitudes regarding its education system toward assessment and evaluation.

In recent years, interest in education and raising the level of achievement among learners has become a top priority for the State of Kuwait at various levels, informed in part by Kuwait's performance on TIMSS. At the end of the 2017–2018 academic year, a team was formed in preparation for the next academic year, headed by the Assistant Undersecretary for Educational Research and Curriculum, Sector Director General of the National Center for Education Development. This team included several education experts from the Ministry of Education and the National Center for Education Development. The meetings with the administrative authorities intensified at both the school and district levels to specify the tasks of each party and its role in achieving the quality of education and raising the level of achievement. This approach is derived from the belief that education is a shared responsibility and an integrated system that can achieve the factors of success and an ability to compete at the highest global levels only by raising the efficiency of its administrative work. This thinking resulted in an unprecedented level of cooperation and coordination between administrative and technical bodies.

The recent focus on improving education in Kuwait involved examining a number of components and making changes to curricula, instruction, and teaching, including the following:

- The team studied the reality of the curricula in both mathematics and science in all grades throughout the three education stages. It observed a wide gap between the intended curriculum and its performance on TIMSS. Major modifications have been made to the mathematics and science curricula to achieve an approach aligned more closely with TIMSS. This approach extends to all classes and will continue in future years to bridge that gap.
- The new curriculum has made educational technology one of its primary goals and put learners at the core of the education process. The process has moved learners from mere recipients or participants to initiators.
- The new curriculum is keen on promoting self-learning and approved an educational project at the end of each educational unit that learners implement individually or within a group.
- Modifications were made to the training and evaluation methods and their mechanisms. Application skills, educational practices, and higher skills received the largest share of attention.
- The team noted that the number of instructional hours allocated to science in weekly school classes in Kuwait is among the lowest in the world. At the beginning of the 2018–2019 academic year, the number of weekly classes was doubled. This increase extended to all grades at the three education levels. In comparison with international standards, the academic year in Kuwait is relatively short and offers fewer instructional hours. It comprises 28 weeks at the primary level and 30 weeks at the intermediate and secondary

levels. Since 2015–2016, five periods per week have been allocated to mathematics instruction at the primary to intermediate levels, with periods lasting 45 minutes. Since 2015–2016, science is taught in Grades 1 to 5 in two periods per week, lasting 45 minutes each, and in Grades 6 to 9 in four periods per week, with periods lasting 45 minutes each.

- Teachers are the main pillars the success in the education process. Therefore, training programs and courses have been held to train teachers in the new curriculum. These programs and courses have been directed mainly at tackling the problems of teaching methods. Training focuses on practice, application, problem-solving, critical thinking, and creative thinking. It also promotes the use of technology to support the education process so that both the teacher and the learner are invested.
- The team noted that teachers are preoccupied with a heavy load of administrative work that reflects negatively on their level of performance and their students' achievement. Therefore, the Ministry issued a decision exempting teachers from administrative tasks or seconding him to any other authority.

Finally, the Ministry has taken an interest in making learners aware of the importance of TIMSS, emphasizing that the assessment relates to Kuwait's reputation and international reputation. Based on the importance of the media in marketing and spreading awareness at all levels, promotional media campaigns were conducted throughout the school year in which TIMSS 2019 was conducted. A media committee invested in mass and social media, as well as field visits and direct meetings, and extended its campaign to include school administrations, teachers, learners, parents, and society in general, using technical means and innovative techniques.

The Mathematics Curriculum in Primary and Lower Secondary Grades

The mathematics curriculum in Kuwait was revised prior to 2014. The revised mathematics curriculum was implemented gradually, beginning with Grade 1 in the 2015–2016 academic year, followed by Grades 1, 2, and 6 in 2016–2017; Grades 3 and 7 in 2017–2018; and Grades 4 and 8 in 2018–2019.

By the end of Grade 4,³ students are expected to have studied the following mathematics topics:

- Numbers and Operations—Recognizing and counting numbers up to 9,999,999; place value; comparison and order; simple operations (addition, subtraction, multiplication, and division); simple fractions; decimal fractions; and problem solving
- Algebra—Properties of addition and subtraction; rules for identifying patterns and solving equations; and solving open sentences
- Measurement—Measuring weight, length, area; calculating circumference, area, and volume; and reading and writing time
- Geometry—Recognizing shapes; types of triangles; intersecting, parallel, and perpendicular lines; and symmetry
- Statistics—Reading graphical representations and becoming familiar with range, median, mode, and mean

By the end of Grade 8,⁴ students are expected to have studied the following mathematics topics:

- Rational numbers
- Ratio and proportion
- Factors and multiples
- Fractions
- Decimals and percentages
- Algebraic expressions
- Mathematical sentences
- Basics of statistics and probability
- Transformation geometry, including reflection, translation, and rotation
- Geometry of quadrilaterals
- Parallelograms
- Triangles and circles
- Congruency
- Measurement related to length
- Volume and area
- Problem solving, or application of these curricular topics
- Principles of statistics and probability

The Science Curriculum in Primary and Lower Secondary Grades

The science curriculum in Kuwait was revised prior to 2014. The revised curriculum was implemented gradually, beginning with Grades 1 in the 2015–2016 academic year, followed by Grades 1, 2, and 6 in 2016–2017; Grades 3 and 7 in 2017–2018; and Grades 4 to 8 in 2018–2019.

The new curriculum is based on international concepts but is built in such a way that students learn the concepts through activities and practical experience.

By the end of Grade 4, students are expected to have studied the following science topics:

- Life Sciences and the Environment: Personal habitat, classification, environmental preservation, public health, parts and functions of plants
- Natural Sciences: Sound, light, heat, magnetism, pollution, simple concepts of electricity
- Earth and Space Sciences: Earth’s layers, fossils, earthquakes, volcanic weathering, rock types

By the end of Grade 8, students are expected to have knowledge of the topics covered in the primary grades; most concepts are different from what students covered in primary grades. At this level, the curriculum is divided into three sections—Life Sciences, Natural Sciences, and Earth Sciences—and covers the following topics:

- Life Sciences: Photosynthesis, simple organisms, tissue structure of the cells, mutation heredity, mutations, human body systems, reproduction in simple organisms
- Natural Sciences: Elements and compounds, mixtures and solutions, features of material, acids and bases, electricity, chemical formula, solubility, chemical bond, chemical equation, reflection and refraction, laws of motion, source of energy, energy transformation
- Earth Science: Air pressure, weathering and erosion, types of soil

Professional Development Requirements and Programs

There are no requirements in Kuwait for teacher education specific to mathematics and science or for professional development. However, the Ministry of Education conducts continuing education programs for teachers.

As teachers are central to the success of the education process, programs and courses have been held for teachers to train them in the new curricula. These programs and courses are mainly directed at teaching methods and focus on self-learning and learners' self-reliance; practice, application, problem solving, critical thinking, and creative thinking; and the use of technology to support the education process.

Monitoring Student Progress in Mathematics and Science

In Grades 1 to 4 at the primary level, student assessment is done at the end of each learning unit, and short examinations are introduced to determine whether students would pass or fail, in addition to worksheets and oral evaluations that teacher are administering continuously. Students pass a class when they obtain 40 percent of the total grade. Grade 5 has final exams.

At the intermediate and secondary levels, students are required to pass examinations to be promoted to the next grade.

At the intermediate level, the school year is divided into two periods, and standardized tests are administered at the end of the first and second periods at the school district level. Students are promoted to the next grade if they obtain 50 percent of the total grade in every subject. If students fail three subjects or fewer, they take a second test in these subjects after two weeks.

At the secondary level, the academic year is divided into two periods. In the first and second periods, tests are administered at the school district level, and national standardized tests are administered in all public and private schools in Kuwait.

In Grades 10 to 12, final examinations are carried out at the Ministry level. Under this system, students accumulate final examination grades based on their performance in Grade 10 (10 percent), Grade 11 (20 percent), and Grade 12 (70 percent), instead of a single summative examination. At Grades 10 and 11, these tests are scored in schools through a system of collective correction; there is a control room in each school, and students' names are kept confidential. At Grade 12, examinations are scored at the national level, and the technical supervisors and teachers

responsible for scoring gather in a central place to complete the correction process. Names of students and their schools are kept confidential (i.e., replaced by identification numbers).

Students in Kuwait have participated in three large scale studies using standardized tests, in addition to TIMSS in 1995, 2007, 2011, 2015, and 2019:

- The Progress in International Reading Literacy Study (PIRLS; 2001, 2006, 2011, and 2016)—An international study that assesses reading literacy at the fourth grade
- MESA (2012, 2013, 2014 and 2020)—A national study managed by the National Center for Education Development to assess student performance in Mathematics, English, Science, and Arabic.

Special Initiatives in Mathematics and Science Education

With regard to mathematics and science at the fourth and eighth grades, there is no specific standard of emphasis that all schools follow. Some schools have developed progress sheets for low and high performing students that track performance trends in mathematics and science.

In appreciation of the importance of improving student achievement and performance in mathematics and science, a number of initiatives involving national assessment have been introduced at the Ministry level in coordination with the National Center for Education Development. In the 2014–2015 school year, Kuwait entered a five-year contract with the World Bank, aiming to address all issues related to different subjects in its education system, including mathematics and science (e.g., curriculum development, teaching strategies, and teacher skills enhancement).

Suggested Readings

Ministry of Education, Planning and Information Department. (2014). *Educational statistical group*.

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