

**Exhibit 19: Processes for Approving Eighth Grade Instructional Materials for Mathematics and Science**

Reported by National Research Coordinators

Country	Description of Process
Armenia	A competition is announced for selecting a textbook and the Ministry of Education and Science chooses and approves textbooks.
Australia	No process for approving instructional materials
Bahrain	Instructional materials are approved by the Curricula Directorate in the Ministry of Education. For mathematics, this includes student exercises and teacher guides. For science, this includes student textbooks, practical activity textbooks, and teacher guides.
Botswana	Publishers are given the curriculum to produce learning materials. A special committee, composed of mainly teachers and education stakeholders, is formed to evaluate such materials for use.
Canada	There are processes for approving instructional materials in all of the provinces except Newfoundland and British Columbia. In Quebec, the Bureau d'approbation du matériel didactique (BAMD) evaluates and approves instructional materials using criteria approved by the Minister (developed in accordance with the orientations and content of programs of study that have received ministerial approval). In Alberta, any proposed instructional materials go through an internal evaluation before they are signed off to be authorized. In Ontario, the Trillium List lists textbooks approved for use in Ontario schools. These textbooks have been evaluated and approved for congruence with curriculum policy, and comply with detailed criteria for content and format. English language and French language schools have a separate list of approved textbooks.
Chile	Approval of instructional materials such as textbooks, workbooks, and online materials occurs every four years. Textbooks are developed by different publishers and the Ministry of Education teams (CPEIP, DEG, and UCE) select two or three of the textbooks submitted by publishers. Then, an external institution selects one of these textbooks. Materials are also corrected every year by ministry professionals; textbooks and workbooks are improved every year when they are reprinted and online materials are corrected constantly.
Chinese Taipei	Before publication, textbooks have to be reviewed and approved by the Textbook Reviewing Committee set up by the National Academy for Educational Research authorized by the Ministry of Education.
Egypt	—
England	No process for approving instructional materials
Georgia	The National Curriculum and Assessment Center has a rigorous and uniformly applied process for approval of textbooks and instructional materials. Experienced, practicing classroom teachers, and higher education faculty knowledgeable about research on mathematics/science learning and teaching analyze the textbooks.
Hong Kong SAR	Mathematics and science textbooks are vetted by appropriate Textbook Reviewing Panels of the Education Bureau's Textbook Committee, made up of experienced teachers. Publishers may submit proposed mathematics and science textbooks to the Education Bureau for review. Textbooks that comply with the curriculum and acceptable standards are classified as "Recommended" and are included in a Recommended Textbook List as a reference for schools.
Hungary	Textbooks must be accredited by the Ministry of Education's Educational Authority.
Iran, Islamic Rep. of	Mathematics and science textbooks are evaluated by Mathematics Council and Science Council in the Organization for Educational Research and Planning, respectively. Approved textbooks are then accredited by the organization.
Ireland	There is no process for approving instructional materials. However, the National Council for Curriculum and Assessment provided discussion fora with the draft specifications for publishers in the early stages of the curriculum developments for mathematics and science. This practice was intended to support publishers in developing instructional materials that reflected the philosophy and aims of the curriculum.
Israel	Textbooks and other learning materials are developed by not-for-profit organizations, universities, commercial agencies, and publishers, and approved by the Ministry of Education. The approval process for instructional materials involves review by anonymous experts of pre-published versions to evaluate the compatibility of the instructional material content to the discipline at hand, the pedagogical and didactical aspects, the syllabus, and the curriculum policy. Although the criteria are curriculum-based, there are various approved materials for teachers to choose from.
Italy	No process for approving instructional materials
Japan	Textbooks must pass a sequence of evaluations before receiving approval for use in Japanese schools. First, companies submit drafts of proposed textbooks to the Ministry of Education, Culture, Sports, Science and Technology. There they are checked in accordance with the Courses of Study by an official council composed of university professors and teachers. Once revisions are complete and the textbook has received approval, local boards of education select books from a list of authorized textbooks for schools under their jurisdiction. The authorization process is generally conducted every four years, with results presented to the public the following year.
Jordan	Textbooks and e-material teacher guides are developed by experts, reviewed by the steering committee, and approved by the educational council.
Kazakhstan	Textbooks for mathematics and science instruction are approved by Ministry of Education and Science of the Republic of Kazakhstan.
Korea, Rep. of	Textbooks are developed based on education guidelines pursued in the curriculum of the Ministry of Education (MOE). For middle and high schools, mathematics and science textbooks are developed by publishing companies and authorized by the MOE. Among these authorized textbooks, schools choose proper textbooks for their students. Online materials are provided by the office of education. For science, digital textbooks were developed for Grade 7 and piloted in research schools.
Kuwait	Textbooks are approved by the educational research and curricular sector at the Ministry of Education before circulation to schools.
Lebanon	The Educational Center for Research and Development (ECRD) elaborates the national curricula to be followed and adopted by all schools for the Lebanese official baccalaureate. It is the only authority that can evaluate textbooks or instructional materials. Public schools refer to ECRD approval to adopt any instructional materials. Private schools have confidence in the ECRD point of view, but can make their own decisions on whether or not to accept materials or textbooks.

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2015

A dash (–) indicates data not provided.

**Exhibit 19: Processes for Approving Eighth Grade Instructional Materials for Mathematics and Science (Continued)**

Country	Description of Process
Lithuania	In order to be included in a textbook database, a textbook must receive positive reviews from independent experts and confirmation of the Lithuanian language committee, stating that the textbook corresponds to the language standards. The choice of the textbook used for learning is the responsibility of the teaching staff. Schools and teachers can choose from a wide range of textbooks in the database.
Malaysia	Instructional materials are evaluated by the Ministry of Education, field tested in schools, and then distributed to schools.
Malta	In state schools, the Department of Curriculum Management provides a specific textbook for a specific subject. However, individual schools and/or teachers are free to choose and/or purchase other resources (online or textbooks).
Morocco	Textbooks and other digital and didactic materials are accredited by the Ministry of National Education.
New Zealand	No process for approving instructional materials
Norway	No process for approving instructional materials
Oman	An authority needs to approve textbook development. During the authoring and development process, appropriate educational materials for science activities are selected, a tender is put out for these materials, then they are distributed to the schools.
Qatar	Teachers use standardized textbooks distributed by the Ministry of Education and Higher Education.
Russian Federation	Acting and new textbooks, as well as educational and methodological support materials (workbooks, online materials), are reviewed by experts in terms of their correspondence with standards adopted in 2011 for mathematics and science by the Russian Academy of Sciences, Russian Academy of Education, methodologists in mathematics, and experienced teachers. A federal list of textbooks is recommended for school use based on this review.
Saudi Arabia	Instructional materials are approved by Mathematics and Science Project Managers, the agency of development, and the Minister of Education.
Singapore	For each revised syllabus, publishers are invited to develop and publish textbooks and activity books/workbooks for use in schools. These materials undergo a stringent review and authorization process by the Ministry of Education. Only those that meet the quality standards and requirements of the respective syllabuses are approved.
Slovenia	Textbooks and workbooks used in schools must be approved by the National Expert Council for the General Education. To be approved, textbooks and workbooks are independently reviewed by subject matter specialists regarding content, coverage of the curriculum objectives, and design, and assigned by the Ministry for Education.
South Africa	The national Department of Basic Education compiles a catalogue of Learning and Teaching Support Material (LTSM) which includes a variety of learning and teaching materials (wall charts, workbooks, textbooks, e-books, readers, stationery, science kits, dictionaries, encyclopedias, etc.). The process of LTSM development may be undertaken by commercial companies, non-governmental organizations, and Open Educational Resource initiatives, as well as by internally producing/commissioning the development of LTSM for subjects where necessary, i.e., state publishing. The national and provincial departments of education only provide materials that pass appropriate evaluation and quality standards.
Sweden	No process for approving instructional materials
Thailand	The Institute for the Promotion of Teaching Science and Technology (IPST) is the independent authority under the Ministry of Education responsible for the development of national curriculum, educational media and tools, standard and quality assessment on science and mathematics education. IPST is also tasked with re-training teachers and students, promoting science talents, and advising mathematics and science education policy.
Turkey	All textbooks must be approved by the Board of Education. In the approval process, an expert commission examines the textbooks electronically with respect to standards. This system is called the panel system. Apart from the panel system, instructional materials are examined by commissions constituted in the Board of Education.
United Arab Emirates	Inspectors check all instructional materials and review a series of textbooks and online materials from neighboring countries.
United States	States use one of two methods to select the textbooks and materials used in their schools. The majority of states allow school districts or schools to choose the textbooks they will use. A number of states (19 states in 2015) have a process for approving or recommending textbooks and materials to be used in local districts and schools. The school district role in approving textbooks also varies. School districts in many of the states have a process for approving or recommending textbooks and materials, while other districts leave the decision to individual schools. The Common Core does not specify which instructional materials should be used.

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Country	Description of Process
<b>Benchmarking Participants—Responses Pertain to Benchmarking Provinces/Emirates/States</b>	
Buenos Aires, Argentina	No process for approving instructional materials
Ontario, Canada	Ontario has a Trillium List containing the textbook titles approved by the Minister of Education. The textbooks have been evaluated in accordance with criteria specified in the Guidelines for Approval of Textbooks. Key eligibility criteria include the following: congruence with curriculum policy; provision of a teacher's resource guide; a Canadian orientation and product; and detailed criteria for content and format. Ontario has separate lists of Ministry approved textbooks for the English-language schools and the French-language schools.
Quebec, Canada	The Bureau d'approbation du matériel didactique (BAMD) evaluates and approves instructional materials using criteria approved by the Minister and developed in accordance with the approved orientations and content of programs of study. Seven aspects are taken into consideration in evaluating instructional packages submitted for approval: pedagogical aspects, sociocultural aspects, material aspects, advertising aspects, toponymical aspects, conventional aspects, and appropriateness of religious content. The approval system ensures that all materials comply with the provisions of the Education Act that concern instructional materials. The Ministère posts only the official list of approved materials on the BAMD website.
Abu Dhabi, UAE	Textbooks and other teacher and student support materials are developed either in-house or with a publisher specifically for the Abu Dhabi government schools. These resources are subject to approvals for content, pedagogical approaches, and for cultural appropriateness for the UAE context.
Dubai, UAE	For mathematics, H. H. Sheikh Mohammed Bin Rashid Smart Learning initiative - using an iPad in learning in public schools - has been approved. For science, textbooks are approved by having a look at neighboring countries' textbooks and online materials series and making comparisons. The use of technology is in the teachers' guide.
Florida, US	Policies and procedures for the adoption of instructional materials are developed annually by the Department of Education. Selected subject areas are called for adoption each year on a rotating basis. Prior to each adoption, the Department of Education publishes the Instructional Materials Specifications for the subjects to be adopted. These specifications outline the courses for which materials are being sought, as well as the standards that those materials are expected to meet. State Instructional Materials Reviewers review and evaluate the materials submitted for adoption. The Commissioner of Education may accept the recommendations or amend them. Each county (Local Education Agency) may choose which materials to purchase from the adoption list. Florida schools and school districts must purchase adopted materials through the publisher's Florida depository.

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