

## **KOREA**

JU-HO LEE, *Minister of Education, Science and Technology*: Korean parents have a very strong passion for their children's education. This is because they want their children to learn the skills required for the 21<sup>st</sup> century.

TITLE: "Strong Performers and Successful Reformers in Education: Korea"

YANG-OK AHN, *President of the Korean Federation of Teachers' Associations*: In 1996, the Korean government introduced a plan to enhance education with ICT in schools. And in 2005, we began distributing and utilizing ICT technology in classrooms, and widening the scope of teachers' duties.

TEXT SLIDE: The objective of "Smart Education" is to digitalize Korea's entire school curriculum by 2015. The program is designed to respond to 21<sup>st</sup> century education challenges by moving from uniform and standardized education to diversified, creativity-based learning, while at the same time bridging the education divide by making access available to all.

JEONG-MIN NOH, *Researcher, Korea Education and Research Information Science (KERIS)*: The primary reason that the Korean government created this policy was to produce a 21<sup>st</sup> century workforce, capable of cooperative learning and better communication of their ideas to others.

TEACHER: *Now we have reviewed what we learned in the last class, so let's move on to a new subject. All students connect to the Internet.*

JU-HO LEE: It is well known that Korean students achieve excellent results in assessments such as PISA. One of the reasons for this strong performance is the intense competition in university entrance exams because there is fierce competition to enter college. Parents want to send their children to the best universities, so students work very hard to achieve good results in these entrance exams.

STUDENT: *Number three: the gravity is the same in each location. If you hit the ball upwards, it falls down, which is an example of gravity.*

INN-WOO PARK, *Professor, Department of Education, Korea University*: In the past, students could prepare for university entrance exams with "passive" learning. However, now things have changed and "passive" learning is no longer a good way to prepare for the exams. Approaches to learning are changing, and when students are given an opportunity to use ICT they learn "actively". They learn how to think independently and creatively, and how to meet the challenges of our new era and develop a new learning capacity, which Korean students were previously lacking.

TEACHER: *There are circles and straight lines, these lines are called "a", "m", or "n". So for this relationship we can use the value "d". Does anyone know the value of "d"?*

CHA-MI KWON, *Teacher, Ku Il Elementary School*: In the past, a strong student was one who was able to remember what he or she had learned, and filled out correct answers in tests. Future skills will require students not just to have a good memory and write down what they have memorized. They will need to be able to select what is useful from various sources of information, and then assimilate that data as their own, and recreate it as their own. Digital textbooks can help students achieve this.

TEXT SLIDE: The Digital Textbook project was launched in pilot phase in 2007 and is now being tested in more than 130 selected schools around the country. The plan is to extend digital textbooks to all elementary schools in 2014 and to all lower and upper secondary schools in 2015.

JU-SHIN SONG, *Teacher, Ku Il Elementary School*: *Here is the first clue. Here is the second clue. Move quickly, here is the third clue.*

JEONG-MIN NOH: Instead of the end result being the acquisition of knowledge by children, the digital textbook project aims to help children engage with others in developing their knowledge. Korean children can lack communication skills and understanding of others. They can also have difficulty understanding other people's perspectives. This is because our traditional education has been one-sided and focused on individual learning. In Korean society we used to think it was sufficient to just obtain knowledge and answer tests correctly. The digital textbook is a very basic tool to produce students with these abilities and one of the basic elements that can be used to promote this kind of learning in the classroom.

JU-SHIN SONG: *Everyone turn around. Tell me a country that is less well known.*

STUDENT: *Ukraine*

TAE-JE SEONG, *President of Korea Institute for Curriculum and Evaluation (KICE)*: Until now, the textbooks that we have been using have been paper-based. But in modern education we need integrated and fluid information instead of fixed information, the ability to actually execute this knowledge, and the ability to observe something and synthesize different knowledge. We need to teach all of this. Paper-based textbooks can contain old information, but in digital textbooks you can add or delete information as often as you want, and at any time.

JU-SHIN SONG: Unlike traditional textbooks, which just have static pictures, digital textbooks can have images and video, which makes more effective learning possible for children. Another internal function of digital textbooks is the "memo" or "note". Using the pen with digital textbooks, you can do highlighting, writing, and erasing, like in a memo or notebook. And you're not limited to just taking notes. Afterwards, you can forward what you have written to the teacher for review. The teacher is

able to review everything instantly. So it's a more effective way for teachers to assess how the students are doing. In the past, after the students complete their assignments, the teacher had to collect their work and read what each one had written individually.

TEACHER: *Pay attention, let's have our class leader conclude the class.*

STUDENT: *Attention. Bow to the teacher.*

ALL STUDENTS: *Thank you for the lesson.*

TEACHER: *Let's put the computers away.*

JU-HO LEE: The biggest obstacle to carrying out "Smart Education" in Korea is likely to be financial. Every student in every classroom will have to be equipped with a digital textbook. There are so many students in Korean classrooms. On average, more than 30 students in each class. The cost of providing all these devices for every student will be very high. I'm not sure that our government will be able to afford that. Developing an inexpensive device to provide to every student will be an important issue.

SEOK-CHAN SONG, *Principal Seok Jeong Middle School*: The aim of cyber education is to provide students with a ubiquitous learning environment, allowing them to study regardless of their location or the time of day.

TEXT SLIDE: In 2005, Korea launched its Cyber Home Learning System to enable students to access lessons and curriculum assignments interactively from home. In addition to bridging school and home, this system is designed to provide more equitable access to educational materials.

TEXT SLIDE: The digital textbook and Cyber Home Learning System initiatives are meant to complement each other. Policy makers hope the combination will reduce pressures on parents to spend large sums on providing their children with private supplemental tuition.

ONLINE LEARNING: *When two objects have friction between them, do they always generate the same type of electricity?*

SEOK-CHAN SONG: Cyber home learning will be very helpful, mostly for students from low-income families. Students from affluent families can go to private learning centers, but students from poor families have a hard time. A particular teacher will be assigned to these students for cyber home learning after school. So if students have any questions, or wish to learn more, they can get assistance. I anticipate there will be a lot more development of this in the future.

STUDENT, *Seok Jeong Middle School*: If I post questions on this website, other children can help me with answers. And teachers can give comments and help. It's convenient because even though we are far away from each other, we can work together.

ONLINE LEARNING: *Let's look at the environment in European countries. How have they made use of their natural resources? What kind of industry is suitable for their environment? Use the mouse to find out what kind of industry developed in Europe.*

JEONG-MIN NOH: After school, many Korean students take lessons at private education centers, and receive additional tutoring from private instructors at these education centers. One major purpose of the government's digital textbook project is to curtail the expense of this private education. By offering high-quality educational material through digital textbooks, like with cyber home learning, we hope we can reduce that expense and eradicate the need for private learning after school.

CHUL-KYUN KIM, *President, Korea Education and Research Information Service (KERIS)*: The group using digital textbooks demonstrated better skills in problem solving and in self-directed studying compared to the group that did not use digital textbooks. We also observed that the performance of economically disadvantaged groups improved more than other groups. In addition, we found that students using digital textbook concentrated better on the content than those using normal paper textbooks.

TEXT SLIDE: Field studies conducted over a two-year period among 110 elementary schools showed improvements in the academic performance of students using the digital textbook.

YANG-OK AHN: I anticipate that in the future, teachers who cannot meet the new demands of students will have a lot of difficulty in their teaching positions in school. Therefore I believe that digital textbooks are an inevitable trend that everyone will follow.