

JAPAN

MASAHARU NAKAGAWA, *Minster of Education, Culture, Sports, Science and Technology*: Instead of educating people to work in a uniform manner in factories, we need in the future to thoroughly develop students' individual creativity, and by educating students in this direction, we can ensure the sustainable development of Japan, as well as creating the foundation for Japan to build a new identity as a nation.

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

ETSUYA KANAMORI, *Deputy Minister of Education, Culture, Sports, Science and Technology*: There is a criticism of Japanese education, that it is too regimented and teaches students how to act based on standardized manuals. However, in the March 2011 earthquake and tsunami disaster, there are cases where children acted independently and made appropriate judgments which helped them to survive the crisis, and children who led elderly people and very young children to evacuate. We want to encourage these attributes in our children.

SAWAKO YUFU, *Waseda University, Faculty of Education and Integrated Arts and Sciences*: After the 1980's, there were major changes in Japanese society. For example, up until then, many people assumed that getting a good education would ensure a good life. However, after the 1980's, this was not necessarily true. Your status and position in society were no longer guaranteed by your educational background. As a result, more students were dropping out of the school system, and we had many other problems in education. Also, another huge concern was what to teach in school. Before this time, academic abilities based on the accumulation of knowledge were the main focus of education. But after the 1980's. our thoughts shifted to how to apply this knowledge. This was a drastic change.

YASUAKI KUBOTA, *Director, Budget Policy Division, Junior High Schools Principals' Organization*: As our society changed dramatically, new challenges arose which could not be addressed by the major subjects taught before, such as Japanese, mathematics, science and social studies. For example, environmental education, communication technology, or international relations. In which subjects can we teach this content? That was the great debate that arose.

STUDENTS: *Good afternoon.*

TEACHER: *Sit down. Be quiet.*

YASUAKI KUBOTA: Also, as we have discussed, problem-solving skills are not easy to teach in regular academic subjects. Therefore, we decided we should promote classes which would focus on real experience.

TEXT SLIDE: In the late 1990's, to help students develop critical thinking and problem-solving skills, the government introduced a new approach called "Integrated Learning". This requires students to study topics from different viewpoints and draw links between what they observe.

ETSUYA KANAMORI: Integrated Learning was started so that students could understand through experience and experimentation what they studied in each academic subject, and strengthen and deepen what they learn in life.

MASAKI OKAJIMA, *Deputy Director, Japan Teachers' Union*: Integrated Learning is multi-disciplinary. Using issues that are closely linked to the community, students come up with their own themes. Integrated Learning teaches students how to investigate, conduct research, and present their findings back to the community and their peers.

STUDENT: *We donated these wheelchairs to the Sansankan Nursing Home, by collecting aluminum cans and recycling them for money.*

MASAKI OKAJIMA: In other words, we emphasize learning that focuses on students' independent engagement. For example, each school chooses its own themes based on issues their community faces, such as human rights, community issues, or environmental problems.

MISAKO SUZUKI, *Teacher, Karakuwa Junior High School*: With the recent earthquake and tsunami, the so-called safety myth of nuclear power collapsed. As a country, we're facing the time when we have to think about energy more seriously. Right now, we don't have an energy shortage. But where will we find energy sources in the future? Not just by relying on nuclear power, but by thinking about alternatives. I think we have to develop children with new perspectives.

SAWAKO YUFU: Education for Sustainable Development is what we call this initiative to cultivate Japanese youngsters, who have the talent and ability, to respond to current global trends by combining independent thinking, creativity, and problem-solving skills. Of course, it must be based on academic skills. But you must be able to utilize this academic knowledge to solve problems in society.

CLASS SPEAKER: *So today, we're going to learn about the basic aspects of radiation. Through a lecture and experiments we will conduct, we will try to understand what it is.*

ATSUSHI TOYAMA, *Head Teacher, Karakuwa Junior High School*: I am the one who designed the Education for Sustainable Development program at Karakuwa Junior High. I made it so that our students in junior high school would think about how they would like to build a society in the year 2050, forty years from now, when they are grown up.

CLASS SPEAKER: *I'm aware that radiation is likely to provoke bad impressions. But there are good aspects of radiation. I'd like to introduce that in this class.*

MISAKO SUZUKI: The students are in the middle of our Integrated Learning course, thinking about whether nuclear power is needed or not. In terms of getting information, they will listen to many different speakers.

CLASS SPEAKER: *Actually, there is radiation in this room. We will measure it later. But we cannot hear it, right? We cannot smell it, we cannot see it, and we cannot taste it. So we cannot touch it, feel it. So why are we afraid of radiation? It's because we cannot sense it, with our senses.*

ATSUSHI TOYAMA: For today's class, we had a lecturer from Tohoku Electric Power Company. He briefed the students about the beneficial sides of radiation, and also what kind of effects it causes to the human body. Next Monday, a person from a local environmental group will visit our school, and talk about how radiation and waste from nuclear plants are harmful to the human body and the environment.

STUDENT: *They have not found any place to put nuclear waste generated by nuclear power plants. If we inhale it, what should we do? We're talking about harmful radiation, very powerful, so it's not easy to treat it. That's why, in Aomori, there is a plant constructed to treat the nuclear waste.*

KATSUMI SHIRAHAT, *Superintendent, Kesennuma City Board of Education*: After the students study radiation, they are supposed to be able to make an independent judgment about the data. Students are learning how important it is to analyze data about a critical problem happening so close to them. They will be very careful about looking at this data with their own eyes, thinking about it, verifying it, and making a presentation.

MISAKO SUZUKI: *You have been very frightened about radiation, haven't you? But now you've started to understand radiation better. And now with this knowledge, how are you going to live your life? Kaito, please speak up.*

KAITO: *I support nuclear power. If we start relying on thermal power, the years that we can produce oil on this planet are limited. The time is getting shorter and shorter. Oil prices will keep going up, so our electricity bill will keep going up.*

YASUO KOMATSU, *Principal, Karakuwa Junior High School*: In Integrated Learning, students learn to survive in this rapidly changing society. Students need to determine what the problem is and analyze the information. And based on that, they need to make their assessments, think independently, and express what they think. These skills are required for them to live in this society.

MISAKO SUZUKI: *Any other opinions? Anyone? I would be happy if any of you expressed yourself.*

STUDENT: *I'm presently against nuclear power plants. Of course we can rely on nuclear energy, and nuclear power plants can produce energy, but I think we cannot rely on it forever. However little information we have about natural energy sources, I think it's better for us to use them.*

MISAKO SUZUKI: *Some of you support what he said, others are against it, isn't it interesting?*

MISAKO SUZUKI: I'd like to create an atmosphere in the class where it's OK to have a critical point of view. It's not a bad thing to have an opposing viewpoint. They are not ready for this yet, but I observe each student and often encourage those with opposing critical views to express themselves. And recently, however few, there are some students with critical viewpoints, who speak up and say "I would like to do it this way", or "Isn't it that way?"

TEXT SLIDE: Many Japanese students still struggle with open-ended tasks requiring students to creatively integrate different school subjects. But over the last decade Japan has seen the greatest improvement in this area among all high-performing nations.

TEXT SLIDE: Japanese students now read more for pleasure than in 2000 and do better in tasks requiring the creative use of knowledge. The in 2009 PISA tests, they scored an average 520 points in reading, 529 in mathematics and 539 in science. This put Japan among the top eight education systems assessed worldwide.

MASAHARU NAKAGAWA: After the tsunami came, schools were used as evacuation centers. When the local people were evacuated to the schools, school principals and teachers played a big role in guiding them through to survive this disaster.

MASAKI OKAJIMA: Teachers did their best to assist and support evacuees. Teachers are good at managing large numbers of people, and also understand the community. And they did a good job in many evacuation centers. School is not only a place used for educating. It also serves as a community center and an evacuation center, and a place where people strengthen their ties to each other.

PARENT OF STUDENT, *Karakuwa Junior High School*: My children were evacuated to a middle school. My children were helped by teachers and local people. We lived separately for a month. During that time, many people helped us. We are deeply grateful to them for what we have now.

MASAHARU NAKAGAWA: Education, which provides children with a zest for living, has a significant role in our effort for recovery from earthquake. But today, Japan is taking rapid and firm steps towards creative recovery. I'm sure that in a few years, you will see Japan in a renewed and improved state. The future is in the hands of

the children, it is a mission to provide them, through education, abilities to learn, think and contribute to the prosperity of the future world.