

Lesson Study for Better Learning



Elementary school classroom in Zambia. Whatever their surrounding is, children are always eager to learn.

In Zambia, school teachers are recently trying to improve the quality of education by incorporating Japan's "lesson study". Lesson study is a mechanism in which teachers observe classes with related persons inside and outside of school and consider approaches to improve classes and their own teaching skills. In Japan, it has spread gradually since the Meiji Era, and is now commonly practiced at schools. Japan's experience is being used in faraway countries in order to provide children with better education.



Bulungu Secondary School is huge; each class has more than 40 students.

IDEAS FOR DIFFICULT LESSONS OF SCIENCE AND MATHEMATICS

Bulungu Secondary School is located in the town of Mumbwa, a 2-hour drive from Lusaka, the capital of Zambia. It is a large school with more than 40 students per class. Njekwa Mumdia who teaches science to third graders of junior high school writes today's theme, "Density", on the blackboard.

The leader of each of six groups takes a graduated cylinder with water, a pebble, a string and a scale. Mumdia instructs them: "Sink the pebble in the graduated cylinder, check the scale and record how much the water surface is raised." The students started to discuss with each other in low voices.

It seems like an ordinary lesson, except for lines of teachers of other classes in the rear and sides of the classroom. One of the teachers explains, "This is a lesson study". They are checking in Mumdia's class if their ideas are effective.

When the lesson is over and the students have left for lunch, the teachers move their desks together and start reviewing the lesson. "Incorporating the experiment makes it easier to understand." "But only a few students really understood the concept of density." "We should have given them more time to think before showing the answer." They exchange opinions referring to the evaluation chart. Head teacher Annie M. Njovu also joins the discussion, "It is meaningless

unless the children can apply what they have learned to outside of the classroom."

LESSON STUDY BY TEACHERS FOR TEACHERS

"Zambia is one of the few countries in Africa where the lesson study is incorporated as a system", says Expert Kazuyoshi Nakai who has been supporting educational reform in the country for more than 10 years. He was a teacher at a public junior high school in Shizuoka Prefecture before taking a step into the world of international cooperation 22 years ago. He taught science in the Solomon Islands as a member of Japan Overseas Cooperation Volunteers, and then made efforts to improve science and mathematics education in Kenya and the Philippines. What Nakai now tries to develop in Zambia is "lesson study" that he worked on in Japan.

Although the school enrollment rate has exceeded 90%, the issue in Zambia is that many students fail to keep up with lessons and drop out. One of the causes is the lack of teaching skills. There is no budget for assembling teachers from remote areas for training. If that is the case, why not establish opportunities for teachers to learn mutually at their schools? The lesson study for which Japanese teachers have worked hard was optimal for solving this issue.

Mumdia and his students learn about density. Exercise follows explanation.



Once the lesson is over, teachers gather to review their experimental session.



PHOTOS: ATSUSHI SHIRUYA



A teacher supervising individually walking through the students. One of the efficient teaching methods.



Nakai has been in Zambia for 10 years. He is relied on by his partners for his experience in Japan as a teacher.



Banda aligns the experiment kit with technicians of his centre.

However, Nakai says, "At first, it was difficult to change their way of thinking." Because the teachers had been stuck with the environment where training was something that should be planned by the Minister of Education and daily allowance was supposed to be paid, Nakai has been prepared to confront the difficulties in persuading teachers that it was possible to carry out training at school even without money if they actively exchange ideas.

HANDMADE EXPERIMENT KIT

However, as if to eliminate such worry, there were school teachers who found lesson study significant. One of them is Benson Banda who taught science for many years and currently is the Principal Education Officer of National Science Centre in Lusaka. The Centre is under control of the Minister of Education and engaged in training for science and mathematics teachers and development of teaching materials.

When Banda opened the door to the room that he was eager to show us, the entire room echoed with a sound like construction noise. Many workers were sawing lumber and joining large iron plates. "The accumulation of lesson study has revealed that practical lessons would be difficult without the minimum experiment equipment. However, it

was not realistic to establish a science room when there were not even enough regular classrooms. Therefore, "mobile experiment kit" was developed with JICA Senior Volunteers." It is a movable shelf containing beakers, alcohol lamps, electrical wiring components, test tube stands, etc., virtually a "mobile science room". The device is distributed to and used at schools throughout the nation, and highly appreciated by teachers.

Banda says, "I was impressed by the passion of Japanese teachers when working with Nakai and earning a master's degree at Graduate School of Hiroshima University as a long-term trainee of JICA. I was totally determined to promote the same passion in Zambia through the lesson study."

Here is an episode in which Nakai witnessed such determination. One day, they were about to leave for monitoring of a school which is practicing the lesson study. When Nakai and his group offered to accompany them, Banda confidently declared, "We are going on our own today, because the teachers would expect more than they should if the Japanese came. We have fully acquired the know-how of the lesson study, so you don't have to worry." This convinced Nakai that this country will have a great potential once the lesson study is established as a system. Since then, he has provided assistance strictly as a behind-the-scenes supporter.



Some schools organize morning sessions and afternoon sessions apart to satisfy the necessity of classrooms for all the students. They sometimes give lessons outside.

OPPORTUNITY TO THINK TOGETHER AND SHARE INFORMATION

Victoria Falls, an hour flight from Lusaka, is one of Zambia's famous tourist spots. In Livingstone where it is located, professionals engaged in education in each province of Zambia are having a meeting in the conference room of a public facility. They assemble four times each year in order to share approaches including the lesson study and find solutions for issues. Chief Education Officer Esvah Chizambe of the Teacher Education insists, "An opportunity to share opinions like this is valuable. Education should exist for the sake of children. In order for that, we must do our best to improve it."

Next day, at Linda West Elementary/Junior High School in the vicinity where children welcomed guests with cheerful greeting and dancing. In a mathematics class, they were learning root calculation. They copied the questions written on the blackboard in their notebooks and solved them, and Mekiwe P. Mutambo checked the answers. Teachers of other classes were observing in the rear of the classroom again.

"It was good to summon students to the blackboard and have them write answers." "It seems like students didn't have enough time to finish calculation. Maybe it's better to give less number of questions." After the lesson, the teachers had a heated discussion. They unanimously said, "There used to



Linda West Secondary school: Yoshie Hama taking part in a post-classroom discussion. She is an advisor of the Ministry of Education of Zambia and working for educational policy including Lesson Studies

be no opportunity for sharing information, and we were often struggling alone. Sharing ideas can improve our lessons."

Thus, the lesson study has spread throughout Zambia and will be incorporated among teacher training schools for further establishment. Nakai emphasizes, "The Zambian people have realized the necessity and incorporated the lesson study on their own instead of just being cooperated by Japan, which was the key to success. The motivated teachers are the assets of Zambia's education."

Children genuinely want to "learn", and teachers make their utmost efforts to make it come true. Zambia's field of education will achieve dramatic progress in the near future.