Issues Concerning Teachers in Teaching Subjects: Based on Teaching of Arithmetic in Palau and Japan

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1. Public schools in Palau

- The school year starts in August. There are four terms.
- There are 13 elementary schools (1st grade to 8th grade). Unification of schools is under way.
- Class size: Big schools (3): about 30 students Small schools (10): fewer than 10 students
- Basically, homeroom teachers teach all subjects. At some schools, subject teachers teach upper-grade students.

2. Elementary school teachers in Palau (math)

- As there are no teacher training colleges or a certificate system as in Japan, very few teachers have specialized knowledge such as effective teaching methods or child psychology.
- They sometimes do not understand the content of the subjects they teach. Therefore they sometimes teach only perfunctorily.

For these reasons, many teachers in Palau face the following issues:

- 1. Teachers sometimes do not fully understand the content of the units and areas they teach.
- 2. Teachers' instructions are not sufficient for students to master the content of the lesson.
- 3. They do not know how to use teaching tools effectively.

Case 1: (Issue 1) Teachers sometimes do not fully understand the content of the units and areas they teach.

Palau

In teaching division, when the divisor is a single-digit number, children can use the multiplication tables to calculate, but if the divisor has two digits, children find it difficult to figure out the quotient. They have to round the divisor and the dividend and multiply and subtract in their heads. Therefore when the divisor has two digits, many children find the problem too difficult to solve.

When children calculate on paper and have to subtract by borrowing, they tend to get lost. Teachers themselves may not fully understand the essential points.

Many teachers in Palau do not know where children are likely to make mistakes. In the case of arithmetic, teachers tend to assume that children who make mistakes do not understand the entire unit, but this is not always the case.



Japan

In Japan, many teachers know where students tend to make mistakes and what the important teaching points of each unit are, but teachers with little experience may not be able to identify exactly where students fail to understand. The same applies to teachers in Palau. When teachers cannot teach a subject with confidence, studying teaching material is a heavy burden for them. When teachers have to teach a different grade, it is a good opportunity for them to understand the sequence of the subjects, but if they have to prepare for all subjects and study the learning content, this can also be a great burden for teachers, particularly for those with little experience. This is also an issue with regard to primary school teachers in Japan.

As the recent revision of the course of study shuffled the learning content across grades and introduced "repeated spirals" of learning, not only teachers with little experience but also veteran teachers find it difficult to remember what is taught in which grade, or what their students have already learned. Every time the course of study is revised, classroom teachers must work hard to understand what is taught in the grade they teach and to make sure the content they teach is

linked to what the students have already learned and what they will learn.

Case 2: (Issue 2) Teachers' instructions are not sufficient for students to master the content of the lesson.

It is important and effective to repeat teaching the content that you want children to learn, such as arithmetic, but if students do not understand the content and repeat the same mistakes, repeating the same lesson may work negatively as students lose their motivation. Some teachers in Palau do not know effective methods for teaching these students.



Japan

Through various opportunities, teachers learn teaching tips that help students' understanding, but teachers cannot take enough time to provide individualized instruction and to make sure the students who are falling behind can fully understand the learning content. For example, in arithmetic, children fail to understand for different reasons. Students often need individualized instruction. Some understand with supplementary explanation. Others need a step-by-step explanation of how to solve the problem. Using figures and semi-concrete examples may be effective. Reviewing the content that they have already studied may help, too. Teachers have to pay attention to how each child is reacting in order to provide appropriate instruction.

Although teachers recognize the importance of individualized instruction, they cannot always take time to help students fully understand the content.

3. Comparison between Palau and Japan in terms of the issues of teachers in teaching subjects

I was dispatched to the Palau Ministry of Education as a member of the Japan Overseas Cooperation Volunteers (JOCVs), and when I visited schools to observe classes, I found that many teachers in Palau have the same problems I have described. I also found Japanese teachers face many problems similar to those of the teachers in Palau.

I was in Palau for one year and nine months. During that time JOCVs provided advice to the teachers there on teaching methods and the use of teaching tools, which brought about changes in how they taught in the classroom. I

also recognized that the support given by former JOCVs had taken effect and that many teachers in Palau had gained confidence in teaching.

At Japanese schools, too, we often get ideas from experienced teachers. For those with little experience, the time spent exchanging information and getting advice is extremely important. Teachers are, however, often burdened not only with classroom teaching but also with providing guidance and dealing with other duties at school and cannot concentrate on teaching.

Through my experience, I learned that both Palau and Japan lack sufficient human resources.

In Palau, the Ministry of Education does not have enough staff members who play a key role in conducting teacher training. Some small schools with only one class do not have experienced teachers to train younger teachers.

In Japan, many senior teachers are in their 50s. Those who have worked at the forefront of education for many years will retire in several years. To fill the gap, elementary schools, particularly in urban areas, are significantly increasing the number of teachers they recruit. Training these newly employed teachers is a major issue. Annual in-service teacher training conducted by national and local governments is effective, but teachers can definitely improve their skills through school-based training. More than ever, teacher training in Japan must recognize the importance of experienced teachers' roles in helping develop young teachers' skills.

Comparing the two countries, I realized that classroom teachers face similar problems. Probably, the same applies to every country in the world.

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Tomoko Udagawa teaches at Saitama Municipal Sashiogi Elementary School. After graduating from university in 2002, she taught at public elementary schools in the city of Saitama for six years. She joined the Saitama City Mathematics Circle and developed her math teaching skills. In 2008, she was dispatched to the Republic of Palau's Ministry of Education under the Japan Overseas Cooperation Volunteers' special program for in-service teachers. In cooperation with local mathematics specialists in Palau, she visited public primary schools and gave advice and conducted workshops for teachers to help them improve their math teaching methods. She also created textbooks on developing number concepts, mainly for lower primary education. In 2009, she participated in wide-area training for Micronesia, the Marshall Islands and Palau. In 2010, she resumed teaching in Saitama at Sashiogi Elementary School.