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Takako Suzuki

1.Introduction

Decades of effort towards universal education have brought about a rapid expansion of access to primary education for large populations in developing countries. Today, one of the most significant remaining issues is to increase the quality of education, especially for the most disadvantaged groups—the poor, rural communities, ethnic minorities, and girls. In remote areas where these groups live, primary schools are often organised as multigrade schools.

Multigrade schools, in which teachers are responsible for two or more grades simultaneously during one lesson period, are often in remote areas, because there is no way for children to gain access to other schools (Berry, 2001). Multigrade schools often accommodate the most vulnerable children, such as poor children, girls, and minorities. Multigrade teaching is found in most countries over the world (Little, 1995). The prevalence of multigrade teaching is higher than most people imagine.

Multigrade teaching is not a phenomenon exclusive to developing countries; we can find multigrade schools all over the world. Multigrade teaching is not uncommon in industrialised countries: for instance (2001), 42% of students in Ireland were in multigrade classrooms, along with 40% in Australia's Northern Territories, 40% (1988), 35% in Norway (c. 2000), 34% in France (2000), 25% in England (2000), 14% in the Canadian province of New Brunswick (2003) (Little, 2006) and 10.52% in Japan: 10.52% (MEXT, 2006). In Canada, 5,600 out of 33,000 classes were multigrade in 1991, and in France, 17,800 out of 52,000 primary schools were multigrade in 2000 (Brunswic and Valerien, 2004). In Japan, 2,406 out of 22,878 primary schools included multigrade classes, and 849 schools contained only multigrade classes in 2006 (MEXT, 2006). All 47 prefectures had schools with multigrade classes. Multigrade schools were found not only in rural areas but also in the capital: there were nineteen multigrade classes in Tokyo. There was a school having only one class for six grades until 2005. The role of multigrade teaching is important not only in developing countries but also in industrialised countries.

The prevalence is even higher in developing countries, including the following: 78% of primary schools were multigrade in Peru (1998) (Hargreaves et al., 2001); in India, 62.03% of primary schools were multigrade (1998) (Swarnalekha, 1999) and 84% (1996); in Sri Lanka, 63% of all schools consisting of more than five grades have less than four teachers (1999) (Little, 2001); in Laos, 64% of schools are multigrade (2003); in Mauritania, 39% of pupils study in multigrade classrooms (2002); in Burkina Faso, 36% of schools are multigrade (2000) (Little, 2006); and in Zambia, 26% of basic schools are multigrade (1984) (Suzuki, 2008). In Benin, 17.09% of 4,329 schools had only one or two classes in 2000 (Brunswic and Valerien, 2004). In Nepal, the teacher-school ratio is 3.8 at 5 graded primary schools in 1998 (MOES, 2000). In other words, on average, only 3.8 teachers are available for 5 grade groups at one primary school. Thus, the role of multigrade teaching in achieving quality EFA is significant.

Because of the significant prevalence of multigrade teaching, various kinds of assistance have been provided to support it, including teacher training and material development. This assistance is often based on experience in industrialised countries. However, there are significant differences between the characteristics of multigrade teaching in industrialised countries and the characteristics in developing countries. First of all, in industrialised countries multigrade teaching arises because of demand-side issues such as low student enrolment in remote areas. In contrast, in developing countries it is a result of supply-side issues such as a shortage of teachers, a lack of facilities, or poorly qualified teachers. As a result, the quality of education in these settings is low, and consequently the achievement of students also low.

Second, there are often special policies and support for multigrade teaching in industrialised countries, while there are often no such policies or support in developing countries. According to the literature discussed in the next section, 5 out of 21 developing countries studied did not have official policies for such special arrangements. Thus, there are often no special political directions indicated for multigrade teaching, and multigrade teaching is often not accounted for in national education systems. Multigrade teaching is often not included in teacher training curricula, and teachers do not receive incentives or support for multigrade teaching. As a result, each teacher has to create his or her own teaching methods to solve the problems that arise in multigrade settings, adjusting the official monograde education systems. Consequently, the practice of multigrade teaching varies widely from classroom to classroom, and the ad hoc methods developed sometimes cause pedagogical problems.

In these circumstances, this study has two research questions. First, are needs in multigrade teaching in developing countries different from those in industrialised countries? Second, although pedagogical support is the main type of support provided for multigrade teaching, are other kinds of support needed as well? In order to answer these two questions, this article provides a comparative study of multigrade teaching environments in Japan, Nepal, and Zambia. Here, Japan represents an example of an industrialised country, and Nepal and Zambia represent examples of developing countries.

2.Policy Environments

There are only few developing countries which clearly state specific policies for multigrade teaching. The reviewed literature indicates that, despite significant numbers of multigrade schools (including percentages as high as 78% in Peru (1998), 63% in Sri Lanka (1999), and 62.03% in India (1998)), only five countries have adopted clear policies indicating their position and policies for multigrade teaching (Table1).

Five countries (Colombia, Indonesia, the Philippines, Uganda, and Vietnam) have formally adopted clear policies on multigrade teaching and recognise the role of multigrade teaching as a form of pedagogy in its own right. In 1967, the government of Colombia issued a decree promoting the Unitary School concept for all schools in sparsely populated areas with one teacher. This concept outlines how multi-grade classrooms can be taught by one teacher. The concept has been promoted by UNESCO as a methodology to address the myriad of problems faced by educators working in rural areas (Colbert et al., 1993). Indonesia gives a unique status to multigrade schools and single-teacher schools through legislation. Students in multigrade and monograde schools should be evaluated in the same way, and the community is required to contribute to multigrade teaching (Birch and Lally, 1995). In the Philippines,

Table 1. The prevalence of multigrade teaching and the availability of specific policies in 21 developing countries

Countries	Prevalence of multigrade teaching	Policies
Bangladesh	high (1989)	
Belize	35.27% (1993)	
China	12.12% (1986)	
Colombia	n/a	√
India	62.03% (1998)	
Indonesia	20,000 schools (1989)	√
Jamaica	n/a	
Korea	7% (1982)	
Liberia	n/a	
Malaysia	1,540 schools (1989)	
Maldives	high incidence (1989)	
Mexico	22% (1980s)	
Nepal	teacher-student ratio 3.8 (1998)	
Pakistan	teacher-student ratio 2.3 (1989)	
Peru	78% (1998)	
Philippines	5% (1993)	√
Sri Lanka	63% (1999)	
Thailand	n/a	
Uganda	n/a	√
Vietnam	17% (1999)	√
Zambia	26% (1984)	

Source: Birch and Lally, 1995; Colbert et al., 1993; Cummings, 1986; Hargreaves et al., 2001; Lally, 1995; Little, 2001, 1995; Lungwangwa, 1989; Miguel and Basarga, 1997; MOE, 2000; Odyek-Ocen, 2000; PROAP, 1982, 1989; Ratnaike, 1987; Swarnalekha, 1999; Tatto, 1999; Wright, 2000

the government has formulated policies for organising more multigrade schools (Birch and Lally, 1995). In order to be included as part of the National Development Plan 1993-1997 of the Department of Education, Culture and Sports (DECS), multigrade teaching was legitimised as a national policy. This was meant to expedite complete national coverage for primary schools offering grades 1 to 6, according to DECS Order No. 38, s. 1992, entitled “Improving access to elementary education by providing complete grade levels in all public elementary schools though combination and/or multigrade classes” (Miguel and Basarga, 1997).

In Uganda, following the findings of the Education Policies Review Commission, set up to formulate new policies for education to match real needs in 1987, the Ministry of Education and Sports has included multigrade teaching as one of the systems meant to solve the problem of mass education (Odyek-Ocen, 2000). Similarly, in Vietnam, the government has legitimised the existence of multigrade schools by a 1993 law. The law regulates some teaching strategies. Teacher training for minority children and extra salary for multigrade teachers were included in the law. At the same time, multigrade schools are required to accept all children who wish to enter school, and grade repetition and student dropout are not allowed (Birch and Lally, 1995).

On the contrary, the other 16 countries in Table1 do not have clear policies for multigrade teaching (Birch and Lally, 1995). Although multigrade schools in these countries are relatively common, they do not attract enough attention to prompt the formulation of clear policies. Some countries have specific policies for rural education or indigenous minorities, but no explicit policies regulate multigrade teaching.

Birch and Lally's (1995) review of the policies for multigrade teaching in seven countries (China, Indonesia, Malaysia, Nepal, Pakistan, the Philippines, and Vietnam) and a workshop on "Managing Schools for Better Quality" with nine participating countries (Bangladesh, Cambodia, China, Laos, Mongolia, Myanmar, Papua New Guinea, the Philippines, and Vietnam) reveal that some countries do not have any policies for multigrade teaching at all (Lally, 1995). In China, based on special policies relating to minority groups, some innovations in multigrade teaching have been introduced (Birch and Lally, 1995). In India, a 1986 national policy programme, called "Operation Blackboard," envisaged a special scheme for improving the conditions of small schools in rural areas (Goyal, PROAP, 1989). In Mexico, the National Modernisation programme for the rural poor was established in the early 1990s. It was followed by the National Agreement to modernise education and the Education Development Programme in 1995. However, these policies are not directly related to multigrade teaching (Tatto, 1999a). In Peru, very similarly, the Quality of Rural Education Improvement Project (PMCER, in its Spanish abbreviation) started in 1998, aiming to eliminate the administrative isolation of rural teachers through a new education network (Hargreaves et al., 2001). However, no clear statement on multigrade teaching was included in these policy statements.

3.Research Methods

I have conducted field research in three countries. In Japan, 3 schools in Aichi and Nagano prefectures were visited in 1997, 2004 and 2005. In Aichi, there are 457 multigrade schools and 71 in Nagano (2007). In Nepal, 14 schools in Nuwakot and Kavre districts were visited between 2000 and 2002. In Kavre, 84.71% of all primary schools are multigrade (2001), and 94.66% in Nuwakot (2000). In Zambia, 5 schools in 3 districts in Central Province were visited in 2004, 2005 and 2009. In Chibombo district, 70.26% of all primary schools are multigrade; in Serenje district, the figure is 80.33%, and in the provincial capital Kabwe, it is 36.11% (2008). In addition to reviewing the literature and secondary data, I conducted interviews with teachers, and observed multigrade classes in the schools visited. These prefectures and districts of the three countries were selected because of their high prevalence of multigrade teaching in each country and relatively easy access from the nearest urban cities.

4.Multigrade Teaching in Japan

One of the major causes of multigrade teaching in Japan is the small number of students in a class due to a decrease in the number of children and migration from remote areas to larger cities. Based on the criteria for class organisation regulated by the national government, more than two grades are allowed to be combined at the municipal level. Law 116-3 regulating the class organisation at public basic schools and the standard number of teachers (1958) states that, when the total number of students in two grades is less than 16 at a primary school or less than 8 in grade 1, a multigrade class should be created. This law is a baseline, but each prefecture has the flexibility to make its own arrangements. Therefore, some prefectures follow the national criteria and others adjust according to

their own situation. For example, in Aichi prefecture, classes are multigraded when the total number of students in consecutive grades is less than 18 (less than 7 at grade 1) (Suzuki, 1999). When the total number of students in two consequent grades is less than 9 (less than 4 at grade 1), the class is to be multigraded in Nagano prefecture (Interview in 2008).

As Table 2 shows, the literature details five patterns of multigrade practice. Hokkaido Education Research Centre (2001) classified multigrade practice into three patterns. The first is same unit teaching, where a teacher teaches the same subject and the same unit to students in several grades. Same unit teaching can be classified into two sub-categories: same contents teaching and similar contents teaching. In the former, a single-grade curriculum spiral is reformed into a two-year cycle spiral curriculum, and the teacher treats the students from two grades as a single two-year cycle grade and teaches them together. In the latter, the teacher follows an original single-grade spiral curriculum, but differentiates the levels of the content and targets according to each grade.

The second pattern is called whole class teaching. This is often used for physical education and music, which require a certain number of students to participate in class activities. In some cases, each grade practices separately and is put together at the end, and in other cases, mixed teams, including several grades considered to be of equal ability, are created to play games. This method is primarily used in activities where the different skill levels of different grades need not be taken into account.

The third pattern is called *teaching by each grade*. While a teacher works on material with one grade, the other grade is given self-learning exercises, directed by a class leader. The teacher moves between the two classes by turn.

The Nakashibetsu primary school (2001) divides teaching by each grade into three subcategories, based on the way the teacher moves from class to class: (1) flexible visits according to the learning levels of the students; (2) planned moving, with four frequent visits; and (3) a main direct teaching class (where the teacher is physically present most of the time) and an additional indirect teaching class (where the teacher is not physically present most of the time and where the students engage in self-learning activities). The categories and subcategories described in the literature add up to five patterns of multigrade teaching in Japan.

In our field work, we observed a P.E. class for grades 5 and 6 that was conducted with whole class teaching and same unit teaching in Village B in Nagano Prefecture. There were two teachers (the grade 5 teacher and grade 6 teacher) in the class. Therefore, it was a combined class rather than a multigrade class. There were three students (one boy and two girls) in grade 5and seven (one boy and six girls) in grade 6. Two teams consisting of five students each were formed for class play. The teachers initially combined the teams by considering the ability and gender of the students, but two grade 6 students took the initiative and led the students themselves to form different teams later. During the class observation, one of the teams won once, lost three times, and tied once. The grade 6 teacher said that students are not differentiated by grades but instead by their size and physical ability, and indeed it was not clear merely by observation what grade each student was in. The curriculum is made up of ten lessons over a two-year cycle, and the unit is spiralled over two years.

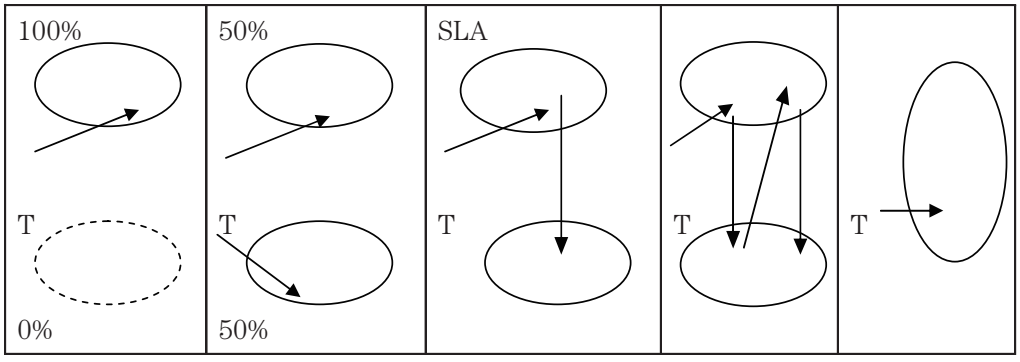
Table 2. Multigrade practice in Japan

	Types of teaching	Class management
A	Same unit teaching	Same or similar content, with differentiation by grades
B	Whole class teaching	Same content provided to all grades together
C	Teaching by each grade, with frequent visits	The teacher visits two classes frequently during a lesson period.
D	Teaching by each grade by turns	The teacher teaches a grade for a half of school time and goes to the other class for the other half.
E	Teaching by each grade, with focus on one grade	Direct teaching for one grade on any given day, with the other grade engaged in self-learning.

5.Multigrade Teaching in Nepal

The features of class organisation in Nepal are shown in Figure 1. In the first pattern, teachers divide their teaching time over the course of a day between the number of grades they have to cover, and teach each grade individually. This means that schools move from a multigrade arrangement to a monograde set-up, so that multigrade teaching within the school becomes invisible. With the other patterns, multigrade teaching is more visible. In the second pattern, teachers divide a lesson period in a multigrade class into two equal time periods, and teach each grade separately. With the third pattern, one class is considered the main class to be taught, and the other is treated as an additional class. In the additional class, teachers assign a self-learning activity (SLA) during the first few minutes of the period, before going on to teach the main class; the main class is the focus of the teacher's concentration. In the fourth pattern, a teacher visits different classrooms frequently during a single period. The fifth pattern is the equivalent to the whole class teaching method used in Japan; in most schools, this pattern is in use only for extracurricular subjects.

Figure 1. Five patterns of multigrade practice in Nepal



The differences among the five patterns are caused by the different degrees of teachers' responsibilities for multigrade teaching. The different seating arrangement for the students and the grade combinations of multigrade teaching create different space and time boundaries for multigrade

classes. These conditions determine the extent of teacher responsibility for multigrade teaching. Table 3 summarises the characteristics of the five patterns, including features of class organisation and the degrees of responsibility for two or more grades simultaneously.

In pattern one, students from different grades are seated in different classrooms. The teachers divide their teaching day by the number of grades they have to cover, and teach each grade individually, one after the other. The first pattern, by dividing the teachers' time into the number of classes they have to cover, shifts the school from a multigrade school to a monograde school. The class is not identified as multigrade, and so multigrade teaching is physically invisible. Therefore, the teachers do not realise their responsibility for two or more grades at the same time. Part of the students' time in each grade group is sacrificed, but the teachers do not realise their responsibility for the time students are idle.

Table 3. The characteristics and diversity of multigrade class organisation in Nepal

Pattern	Features of class organization	Identification of the class as a multigrade class	Responsibility for two or more grades simultaneously	Control of student time on task during self-learning time
1	Sharing the time of teachers for all 5 grades			
2	Dividing the lesson period into two	√		
3	Using a main teaching class and an additional SLA class	√	√	
4	Frequent visits	√	√	√
5	Whole class teaching	√	√	√

In pattern two, students from different grades are seated in the same classroom. These two grades are identified by the teacher as a multigrade class. The multigrade class is physically visible, so that the teachers know that they have to deal with two or more grades during the same lesson period. However, they do not realise their responsibility for two or more grades at the precisely same time. Teachers divide the lesson period of the multigrade class equally into two time sections and teach each grade group separately, as if they were teaching two monograde classes. As a result, they do not provide SLA and do not occupy the time students are idle.

In pattern three, two or more grades are treated as a multigrade class. One grade is considered the main teaching class, and the others, additional classes. The teachers recognise their simultaneous responsibilities for both grades. For the additional class, they provide an SLA at the beginning of the lesson period and feedback at the end. However, they fail to control the additional class, because there the SLA does not have enough material to cover a 45-minute lesson.

In pattern four, the teachers also recognise their responsibility to simultaneously control a multigrade class. The teachers visit two or more grades frequently during one lesson period. The grades receiving these frequent visits during a lesson period are identified as a multigrade class. The teachers realise their responsibility and provide an SLA whenever they leave one grade. By visiting and checking all grades frequently, they control the student activity during work on the SLA.

In pattern five, the grades grouped together during a lesson period are identified as a multigrade class. Subjects such as sports, music, and art are taught to a whole class. The teachers in pattern five identify two or more grades as a whole class and teach them together. The teachers are responsible for the grades simultaneously. All students of the multigrade class receive direct teaching from the teacher and their activities during the lesson are controlled.

6.Multigrade Teaching in Zambia

Research conducted by the University of Stockholm in 1982 identified the considerable number of ungraded schools in remote areas as one of the constraints on providing universal education in Zambia (Lungu, 2001). Due to the low number of children, the government could not upgrade these schools which contained fewer than seven grades to full primary schools. Thus, multigrade teaching methods were introduced to provide primary education for the first time in these ungraded schools. Although there was no official statement in the education policies, in October 1984 the Ministry of Education designated Malcom Moffat Teachers' College as a centre for multigrade teaching to identify suitable teaching methods for Zambian multigrade schools, as a part of a project. Three key teaching staff at the college were influenced by their multigrade experiences in Australia, the United States, England, Germany, and Sweden. A pilot project was conducted in four selected schools to experiment with multigrade teaching.

After several experiments, three multigrade options were recommended (Lungwangwa, 1989). The first is a *subject-grouping option*. Subjects such as music, arts, religion, and social studies are taught to all grades together at the same time. This is whole class teaching, just like the pattern 5 in Nepal and type B in Japan.

The second is the *subject stagger option*. The subjects in the timetable which require a good deal of teacher-student contact are staggered with those requiring little contact. Each grade separately studies different subjects in the same period. This option contains main and self-learning classes, just like the patterns 3and 4 in Nepal and types C, D, and E in Japan.

The third is a *common timetable option*. Although children of all classes study the same subject during a lesson period, the learning contents are differentiated by grades. Each grade does its own work separately. This is just like pattern A in Japan.

Newly developed manuals and in-service teacher training for multigrade teaching added a fourth option (Shiaka, 2001), called *integrated day*. In this pattern, a whole day is completely open for self learning, in which each student works on anything he or she likes, with teachers serving as facilitators. Currently, these four patterns of multigrade practice are recommended by the in-service training for multigrade teaching.

In the field research, seven multigrade classes were observed. One of classes was a model class and the model teacher used the common timetable and subject grouping options. In other ordinary teachers' classes, I observed all of the options except integrated day. Schools probably do not have enough self-learning materials or facilities for students to study alone for an entire day.

The most popular option of other ordinary teachers was the subject grouping option. In this option, the teachers can teach multigrade classes as they would monograde classes. Some teachers use the subject grouping option even for core subjects.

The common timetable option was also popular, but many teachers did not make any differentiation

between different grades. The common timetable option without differentiation is in essence monograde teaching. The teachers are in fact teaching as if their classes were monograde. However, the classes are in reality multigrade. Students are sometimes taught subjects for which they have not received the necessary prerequisite information; others have to repeat same lessons several times. In my class observation, I see a gap between the ideal models and classroom reality.

7. Comparison

Table 4 contrasts the practice of multigrade teaching in the three case study countries. Whole class teaching and main and sub-classes are quite common in all three countries. On the other hand, there patterns one and two are seen in Nepal and Zambia but not in Japan. Some teachers divided a lesson period into two periods; others divided the whole school day among the teachers.

Table 4. Comparison of multigrade practice in the three case study countries

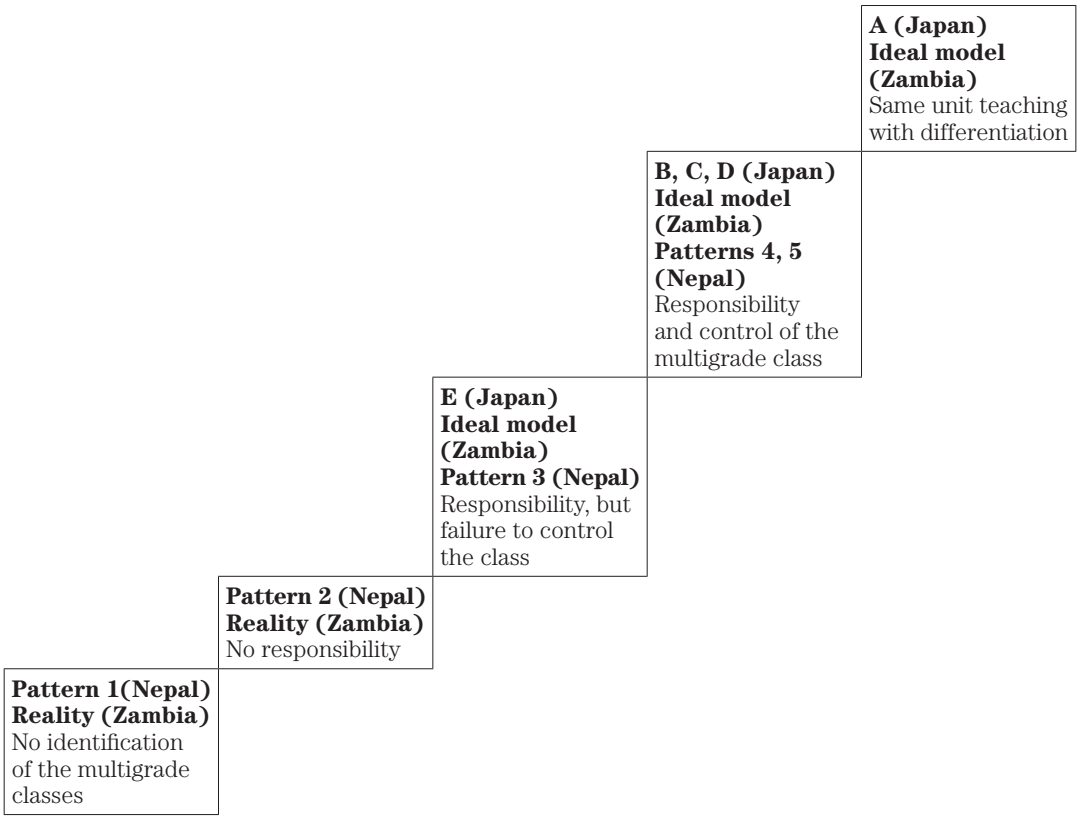
Zambia	Nepal	Japan
Integrated Day (free class)		
Common timetable option (Same unit teaching with differentiation)		A (same unit teaching with differentiation)
Subject grouping option (whole class teaching)	Patten 5 (whole class teaching)	B (whole class teaching)
	Pattern 4 (frequent visits)	C (frequent visits) D (by turn)
Subject stagger option (main and sub-classes)	Pattern 3 (main and sub-classes)	E (main and sub-classes)
Observed in the classroom, although they are not officially authorized there	Pattern 2 (time divided into two periods)	
Observed in the classroom, although they are not officially authorized there	Pattern 1 (time divided by the number of teachers)	

Taking into account the characteristics of the patterns and the level of the teachers' realisation of their responsibility for multigrade teaching, the five patterns of multigrade class organisation allow the construction of a ladder (Figure2). The degree of conscious responsibility for multigrade teaching increases from the left-hand side (pattern one) to the right (pattern five and type A). With pattern one, class is not identified as multigrade; as a result, the teachers do not realise their responsibility for the multigrade class. With pattern two, the class is identified as multigrade; however, the teachers still do not realise their responsibility for the multigrade class. The teachers following pattern three realise their responsibility, but fail to control the class taught indirectly. The teachers using pattern four realise their responsibility and succeed in controlling the multigrade class. The teachers applying pattern five identify two or more grades as a whole class and teach them together. Same unit teaching with differentiation can be applied even to core subjects. In short, there is a difference in the degree of the

teachers' realisation of their responsibility for multigrade teaching.

In the light of the research questions in this study, we can see the difference between Japan and the other two countries. The classified patterns in Japan are located in the upper parts of the ladder, while those in Nepal and Zambia tend to be in the lower parts of the ladder. Multigrade teachers in Japan tend to recognise and understand multigrade teaching and face their own multigrade reality. On the other hand, there are some teachers in Nepal and Zambia who do not understand multigrade teaching and avoid multigrade teaching, pretending that their class is monograde. This does not mean that the models on the right-hand side of the figure represent ideal multigrade practice, but it does illustrate the difference in multigrade practice between the countries. Multigrade practice is varies across countries, schools and classrooms. Naturally, needs are different in different settings.

Figure 2. Ladder of multigrade teaching



8. Conclusion

The broad prevalence of multigrade teaching calls for various kinds of assistance for multigrade teaching. This assistance is often based on the experience in industrialised countries, but there are significant differences between characteristics of multigrade teaching in industrialised and developing countries. Therefore, this study aimed to answer the following two research questions through

comparative study conducted in Japan (as an example of an industrialised country on the one hand) and Nepal and Zambia (as examples of developing countries on the other):(1) Are needs in multigrade teaching in developing countries different from those in industrialised countries? (2) Although pedagogical support is the main type of support provided for multigrade teaching, are other kinds of support needed as well?

This study concludes that the context and practice of multigrade teaching in developing countries are different from those in industrialised countries. As mentioned in the first section, multigrade teaching is not uncommon in the world, but its context is different in industrialised and developing countries. The most significant difference is whether or not multigrade teaching is recognized in the national education system. Despite the significant contribution of multigrade teaching to access to and equity in high-quality education, many developing countries do not include policies about multigrade teaching in their education policies and programmes. This makes multigrade teaching in industrialised countries different from such teaching in developing countries.

This study aimed to describe difference in multigrade practice between industrialised countries with special policies and developing countries without specific policies, through a comparative case study of Japan, Zambia, and Nepal. If a school in Japan adopts multigrade teaching, it is mostly likely because there are not enough children in a particular class. This is an issue of education recipients: the required demand is less than the supply. In contrast, if a school in Nepal or Zambia adopts multigrade teaching, it is most likely because there are not enough teachers for a class. The required education supply is less than the demand. When the supply side is short, the quality of education service could be adversely affected. On top of that, multigrade teaching is neglected and no concrete support is provided. As a result, classroom practice depends on the individual teachers, and the techniques used are quite diverse. When compared with developing countries, Japan's specific policies indicate positive diversity, and Nepal and Zambia's lack of specific policies shows negative diversity in terms of teachers' responsibility.

Just as the practice is different in industrialised and developing countries, so too are their needs different. The multigrade teachers in Japan are supported with legal statements and basic assistance for multigrade teaching, and as a result they understand the concept of multigrade teaching. Therefore, they are prepared to benefit from the introduction of pedagogical inputs such as new teaching methods and class activity ideas.

On the other hand, in the other two countries, there is not enough support for multigrade teaching, and the context surrounding multigrade teachers thus does not allow the teachers to use special methods for multigrade teaching. Some teachers in these two countries do not recognise that they are actually teaching multigrade classes. In these circumstances, even if pedagogically well considered multigrade teaching methods are introduced, these teachers will not see the necessity of introducing them to their classrooms. As a result, their classrooms may not change, unless they are led to recognize multigrade teaching before the introduction of pedagogical multigrade teaching methods.

The observations in Zambia particularly revealed that multigrade classes are often monograded in practice even when teachers do understand multigrade teaching. This is because, for these teachers, monograde teaching may be the only kind of class management they know; in some cases, they may believe that monograde teaching is better than multigrade. Even when high-tech methods are introduced, they are misunderstood and their use is distorted to match monograde strategies. When

multigrade classes are incorrectly treated as monograde, there will be contradiction in practice, as there are several grades in a class in reality. You can imagine the negative impact this will have on the quality of education.

Therefore, educational programmes, such as training and materials based on the standard model, may not fit the needs of diverse contexts of multigrade teaching—even those settings with lower teacher responsibilities. In particular, any strategy for multigrade teaching will not work for teachers who do not recognise the fact they are actually working with multigrade classrooms. When a programme is not fit to the real needs of teachers, we can hardly expect great impacts in the classroom. Thus, we must understand this difference as the specific context of multigrade teaching and develop effective innovations.

Although pedagogical support is the main type of assistance currently provided to improve multigrade teaching, the concepts and recognition of multigrade teaching must be understood prior to the introduction of innovative teaching methods. The main disadvantage of multigrade teaching from monograde teaching is the constraint on learning time of students, which determines quality of education (Lockheed et al., 1991). There is a significant difference in the amount of time given to each grade in different classrooms. The students in some of the multigrade classrooms tend to receive less teaching-learning time than those in monograde or well-organised multigrade classes. In order to boost the learning time of students in multigrade teaching, the way a multigrade class is organised should be improved. Improving multigrade teaching practice is an issue deeply related to the quality of education, so we need to carefully observe the practice of diverse multigrade teaching in developing countries.

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