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Cascade model for teacher training in Nepal

Takako Suzuki

1. Introduction

The teacher is the most decisive factor in the qualitative improvement in primary education (Mortensen, 1992). A large number of unqualified teachers are the crucial obstacle to improving the quality of education in just beginning courtiers (Andrews et al., 1990). Teacher training is a direct means to enhance the quality of teaching and student achievement. In-service training is one of the strategies for improving the knowledge and skills of unqualified teachers already employed (Lockheed et al, 1991). For example, a study in the Democratic Republic of Congo indicates that in-service training has improved the French reading test scores of students in Grade 8 (Biniakunu, 1982).

When in-service training is delivered, the cascade model is often used. The cascade model means that the 'training messages flow down from experts and specialists through several layers of personnel and eventually to the teachers' (Dove, 1986: 230). It has been used for many years, particularly in industry and commerce (Department of Education and Science, 1988).

As anything else, the cascade model has advantages and disadvantages. Some are positive for the model and others are negative as mentioned below. It could be cost-effective but may only bring poor effects in the targeted practice. Even though it is economically advantaged, if teachers don't change their practice at classroom at last, no training could be cheaper than conducting meaningless trainings. Thus this study tries to examine whether trainings provided by the cascade model is effective through a case study conducted in Nepal.

2. Advantages and disadvantages of the cascade model

The cascade model has some advantages. It has impressive multiple effects and is economical with regard to material and training. It can deliver a large number of trained teachers relatively quickly and to reduce the cost of training. It is a strategy for training large numbers of people within a limited period of time (Department of Education and Science, 1988). Therefore, it is suitable for staff development and the training of facilitators (McDevitt, 1998).

Despite its advantages, the cascade model is often criticised. Its main weakness is the distortion of the messages transferred during the training, because they are passed down through many different levels of personnel. The intended messages are often altered and their effects are diluted through miscommunication and different interpretations of the same messages (Mpabulungi, 1999). The cascade model envisages a series of consecutive training processes. The participants are constantly changing in the process (McDevitt, 1998). Each training takes place as a result of the previous one, in principle imparting an agreed and consistent body of knowledge, skills and attitudes, but evaluation studies in the UK reveal that

there is no continuity within a three-layer cascade model. Training plan and guidelines are only loosely followed in the processes of the training. Often different strategies are adopted and new elements are introduced (Department of Education and Science, 1988). In order to avoid this, the messages must be simple, as well as clear enough to be understood at all levels (McDevitt, 1998). Otherwise, received imperfectly at one level they become contorted or are ignored on subsequent levels.

The second weakness of the model is the distance between the central and the local level. McDevitt, (1998: 427-428) concludes that 'if you are too far away from the source, you cannot get soaked.' Additionally, there are few opportunities to check process and outcomes of each stage (McDevitt, 1998). The evaluation study of a three-layer cascade model in Uganda indicates problems especially at the lowest level (Mpabulungi, 1999). The trainers for the training at the lowest level had not internalised the messages from their own training. Consequently, they could not perform well for some steps of the training contents.

A third limitation is one-way transmission. The cascade model is constructed according to a centre-periphery and top-down structure, so that it is too inflexible to respond to the needs at grassroots level (McDevitt, 1998). Additionally, the higher levels often lack experience of primary school teaching (Dove, 1986). This makes it difficult to predict the needs of the lowest level and widens the gap between levels. The implementation of innovation in practice becomes difficult. This means that the target of the training, as well as those who really need the training, must be identified clearly. According to final evaluation at the lowest level for a cascade model in Botswana, the training was too much focused on what is already known, and finished by being not very useful. The study in Botswana reveals that the cascade model fails to be a means of transferring ideas or of changing behaviour, because it has little impact on commitment (McDevitt, 1998). A process of justifying or validating communicated ideas is needed in order to transfer new ideas which are perceived and comprehended (Mezirow, 1991). A top-down approach does not encourage participation and commitment. Consequently a justification of the new ideas which need to be transferred in order to change behaviour hardly takes place.

3. Debates over the cascade model

Some researchers believe that this failure lies with *the cascade model itself* (McDevitt, 1998). Others argue that the quality of a cascade model depends on *the quality of planning and implementation*, rather than on inherent weaknesses of the model itself (Department of Education and Science, 1988).

The former suggests the ten components of conditionality to maintain the quality of planning and implementation as follows: (1) To run a successful cascade model, the trainees and their needs are to be well defined. (2) Clear training objectives are to be set. (3) It should be supported by high quality consistent training material. (4) The trainers are to be carefully selected for their competence as trainers and their understanding of the particular knowledge and skills which are to be transferred. Cascade training is only effective if the trainers are fully familiar with the practice and not only the theory, and sufficient time is given to the trainers to acquire new knowledge. (5) The role and function of each actor needs to be defined. (6) Each stage has to provide sufficient time for trainers to prepare, and for trainees to absorb the messages. (7) Each stage should be well structured. (8) Any ambiguity in training objectives and materials has to be removed in order to avoid the risk of personal interpretations. (9) Commitment at the local level is needed. (10) The training process should be supervised to ensure the following of training procedures and

the accountability of the trainers (Department of Education and Science, 1988; Mpabulungi 1999).

4. Multigrade Teaching Training in Nepal

In Nepal, the average number of teachers per school was 2.03 in 1975. In other words, two teachers had the responsibility for three or five grades in one school. As a result, a teacher has responsibility for more than the two grades at the same time in these schools. This form of class management is called multigrade teaching. However, as the standard of schooling in Napal is based in monograde teaching, most of teachers were not trained as multigrade teachers. Therefore, the government of Nepal has been providing in-service training on multigrade teaching.

Multigrade Teaching Training is organised in a three-layer cascade system (Table1). First, Master Training of Trainers (MTOT) is organised in six zones throughout the country for one and half days in January 2001. A section officer from Primary Teacher Training Unit (PTTU) was the master trainer. Three School Supervisors or Resource Persons from six districts participated as trainees. Second, District Training of Trainers (DTOT) is organised in the districts for 4 days in May. The trained School Supervisors and Resource Persons of MTOT return to their own districts and train other School Supervisors and Resource Persons. Third, Resource Centre Training (RCT) is organised in the Resource Centres (RCs) for ten days in July and August. The trained School Supervisors and Resource Persons of DTOT return to their RCs and train primary school teachers. All primary teachers of the RCs are called in for RCT.

Table 1 Structure of Multigrade Teaching Training in the cascade system

training	levels	trainers	trainees	duration
MTOT	zones	section officers from PTTU	selected school supervisors and resource persons	1.5 day in January
DTOT	districts	school supervisors and resource persons who have attended MTOT	other school supervisors and resource persons	4 days in May
RCT	resource centres	school supervisors and resource persons who have attended DTOT	primary school teachers	10 days in Jul.-Aug.

5. Research methods

For this case study, a field research was conducted for 20 months in the following two districts in Nepal. Nuwakot and Kavre districts were selected as cases because 94.66% (2000) and 84.71% (2001) of primary schools in these districts are multigrade. With generous corroboration and assistance from Ministry of Education of Nepal, inputs, process, and outputs of the training was evaluated in order to evaluate Multigrade Teaching Training.

Firstly, in order to evaluate training inputs, the relevance of the training curriculum, the characteristics of training developers, trainers and trainees, and the environment for the training are examined through document analysis on the contents of the training materials. At the same time, the author interviewed training trainers and trainees of 14 selected schools in the two districts to understand their teaching and learning activities before the training. In order to cover the small number of the interviewees, question-

naires were distributed to the 108 trainee-teachers who attended the training observed.

Secondly, in order to evaluate training process, MTOT sessions for one and half days held in Chitwan, which covered Nuwakot and Kavre districts, were observed. Then the following DTOT at the two districts for four days and the following two RCTs at Resource Centres in both districts for ten days are also fully observed. Through the observation of these three layers of the training, how the training messages were transferred over the cascade and its environment were examined.

Thirdly, in order to evaluate training outputs, the relevance of new knowledge is examined through self evaluation completed by the 108 teacher-trainees; competency is examined through observation of practice teaching during the training; and performance ability at classroom gained by the training are examined through comparison of classroom practice before and after the training. The limited number of class observation was coved by focal group discussions by RCT trainers.

Finally, these data were analysed to clarify the effects of the cascade model and its possible causes were identified in the following sections.

6. Inputs of the training

(1) Training curriculum

The training package for Multigrade Teaching Training was developed by ten members of the Primary Teachers' Training Unit (PTTU), in co-operation with foreign and Nepalese advisors (PTTU, 1998). The authors started preparing in 1994 and the package was finally published in 1998. The package has been used for Multigrade Teaching Training since 1999. According to my interview with one of the authors, none of them had had teaching experience in a multigrade primary school.[i]

The training material is divided into ten sections. Each section is to be covered in one day. Although the Multigrade Teaching Training programme focuses on only multigrade teaching, the topics of the training material are not always directly related to multigrade teaching. Some topics concern general pedagogy rather than multigrade strategies. Table 5 examines whether each topic is directly related to multigrade teaching. The topics of the first section are all directly linked to multigrade teaching. The first section gives an introduction to multigrade teaching and gives an idea of what multigrade teaching means. The topics of the second section are also mostly relevant to multigrade teaching, introducing multigrade teaching strategies, including the production of a special timetable for multigrade classes. However, evaluation, examination and the keeping of student records are rather common issues which equally concern monograde teaching. The third section starts with multigrade teaching planning and multigrade teaching techniques, but the central argument of the section is concerned with general, monograde pedagogical issues. The fourth section has nothing on multigrade teaching, but explains how to generally use the blackboard and textbooks. The remaining sections focus on the practice of multigrade teaching, this practice is not concerned with the question of how to deal with multigrade teaching on a conceptual level.[ii]

An ideal model of multigrade teaching, which is supposed to be transmitted by the training programme, is not evident in the training material. However, the following three components, meant to assure the success of the class organisation, are highlighted in the training material (PTTU, 1998): (1) using *T, AM and AMT classes*. The training material states that when two or more classes are taught by one teacher, one class should be the main class, taught by the Teacher (T class), and other classes should be additional classes, provided with SLA and supported by a Monitor (AM or AMT classes),[iii] (2) providing *Self-Learning*

Activity (*SLA*), *and* (3) a *monitor* selected from among the students of a grade group in order to take care of the class, during the absence of the teacher from the classroom, while he is teaching in another class.

(2) Trainers

Table 2 shows background information for the trainers from PTTU to RC level. Although all trainers have high qualifications and most of them have teaching experience – as well as experience as a trainer – there are differences between MTOT/DTOT and RCT. While all trainers above DTOT level have higher qualifications, none of them has teaching experience in a primary school. Their knowledge of multigrade teaching is theoretical, rather than based on their own experience.

The master trainer for MTOT holds a Master of Education (MEd) degree and has teaching experience in a monograde secondary school. However, he has never taught in a primary school and does not have teaching experience in multigrade teaching. He has some experience as a trainer, having been trainer for the 10-month training, distance education training and curriculum dissemination training. He has never organised Multigrade Teaching training, except his observation of Multigrade Teaching training at DTOT and RCT levels two years ago.

Of the two School Supervisors who have attended the MTOT, one holds a Bachelor of Education (BEd) degree and is currently studying for an MEd degree. He has had teaching experience in a monograde secondary school for 5 to 6 months. However, he has never taught in a primary school and does not have teaching experience in multigrade teaching. He has been School Supervisor for five years. The other School Supervisor holds a Bachelor of Commerce (BCom) and a BEd degree, and is currently studying for an MEd degree. He does not have any teaching experience in schools. He has been School Supervisor for eight years.

Table 2 Background information on trainers in Multigrade Teaching Training

	status	place	qualifications	experience in multigrade teaching	teaching experience	experience as a trainer
author of the training package	section officer	PTTU	MEd	no	2 years in monograde secondary school	yes
MTOT trainer	section officer	PTTU	MEd	no	monograde secondary school	yes
DTOT trainer A	school supervisor	Kavre	BEd	no	5-6 months in monograde secondary school	not available
DTOT trainer B	school supervisor	Kavre	BEd and BCom	no	no	not available
RCT trainer A	resource person	Nuwakot	BEd	5 years	5 years in primary school	yes
RCT trainer B	resource person	Nuwakot	BEd	1 year	9 years, including primary school	yes
RCT trainer C	vice-headmaster	Nuwakot	n/a	n/a	n/a	yes
RCT trainer D	headmaster	Kavre	BEd	4-5 years	7 years including primary school	no

RCT trainers on the other hand normally have teaching experience in multigrade primary schools. One person holds a BEd degree and is currently studying for an MEd degree. He has had teaching experience in a multigrade primary school with 5 grades and 3 teachers for five years. Another is a Resource Person with nine years of experience. He holds a BEd degree. He has nine years of teaching experience in primary schools and multigrade teaching experience of one year. Another is the head teacher of a secondary school who took DTOT in the same year. Three out of four RCT trainers in the study have this teaching experience. They are not only trainers, but at the same time Resource Persons or headmasters who are familiar with real practice in the schools. The RCT trainers have knowledge on multigrade teaching from their own experience. Here we can see the gap between MTOT/DTOT and RCT.

(3) Trainees

Of the 108 trainees (75 for Trishuli RC, Nuwakot district and 33 for Sunthan RC, Kavre district) who participated in the training, 104 trainees (73 for Trishuli RC and 31 for Sunthan RC) filled in the questionnaires on the first day and/or the self-evaluation forms on the last day of the training.

Table 3 shows that there are three types of teachers among the trainees. First, there are the teachers who are currently working in multigrade schools and will continue to teach multigrade classes after the training. A second type is constituted by those who used to work in multigrade schools, but are currently working in monograde schools. They have experience of multigrade teaching, but they will teach monograde classes after the training. The third type concerns those teachers who are currently working in monograde schools and have never taught multigrade classes. In this study, the first type is called multigrade teachers, the second multigrade-experienced teachers and the third monograde teachers.

Table 3 Number of trainees and number of multigrade teachers[iv]

districts	multigrade	experienced	monograde	total
Nuwakot	18	21	34	73
Kavre	14	9	8	31
total	32	30	42	104

Note: Multigrade: teachers who are currently working in multigrade schools. Experienced: those who used to work in multigrade schools, but are currently working in monograde schools. Monograde: those who are currently working in monograde schools and have never taught multigrade classes.

Of the overall 104 trainees in both districts, 31% are currently multigrade teachers, 29% are multigrade-experienced and 40% are monograde teachers. In other words, only less than one third of the trainees are multigrade teachers. Considering the current posting of the teachers, 69% of the trainees are working in monograde schools. They will not teach multigrade classes after the training. Indeed, they do not need to learn about multigrade teaching for the moment.

7. Process of the training

When comparing the three different levels of the training, it is possible to observe an important change in the structure of the training between MTOT/DTOT and RCT levels. This is in terms of duration, aims, coverage of the training material, and physical conditions at each level.

The duration of each training programme differs. The duration of MTOT is 1.5 days, DTOT takes 4 days and RCT 10 days. The whole training material is to be covered in ten days, but only 1.5 days are available for MTOT. The MTOT trainer restructures the training material, intended for 10 days, and compresses the training content from 10 to 1.5 days. In other words, he produces a miniature version of the 10-day training. The aim of MTOT is to highlight significant points in the training material. Since the MTOT trainer shortens the 10-day training to 1.5 day, the coverage of content is limited, as shown in Table 4. He selects seven topics which he thinks most significant for multigrade teaching, to be treated during the 1.5 day period of training. Timetable and SLA are considered especially important. Thus a great deal of time was spent with those topics.

DTOT trainers followed a programme with the same characteristics, duplicating the structure of MTOT and just extending it from 1.5 to 4 days. They covered the same topics in the same order as MTOT, extending the length of training by 2.5 days. Two topics were added to the training contents of MTOT to fill 4 days. The topics added during the additional 2.5 days were selected from non-multigrade teaching–related topics familiar to the trainers (Table 4).

The structure of RCT on the other hand is completely different from the upper levels. Unlike MTOT/DTOT trainers, RCT trainers need to cover all topics of the training material, not only selected topics. Their aim is to finish the training material in ten days. Table 4 shows that RCT trainers cover most of the training material.

Physical conditions also change between MTOT/DTOT on the one hand and RCT on the other hand. There were large tables for group work during MTOT, making it possible to follow the instructions of the training material. The same kind of furniture was used for DTOT. For RCT however there are only tiny rooms with inappropriate furniture which make it difficult for RCT to follow the examples of the upper levels.

Table 4 Training material covered by each trainer

days		MTOT	DTOT Kavre	RCT Nuwakot	RCT Kavre	Relation to multigrade teaching
1	types of teaching			✓	✓	✓
	situation of multigrading	✓	✓	✓	✓	✓
	need for multigrade teaching	✓	✓	✓	✓	✓
2	time table	✓	✓	✓	✓	✓
	classroom management			✓	✓	✓
	student management			✓	✓	✓
	evaluation and examination			✓	✓	
	student records			✓	✓	
3	lesson plans					✓
	multigrade teaching methods					✓
	activities for creative activity			✓	✓	
4	resources for teaching		✓	✓	✓	
	skills required for teaching		✓	✓	✓	
5	setting SLA	✓	✓	✓	✓	✓
6	use of SLA	✓	✓		✓	✓
7	demonstration class	✓	✓	✓	✓	✓
8, 9	practice teaching	✓	✓	✓	✓	✓
10	Review			✓	✓	✓

8. Outputs of training

(1) Knowledge transfer by the trainers

The trainees were asked before the training how they currently conducted multigrade teaching. After the training, they were asked again how they would conduct multigrade teaching from then on. Tables 5 indicate that there is a difference in the answers between the two surveys. Most significantly, a number of trainees cited T and AMT class, SLA and monitors more often after the training. The results from the evaluation forms indicate that some knowledge on multigrade teaching is certainly acquired or recalled by a number of trainees.

Table 5 Knowledge concerning multigrade teaching before and after the training

	before	after
50-50	4	0
Teaching only one class	1	0
T and AMT classes	13	24
use of blackboard	0	4
seating plan	2	5
SLA	27	37
monitor	17	64
timetable	2	5
group work	5	6
lesson plan	1	1
other	4	4
number of trainees who answered the relevant questions	70	68

(2) Competency gained by the trainees

Table 6 shows how the trainer and the trainees practically conduct multigrade teaching during training. It indicates how the intended ideal model of multigrade teaching is cascaded down from the model of the training material to the model of RCT trainers.

During MTOT, trainee 1 (RCT trainer A) managed to duplicate the model lesson of the MTOT trainer, but others failed in duplicating it and missed some concepts. All of the trainees included SLA and a monitor in their practice teaching. The trainees learned about the monitor system, although whether they understand its function is questionable.

DTOT produces results similar to MTOT. However the quality of duplication by the trainer of the model lesson in the teaching material decreased. Group work has totally disappeared in DTOT. Three out of five trainees did not follow the AMT and T class system, but visited the two classes frequently. Although the message becomes distorted, there is still some transfer achieved, especially the notion of responsibility for two grades during one lesson period. AMT and T classes are the major component of the training. All the trainees provided SLA and checked student work at the end of the lesson. Most of the trainees appointed a monitor.

(3) Performance at classroom

Since for this study visiting the classrooms of all 108 trainees was not feasible, five multigrade teacher-trainees, Nuwakot-B3, Nuwakot-B22, Nuwakot-R2, Kavre-4 and Kavre-12, were selected.

Table 6 Model teaching by the trainer and practice teaching by the trainees

	duration of lessons (minutes)	class organisation	SLA	monitor	group work
model teaching in the training material	not mentioned	AMT, T classes	✓	✓	✓
MTOT trainer	21	AMT, T classes	✓	✓	✓
MTOT trainees 1 (RCT trainer A)	15	AMT, T classes	✓	✓	✓
MTOT trainees 2	16	AMT, T classes	✓	✓	
MTOT trainees 3	18	frequent visits	✓	✓	✓
DTOT trainer B	27	AMT, T classes	✓	✓	
DTOT trainee 1	26	AMT, T classes	✓		
DTOT trainee 2	13	AMT, T classes	✓	✓	
DTOT trainee 3	15	frequent visits	✓		
DTOT trainee 4 (RCT trainer D)	19	frequent visits	✓	✓	
DTOT trainee 5	29	frequent visits	✓		
RCT trainer A	10	AMT, T classes	✓	✓	

Trainee Nuwakot-B3 visibly changed her technique of multigrade teaching. Before the training, she did not identify her multigrade classes as multigrade and conducted teaching. She taught two or more classes sequentially. After the training however, she identified the multigrade classes and differentiated ATM and T classes. She provided SLA and appointed a monitor, providing instructions and answer keys to him. She checked the SLA of her English lessons.

Kavre-12 did not adopt most of the techniques for multigrade teaching introduced by the training. However, the training influenced him in terms of his feeling of responsibility for two grades. Before the training, he just divided the lesson period into two parts and taught social studies to two grades in turn. While he taught one grade, he did not pay attention to the other grade and did not provide SLA for it. After the training, he still taught the two grades in turn within one lesson period, but before starting teaching for the first grade, he provided SLA for the other grade. When he finished teaching the first grade, he checked on the SLA of the other grade before starting teaching for it.[v]

The trainee Kavre-4 also does not change his organisation of multigrade classes after the training. Generally speaking, he did not adopt most of the techniques for multigrade teaching introduced by the training course. However in three lessons after the training he appointed a monitor. On the whole it is probable that he adopted some of the techniques taught in the training course, although he used them in the lessons observed mainly because he had learnt about them during the training.

After the training, the trainee Nuwakot-B22 he organised his multigrade classes as AMT and T classes, with appointment of a monitor in practice teaching and also in one lesson after the training, although he did not give clear instructions or answer keys to the monitor, which again means that the student was a monitor rather in name only and could not fulfil his role.

There is no single style of multigrade teaching which can be identified for trainee Nuwakot-R2. Even after the training, she did not organise her multigrade class as AMT and T classes. Moreover she did not

use multigrade teaching, but pseudo-monograde teaching. It is difficult to identify multigrade classes in her school.

According to the focus group discussion by the trainers, especially *class organisation* and *the monitor system* did improve. After the training, the teachers organised multigrade groups as AMT and T classes, systematically gave instructions to the monitor and assigned more SLA. The training components mentioned by the trainers as implemented overlap with the results from the class observations after the training.

9. Conclusion

Multigrade Teaching Training certainly stimulated the trainees. Although the training curriculum was not new to some trainees, they still acquired new knowledge, and others recalled existing knowledge through the training. After the training more trainees put *SLA, monitors and T and AMT classes* as skills gained for multigrade teaching into the evaluation forms. Most trainees were able to apply them in the practice teaching sessions during practice teaching. In four out of five trainee-teachers included them in their classroom practice. The supervision of the trainers confirmed the results.

Although the training messages were slightly distorted, three key concepts survived throughout the cascade from the central to the school levels. Even though only three concepts reached till the end, the expansion of the messages from only 6 master trainers to all of primary teachers in the nation (91,878 teachers in 1998; MOE 2000) during six months is impressive, compared with 4,317 teachers during six years between 1992 and 1997 before the cascade system was adopted. Thus we can see the cascade system can be very effective.

The inefficiency as only three concepts survived among 18 components is not because of its nature but of the quality of the management. Examining training inputs and process, we can find the gap between MTOT/DTOT and RCT. The messages came down from the top can hardly go through this gap. If the gap is minimised and the smooth stream of the cascade is assured, the quality of its function will be improved and its efficiency can be increased.

Note

i. For instance, the author interviewed wrote parts of the first, second and fifth sections, the whole third section and the management sub-section. She has teaching experience in a monograde secondary school, but has never taught in a primary school. She also said that apart from an Irish consultant, sent by UNICEF in 1988/89, there was no expert on multigrade teaching involved in the preparation of the package.

ii. There are of course reasons why some topics are not directly related to multigrade teaching. First, multigrade class organisation is a more obvious focus of the programme, because of the fact that two or more classes are managed by one teacher; the necessity to adapt class organisation to this is obvious. However, specific teaching for multigrade classes is more difficult to define, because each grade group is seated in a different classroom and lessons for them are conducted individually; i. e. teaching and learning activities are still organised grade-wise. Second, the authors of the training material are

aware of only monograde pedagogy. They therefore tend to write about pedagogical issues always in relation to monograde teaching. Third, the author interviewed stated that most primary school teachers do not have any general pedagogical knowledge, so that the training programme is intended not only for multigrade teaching, but also tries to cover teaching in general. Consequently the material labelled as for multigrade teaching training, does not exclusively concentrate on multigrade teaching.

iii. The difference between AM and AMT classes is not made clear in the training material. And neither are there supplementary explanations in the training handbook. According to the interview with one of the authors, in AMT classes the teacher is supposed to go to the class to give directions for SLA at the beginning of the lesson period, while the presence of the teacher is not necessary in AM classes. This distinction was not made by all authors, so that descriptions of AM and AMT are not coherent throughout the training material.

iv. The trainees shown in this table were those who filled in the questionnaires on the first day and/or the self-evaluation forms on the last day of training.

v. He did not check on SLA during one lesson, because SLA was 'reading the textbook aloud.'

References

Andrews, J. H. M., Housego, I. E. and Thomas, D. C. (1990), 'Effective in-service programs in developing countries: A study of expert opinion'. In V. D. Rust and P. Dalin (eds), *Teachers and Teaching in the Developing World* (pp. 63-93). New York: Garland Publishing.

Biniakunu, D. D. (1982), 'Inservice teacher training improves eight grades' reading ability in Zaire'. *Jounal of Reading, 25*, 662-665.

Department of Education and Science. (1988), *A critique of the implementation of the cascade model used to provide inset for teachers in preparation for the introduction of the general certificate of secondary education*. Stanmore, Middlesex: Department of Education and Science.

Dove, L. A. (1986), *Teachers and Teacher Education in Developing Countries*. New Hampshire: Croom Helm.

Lockheed, M. E., Verspoor, A. M., Bloch, D., Englebert, P., Fuller, B., King, E., Middleton, J., Paqueo, V., Rodd, A., Romain, R. and Welmond, W. (1991), *Improving Primary Education in Developing Countries*. (1st ed.). Washington, D.C.: Oxford University Press for The World Bank.

McDevitt, D. (1998), 'How effective is the cascade as a method for disseminating ideas? A case study in Botswana'. *International journal of educational development, 18*, 425-428.

Mezirow, J. (1991), *Transformative Dimensions of Adult Learning*. San Francisco: Jossey-Bass Publishers.

MOE (Ministry of Education), P. D. (2000), *Education Information of Nepal*. Kathmandu: Statistics Section.

Mortensen, K. (1992), 'The involvement of the Danish International development Agency (DANIDA) in educational development: consideration and future plans'. In L. Buchert (ed.), *Education and training in the third world* (pp. 243-250). The Hague: Centre for the Study of Education in Developing Countries (CESO).

Mpabulungi, A. (1999), *Assessment of the Cascade Training* (Uganda Working Brief Series). Uganda:

UNCDF.
PTTU (Primary Teachers' Training Unit). (1998a), *Multigrade teaching training manual* (*for the teachers*). Sanothimi, Nepal: DOE, BPEP.