

Effective Classroom Teaching/Learning

(Phase I: Classroom Delivery)



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Acknowledgement

Development, printing and distribution of curriculum, textbook and teacher guide are among the major works of BPEP. Similarly, teacher training is also an equally important undertaking of BPEP. All these four aspects are directly related to classroom teaching learning.

Repeatedly, issues have been raised and questions asked about the relevancy and effectiveness of curriculum, content load and development of textbook, and appropriateness and feasibility of teacher guide. It might be relevant to analyze the situation regarding the use of curricular materials provided to the school/teacher and transfer of training skills before finding out the impact of the curricular materials and teacher training. Certainly, impact can not be assessed in the vacuum.

This study is basically focused on analyzing situation regarding utilization of curricular materials and utilization of skills acquired during training for classroom delivery. Besides, this study also probes on the reasons for use or non-use of curricular materials and transfer of training skills.

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List Of Abbreviations

| | |
|---------------|--|
| BB | Blackboard |
| BPEP | Basic and Primary Education Program/Project |
| BS | Bikram Samabt |
| CDC | Curriculum Development Center |
| CERID | Research Centre for Educational Innovation and Development |
| CSA | Concrete Semi-concrete Abstract (approach) |
| CW | Class Work |
| DEC | Distance Education Center |
| DEO | District Education Office |
| DOE | Department of Education |
| EDSC | Educational and Development Service Centre |
| EMIS | Educational Management Information System |
| FGD(s) | Focus Group Discussion(s) |
| HMG/N | His Majesty's Government of Nepal |
| HTs | Head Teachers |
| HW | Home Work |
| MOE | Ministry of Education |
| MOES | Ministry of Education and Sports |
| NCED | National Center for Educational Development |
| NESP | National Education System Plan |
| PEDP | Primary Education Development Project |
| Q/A | Question Answer |
| RC(s) | Resource Center(s) |
| RP(s) | Resource Person(s) |
| SIP | School Improvement Plan |
| SLC | School Leaving Certificate |
| SMC | School Management Committee |
| SS(s) | School Supervisor(s) |
| TG(s) | Teacher Guide(s) |
| TU | Tribhuvan University |
| UN | United Nations |
| VDC | Village Development Committee |
| WSA | Whole School Approach |

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Executive Summary

Background

This study focused on situational analysis of the use of curricular materials (curriculum, textbook, teacher guide) and transfer of training skill for classroom delivery. The objectives of the study were related to examining the classroom practices of the teachers, utilization of curricular materials and transfer of the training skill in the classroom delivery.

This study covered 16 schools -- 5 in Morang, 6 in Kaski and 5 in Rasuwa. Altogether 153 classes were observed, covering all the primary grades and all the primary level subjects in total. In addition to the three districts, Jhapa district was also visited for a few days in order to observe 12 classes of the 4 schools, share finding from other districts with the teachers and RPs of Jhapa district.

The major strategy of the study was to compare observed classes with curriculum, textbook, teacher guide and related training manual in order to find out the extent and quality of utilization of these for classroom delivery. In this process discrepancies, regarding classroom delivery practice of the teacher with respect to the curriculum, textbook, teacher guide and related training manual for each individual observed classes were also identified. On the basis of classroom observation and interaction with the teachers and DEO personnel (interview and Focus Group Discussion) reasons for the discrepancies and problems they have faced during classroom delivery were also determined.

Major Findings

More often, textbook was found to have been used by all the teachers than curriculum and teacher guide. Some of the teachers had used teacher guide during classroom delivery or for the preparation of the classroom teaching learning. Curriculum was found to have been consulted by fewer number of the teachers. Analysis of the curriculum and teacher guide related to the concerned lesson of the classroom delivery indicates that if the teacher would have consulted curriculum and followed the suggestions provided in the teacher guide, classroom delivery would have been better than the existing ones. Major findings from the comparison of the curriculum, textbook, and teacher guide with the observed class were as follows:

Classroom Delivery with Respect to Curriculum

Curriculum as a document was found to have been utilized by only a few number of teachers. In this regard, an analysis of the curriculum as well as perceptions of the teachers indicated that in some subjects curriculum objectives match with the content exposition in the textbook (such as mathematics), so that even if the teacher depends upon the textbook for classroom delivery, curriculum objectives would be fulfilled in most of the cases. In the case of language subjects (English and Nepali), curriculum objectives are not directly related to the content exposition of the textbook. Teachers were found deviating from curriculum objectives during classroom delivery to a large extent in language classes. Non-consultation of the curriculum was evident in language classes.

There was another type of discrepancy observed in curriculum and classroom delivery of social studies, environment education, and health education. Curriculum objectives related to lower levels of cognitive domain were fulfilled in the classroom delivery. However, higher levels of objective related to habit formation were not adequately covered in the classroom delivery.

There are no specific textbook for physical education and creative arts. Teachers have to depend upon curriculum and teacher guide for classroom delivery for these subjects. Only a few teachers seem to have been consulting curriculum for classroom delivery in these subjects.

Classroom Delivery with Respect to Textbook

Textbook is the curricular material, which has been found to have been used most by the teachers during classroom delivery. The way textbooks of various subjects were used, the emphasis seemed to be upon rote memorization of the content matter of the textbook. This concern is supported by the use of mathematics textbook for students engaged on doing problems/exercise in 69% of the cases. Frequent use of reading and repeating text, memorizing question answer, word meaning, paraphrasing teaching style in the language subject also indicate use of textbook for rote learning. The activities and exercises suggested in the textbook aim to involve students in problem solving, inquiry, and out of class works in social studies, environment education, and health education. But in most of the observed classes, such activities were not conducted. The tendency was to use textbook for how much of the content need to be covered rather than how to deliver classroom effectively.

Classroom Delivery with Respect to Teacher Guide

The methods and activities suggested in the TGs are student - centered in nature. Suggestions regarding discussion, question answer, problem solving, inquiry method, group works, activities outside classroom, games, use of instructional materials are undertaken only in few occasions. Instead there were deviation from these suggestions and teachers were found engaged most of the time in lecturing, making students read textbook content, do the exercises, memorize question answer. Suggestions from TGs, specifically regarding social studies, environment education, and health education, which could have been helpful in achieving higher level of curriculum objectives were not followed in most of the cases.

Availability of the Curricular Materials and Time on Task

It is necessary to examine whether non-use of the curriculum, and teacher guide is due to unavailability of these materials in the school. In the 16 schools visited in Kaski, Morang and Rasuwa, complete sets of curricular materials - curriculum, content elaboration, teacher guides were not found in any of them. In one hand there were not all the required curricular materials available in the school, and in other hand available materials were not used to the required extent.

It is also equally important that teacher and student spend specified time on classroom teaching learning if any learning is to happen. During school visits it was observed that in about 10% of the school about 30 minutes to 1 hour was wasted due to late opening and early closing. During school visit, it was found that some (less than 10%) schools opened

about 15 to 30 minutes late and closed about 15 to 30 minutes early. Even last period was off to the lower grades in some schools.

These basic phenomena, teacher-student spending time on teaching learning, availability of the curricular materials and use of the available materials are crucial for effective classroom delivery. These were not up to the satisfaction level in the schools visited.

Lack of Uniformity Within the Curricular Materials

During cross matching of classroom delivery with respect to curriculum, textbook and teacher guide, lack of uniformity were found within the materials, such as

- Exposition of content matter in the textbook and curriculum objective match in mathematics subject so that even covering content matter from textbook fulfill curriculum objective. But in language subject (English and Nepali) curriculum objectives were difficult to match with textbook content. Complexity was due to curriculum objectives stated in terms of reading, writing, listening and speaking skills and grammatical function. These skills can not be easily isolated and linked with certain topic or section of the textbook content if textbook would be the only source for classroom delivery. However in case of English language, directions provided in the textbook and activities suggested in the teacher guide largely link textbook content with the curriculum objectives. In case of Nepali language, teacher guide clarifies it. In case of Health Education, Social Studies, Environment Science Education higher and habit formation level curriculum objectives are not adequately addressed in the textbook and teacher guide. As such, these remain only as ideal objectives.
- Similarly, teacher guides of different subjects lack uniformity. For example teacher guide for English language of grade 5 categorically distributes textbook content to be covered in each period. Whereas all other teacher guides suggest approximate periods for each lessons. In mathematics teacher guide unit tests are included. In other teacher guides, tri-monthly and final examination tests are included. Methods and activities suggested in "Mero Batabaran" (My Environment) is in a paraphrasing pattern. In Nepali language teacher guide additional exercises, questions, activities, poems, paragraphs are provided to be used during classroom delivery.

The above observations show that the teacher guides lack uniformity in terms of format, aspects to be covered and presentation.

Some Inherent Problems Within the Curricular Materials

Subject-wise analysis indicates problems in curriculum, textbooks, and teacher guides in some places. For example, higher level curriculum objectives are not adequately addressed in the textbook and teacher guides in some cases. There are examples and activities such as visiting health post which are not relevant for the primary level children. In some places teacher guide, textbook content exposition was not relevant, such as exposition of the concept of bar graph and its use coming in the students' mind in an insightful manner. Similarly, there were some suggestions which were incompatible to the usual classroom, such as lining up boys and girls into two lines in front of the class to provide concept of set.

Testing Focus on Rote Memory

Usual practice in the classroom delivery as well testing emphasize and promote rote memorization. This is clearly indicated in the test items. Even in the Creative Arts, questions like "What is music?", "How many types of dances are there? Describe," are asked.

Transfer of Training

A unique feature observed regarding teacher guide and training manual is that most of the teaching methods suggested in the teacher guide are covered in the training manual. Similarly, materials suggested in teacher guide are explained in the training manual. Thus, skill learned during training would be supportive in implementing teacher guide effectively in the classroom delivery. However, this was lacking largely in the classroom delivery.

Training provides teacher with skill and practice for teaching preparation (lesson plan, materials collection), teaching methods, instructional materials use/construction, and evaluation. These relevant skills acquired during training were not used during classroom delivery in most of the cases in the observed classes. Training manuals cover methods of classroom organizations, ways to enhance classroom environment, proper use of blackboard, various methods and use of group techniques, students' attendance board, testing. These skills are yet to be translated widely in the classroom.

Perceptions of Teachers and DEO Personnel

Reasons provided by the teachers regarding lack of use of curriculum and TG, and lack of transfer of training were related to inadequacy of - budget, materials, (insufficient) time, monitoring and follow up, space in the classroom. Reasons provided by the teachers and DEO personnel also starts with the work lack -- lack of mandatory provision for using training skills by the teachers, lack of professional commitment of the teachers, lack of regular monitoring and evaluation, lack of effective management skill and commitment of the Head Teacher, lack of physical and financial resources, lack of knowledge of SMC members about teaching learning. For the solution of these problems, teachers and DEO personnel suggested regular supervision and monitoring, provision of professional support and reinforcement, improvement of physical facilities, evaluation of teachers with reward and punishment system. Besides these general suggestions some of the specific suggestions were setting up mechanism to - provide textbooks on time, providing complete set of teacher guides at least for one time, provision of teacher guide on sale, implementation of teacher rationalization.

Suggestions

This study provides following suggestions in order to enhance the use of curricular materials and transfer of training skills for the classroom delivery:

- Ensure that teacher and student spend intended time on teaching learning in the classroom.
- Find out the situation of availability of curricular materials (curriculum, content elaboration, textbook, teacher guide) through RPs.

- If majority of the schools do not have a complete set of the curricular materials, it will be necessary to provide these materials to the schools at least one more time.
- Curricular materials need to be on sale as well. Schools should be made responsible to maintain complete set of the curricular materials at the school after these receive complete set.
- Frequency and quality of the monitoring by the RPs should be maintained. RPs role should be more on providing professional supervision rather than administrative one.
- It will be useful to establish an objective accountability system, such as increasing certain mean achievement score at the grade level by the teacher, at the school level by the head teacher, at the RC level by the RP, at the district level by the DEO. This will be helpful to ensure fulfillment of roles and responsibilities of all the concerned personnel and institutions/agencies.
- Instead of providing a number of curricular materials and make it complex for the teacher in using those materials during classroom delivery, it would be appropriate to think over the feasibility of providing a single material in the form of a HANDBOOK for each subject, for each grade. Existing materials in the form of teacher guides, curriculum, content elaboration, learning outcome indicators, specification grid, test specimen should be brought together in a coherent, sequential manner. Where essential revision, addition, deletion need to be done in order to increase quality and utility of the handbook.
- The concept of the handbook can be further developed to provide single material (structured textbook) for students and teachers.
- Analyze feasibility of attending higher level objectives at the classrooms. If curriculum objectives are not attainable at the classroom, such objectives should be removed from curriculum. If curriculum objectives require different kind of treatment (methods, materials and evaluation), teachers need to be oriented accordingly.
- There is a need to improve quality of testing as well at the primary level. If occasional tests are to be conducted it will be better to provide Camera Ready Copy of the quality model questions to the DEO and RCs to be used in individual schools than teachers or group of schools employing low quality, rote memorization emphasized tests.
- It is necessary to analyze textbook content exposition, teacher guide suggestion, and teacher training delivery so as to make these supportive in effective classroom delivery. Weaknesses, irrelevancies, contradictions, incompatible aspects need to be corrected in these curricular materials and training.

Chapter I

Introduction To The Study

Background of the Study

Basic and Primary Education Project (BPEP), now in its second phase, has concentrated in the overall development of primary education in Nepal. BPEP II has divided its activities into 17 components. Curriculum, teacher training and assessment are among these components in the area of quality improvement.

BPEP has noteworthy achievement regarding foundational works in the primary education sub-sector, but there is lack of a visible and significant impact on classroom learning and students' achievement levels as reported by Shrestha et al. (1999) in the report "BPEP (1992-1998): A Synthesis of Experiences". Study undertaken by BPEP and national achievement level assessments of grade 3 and 5 conducted by EDSC for BPEP indicates lower level of students' achievement. It is pertinent to find out why there is failure on achievement despite the prime goal of enhancing students' achievement level for which all the endeavors are directed to.

BPEP II master plan (1997-2002) assessed deficient delivery of the curricular materials as probable reason for under achievements of the primary level, "either the new curriculum has not been appropriately delivered, or it has not been delivered to the required extent" (1997, p. 281). Master plan also points out problems and raises concerns regarding feasibility of the learning outcomes, relevancy of the curriculum, dissemination of the curriculum to the teachers, availability and use of curricular materials in the school, linkage with materials inputs and teacher training, and integrating evaluation and curriculum. In many of these curricular aspects, resource centers (RCs) have to play major roles. Therefore, delivery mechanism, capability and effectiveness of the RCs should also be of concern.

Major factor for the effective implementation of the curriculum is teacher training. Until the end of BPEP I, teacher training had been, "a one-way traffic of unknown emphases and unseen practices" (Shrestha et al., 1999). BPEP II master plan (1997-2002) raises concerns over gap between content and intent of the teacher-training curriculum, and teacher-training endeavors producing under-trained teacher at large (p. 344-345). These could be among several factors for training of the teacher not having any significant impact on the achievement level of the students as reported by EDSC study on national achievement level of grade 3 students (1997, p. 97). This study also points out almost non-existent of the research studies, which investigated into the impact of the training on classroom performance of teachers (p. 113). However, studies conducted by BPEP I in 1997 and 1998 have tried to evaluate some of the components of the classroom practices of the teachers in the classroom (MOE, 1997b; EDSC, 1999).

In this context, this study mainly intended to observe and analyze:

- curriculum delivery in the classroom,
- availability and use of the various supporting materials by the teachers in the classroom and
- use of skill and knowledge teachers are supposed to have acquired from the training(s) they have received.

It is expected that finding of this study as gaps identified and measures suggested will be helpful in effective implementation of BPEP II in the following aspects:

- revision endeavors in certain areas of curriculum,
- curriculum and curricular materials dissemination,
- linking evaluation to the curriculum objectives,
- linking teacher training to the classroom practice, and
- input requirement for classroom delivery.

Objectives of the Study

This research on classroom teaching/learning focused generally on classroom practice vis-à-vis various inputs of BPEP II such as curriculum, teaching/learning methods, teaching/learning materials and supports provided to the teachers. Specific objectives were to:

- Examine practices of the teachers in classroom delivery including student assessment practices and their effect.
- Examine application of skills, and knowledge acquired by the teachers during training in the classroom.
- Find out types of problems teachers have been facing by way of using the teaching skills they have acquired in their training.
- Analyze gaps if any, existing in the stated intention of the curriculum and classroom practice, and find out corrective measures.
- Analyze classroom environment, classroom management, use of instructional materials and other support to teachers that could have direct implications on classroom teaching/learning.
- Suggest effective classroom practices that could be implemented in the Nepalese situation.

Limitation of the Study

Effective classroom teaching learning is an all-inclusive concept. This study focused on describing situation of classroom delivery concerning some foundational aspects. Major coverage of this study is situational analysis of the use of curricular materials provided to the schools and transfer of the training skills (NCED, DEC, Modular, Whole School Approach) in the classroom. This study does not assess the impact of the curricular materials and training.

Study Design

It requires to study several aspects such as curriculum, training, pedagogical support, classroom delivery if effective classroom teaching learning is to be understood fully. As not all these aspects could be covered in the present study, the study is designed to cover these aspects in several stages.

First stage focuses on classroom delivery at the school level. Next stages should focus on training delivery at the Training Center/Resource Center level, and analysis of curriculum as per requirements. This stage intends to focus on classroom delivery, not on the impact of the training or effectiveness of the curriculum or on how children learn.

Assumptions in the study: The focus of analytical study of classroom delivery with respect to curriculum, textbook, teacher guide and training manual has been based upon following two assumptions:

1. There are various curricular materials (curriculum, content elaboration, textbook, teacher guide) at the disposal of the teacher/school. Similarly, teachers have been provided with essential training(s) to support in the classroom delivery.
2. Teachers are using curricular materials for preparation and/or during classroom delivery, and applying skill obtained from the training in the classroom delivery time.

With these assumptions, each of the observed classes were analyzed with respect to related aspects of curriculum, content in the textbook and areas of teacher guide. These classes were also analyzed with respect to the application of training skill the concerned teacher has received.

Description of the Sample Coverage

Study districts and schools: This study covered 16 schools -- 5 in Morang, 6 in Kaski and 5 in Rasuwa (See Appendix 1 for the list of the schools covered). Among these schools. The oldest school was established in 2012 BS and the newest among them was established in 2050 BS. Both rural and urban schools were covered in consultation with District Education Office of the concerned district. District personnel were also requested to suggest good and average schools based on their perception/observation for the study.

Teacher characteristics: 'School Information Form' was used to collect information on the total number of teacher and their training from the sample schools. Schools provided data of 100 teachers altogether. Data regarding gender and training is presented in table 1.

In the sample schools, there were 56% female teachers and 44% male teachers. As reported by the schools, altogether 70% of the teachers were trained, i.e. teachers had degree in Education Subject, or had completed long term training, or had completed at least first package of on-going 10 months teacher training. Such criteria for a trained teacher was being used in the sample schools. As this study did not intend to compare classroom delivery with the type or duration or number of the training(s) a teacher has received, fine discrimination with respect to definition of the trained and untrained teacher has not been made here.

Out of 100 teachers recruited in the 16 sample schools, altogether 79 teachers were contacted in this study. 'Teacher's Background Form' was used to collect information

Table 1. Number of the teacher by gender and training in the sample school

| District Teacher | Morang | Kaski | Rasuwa | Total |
|---------------------|--------|-------|--------|-------|
| Male | 13 | 16 | 15 | 44 |
| Trained | 9 | 15 | 5 | 29 |
| Trained % | 69.2 | 93.8 | 33.3 | 65.9 |
| Female | 24 | 22 | 10 | 56 |
| Trained | 17 | 18 | 6 | 41 |
| Trained % | 70.8 | 81.8 | 60.0 | 73.2 |
| Total | 37 | 38 | 25 | 100 |
| Trained | 26 | 33 | 11 | 70 |
| Trained % | 70.3 | 86.8 | 44.0 | 70.0 |

from individual teachers. The research team was not able to meet 21 teachers working in these schools as some were on leave and some out of school for administrative work.

Among 79 teachers, 65% had SLC qualification, 27% had intermediate level and 8% had bachelor level qualification. (See Appendix 2 for district-wise data). Among these teachers, 69% had teaching experience of more than 10 years and 22% were with teaching experiences of 5 to 10 years. About 42% of them were working at the present school for more than 10 years and about 22% were working at the present schools for 5 to 10 years. This scenario presents a stable time frame for teacher to establish strong relationship with the community and the students. Moreover, most of the teachers were locals as well. (See Appendices 3 and 4 for district-wise data).

Based on the information provided by the teachers about the training they have received, all of the contacted teachers have received one or another type of modular training. Most of them have also received Whole School Approach training in Morang and Kaski districts. As BPEP program has been launched recently in Rasuwa district, there were only few teachers who have received modular and/or Whole School Approach training. In a number of cases, modular or Whole School Approach teacher training was the first teacher training that the teacher had ever received. Status of the BPEP training that 79 teachers had received is presented in the table 2.

About 97% of the teachers of Morang district and 74% of Kaski district had received modular training on 'Teaching Methods'. Whereas this is 70% and 74% in 'Instructional Materials' respectively for Morang and Kaski. Similarly high number of teachers of Morang and Kaski had received modular training on 'Grade Teaching' and 'Multi-grade Teaching'. More than half of the Morang and Kaski teachers had received training on 'Learning Process and Evaluation' and 'Curriculum Dissemination'. The first package of WSA

Table 2. BPEP training received by the teachers

| Training | District | | Morang (n=33) | | Kaski (n=31) | | Rasuwa (n=15) | | Total (n=79) | |
|---------------------------|----------|-----|---------------|----|--------------|----|---------------|----|--------------|--|
| | N | % | N | % | N | % | N | % | | |
| Modular | | | | | | | | | | |
| Teaching method | 32 | 97 | 23 | 74 | 2 | 13 | 57 | 72 | | |
| Instructional material | 23 | 70 | 23 | 74 | 2 | 13 | 48 | 61 | | |
| Learning process ... | 16 | 48 | 16 | 52 | 0 | 0 | 32 | 41 | | |
| Grade teaching | 26 | 79 | 20 | 65 | 0 | 0 | 46 | 58 | | |
| Multi-grade teaching | 26 | 79 | 18 | 58 | 0 | 0 | 44 | 56 | | |
| Curriculum dissemi.. | 18 | 55 | 16 | 52 | 1 | 7 | 35 | 44 | | |
| Whole School App.. | | | | | | | | | | |
| WSA I | 33 | 100 | 27 | 87 | 4 | 27 | 64 | 81 | | |
| WSA II | 14 | 42 | 24 | 77 | 0 | 0 | 38 | 48 | | |
| NCED, DEC | | | | | | | | | | |
| 1st package | 20 | 61 | 15 | 48 | 14 | 93 | 49 | 62 | | |
| 2nd package | 15 | 45 | 9 | 29 | 8 | 53 | 32 | 41 | | |
| 3rd package | 13 | 39 | 5 | 16 | 7 | 47 | 25 | 32 | | |
| 4th package | 13 | 39 | 2 | 6 | 0 | 0 | 15 | 19 | | |

had been received by 81% of the teachers in total and by 100% of the teachers of Morang and by 87% of the teachers of Kaski in the sample schools. WSA II had been received by 48% of the teachers in total and by 42% of the teachers of Morang and by 77% of the teachers of Kaski. In case of NCED and DEC packages 62% of the contacted teachers had completed first package, and 41%, 32% and 19% of them had completed 2nd, 3rd and 4th packages respectively. High number of the teachers from Rasuwa were found to have received training of NCED and DEC packages than modular or WSA training packages.

Number of the students: Data regarding number of the students were also collected from sample schools. In table 3 total number of the students at the primary level of the sample schools is presented (See Appendix 5 for grade-wise student enrollment).

Table 3. Number of the students by gender in the sample school

| District | Morang (n=5) | Kaski (n=6) | Rasuwa (n=5) | Total (n=16) |
|-----------------|-----------------|----------------|-----------------|-----------------|
| Boys | 890 | 582 | 251 | 1723 |
| Girls | 773 | 706 | 228 | 1707 |
| Total | 1663 | 1288 | 479 | 3430 |
| Student:Teacher | 44.9 | 33.9 | 19.2 | 34.3 |

In the sample schools, student teacher ratio was found to be within limit of MOES requirement. In Rasuwa this ratio was even lower with 19.2. The number of girls was also good, with about half of the students being girls.

Number of classes observed: Altogether 153 classes of grades 1-5 were observed. Out of these 153 classes 35 were Mathematics classes, 22 English language classes, 40 Nepali language, 18 Mero Batabaran, 22 Mero Serefero and Mero Desh, 10 Physical Education, and 6 Creative Arts classes. It was intended to cover subjects and grades in a proportionate manner. Researchers planned to observe certain grades and subjects before visiting the school. But this plan was affected by the presence/absence of the teacher and by the daily routine of the school. Usually in the first period, researcher(s) used to observe the class in which teaching learning was going on.

Tools Development and Orientation

Familiarization on principles and process of curriculum implementation, teacher training and students' assessment: One-day familiarization workshop with concerned personnel from DOE, CDC, DEC and NCED was conducted to familiarize the principles and processes of teachers' professional development activities to the research team. Draft tools were also shared at the workshop and suggestion and comments incorporated in the tools.

Tools development: A comprehensive list of the training skills covered in BPEP program (modular, WSA, and 10 months packages of NCED and DEC), which were relevant for the classroom practice was prepared. For this, training package of BPEP (Whole School Approach and modular); training package and teacher training curriculum of NCED; and curriculum of primary level were studied. Four classroom observation forms were developed: 1) Classroom Observation Form (General), 2) Classroom Observation Form (Language), 3) Classroom Observation Form (Physical Education), 4) Classroom Observation Form (Arts and Crafts). Besides classroom observation forms, background data collection forms were also developed -- Teacher's Background Form, and School Information Form. (See Appendix 6 for the tools).

Field Work

Field coverage: It was planned to cover 3 districts, 15 schools, about 50 teachers, and 150 classes for classroom observation. Two to three days were set for observing classroom teaching in each school. As some schools were closing for the vacation and some of the schools were starting their terminal examination, 6 schools were observed at Kaski. Five schools each were observed at Morang and Rasuwa as planned. Altogether 153 classes were observed, covering all the primary grades and all the primary level subjects in total. As teachers were generally found covering much more content in one day than suggested

in the teacher's guide, it was felt necessary to observe the same teacher in the same grade and subject for 4/5 days in order to find distribution/planning of periods for a lesson as suggested in the teacher guide. Therefore, in both Kaski and Morang, 4-5 days were also spent in one/one school to observe planning of period for a lesson by the teachers.

In about half of the sample schools at Kaski district, research team worked together, discussed the class observation (some classes observed by four researchers together and some by two together) at the evening, on the basis of comprehensive daily diary maintained for the class observed. This was helpful to clarify and focus more on collecting relevant information (classroom delivery, classroom environment, classroom management) and maintain consistency in classroom delivery observation. Research team was involved in tools development, field work, data tabulation and analysis. No other persons were used as field researcher. Resource persons from DOE and CDC were involved in tools development, designing data tabulation and data analysis.

In addition to the three districts, Jhapa district was also visited for a few days in order to observe 12 classes of the 4 schools, share finding from other districts with the teachers and RPs of Jhapa district.

Classroom observation: Classrooms were observed during teaching/learning activities in order to 1) record status/scenario of classroom delivery practice; 2) describe classroom environment in order to analyze whether present school/classroom environment is conducive for implementing curriculum, textbook, teacher guide, and training skills; 3) find out gaps in the teacher training and classroom practice; and 4) find out gaps in the intended curriculum and enacted curriculum. Information regarding physical aspects of the classroom, students' enrollment, availability of instructional materials, teacher support through RC, teachers' qualification and training were also collected through interview and Focus Group Discussion.

Examination of instructional and reference materials used by the teachers: This observation focused on the availability of instructional and reference materials, and appropriateness of their use.

Interview with teachers, head teachers, RP/SS, DEO: Focus Group Discussion and/or interview were conducted to solicit perception of the stakeholders on classroom practices of the teachers and also on supporting or hindering factors for effective classroom delivery.

Sharing and consultative sessions: During data tabulation and report preparation, finding were shared with teachers (Kathmandu -- Phurping and Jhapa), and personnel from DEO, CDC, NCED, DEC, DOE, MOES, TU. These sessions were helpful in verifying the field finding and determining courses of actions as to be provided as suggestions of the study.

Analysis

Preparation of comprehensive list of skills: Comprehensive list of the skills relevant for the classroom practice was prepared on the basis of training package of BPEP (WSA and modular); training package and teacher training curriculum of NCED; and curriculum of primary level. This list was used to cross match skills provided in the training and their appropriate use in the classroom delivery by the teacher.

Analysis strategy: Analysis of the classroom delivery observation was based on comprehensive daily diary maintained for each of the classroom observation. Analysis

strategy was:

- Subject-wise analysis.
- Field researcher(s) who observed the class describe teacher's delivery of the lesson to the team.
- Research team, sometimes accompanied by the resource person(s), went through curriculum, textbook, teacher's guide and related training manual for the training teacher had received. This was done for each of the classes observed.
- Identify if any discrepancy existed with respect to curriculum, textbook, teacher's guide and related training manual for each of the classroom delivery. Cross matching of the classroom delivery by the teacher was done in two stages. First stage, tallying classroom practices of the teachers with the relevant skills provided in the training. Second stage, to track back skills provided in the training that would have been helpful to the teacher if teacher would have applied the skill in the classroom delivery.

Multi stage data tabulation: Qualitative data tabulation was undertaken at multi stages. First stage, data tabulation was concerned tabulating data for each of the single classes observed. Second stage focused to aggregate data by subjects on the basis of the data for each of the single classes. At this stage, qualitative data was summarized in related categories. In the third stage, the focus was to synthesize the data from the subject-wise data in general terms.

Sharing sessions with the experts: Frequent interaction sessions were organized with the help of teachers, resource persons and experts to get their comments and feedback on the findings. Advice from the teachers, resource persons and consultative meetings with the resource persons and experts were helpful to verify the findings and determine further course of the analysis.

Chapter II

Use Of Curricular Materials During Classroom Delivery

Various types of curricular materials have been provided and training conferred to the teachers to support them in classroom delivery. Materials such as curriculum, content elaboration, textbooks (for every subjects in each grade), and teacher guides (for every subjects in each grade) have been provided to all the primary level public schools free of cost. Curriculum provides grade-wise objectives per content areas for each of the subjects. Content elaboration further breaks down curricular objectives along with brief description of teaching methods, teaching materials relevant to the content and evaluation procedures. Textbook provides sequential content presentation mainly stated in the curriculum. Teacher guide provides suggestion regarding tentative periods required for each of content lesson of the textbook, objectives to be achieved, suitable teaching methods for content delivery, appropriate teaching materials, and evaluation of the lesson. Long term in-service training (4 packages of 2.5 months each) and short-term recurrent training (modular and whole school types) are supposed to provide relevant theoretical knowledge, essential practical skills and solution for enduring problems.

Utilization of the curricular materials in the classroom, as observed during field study, is presented in this chapter. This chapter presents subjective-wise findings. For each subject, classroom delivery as observed was thoroughly analyzed with respect to curriculum, textbook and teacher guide. A comparative analysis of classroom delivery and utilization of training skills with respect to the training is also presented in general in a later chapter.

Mathematics

Altogether 35 mathematics classes were observed covering grades 1-5 in the 16 primary schools of Morang, Rasuwa and Kaski. Following sections present findings from the analysis of each of the individual Mathematics classes with respect to curriculum, textbook, and teacher's guide.

Classroom Delivery with Respect to Curriculum

Each of the classroom observation was analyzed to determine whether curricular objective(s) was fulfilled in the day's lesson. To ascertain this, two sources were used: 1) cross-examine classroom delivery, content coverage and stated curricular objectives, and 2) ask teacher (in some of the cases) about his/her intent for the day's lesson where it was difficult to clearly state what objective(s) was achieved.

Broader categorization indicated drills based upon the textbook exercise were common in the mathematics classes. In about half of the mathematics classes observed, teachers were found engaging their pupils in drills for solving mathematics problems. Those exercises were given from the textbook exercise, example from the textbook or a solution worked out by the teacher for the students as demonstration for solving problems. In another half of the classes observed, teachers were also found teaching mathematical concepts mostly followed by drills in their classes. These classes were concentrated on providing mathematical concepts and solving related problems as follow up drill. Out of 35 mathematics classes observed, in 25 classes (i.e. 72%) the content covered match with the curriculum objectives. In 7 classes (20%) the content covered did not reflect the

curriculum objective(s). On the other hand in 3 (8%) of the classes, content covered partially reflected the curriculum objectives.

Specifically, the nature of curriculum for mathematics subject provides rather the content coverage and those contents are sequentially presented in the textbook. Therefore, even if content covered in the classroom match to the curriculum objectives, teachers might not be consulting the curriculum. As it was common practices of the teachers to teach/consult the textbook in the classroom delivery time, it was not an easy task to conclude whether the teacher had referred to the curriculum or not. This was the view of the teachers as well -- textbook guide their teaching. However, there were some cases when teachers could be indicated for a deviation from stated curriculum objectives in classroom delivery.

Case 1: Calculation of perimeter of rectangle and square in the curriculum, but teacher tried to cover perimeter of circle as well.

Case 2: Curriculum specifies "draw bar graph on the basis of given information/data". Instead teacher's approach was -- drew bar graph freehand and described how to interpret a bar graph.

Case 3: Curriculum scope is to cover multiplication up to 10. Teacher made the students drill and rote memorize multiplication fact up to 15.

Classroom Delivery with Respect to Textbook

During classroom observation, mathematics textbooks were found extensively used by both teachers and students. Textbooks were used for classroom delivery, students reading, doing problem/exercise, for class work and homework. Illustrations, examples, pictures from textbook were used during classroom teaching learning. There was extensive use of the textbook and there were also cases when textbooks were not used properly during classroom delivery.

Analysis of the content presentation in the textbooks related to the observed classes indicated several suggestions given in the textbook as supportive in the classroom delivery. Some of these opportunities were cashed by the teachers by following the sequence of content presentation, following the instructions provided in the textbook or by utilization of the illustration, exercises pictures from the textbook. But in several other cases, teachers seemed to be deviating from what has been suggested in the textbook. Use of the textbooks in relation to the observed classes is presented in table 4.

Table 4. Utilization of textbook suggestion by the teachers

| Aspect related to classroom delivery | Use by the teacher (n=35) | |
|---|---------------------------|---------------------------|
| | followed the suggestion | deviation from suggestion |
| Required content covered (other than doing exercises) | 6 | 5 |
| Sequence/step for content delivery | 6 | 5 |
| Teaching aid suggested | 2 | 2 |
| Game Suggested | 1 | 1 |
| Classroom discussion based on textbook example | 3 | 0 |
| Exposition of mathematical concept | 0 | 2 |
| Textbook used for problem/exercise | 16 | 2 |
| CW/HW from textbook | 8 | 0 |

As stated earlier, textbooks of mathematics cover the suggested contents of the curriculum. Therefore even if the teachers base classroom teaching on textbook, curriculum objectives might be achieved without consulting the curriculum itself. As the above figures indicates mathematics teachers spend more of students time on doing problems/exercise -- in 24 classes out of 35 (i.e. 69%) of the cases, textbook were used to solve problem given in the textbook as an example to follow for the students or solving problem from the exercise given in the textbook by the teacher for the students or textbook exercise given for students work as CW/HW. Textbook clearly presents what content is to be covered, and in what sequence the content is to be presented. In the textbook there are also suggestion in number of places what instructional material need to be used. These instructions provided in the textbook are clear and understandable to follow. However, there were cases in which teacher's use of the textbook deviated from what has been suggested in the textbook.

Textbook provides the content to be covered, the sequence of the content, and in some cases the instructional materials to be used. There are also examples, illustrations, pictures in the textbook which can be used during classroom delivery. There are also exercises, which could be given to the students as CW/HW. About 50% of the classes were spent entirely for calculation/solution of mathematical computation problem/exercise i.e. drill and exercise were regarded as the way of math learning. About 30% of the classes were, at least partly, focused on exposition of the mathematical concepts, understanding and procedures as well as providing illustrations of these concepts. In rest (20%) of the classes CW/HW checking was the major focus, but supportive mathematical concepts, procedures were also explained by the teacher -- mostly to the class as whole and occasionally to an individual student. In the 11 classes in which major focus was on content teaching (not doing exercises) in 6 classes required content was covered by the teacher, but in remaining 5 classes teachers did not cover the required content. The teacher either covered more of the content than required in particular lesson or focused on the concept not related to that lesson. About same number of teachers divide into both ends regarding following sequence/steps of content delivery in those classes. Such was case in the use of instructional materials as well.

A lack was also noticed in translating the intention of the textbook content coverage and sequence for providing/developing mathematical concepts in the students. In 2 of the cases where it was explicit that teachers need to deal with mathematical concepts, they were found engaged in providing steps or formula for solving the problem. Some of the cases which illustrate a deviation of classroom delivery from what has been suggested in the textbook are presented below:

Case 4: Higher concept/level required in the day's lesson, but teacher focused on lower concept/level or vice versa. For example, use of cm/m concept in the lesson, but teacher spent whole of the class explaining how to measure properly by using scale. Proper measurement was in the previous 3/4-lesson, which was already covered.

Case 5: Lesson focus on rank order number (first, second, third), but teacher restored to drill -- number 1 for first, 2 for second and so on.

Case 6: Illustration, example in the textbook not used by the teacher. For example conversion chart in the textbook, but teacher focused on direct conversion and conversion formula.

Case 7: Textbook provides specific steps -- collect data/provide data, tabulate and then draw bar graph in a graph paper. But the teacher drew bar graph free hand in the blackboard and then explained how to read a bar graph.

Case 8: Concept of multiplication fact up to 10, but the teacher made students to memorize multiplication table up to 15.

Case 9: Number 11-20 and placement in textbook, but the teacher made students to repeat 1-100 in chorus.

Case 10: Textbook suggests to take students outside for a race and teach concept of first, second. Instead, teacher explained meaning of first, second in the class.

Case 11: Introduction of formula through inductive approach from several examples for measuring perimeter given in the textbook. The teacher wrote the formula, explained how to use the formula and provided example how to use formula to solve problems given in the textbook exercise.

Some of the above cases indicate emphasis of the concerned teacher on rote memorization than understanding and application of the mathematical concepts and procedures. However, there were few cases, which indicated instances where classroom delivery emphasized on mathematical concept understanding and use of mathematical procedure through induction/deduction. For example, teaching multiplication by repeated addition, use of day-to-day materials as examples to recognize and analyze various geometrical shapes and their sample properties as suggested in the textbook were utilized by some of the teachers.

In general, content exposition in the textbook, related to the observed classes, was found appropriate and supportive for effective classroom delivery. But there were a few instances where content exposition in the mathematics textbook was found to be irrelevant as well. For example, grade 5, lesson 5-2, draw bar graph. In this, for content exposition dramatization is used in which one of the students suddenly thinks how to present collected information in a way that everyone easily understands. Then he presents collected information in a table. Then comes insight to present in a bar graph. Such content exposition (section 15.2) would be misleading and confusing. In addition, content exposition from 15.1 does not match with 15.2 in this textbook. In 15.1 central idea of exposition is in an information dissemination method.

Classroom Delivery with Respect to Teacher Guide

Teacher Guide has been developed for all the primary grades and for all the subjects. In subjects like 'Creative Arts' there are no textbook, but only teacher guides. Teacher guide provides information regarding approximate periods required for each of content lesson of the textbook, objectives to be achieved, suitable teaching methods for content delivery, appropriate teaching material, and evaluation of the lesson.

Each of the classrooms observed was analyzed how the class should have been delivered according to the teacher guide. A cross-match of actual classroom delivery and guideline from the teacher guide indicates instances of match between those two, but a gap seems to be enormous as presented in table 5.

Table 5. Utilization of teacher guide suggestion by the teachers

| Suggestion from teacher guide | Use by the teacher (n=35) | |
|---|---------------------------|---------------------------|
| | followed the suggestion | deviation from suggestion |
| Method Inductive/Deductive | 1 | 3 |
| Discussion | 2 | 3 |
| Question/Answer | 3 | 12 |
| Demonstration | 3 | 7 |
| Drill | 5 | 1 |
| CSA approach | 4 | 10 |
| Activity Concept development | 1 | 5 |
| Provide individual practice | 2 | 5 |
| Provide similar examples for practice | 3 | 6 |
| Use example from TG | 2 | 1 |
| Exercise for CW/HW from Textbook | 4 | 2 |
| Group work | 0 | 2 |
| Game | 1 | 2 |
| Instructional material | 2 | 6 |
| Use real objects | | |
| Multiplication fact table | 0 | 2 |
| Use of suggested materials (flash card, number card, map, globe etc.) | 6 | 8 |
| Sequence/steps for content delivery | 4 | 7* |

* in addition 6 cases partially followed

The methods and activities suggested in the TG are student - centered in nature. In practice, most of the time in mathematics classes was spent in doing math problems. General approach observed in majority of the cases was teacher showing step by step how to solve math problem and then asking students to solve other similar problems given in the textbook exercise or one given by the teacher in the blackboard. While the class was related to math concept development, understanding of the procedures or deducing formula, but teachers usually deviated from these focus and resorted to lecturing. Discussion, question answer, demonstration, inductive, deductive methods as suggested by the TG were not utilized as often as required. Major thrust of mathematics teaching has been on CSA (Concrete, Semi-concrete and Abstract) approach and time and again these are explicitly mentioned in TG. In 10 cases out of the 15 cases suggestion to apply CSA approach, it was found to have been ignored in 6 cases and in 4 of cases CSA approach was utilized correctly as well. Similarly math concept developed was the emphasis in 6 of the cases, but only in 1 case concept development strategy was used as suggested in the TG. In 6 of the cases, there was specific mention of undertaking drill exercise and in 5 of these cases drill was done.

TG also suggests specific activities such as need for individual practice, providing more of similar examples, group work, game, practicing math problems and so on. Math problems practice/exercise was mostly done as suggested in the TG, but other activities were not undertaken so frequently.

With regard to instructional materials as suggested in the TG related to the observed classes, in 8 of the cases real objects were suggested to be used. But only in 2 of the cases, it was done so. Multiplication fact table was not used in 2 suggested cases. However where suggestion was to use flash card, number card and other such simple materials, these were found to have been used in 6 of the cases and not being used in 8 of the cases.

TG is also found useful in suggesting sequence/steps for classroom delivery specifically where CSA approach is relevant. Suggested sequence/steps were found to have been correctly followed in 4 of the cases, partially and/or weakly followed in 6 of the cases, and completely ignored in 7 of the cases.

Thus, it seems that there is lack of practice of consulting and following TG for classroom delivery by the teachers. Cases of discrepancy what TG suggests and what teachers actually practice in the classroom strongly indicate none-use of TG by large number of teachers. Some of the cases as illustration of use of TG are provided here.

Case 12: Teachers generally do not follow suggested periods for the lesson. They usually cover far more in a day's lesson. Teacher's guide suggests 4 periods for a lesson, but that much matter was covered in a single class.

Case 13: Teacher guide might suggest child-centered approaches such as discussion, question answer, group work or field work. Use of discussion and question answer was found practiced by the teachers in few cases, group works rarely and out of class activities in none. TG suggested group work and preparation of report, but content was covered through lecturing.

Case 14: Formula learning and emphasis on drill based on demonstration by the teacher how to solve problem for a similar problem. TG suggestion was to discuss and build upon experiences of the students, question answer based on specific examples and induct formula.

Case 15: TG suggested concrete example first, then addition practice and then describing multiplication as additive process. Instead teacher provided an example of additive process ($2+2+2 = 6$) and stated it could be expressed as 2×3 as well and retorted to memorization of multiplication table by the students. Suggested multiplication fact table was also not used.

Case 16: Counting blocks, figures of blocks in blackboard, transposition of 10 blocks with unit of ten, counting drill exercise by ten unit one unit concept for 11-20 is the suggested sequence in TG. Teacher rather makes one student say the numbers aloud for the class and other repeat after that student in chorus. Then teacher makes the students write the numbers 1-100 in the exercise copy.

Case 17: Students measure pencils of equal length with their figures as a group activity. Compare the result and conclude need of standard measure through class discussion. Instead, the teacher asked students to draw line in their exercise copy and measure length of the line with the help of a scale.

Case 18: Teacher needs to ask time as shown in the paper-made clock; students show time on the paper-made clock as asked by the teacher. Instead, teacher engaged students to do exercise and calculate time directly without using paper-made clock.

Case 19: Various concrete and semi-concrete activities suggested in TG to develop concept of fraction, but teacher limited to the shaded figures given in the textbook.

There were a few cases in which teachers had delivered their classroom teaching effectively. In those cases teacher had consulted TG in the past, but not at the present and some others were consulting TG for classroom delivery. These cases included teacher's introduction of various objects like globe, duster, blackboard etc. while teaching geometrical shapes and students tell the name of that shape and prepare list of objects

related to various geometric shapes. Another teacher used number cards -- recognizing and ordering numbers, teacher said a number and student picked that number card. One teacher used protractor for introducing protector, discussed and demonstrated proper use, asked one student to demonstrate and then made the class to practice individually. The teacher went around, and provided reinforcement.

In these classes, students were found motivated and active in learning than in other usual type of classes. In such classes where teachers employed student centered approach, CSA approach or used teaching materials, students were found to have been keen, interested and motivated in learning. They were found actively engaged in classroom teaching learning. In a few cases student were found engaging in the learning while playing with the materials teacher had used at the classroom. For example teacher had used pebbles and ring (drawn on the table with chalk) to teach division. Two of the students were found playing with pebbles and ring during the break. They were grabbing pebbles in their hand, dividing those in the 5 rings and telling each other how much are there is each ring and how many remained. Then another would try more pebbles in one grab and get more in each ring as seen in picture 1.



Those cases of good practice were not found specifically related to type of school, nor qualification of the teacher. Only one common aspect among those teachers was that they had long term training, WSA and a number of modular training. Therefore, from the limited data in this study, it can not be deduced how the trained and untrained teachers or teachers with various types of the training are utilizing teacher guide provided to them.

English

English language curriculum is introduced in grades 4 and 5 as compulsory subjects in the primary education in Nepal. Altogether 22 English language classes of grades 4 and 5 were observed. Three English language classes of grades 2 and 3 were also observed. As these were optional and there was no specified curriculum, textbook and TG, the findings are not included in the analysis, and also not included in 153 observed classes.

Classroom Delivery with Respect to Curriculum

It was found difficult to match classroom delivery of the teacher with the intended learning outcome in the English language teaching. This difficulty was faced mainly due to two reasons --one, intended learning outcomes do not explicitly match with the content area of the textbook, and two, in most of the cases teachers did not follow even the suggestions provided in the textbook, not to mention teacher guide. Out of 22 classes observed, only in 6 (27%) classes, day's lesson were found directly related to the intended learning outcomes in the curriculum such as

- Describing a person,
- Reading with understanding simple English words,

- Interpreting maps,
- Following directions,
- Narrating actions and events,
- Telling time.

In majority (73%) of the observed classes, it was difficult to trace which of the intended learning outcome was met. Some of the examples are presented in the following matrix.

| Intended/requirement | Actual practice |
|---|--|
| <ul style="list-style-type: none"> • Write the sentences and draw the correct pictures | <ul style="list-style-type: none"> • Reading and translating in Nepali • Repeating in chorus after the teacher |
| <ul style="list-style-type: none"> • Match, talk, draw and write | <ul style="list-style-type: none"> • Question and answer on the blackboard by the teacher, student copy and memorize |
| <ul style="list-style-type: none"> • Class discussion, oral exercise | <ul style="list-style-type: none"> • Question and answer in flash card shown by the teacher, students copy and memorize |

As indicated in the above matrix, the intention in the first case was in writing correct sentence by the students, but teacher wrote the sentence, and then translated the sentence into Nepali. Students were also made to repeat the sentences in chorus after the teacher. The objective was related to writing, but classroom focus was on reading. Second and third cases in the above matrix also indicate such deviation of the classroom delivery from the intention of the curriculum objective(s).

The nature of the curriculum of English language also makes it difficult to interpret the curriculum objectives and cross match these with the contents of the textbook. Poems or stories or description of events, as the contents, need to be delivered so as to achieve some functional aspect of the English language or inculcate some kind of language skill in the pupils. Some content might be used to achieve varied objectives of the curriculum. In this regard, interpretation of curriculum of English language is complex.

To make the situation worse, competency of majority of the English language teacher was found weak. Some of the teachers were found to be weak in speaking in English or confused in spelling or giving wrong answer to the question and other such similar incidences. However, textbooks and teacher guides of English language are developed in such a way that gap of English language curriculum has been filled up in large extent.

Classroom Delivery with Respect to Textbook

Textbook for English language suggests specific activities for each of the sections of a lesson. One or more sections of each lesson could be covered in a day - approximate periods for each classes indicated in grade 4 teacher guide and grade 5 teacher guide also mention which of the sections to be covered in a single period. The design of the textbook is user friendly as it provides with numbered sections and major activities (related to four language skills) for each section. Specific instruction(s) for the activities to be undertaken are also provided in the textbook itself.

Teachers whose English language classes were observed in this study were found to have used textbook during classroom instruction. But they were found deviating from the instruction and requirement of the sections of the textbook in a number of the cases as given in table 6.

Table 6: Consideration of Textbook Guidelines

| Suggested activity in Textbook | Suggested Activities | | | Activities undertake during classroom delivery | | | | | | | |
|---|----------------------|--------------------|----------------------|--|--|-----------------------------------|------------------------------|----------------------------------|-----------------------|----------------------------|--------------------------|
| | Completely followed | Partially followed | Not yet all followed | Student repeat after teacher | Student repeat after one leading student | Question and answer on blackboard | Memorize question and answer | Translation (in Nepali) teaching | Paraphrasing (Nepali) | Word meaning with spelling | Using words in sentences |
| Class discussion, questions and answers, games, chorus speaking, chants | - | 2 | 5 | - | - | 3 | 3 | 3 | - | 2 | - |
| Dialogues and oral exercises for children to practice in pair | - | 1 | 1 | - | - | - | 1 | 1 | - | - | - |
| Exercises for directed listening | - | - | 4 | 1 | - | 1 | 1 | - | 1 | - | 1 |
| Silent reading - usually followed by discussion | - | 3 | 1 | 2 | 1 | - | - | - | 1 | - | 1 |
| Writing exercises. These may be done orally first, or students may do them | 5 | 5 | 5 | 3 | 1 | 3 | 4 | - | 1 | 4 | - |
| Silent reading followed by written activities | - | - | 1 | - | - | - | - | - | - | 1 | - |
| Exercises which involve reading, class discussion, extension activities, and written work | - | - | 1 | - | - | - | 1 | - | 1 | - | - |
| Total | 5 | 11 | 18 | 6 | 2 | 7 | 10 | 4 | 4 | 7 | 2 |

Altogether 34 activities were found to have been suggested in the English language textbook related to the 22 classes observed. In five of the cases (i.e. 15% of 34 activities) suggested activity was found to have been followed by the teacher during classroom delivery. Whereas 32% of activities were partially used and 53% of suggested activities were not undertaken at all. Above table 6 also indicates general practice of the teachers which deviate from the intention of the curriculum and suggested activity in the textbook for that lesson. In about 64% of the classes (i.e. 14 classes of 22 observed classes) classroom delivery was at least partly related to reading the text. Among those 14 classes, in 10 classes part of time allocated in the period was spent on text or question answer reading by the teacher and student repeating after him/her. In four of these classes, teacher asked one of the students to read and other students repeat after the leading student.

Emphasis on memorization of question and answer was also high. Teachers writing question and answer on the blackboard and student copying and memorizing them was very frequent. Even during classroom hours some teachers were found asking students to read question and answer they had done as homework. Similarly teaching by the use of

translation method, sometimes using paraphrasing way, was also high (8 or 36% of the classes out of 22 classes). Word meaning with spelling or using words in sentences was also favorite classroom activity of the teachers.

Thus still general practice of the English language teachers seem on teaching by translation methods, reading and repeating text, memorizing question and answer, and word meaning. Suggested methods in the textbook and the methods adopted by the teachers during delivery is presented in the above table 6. There were a few good cases where teachers were found to have employed suggested activities (at least partially) of the textbook. A couple of cases are noted below.

Case 20: Textbook suggests class discussion, silent reading and then written activities in one of the exercises "Draw the two boxes. Write the words in the right box." The teacher led the class discussion emphasizing word meaning by translation, student took part in discussion and wrote words in the right box drawn by the teacher on blackboard. In this case teacher partially followed the instruction given in the textbook.

Case 21: Textbook suggests oral exercises for children to practice in pairs, "Ask and answer these questions with your friend. Use these answers." Teacher first asked questions to 3/4 students and asked students indicated one of their classmates and asked the question. More than half of the students participated in asking and answering questions.

Classroom Delivery with Respect to Teacher Guide

Teacher guide includes teaching points, mainly specifying the curricular objectives to be fulfilled from the lesson. It also suggests approximate class periods required for each of the lesson. Teaching strategies for each of the sections of the lesson are suggested. Moreover, teacher guide for grade 5 specifically suggests section(s) to be covered and sequence of the sections to be covered in a day's lesson, which is lacking in grade 4 teacher guide. Teaching strategies suggested in the teacher guides include methods of teaching, essential instructional materials, questions to be asked, and activities, games that need to be undertaken in rest of class time.

In the teacher guide, methods for classroom delivery and materials required are mentioned. Similarly, specific games and activities are suggested. Use and non-use of guidelines from teacher guide by the English language teachers during classroom delivery is presented in table 7.

Table 7. Utilization of teacher guide suggestion by the teachers

| Suggestion from teacher guide | | Use by the teacher (n=22) | |
|--------------------------------|--|-----------------------------|---------------------------|
| | | according to the suggestion | deviation from suggestion |
| Method | Dramatize/role play/act out | 1 | 6 |
| | Question answer | 1 | 6 |
| | Discussion | 1 | 3 |
| | Demonstration (conservation activities) | - | 2 |
| | Drill | 2 (read from book) | 11 |
| Activity | Writing | 1 | 2 |
| | Drawing | - | 3 |
| | Revision | 1 | 3 |
| | Set time and ask | - | 2 |
| | Group work | - | 1 |
| | Give scholar exercise | - | 2 |
| | Ask to pick up the object | - | 3 |
| | Point & ask | - | 3 |
| | Put students work on the wall | - | 1 |
| | Matching exercise | - | 4 |
| Games | Touch for this point for that | - | 2 |
| | Do this, do that | - | 2 |
| | Play R to B | - | 1 |
| | Race & identify/point | - | 2 |
| | Sorting game (flash card, pair, run in your corner, matching, circling grouping) | 2 (circle in BB) | 11 |
| | Quiz | - | 3 |
| | Bingo | - | 1 |
| Instructional Materials | Flash card/cut-outs | 1 | 8 |
| | Use real objects | - | 6 |
| | Map (draw) | - | 1 |

Teacher guide suggests to follow guidelines provided in the textbook as well as provides additional guidelines to undertake specific activity or game or use of some instructional material. Above table 7 indicates suggested methods in a broader terms as well as enumerates specific activities and games suggested in the teacher guides (not textbook) with respect to the observed 22 classes. The table shows that most of the activities and games were not undertaken during classroom delivery. Similarly, suggested instructional materials were also not used. In out of 17 suggestions to use instructional material only in one case flash-card was found to have been used. Some of the cases of deviation from the suggested guidelines from the teacher guides are presented here.

Case 22: The content covered by the teacher related to listening and answering questions as oral practice. TG suggested to use flashcard (choose a card and say) and games like "Touch for 'this' point for 'that'", "Play 'do this, do that'". The teacher first tried to conduct class in English language medium and also tried to use demonstration method by making one girl stand outside classroom and asking, "Where is Sita?" When students failed to answer, teacher demonstrated by walking himself saying "I am walking. What am I doing?" Students could not understand what teacher wanted. Then teacher had to retreat to his usual teaching method - read from the book, students repeat, read and translate in

Nepali, word meaning and repeat question and answer.

Case 23: There were 7 sections in one lesson and TG suggested 6-8 periods for the lesson. The teachers covered 5 sections in a day. Except the activity copying from book, none of the activities during classroom delivery matched with the textbook suggestion or guidelines from TG. Two of the sections as presented in the textbook, suggestion from the TG and teacher's actual practice is presented here,

Textbook

 **90. Match, talk, draw and write.**

seven o'clock in the evening six o'clock in the morning

two o'clock in the afternoon eleven o'clock at night

 Ram is getting up. It is _____.

 Ram is in school. It's _____.

 Ram is eating his rice. It's _____.

 Ram is asleep. It's _____.

Teacher Guide

90. a) Explain in Nepali

"In the morning" = from getting up to school Khaja break after period 4.

"in the afternoon" = from break till about 5 o'clock.

"in the evening" = about 5.0 pm to bed time.

"at night" = sleeping time.

b) Act. T: I'm washing my face. What time is it?

SS: Six o'clock in the morning etc.

c) Talk and draw and write Ex. 90.

Classroom delivery

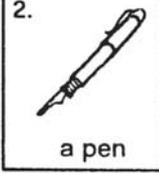
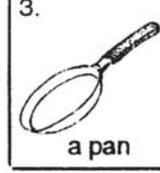
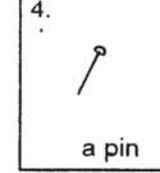
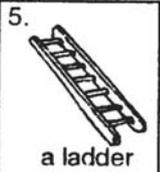
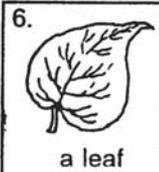
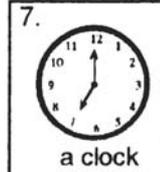
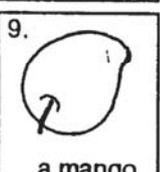
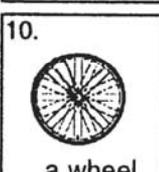
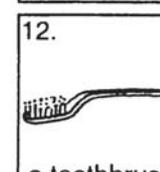
Teacher asked questions to the class such as, "Where is Ram?", "What is Ram eating?". When students could not understand, teacher would translate the question(s) in Nepali. Even the teacher made the students repeat question answer 2/3 times after him.

Textbook

 94. Listen to your teacher. Your teacher will say six words.

Which numbers is the teacher saying ?

Write the numbers in your copy.

| | | | |
|--|---|---|--|
| 1.  a flag | 2.  a pen | 3.  a pan | 4.  a pin |
| 5.  a ladder | 6.  a leaf | 7.  a clock | 8.  a bag |
| 9.  a mango | 10.  a wheel | 11.  a bird | 12.  a toothbrush |

Teacher Guide

94. Ask Questions: T: What is number 3?

What number is the bag? Is there a pig? etc.

Explain instructions in Nepali. If you say 'pin', they must write '4'.

Say six words.

Repeat this exercise on several days, using different words.

Classroom delivery

Teacher partly covered this exercise. Teacher's emphasis was on word meaning through translation method. Then the teacher asked students to use the words into sentences.

Case 24: Students required to practice asking and answering in pair, but teacher asked questions to individual students.

Case 25: TG suggests sentences written on large flash cards call out students who hold the sentences so that classes can see. Students say in which order sentences should be, then read the sentence together. Instead of this activity, teacher provided this exercise as homework and then teacher spend day's period in checking and correcting homework.

Case 26: For discussion and oral exercise based on matrix of animal facts, TG suggests question on card or blackboard, questions in two groups, pair work, quiz game in two teams. TG also provides samples of questions. Teacher had prepared question and answer for five of the questions provided in the textbook exercise which students copied and read loudly by themselves.

Above cases also indicate general practice of English language teacher in classroom delivery -- teaching through translation, paraphrasing, students repeating after the teacher or one lead student, word meaning, note memorization of question-answer, using words in sentences, asking question based on the statement without considering skill to be developed. In 6 of the 22 observed classes, teachers had attempted to deliver the class in English language medium. Various inconsistencies indicated that such was not usual practice of the teacher. For example:

- When teacher asked question such as "Where is Sita?", students also repeated "Where is Sita?" in chorus.
- When teacher gave a command such as "Come here", "Give me your book" student remained silent, could not understand even simple command.
- When teacher read instruction of the textbook exercise, students could not do the exercise. Instruction had to be explained in Nepali.
- When teacher asked question such as, "Who is eating rice?" and student could not answer, teacher also provided answer -- "Ram is eating rice." When teacher again asked the same question, instead of providing answer, student just repeated question after the teacher.

Nepali

Altogether 40 Nepali language classes were observed from grades 1-5. Findings from comparing those classes with curriculum, textbook, and teacher guide are presented here.

Table 8: Linkage between Nepali language curriculum and classroom delivery

| Curricular emphasis | Classroom delivery fulfill curricular emphasis | |
|---|--|----|
| | Yes | No |
| Alphabets | 12 | - |
| Pronunciation (सरल र संयुक्त शब्द) | 5 | 3 |
| Vocabulary (शब्दभण्डार) | 12 | 3 |
| Poem recitation | 3 | 1 |
| Reading (sentences, paragraph) | 4 | 1 |
| Riddle (गाउँ खाने कथा) | - | 1 |
| Grammer | 3 | 6 |
| Dictation (श्रुतिलेखन) | 1 | 5 |
| Self-writing/free writing/paragraph writing | 2 | 5 |
| Understanding (बोध) | 2 | 12 |

Classroom Delivery with Respect to curriculum

In case of Nepali language it was found difficult to link classroom delivery with curriculum. These difficulties were faced mainly due to emphasis of teachers on teaching textbook content than the language skills during classroom delivery. Through examination of classroom delivery and outcome of the classroom,

aspects of curriculum covered in those classes were identified. In table 8 linkage of classroom delivery with Nepali language curriculum is presented.

Table 8 shows that lower level curricular objectives and objectives which could be fulfilled through teacher centered activities were mostly fulfilled during classroom delivery. Whereas curricular objectives which were rather at the higher level and those that required active participation of the students were not adequately fulfilled during classroom delivery. Students repeating alphabets, text content, poem either after the teacher or a lead student were very common in the Nepali language classes. Similarly, reading, word meaning, vocabulary were also covered in the classroom. But dictation, students' writing practice and practice for understanding were covered less during delivery.

Classroom Delivery with Respect to Textbook

Like other subject teachers, textbook had been consulted more often than other curricular materials by Nepali language teachers in the observed classes. Nepali language textbooks were used mainly for reading, doing exercise, describing pictures of textbook, memorizing textbook content. Ways in which Nepali language textbooks were used during classroom delivery is presented in the following table.

Table 9: Use of Nepali language textbook during classroom delivery

| Use of textbook | Frequency (n=40) |
|--|------------------|
| Reading from textbook | 13 (33%) |
| Teacher (Paraphrasing) | 5 |
| Student (Repetition in chorus) | 4 |
| Teacher & student both | 4 |
| Writing alphabets, words, copying | 5 (13%) |
| Textbook exercise | 19 (48%) |
| Oral | 6 |
| Written | 13 |
| CW | 12 |
| HW | 7 |
| Student asked to memorize from textbook | 21 (53%) |
| Poem | 3 |
| Story | 3 |
| Q/A | 6 |
| Word meaning | 5 |
| Text content | 4 |
| Use of textbook picture, illustration | 3 (8%) |

Usually more than one activity was undertaken in a single class. Frequency of those activities as shown in the above table indicates that most often students were asked to memorize textbook content (53%), do the exercise of the textbook (48%), reading from the textbook (33%). Textbooks were also used for copying alphabets/words (13%) and to use pictures of the textbooks (8%) as well during classroom delivery. When teacher ask students to memorize textbook content, it usually meant read from the textbook and rote memorize by heart. Thus, classroom delivery of Nepali language was found dominated by reading and writing skills. There was a lack of listening and speaking skill practice during classroom delivery.

It was also noteworthy that reading from the textbook meant paraphrasing by the teacher and it meant repetition by the students in chorus either after the teacher or after a lead student. Chorus repetition was dominant when students were involved in memorizing textbook content -- poem, story, Q/A, word meaning, paragraphs. Five (13%) of the observed classes were found not sequentially related with the textbook content. In the grades I and II teachers were found asking students to read or write alphabets (अ-अ, क-क) by memory. In case of doing exercise of the textbook, it is not clear which of the four skills was being emphasized in the exercise. There were even cases of instructions provided in the textbook exercise from which classroom delivery deviated,

Case 27: Exercise requires oral answers from individual students. Teacher provided questions and answers on the blackboard, which students copied and then they were asked to memorize. Question/answer on blackboard for students to copy and memorize was frequent practice of the teachers.

Case 28: Exercise instruction, "Copy the right word in your copy". Instead teacher read the question, student answer in chorus.

Case 29: Textbook exercise instruction, "Give answer to the following questions". Teacher formed each bench as a group, asked each group to read and said that he would ask each group question. Teacher let each group read silently for a while then indicated particular student to answer particular question he/she had read. Although the teacher formed groups to work, the nature of the work was essentially individual.

Case 30: Exercise instruction was "Write the right word in the copy". There was picture and three words among which one word was related to the picture. Teacher made the class repeat 3/4 times all the words in that page in chorus.

Analysis of the textbook content/exercise coverage of the textbook in the observed classes shows that covering textbook content and doing exercise provided in the textbook is not sufficient to fulfill curriculum requirement. It is not clear which of the language skills is supposed to be used in such example where the instruction is like "give answer", "provide right word", "select the correct answer". In such case where the answer is required in oral or written, where the question is supposed to be read by teacher so that student listen, understand and answer is not clear. However skill emphasis and activity requirements are clarified and elaborated in the teacher guide of Nepali language.

Classroom Delivery with Respect to Teacher Guide

As in other subjects, textbook was found to be the main source in the classroom delivery of Nepali language subject. There is lack of direct link between curriculum and textbook content exposition. Textbook content exposition and provided exercise in the textbook are not as much clear as it is in mathematics textbook, which can be helpful to the teacher to direct teaching learning to achieve curriculum objectives. Largely the teacher guide of Nepali language fulfills this gap.

Teacher guide provides suggestion as well as illustrations for teachers' pre-planning, methods for classroom presentation, and student practices. Suggestion from teacher guide is presented in the following table 10 in seven broader categories.

Table 10: Use of Teacher Guide during classroom delivery

| Suggestion from teacher guide | Use by the teacher (n=40) | |
|---|---------------------------|---------------------------|
| | followed the suggestion | deviation from suggestion |
| Pre-plan required (ask more similar questions, conduct more similar activities, provide more similar exercises) | 3 | 15 |
| Content presentation - teacher led (summarize theme, sing a song, tell a story, dramatize, explain the meaning) | 3 | 11 |
| Content presentation - student teacher collaboration (relate to the experiences of students, discussion on the basis of picture, discuss relationship, question answer, discussion, comparison, riddle) | 6 | 23 |
| Individual student work (paragraph writing, individual exercise) | 1 | 5 |
| Drill (pronunciation, word recognition, picture word association, cross word game) | 4 | 12 |
| Teaching vocabulary (word meaning, use word in sentences) | 10 | 4 |
| Recitation (model recitation by the teacher, students recite after the teacher, group recitation, individual recitation) | 12 | 5 |

Table 10 shows that pre-planning, well thought presentation endeavors from the teacher side, engaging student in an effective manner, individual student work and drill practice were not undertaken as frequently as required. Drill practices suggested in the teacher guide also required well planned activities related to pronunciation practice, word recognition, picture word association and cross-word game. Only 25% (out of 16 cases suggested such drills) of such drill practices were undertaken as suggested in the teacher guide. In around 80% of the cases pre-planning were not done as suggested or teacher had not led content in a well thought manner or content presentation was not student - centered as suggested. Teachers were found to have undertaken activities in which teacher had to engage students with him/her for less time. Students self repetition and memorization or teacher lecturing, paraphrasing, providing questions answers was dominant practice. Activities in which students were engaged related to vocabulary and recitation. In over 70% of such requirements in the teacher guide, vocabulary memorization repetitive recitation was carried out during classroom delivery. These activities were fulfilled due to usual practices of the teachers and not essentially because teachers had consulted teacher guide for classroom delivery.

Mero Batabaran (My environment)

Mero Batabaran is the textbook for grades 4 and 5. Curricular contents for Environmental Science Education and Health Education for grades 4 and 5 are presented combined/ integrated in this textbook. Altogether 18 classes were observed in this subject in grades 4 and 5.

Classroom Delivery with Respect to Curriculum and Textbook

An analysis of the "action verb" related to the curricular contents covered during classroom delivery indicated that these classes were mostly concentrated in achieving lower level curricular objectives. List and frequencies of those action verbs is presented in table 11,

As textbook content exposition is of descriptive nature, classroom delivery match with these curricular objectives, even teachers used to consult textbook rather than curriculum for classroom delivery. Curricular objectives such as "describe importance of

Table 11: Curriculum objective covered during classroom delivery

| Action verb related to curricular objective | Frequency (n=18) |
|---|------------------|
| Describe | 14 |
| Explain | 4 |
| Categorize | 3 |
| List | 2 |
| Tell | 2 |
| Compare | 1 |

conservation of natural resources", "categorize plants into various groups" "list the activities of human beings that affect environment", "tell the reasons of tooth decay", "explain advantages and disadvantages of body cleanliness", "describe methods of preparing water for drinking". Textbook content cover these descriptions.

Textbook exercises also suggest investigative works such as "visit your neighborhood and identify activities of your neighbors that

pollute the environment", "go around your neighborhood and prepare list of 7/8 persons those who smoke and those who drink, find-out reasons for smoking or drinking habit", experiments such as "germination of seed". "solvents in water", "types of soils"; and some were related to practical activities such as "preparing drinking water by using germ killing medicine". In none of the observed 18 classes, teachers were found engaging or instructing students in observation, investigation, experiment or practical works as suggested in the textbook. Paraphrasing, reading, doing question answer was dominant practice during classroom delivery. Observation, investigation, experiment or practical work requirements were covered within the classroom through question answer, discussion or individual works. Two of such examples are presented here.

Case 31: Textbook instruction was to make students "observe at home, discuss at the classroom and prepare list of do and don'ts for preserving nutritional values of the food. Instead, teacher asked individual students the practices they have observed and then asked them to write in their copies.

Case 32: Textbook instruction was students to talk with adults in the neighborhood and find-out if there had been fire in the village, list down destruction made by the fire and measures taken to avoid fire. Instead, teacher reframed the question, "In what ways fire is destructive and what measures can be taken to avoid it?"

Table 12: Higher level curriculum objective not covered during classroom delivery

| Action verb related to curricular objective | Frequency (n=18) |
|---|------------------|
| Adopt measure | 6 |
| Participate | 5 |
| Make use of | 3 |
| Keep clean and safe | 2 |
| Provide care and security | 2 |
| Document | 1 |

It was generally found that less attention was paid on observation, investigation, experiment or practical works during classroom delivery. Due to such practice, higher level objectives of the curriculum were found not being achieved. On the other hand, it was also found that higher level objectives aimed by the curriculum were not adequately reflected in the textbook in few of the cases -- in the content elaboration or in the given exercises. There were higher level curriculum objectives as well related to the contents covered in the observed classes as presented table 12,

Higher level of curriculum objectives presented in table 12 were not found adequately addressed during classroom delivery though in the curriculum both lower level and higher level objectives are even mentioned in the same sentence such as, "Describe importance of conservation of wild animals, plants and other natural resources and take part in conservation of these". Description was done, but participation was never mentioned.

Another such example is "Tell the reasons for tooth decay---- and adopt measure to avoid it". Reasons were listed, adopt measures were not clear. Mainly in health education curriculum, a number of curricular objectives relate to developing healthy behavior such as proper use of toilets, keeping the water resources clean, preparing water for drinking, taking part in keeping neighborhood clean, adopting measures to keep body parts safe etc. Neither teacher addressed such objectives during classroom delivery nor are there clear enough instruction in the textbook to fulfill such objectives.

Classroom Delivery with Respect to Teacher Guide

It was found difficult to trace which of the instructions provided in TG relate to classroom delivery activities of the teacher related to the observed classes. Firstly the difficulty was due to instructions provided in the TG largely suggest to read textbook content by teacher to explain, students (silently, in group, whole text, paragraph). As textbook reading was done in most of the class, suggestion from TG seemed to have been followed. Even Q/A, discussion as suggested in TG were largely to be based on reading textbook content.

Significant gap between classroom delivery and TG was found regarding suggested numbers of period for each of the lessons. In most of the cases more content was covered in a day than suggested.

Case 33: For one of the lessons TG suggested 10 periods, provided 42 activities and also provided suggestions for all the 6 textbook exercises. Teacher covered textbook content as well as 3 of the exercises in a day.

Mero Serofero and Mero Desh

Mero Serofoero is the textbook for grades 1-3 and Mero Desh is the textbook for grades 4 and 5. Curricular contents for Social Studies, Environmental Science Education and Health Education for grades 1-3 are covered in Mero Serofero and curricular content for Social Studies for grades 4 and 5 are covered in Mero Desh. Classroom delivery of Mero Serofero and Mero Desh were found to be similar to classroom delivery of Mero Batabaran.

Classroom Delivery with Respect to Curriculum and Textbook

An analysis of the "action verb" related to the curricular contents covered during classroom delivery indicated that these classes were mostly concentrated in achieving lower level curricular objectives. List and frequencies of those action verbs are presented in table 13.

As textbook content exposition is of descriptive nature, classroom delivery match with these curricular objectives. Even teachers to consulted textbook rather than curriculum for classroom delivery both in Mero Serofero and Mero Desh. Curricular objectives such as "mention important caste, costume, religious functions, religion, culture of own district"; "tell the names and describe the functions of community organizations which are within the village or near

Table 13: Curriculum objective covered during classroom delivery

| Action verb related to curricular objective | Frequency (n=22) |
|---|------------------|
| Mention | 12 |
| Name | 6 |
| Tell | 5 |
| Describe | 5 |
| List | 4 |
| Explain | 2 |
| Point out | 1 |
| Write | 1 |

by the village"; "mention the rights of children"; "tell the names and number of the VDC personnel"; "list the reasons for water and land pollutants "; "describe the importance of right postures while sitting, walking and sleeping"; "name the foods which are eaten in the home". Textbook content cover these descriptions.

Textbook exercises also suggest investigative works such as "collect various materials from the surrounding and find out which substances sink and which of these float in the water", "consult some knowledgeable persons in your neighborhood and prepare list of problems which are prevalent in your development regions"; "collect a green leaf from the surrounding and draw its picture". In none of the observed 22 classes, teachers were found engaging or instructing students in observation, investigation, experiment or practical works as suggested in the textbook. Paraphrasing, reading, doing question answer were dominant practice during classroom delivery. Observation, investigation, experiment or practical work requirements were covered within the classroom through question answer, discussion or as individual works.

It was generally found that teachers paid less attention on observation, investigation, experiment or practical works. Due to such practice, higher level objectives of the curriculum were not achieved. On the other hand, it was also found that higher level objectives aimed by the curriculum were not adequately reflected in the textbook in few of the cases -- in the content elaboration or in the given exercises. There were higher level curriculum objectives as well related to the contents covered in the observed classes as presented table 14,

Higher level of curriculum objectives presented in table 14 were not found adequately addressed during classroom delivery though in the curriculum both lower level and higher level objectives are stated such as, "Prepare a list of community resources (forest, river, stream, temple etc.) and use these properly".

Table 14: Higher-level curriculum objective not covered during classroom delivery

| Action verb related to curricular objective | Frequency (n=18) |
|---|------------------|
| Adopt proper habits | 8 |
| Adopt measures | 5 |
| Use properly | 5 |
| Render and take help | 3 |
| Keep clean | 2 |
| Recognize | 2 |
| Be in the queue | 1 |
| Investigate | 1 |
| Caricature | 1 |
| Ordering | 1 |
| Tabulate | 1 |

Listing was done, but proper use could not be covered. Another such example is "Tell the names of food eaten at the home, wash raw eating foods properly before eating, chew food properly, not waste the food...". Name of foods were discussed in chorus. Mainly in health education curriculum, a number of curricular objectives relate to developing healthy behavior such as proper use of toilets, keeping the water resources clean, preparing water for drinking, taking part in keeping neighborhood clean, adopting measures to keep body parts safe, proper eating habits etc. Neither teacher addressed such objectives during classroom delivery nor are there clear enough instruction in the textbook to fulfill such objectives in all the cases.

Classroom Delivery with Respect to Teacher Guide

It was found difficult to trace which of the instructions provided in Teacher Guide relate to classroom delivery activities of the teacher. Firstly the difficulty was due to instructions provided in the TG is paraphrasing type -- discuss the picture, let students

read the paragraph and discuss, ask question and like. As textbook reading was done in most of the class, suggestion from TG seemed to have been followed. Even Q/A, discussion as suggested in TG were largely to be based on reading textbook content.

In the TG, there are suggestion for investigation, experiment, field visit and so on. But during classroom observation such activities were not conducted.

Physical Education and Creative Arts

For the primary education, curriculum has been developed in Physical Education, and Creative Arts (Music, Arts and Crafts). There are no textbook developed like in other subjects. The way these subjects/activities were delivered in the classroom, raises several questions.

Even though research team tried to observe more of Physical Education and Creative Arts classes, the team succeeded to observe only 10 Physical Education and 6 Creative Arts classes in 16 schools 3 districts. Firstly, it was due to lesser number of periods allocated per week, i.e. 4 periods for grades 1-3 and 3 periods for grades 4 and 5 for physical education and 3 periods for grades 1-5 for creative arts (1 period per week for each area in creative arts). Secondly, the practice found in the observed schools was that physical education and creative arts were allocated in the last periods of the day.

In most of the cases, last periods were off for grades 1 to 3 and even for grades 4 and 5. Either it was off or covered some other subject or students were let to play whatever they like (please see chapter III for reasons for ineffective classroom delivery of physical Education and creative arts).

As there are no textbooks developed for physical education and Creative Arts, curriculum and Teacher Guides are supposed to be the major source for classroom delivery. But in the observed classes, it was found that teachers made students play few games (*Rumal Chor*, In and out, Football or Volley ball) and in case of Creative Arts students were asked to draw what they like or sing a song. Only in one class teacher was found to divide students in two groups for dancing. The teacher happened to be involved in one of the cultural groups.

Curriculum as well as TG emphasizes basic structure for games and physical activities basically as introductory part (about 10 minutes) for warming up and introduction, main part (about 20-25 minutes) for demonstration, practice, and ending part (10 minutes) joyful group activities, relaxation. This basic structure has been covered in the training manual also. During observation none of teachers was found employing this basic structure. Similarly in case of singing children songs, basic structure provided is clapping, demonstration by the teacher, individual practice, group practice etc. But teachers were found mostly asking students to sing in group and occasionally teachers also sang with the children or teachers asked students to sing after them.

Classroom Observation in Jhapa

Altogether 12 classes of 4 schools were observed in Jhapa districts. Jhapa was suggested for the visit as being successful case in BPEP. In Jhapa some of the good practices in the classroom delivery observed were as such.

- In 3 schools out of the 4 schools visited, curriculum and teacher guide were found being utilized during classroom delivery. In one school, teacher guides

were kept in the classroom (grade teaching class); in one, individual teacher kept teacher guide with them and teacher guides were with cover.

- In all the 12 classes observed, there was no tendency of the teacher to cover more contents in a single day. These were just right, as suggested by teacher guide.
- Teachers asked questions and discussed in the class frequently.
- Flash cards were found to have been used often than other instructional materials.
- 3 of English language classes observed were delivered in English medium and students also interacted in English medium with the teacher.
- Except in one school, classroom of the visited schools were covered with various materials -- class song, poems, pictures, alphabets, numbers, posters and so on. In some of the classes, students' works were also hung/pasted.
- Students Attendance Board were properly maintained.

It was nice to have a chance to observe curricular materials, specifically curriculum and teacher guide being used for the classroom delivery widely in Jhapa district. Twelve of the RPs who participated in the FGD also informed that it was the usual practice in most of the schools in Jhapa district. However, they also frankly admitted that in some schools there might be no curriculum and teacher guides and even if these are available there might be no attempt to utilize them for classroom delivery.

There are some issues and concerns from the classroom observation and interaction with the teachers and district personnel from Jhapa as well.

- Creative arts class was problematic to the teachers as varied skills (dancing, singing, music etc.) are required to conduct this class.
- Teachers were not clear how to achieve higher level curriculum objective (specifically related to habit formation). A teacher had prepared lesson plan in a register in which columns for teaching methods, instructional materials and evaluation were left blank for the objectives like "Maintaining things of daily use by oneself", "Adopt preventative measures to keep safe from transmitted diseases". During FGD also, teachers opined that those objectives which are related to habit formation type are also limited to providing information.
- Curriculum of language subjects (English and Nepali) are not clear enough in order to relate curricular objectives and textbook content for classroom delivery.
- In the observed classes, group works undertaken.
- Teacher/school expressed their concern where to get teacher guide which they had lost or was torn.
- Two row type sitting arrangement, with teacher facing the class in front was usual sitting arrangement in the observed schools of Jhapa district as well. But in one class, teacher had arranged students sitting in two group facing each other -- east and west. In the north wall there was blackboard and in the south wall flash card board was hanged. During classroom delivery, teacher used both blackboard and flash card simultaneously.
- In majority of the class observed, there was connotation of emphasis on rote learning in schools visited in Jhapa district. Repeating same question time and

again, limiting the answer that is in the textbook, lack of opportunity for the students to share their experiences among themselves were indicative of emphasis on rote learning.

Some good features observed during field visit and expressed during FGD in Jhapa district should be mentioned here. Firstly, there is favorable educational environment in the community of observed schools (Bhanu Primary School, Bhadrapur; Gautam Buddha Primary School, Bhadrapur, Haldibari Secondary School, Haldibari; and Birat Primary School, Biratpokhara, Garamani). Due to educated parents, community seemed to be concerned about education of their children. Secondly, teachers were more committed to their profession. Keeping TG safe with them, constructing instructional materials, contacting RPs for professional support indicate their professional commitment. Thirdly, RPs were found providing professional support regarding teaching learning to the teachers. RPs, during their regular intercourse were also found expressing their concerns regarding the monitoring works they had undertaken or works they had to complete and so on. Commitment of the RPs and SSs might be one of the strengths of Jhapa district for program success.

Chapter III

Teacher Training And Classroom Delivery

There has been serious endeavor to support and provide essential skill for classroom delivery of the teachers. Subject-wise curricular materials and training has been covered in chapter II. In this chapter short description of the teacher training under BPEP is provided in the first part. In the second part, training aspects related to yearly plan, daily routine, classroom organization, use of blackboard, development of instructional materials, group formation techniques, use of students attendance board, testing are covered.

Description of Primary Teacher Training Under BPEP

Governmental and non-governmental agencies are providing different types of training to teachers in order to build their teaching capacity. Teacher training has been one of the major focuses of BPEP. Priority to primary teacher training programs has been due to majority of the teachers being untrained, low qualification of teachers, and low level of students' achievement. This chapter reviews primary teacher training under BPEP, in brief.

Development of Teacher Training

Primary teacher training program began with basic teacher training in 1947 AD during Rana regime. The main objective of the training center was to equip teachers with skill for better teaching. National teacher training center was opened in 1954 with the aim to train primary teachers. Later in 1956, Normal School Program and College of Education was launched to provide training to the primary teachers. Another milestone in the primary school teacher training was achieved with the opening of Primary School Teacher Training Center in 1964. 9000 trained teachers were produced under normal schools and 6000 under primary school teacher training program.

'A' level and 'Women Teacher Training Program' were introduced in 1971 under NESP. In 1972 'On-the-Spot Teacher Training Program' was started and in 1974 'Remote-area Teacher Training Program' was started in Jumla. 'Field Oriented Primary Teacher Training Program' was launched in 1975. Ministry of Education started to provide training to primary teacher from 1986 under the program of 'Basic and Primary Teacher Training'. Radio education is one of the components of this program.

Various teacher training programs has also been launched under education projects in Nepal. Major aspects of 'Seti Project', 'Primary Education Project', and 'Basic and Primary Education Project/Program' are presented here. (PEDP, 1993; MOE, 1997a).

Seti Project and Teacher Training Program:

- 21 Days in-service primary teacher training program
- 'Block Model to Math' teacher training program
- 21 days recurrent teacher training
- 35 days adult literacy teacher training
- Chelibeti teacher training program

- Satellite school teacher/HT training.

Primary Education Project (1984-1992):

- 12 days teaching method primary teacher training
- 12 days basic teaching material primary teacher training
- Learning strategies teacher training
- Teacher training on evaluation strategies
- Subject-wise teacher training
- Grade teaching teacher training
- Multi-grade teacher training
- Head master management training

Basic and Primary Education Project (1992-1998):

- Basic Teacher Training Program
 - Model I teaching method
 - Model II teaching material
 - Model III learning and evaluation strategies
- Education Improvement Training
 - I. Grade teaching
 - II. Multi-grade teacher training
- Subject-wise teacher training
 - English
 - Mathematics
 - Science
 - 180 and 330 hours teacher training
- Education Management Training
 - HTs management training
 - Supervision Training
- Curriculum Dissemination Training
 - Curriculum dissemination for teachers
 - Curriculum Dissemination for HTs
- Extracurricular Training
- Health and Nutrition Teacher Training
- Educational Quality Improvement Training
- Special Education Teacher Training
 - Awareness raising seminar
 - Basic training
 - Special one month teacher training for resource class.

- Whole School Teacher Training

Basic and Primary Education Project had covered teacher training program in 40 district. Selected training from the above list had been conducted according to district need.

Teacher Training Program Under BPEP II

Teacher training programs are categorized into two parts under BPEP:

- Recurrent teacher training
- Certificate teacher training

Recurrent teacher training programs launched by DOE: NCED and DEC are responsible to provide certificate training to primary teachers. DOE has designed WSA and modular different recurrent teacher training program related to classroom delivery

- Whole school approach primary teacher training: This program is one of the most important parts of recurrent teacher training. It includes all teachers of schools of program area. Teachers learn to construct and use teaching material for 4 days in training hall. Then four theory into actual use to practice in school. In the next six days making the training is of 10 days. There are two packages of training program. The first package covers the milestone (learning indicators/learning outcomes) of grade one to three. The second package covers the indicators of grade four and five. This training program guides teachers to construct and use subject-wise teaching material, such as pocket board (for all subjects), Language cards, Number cards, Social Studies cards, Health and Nutrition cards, Environmental Science cards, Students attendance board, Song/Dance/Story/Games items.

Modular Training: This cover various modules of 10 days each, related to specifies areas.

- Teaching Methods: This package enables teachers to use proper method in teaching primary grades. It covers text and practice on student centered teaching methods for primary grade subjects. The course is of 10 days.
- Teaching Material Training: This training is about basic teaching materials, such as blackboard, textbook, environment, and teacher made materials. This is also of 10 days duration. It provides skill to teachers in construction and using these materials in classroom teaching.
- Learning Process and Evaluation: This package facilitates teachers in developing effective learning activities and assessing students' learning outcomes. It covers learning activities, conceptual learning, motivation in learning, memory and learning, matchstick-figure, evaluation, test, examination, level of knowledge (recall, understanding, application), summative and formative evaluation, specification chart for test construction, examination conduction, interpreting result and result analysis.
- Grade Teaching: This program is also of 10 days period. It introduces different types of class organization and then focuses in single teacher teaching in one class throughout the year. Learning activities, planning skill, classroom management, sitting plan, care for slow learner, material development etc. are also covered in the training.
- Multi-grade teaching: This training is related to providing skills to the teachers to conduct two or more classes by one teacher at one time. Different types of

class organization, planning routine, self-learning activities for students in absence of teacher, material constructions etc. are the main contents of this training. It is of 10 days duration. This training is effective in those schools where there are fewer number of teachers compared to the number of classes.

- Curriculum Management: This package is mainly for Head Teachers. It enables HTs to disseminate curriculum in classroom. It covers definition of curriculum, curriculum development procedure, national and primary goal of education, curriculum structure, learning outcomes of all primary subject, subject elaboration booklet, textbook, teachers' guide etc. It also takes 10 days time to train the teachers. It covers curriculum of all subjects of each grade of primary level.
- Subject-wise Training: DOE is developing training package for English and Mathematics teaching in primary grade. Master trainers training is held in draft material in English. Mathematics package is being developed

About 114070 teachers have received recurrent (whole school and others) training up-till now. Some participants may receive repeated trainings because a teacher can take part in whole school approach and different type of modular training as well.

The above lists of training are concerned directly with classroom teaching. DOE has designed other training packages for teacher and head teacher, which are indirectly helpful to classroom teaching. These training are:

- SIP training
- EMIS training
- Management training
- Special education training

Primary Teacher Training Under NCED

NCED is an apex organization of Ministry of Education and Sports for teacher training. This center trains teachers through its Primary Teacher Training Centers. Training packages of this center are divided into four two and half monthly packages, making the training of 10 months duration in total. The four packages are,

First package: It covers fundamental concepts and some necessary teaching skills on education, Nepali, mathematics and social studies subject in primary level. The credit hour is 330.

Second package: This package covers the course of education, English, environment science, physical education, and creative arts. It is intended to enable teachers in teaching these subjects effectively in the primary grades.

Third package: Primary education and community development, Nepali teaching, mathematics, social studies, and optional subjects are included in this package.

Fourth package: Child development, curriculum, theory of learning, English, environmental science, physical education and creative arts are the subjects included in this package.

Primary Teacher Training Program and DEC

DEC is another important institution of MOES in teacher training. At the beginning, it launched a five-month teacher training. It also conducted 150 and 180 hours teacher training at the same time. Now a day, it is conducting second and third packages of NCED through radio. This center conducts other radio education programs as well.

Classroom Delivery and Training Manuals

Attempts were made to cross match skills from training manual on which the teacher had received training and classroom delivery. But it was found difficult to cross match as matching became more subjective. Most of the skills could be related to be useful to the classroom delivery or most of the content in the training manual could be stated as to be vague as these do not specifically relate to contents that could be covered in a period. Therefore a general description is presented in this section.

It is also important to mention that training manuals are only guidelines for the trainers and trainees. The quality of the training will largely depend upon the training delivery, which was not observed by the research team. However, an analysis of the related topics of the training manuals with the observed classes suggests that training skills are not mostly translated during classroom delivery. Some of the examples and general descriptions are provided here. Here training manuals is meant to be 10 months packages, modular and whole school.

In the training manuals of mathematics subject methods (induction, deduction, question answer, discussion, demonstration, drill, CSA -- concrete, semi-concrete, and abstract, concept development, games, problem solving) are covered. Most of these methods are also suggested in the teacher guide. The section describing use of teacher guide indicates that these methods were not frequently and properly used during classroom delivery. Similarly, intended instructional materials were not used frequently and properly. Training manuals cover real objects, multiplication fact table, flash card, number card, model, picture, drawing, instrument box etc.

Similar is the case with other subjects. Basically training are related to providing teacher with skill and practice on teacher's preparation (lesson plan, materials collection), teaching methods, instructional materials use/construction, and evaluation. Those relevant skills acquired during training were not used during classroom delivery as indicated in the subject-wise description above. There were also some instances observed which could be the aspects for improving training manuals themselves. For example in the mathematics,

- Incompatible suggestions: lining up boys and girls in front of the classroom to give example of a set.
- Lack of linking theoretical description with content area: Piaget theory, group formation, correction for guessing.

Some of the specific aspects of the teacher training related to classroom delivery are described in the subsequent paragraphs.

Yearly Plan and Daily Routine

In the schools visited, a daily routine was found pasted on the wall of the office-room. In some of the cases, same daily routine of the last year seemed to have been used this year as well. About yearly school plan most of the schools said they were planning, but had

not completed then. Some said that due to change of academic year the program was tight and they had no time to prepare yearly plan. Only two schools had prepared yearly plan. During individual interaction with the teachers, some of them informed that they had tentative plan how much lessons to cover tri-monthly, but those plans were not documented and in some cases distribution was done within the content list of the textbook. It seems that school/teachers have not fully realized the importance of pre-planning as emphasized during training.

Classroom Organization

Classroom organization has been one of the major aspects covered in 10 month training and 10 day modular training. Structure of classroom organization (subject teaching, grade teaching, multi-grade teaching) and classroom sitting arrangement are among major components covered in those training. Structure of classroom organization in the 16 sample schools is given in the following table.

Table 15: Structure of Classroom Organization

| Structure | Grades | | | | | Total |
|-----------------------------|--------|----|----|----|----|----------|
| | 1 | 2 | 3 | 4 | 5 | |
| Grade teaching | | | | | | |
| Morang | - | - | - | - | - | - |
| Kaski | 5 | 3 | 1 | - | - | 9 |
| Rasuwa | 1 | - | - | - | - | 1 |
| Multi grade teaching | | | | | | |
| Morang | - | - | - | - | - | - |
| Kaski | - | 1 | 1 | - | - | 2 |
| Rasuwa | 1 | 2 | 1 | - | - | 4 |
| Subject teaching | | | | | | |
| Morang | 5 | 5 | 5 | 5 | 5 | 25 |
| Kaski | 1 | 2 | 4 | 6 | 6 | 19 |
| Rasuwa | 3 | 3 | 4 | 5 | 4 | 19 |
| All total | | | | | | |
| Grade teaching | 6 | 3 | 1 | - | - | 10 (12%) |
| Multi-grade teaching | 1 | 3 | 2 | - | - | 6 (8%) |
| Subject teaching | 9 | 10 | 13 | 16 | 15 | 63 (80%) |

Subject teaching arrangement has been found mostly (80%) used. Subject teaching classroom organization was used in grades 4 and 5 in the sample schools. At grades 1-3, there were grade teaching (12%) and multi-grade teaching (8%) as well. It is noteworthy that average number of teacher was about 7 teachers per school and only in two schools out of 16 schools; there were fewer numbers of teachers than the number of grades. In total, student teacher ratio was 34:1. This scenario indicates an environment of the school where grade teaching could be organized. In the training, grade teaching is emphasized for its effective organization. (class organization and school management, p. 32, DEC, 2058). In Morang grade teaching is totally absent in the observed 5 schools and in Rasuwa only in one of the observed schools grade teaching has been adopted. Grade-wise, grade teaching has been adopted mostly in grade one.

"Class organization and school management" (third package) and modular training "Grade Teaching" and "Multi-grade Teaching" explain various sitting arrangements (U-shape, V-shape, semi-circular, circular), space management. Except in two classrooms, among the 16 schools observed, row type of sitting arrangement was used. In addition, in most of cases rows were divided into two column -- in one column girls and in another

boys. Though other type of sitting arrangement would have been difficult due to congested space and crowded class, other type of sitting arrangement was not used even where there was enough space in the classroom.

Creating Conducive Classroom Environment

Managing classroom space for effective sitting arrangement and display (Grade teaching, p. 12-14), displaying and keeping handy instructional materials like flash card, real objects, charts, diagrams (Whole school Approach, p.66-67, foundations of Education, First Package, p.115) have been discussed in the training manuals. In all the classes, blackboard were found hanged on the wall. In more than 50% of the classes there were students' attendance board, in about half of the classes there were pocket board and in few of them some pictures and charts as well. But the display was very poor and their use ineffective in most of the cases.

Use of Blackboard

Blackboard, mostly contented on the wall and in some cases wooden, were found in all the classes of the observed schools. Use of blackboard is one of the aspects most extensively covered in the training manuals -- foundations of education, second package, subject-wise packages like-Nepali language teaching, English language teaching, Mathematics; modular like Instructional Materials, Learning Process and Evaluation, Grade Teaching, Multi-grade Teaching, and Whole School Approach.

Mostly blackboard was used for writing subject, topics date. And in most of the cases these were only things written on the blackboard throughout the classes. Training packages emphasized that more spaces should not be used in writing subject, period, date, grade etc. (Instructional Material Training Booklet for Trainer, p. 36, 2057, DOE). Whereas in the same booklet on page 3 suggestion is, "unnecessary things such as grade, date, period, subject should not be written on the blackboard. If it is done so not more than 5-10% of spaces should be used. In the cases where blackboard were found being used, it was used for,

- solving mathematical problems -- mostly by the teacher, sometimes by students.
- giving mathematical problems to the students
- writing word-meaning -- English language, Nepali language.
- writing letters, words, sentences number -- especially in the lower grades.
- drawing pictures (only in one case) (see pictures 2-6 in appendix 7 for these cases).

Though quality of use of blackboard was unsatisfactory in general, but quality of blackboard as a material was good in most cases. In two cases, blackboards were found defaced and not usable and in three cases spatial location of the blackboards were found not suitable -- so high that teacher barely reaches the middle and students the lower bottom at most. Suggestion to make blackboard around the lower part of wall was not found being practiced in the observed school. In one school a small blackboard was made at the bottom, below the classroom blackboard. Almost all students had to share classroom blackboard with the teacher.

Instructional Materials

Instructional materials use and construction is one of the major components in the teacher training of DOE. Blackboard use also falls under instructional materials. Besides blackboard, various types of instructional materials are included in the training,

- Real objects - stones, pebbles, things around classroom & environment, plants,
- Match stick figures, drawing
- Cards, charts, models (flash card, number card, pocket chart, charts, models)
- Globe, map, poster, pictures
- Children book, local book
- Flatin board,
- Figures of faces, various pictures, cutouts (WSA)
- Paper work, colors
- Playing materials
- Musical instruments
- Mathematical instruments
- Curricular materials
- Audio-visual

Training programs widely cover use and construction of instructional materials for effective Classroom delivery. Pictorial, printed materials are also provided in WSA packages as well. In the TGs, specific materials are suggested to be used while covering specific lesson/activity. One teacher was found using pebbles to provide students additive function of multiplication, three teachers using mathematical instruments, a few using map, globes, pictures and about 20% using flashcard, number card. Otherwise, reading textbook content and doing textbook exercise was dominating.

In three schools, even cloth pocket board prepared during training period were found thrown in one corner -- outside surface was covered with dust and inner layer white and new. In some cases there were cloth pocket board hanged on the classroom wall, but pockets were empty. (See pictures 7 and 8 in appendix 7).

Group Formation Techniques

In the training manuals various types of group formation (age ability, interest, sex) are described and their use explained. In the TGs also (see subject-wise analysis in chapter III) group formation for classroom discussion, group work/activities were found being suggested. But teachers were found not considering any aspects or observing any utility while forming groups. Usually while teachers formed groups, they made a bench, or a row or a column a group. But activities (such as read content paragraph, read poem, do exercise, solve problem) provided were not really a group work. When presentation (answer to the question, reciting poem) were done, these were by individual student. In one case an usual and one more pseudo group formation was observed as shown in the box.

There is possibility of interaction when there is a bench as group or two benches with suitable sitting arrangement as a group. It is very difficult, if not impossible, for group interaction by the passage or a column with 3/4 benches or students in column.

Student Attendance Board

Students attendance board are used to motivate students to come to the school regularly. Out of 16 schools visited, only in one school student attendance board was found used properly. In most the schools of Kaski district, attendance board could be seen on the walls of classroom, but they were in unused form for a long time or roll number coin was missing. In the visited schools of Morang district, attendance board or mostly stacked in the office room or totally missing (either attendance board or the coins) or was not used Attendance board were not used in Rasuwa district. (See pictures 9-13 in appendix 7).

Testing

During classroom delivery observation, classroom questioning was noted down in broader categories and test papers used in some of the schools were also collected. As paraphrasing and reading textbook content was dominating method of teaching, rhetorical questions and memory level questions were in large proportion. Questions relating to experiences of students, and providing motivation were very few. Leading questions asking and providing immediate reinforcement was also found practiced less. Training programs also seemed not covering much on classroom questions.

As for the written test, it was found that in most cases question papers (for terminal and final) were developed RC- wise or by a group of schools. Some of the test items were found appropriate with respect to curriculum and grade-level.

In written test also rote memory questions and questions from textbook exercises were found in higher proportion, as seen in examples 1, 2 and 3.

Example - 1

दोस्रो त्रैमासिक परीक्षा २०५८

कक्षा: ५

विषय: मेरो वातावरण

समय:- २ घण्टा

पूर्णाङ्क: ३०

उत्तीर्णाङ्क:

विद्यार्थीले सकेसम्म आफ्नै मौलिक भाषामा उत्तर दिनु पर्नेछ । यस्तो उत्तरलाई अङ्क दिंदा ग्राह्यता दिइने छ ।

१) तलका कुनै ५ प्रश्नहरूको छोटकरीमा उत्तर देउ ।

- क) सजीव वस्तुमा हुने कुनै ५ लक्षणहरूको नाम लेख ।
- ख) ढाड भएका र ढाड नभएका ३/३ ओटा जनावरको नाम लेख ।
- ग) हावामा अक्सिजन नभएको भए के हुन्थ्यो होला?
- घ) जनसङ्ख्या बृद्धिबाट वातावरणमा पर्ने असरहरू के के हुन्?
- ङ) जङ्गली पशुपन्छीको संरक्षण कसरी गर्न सकिन्छ?
- च) प्राथमिक उपचारका मुख्य उद्देश्यहरू कुन कुन हुन्?

२) कारण देउ (कुनै २ मात्र)

- क) सतहको माटो बढी कालो हुन्छ । किन?
- ख) विरुवा भएन भने हामी बाँच्न सक्तौनौ किन?
- ग) घाइतेलाई सान्त्वना दिनुपर्छ । किन?

३) खाली ठाउँमा मिल्ने शब्द लेख ।

- क) ग्यासले चुनपानीलाई दुधिलो बनाउँछ ।
- ख) चमेरो समूहमा पर्छ ।
- ग) हावामा % नाइट्रोजन ग्यास हुन्छ ।
- घ) विरुवाले तयार गरेको खानालाई भनिन्छ ।
- ङ) माटो बढी कस्सियको हुन्छ ।

४) जोडा मिलाऊ ।

| समूह "क" | समूह "ख" |
|-----------------|----------------|
| हरितकण | एकदीलय |
| वातावरण सन्तुलन | चिनी (स्टार्च) |
| मकै | पात |
| दादुरा | दूइ दलीय |
| केराउ | विरुवा र जनावर |
| विरुवाको खाना | सरुवा रोग |

Example - 2

| | | |
|---------------------------------|----------------------|---------------|
| अर्धवार्षिक परीक्षा २०५८ | | |
| कक्षा: ४ | | पूर्णाङ्क: ४० |
| विषय: मेरो देश | समय:- १ घण्टा ३० मि. | उत्तीर्णाङ्क: |

१. तलका प्रश्नहरूको छोटकरीमा उत्तर लेख:-
- (क) कमल, राधिका र सुशीला को-को थिए?
 - (ख) यी तीनै जनामा कमल के गर्न सक्दैन थियो?
 - (ग) मंगलीले बाटामा के देखिन्?
 - (घ) कस्को घरबाट चोरी भएको थियो?
 - (ङ) प्रहरीले के-के काम गर्दो रहेछ?

Example - 3

| | |
|----------------------------------|-------------|
| 2nd Terminal Examination, | 2058 |
|----------------------------------|-------------|

Class: V Full Marks: 30 Subject: English Time: Two hours PM: 9.6

- Q.No. 1. Answer the following questions.
- (a) How high is the Mt. Everest?
 - (b) When is the Democracy day?
 - (c) Where is Rara lake?
 - (d) Can you build castles in the air?
 - (e) What is given to the disciples by an old monk to select his successor?

A limited number of the question papers were collected from the visited schools. Analysis of these test papers indicates lower quality of the test items, as these mostly emphasize rote memory.

Chapter IV

Perceptions Of Stakeholders

Perception of teachers and DEO personnel were collected through interviews and Focus Group Discussions (FGD). FGDs were conducted in Kathmandu Valley (DOE personnel, DEO personnel, and teachers) as well to share and validate field data. In this chapter perception and suggestions of stakeholders is presented.

Use of Curricular Materials

Curricular materials such as curriculum, content elaboration, textbooks, teachers guide are distributed to all the public primary schools. But complete sets of these materials were not found in any of 16 visited schools. In those schools incomplete sets were found. An unobtrusive observation indicates that available curricular materials specially curriculum, teacher guide, children books remained in one corner of office room unused. In some cases teacher guide and other materials were taken away by teacher (mainly at the time of teacher service examination time) and never returned to the school.

During interaction with the teachers individually and during FGD, teachers informed that textbook was the major source in their classroom delivery. Only a few of them said that they used to consult curriculum and /or teacher guide when they felt difficulty in some content of the textbook. However all the teachers agreed that using curriculum and teacher guide could help them a lot in making their classroom delivery effective. DEO personnel also agreed that curriculum and teacher guide were barely used and textbook as a classroom delivery resource was dominant, They were also critical that pictures, figures, illustrations, exercise of textbook were also not properly used. They also said that environment as a resource had not been used.

Use of Training Skills

During FGDs, teachers and DEO personnel were asked to indicate categorically two skills which teachers had learned from training they received and were using those skills in their classroom delivery. Similarly, they were asked to indicate two important skills learned but not being used, In addition they were asked reasons for non-use of training skills and requirements for effective use of training skills.

Teachers indicated various skills they had learned and were using in classroom delivery. Those skills were related to use of textbook, adoption of student centered approach (in some extent), preparation of yearly educational plan, use of blackboard, cut out picture, flash cards, number cards, letters, cards, pocket chart, real objects as instructional materials. They also told that they have been using students' attendance board. They opined that these skills learned from the teacher training have been useful and helpful in making classroom delivery effective.

In the view of DEO personnel, training skills that teacher were using during classroom delivery were use of textbook, yearly education plan, use of instructional materials -- flash cards, number cards, pocket chart, match stick figures, cut outs, real object/local materials as instructional materials.

The responses of the teachers and DEO personnel indicated that some of the skills related to use of textbook, instructional materials, and yearly education plan making were used

by the teachers during classroom delivery. This indicates transfer of certain training skills at the classroom level.

Teachers and DEO personnel indicated useful training skills that teachers were provided with but were not able to employ during classroom delivery. In the view of the teachers training skills which they were not able to transfer in the classroom were:

- Selection and proper use of teaching methods – discussion, Q/A, demonstration, observation, story telling, practical, field visit
- Student centered approach
- Preparing lesson plan
- Classroom management, sitting arrangement
- Construction and use of variety of instructional materials -- flannel board, UN cards, pictures, charts etc
- Students Attendance Board
- Games and activities in Physical Education
- Activities in Creative Arts
- Multi-grade teaching strategy.

In the view of DEO personnel, training skills which the teachers were not able to transfer in the classroom were:

- Selection and proper use of teaching methods
- Student centered approach
- Lesson Planning
- Construction and use of instructional material
- Group works, games, songs
- Multi-grade Teaching.

Responses of teachers and DEO personnel about use and non-use of the training skills indicated that skills provided in the training are useful ones, but only a small portion of these skills had been actually utilized. Important aspects supportive for effective classroom delivery such as student centered approach, selection and proper use of appropriate teaching method, lesson planning were neither frequently nor properly utilized. Reasons provided by the teachers and DEO personnel for non- use of training skills were,

| Response of Teachers | Response of DEO personnel |
|---|---|
| <ul style="list-style-type: none"> • Lack of budget • Lack of material (musical instruments, globe, map, charts, sports materials) • Lack of time (7 periods a day did not allow time for lesson planning, preparing instructional materials)Lack of proper evaluation (doing good or bad does not make any difference) • Lack of monitoring and support from RC and DEO. • Poverty and illiteracy of the community and parents • Lack of curricular materials (Curriculum, TG) • Crowded class | <ul style="list-style-type: none"> • Lack of mandatory provision for using training skills by the teachers • Lack of professional commitment of the teachers • Lack of regular monitoring and evaluation. • Lack of effective management skill and commitment of the Head Teacher. • Physical and economic reasons. • Lack of knowledge of SMC members about teaching learning. |

Responses of teachers and DEO personnel are usual, ready-made ones; their responses also indicate lack of professional commitment of the teachers and DEO personnel. Indicating lack of resources or blaming others, they have attempted to justify not fulfilling their duty and responsibilities, For example lack of musical instruments was given a reason for not conducting Creative Arts classes in most of the schools. This was also the reason provided in sharing and verification interaction at Phurping, Kathmandu. Unavailability of musical instrument might affect about 25% of the Creative Arts curriculum and it cannot justify for not covering the remaining 75% of the curriculum.

Teachers and DEO personnel were also asked to provide their suggestion in order to improve classroom delivery. Again, their suggestion were general and in broader form. These were,

- Regular supervision and monitoring
- Head Teacher should also supervise, monitor the classes
- Provide immediate reinforcement and suggestion
- Improve physical aspects of the school, class
- Strictly follow student teacher ratio criteria
- Reduce teacher load (provide time for lesson planning, homework, and instructional material construction)
- Proper evaluation of the teacher
- Establish reward and punishment system.

Some relevant suggestions provided by teachers and DEO personnel were,

- Provide textbooks on time: As free textbook distribution takes time, it disturbs regular teaching learning.
- Provide complete set of teacher guide at least for one time: As some of the curricular materials provided are either lost or torn and these are not on sale, a provision to help school to have a complete set will be fruitful.
- Curricular materials should be on sale as well.
- Teacher rationalization to achieve proper students teacher relation should be strictly followed. This would minimize problem of crowded class.

Relevancy of Training

All the teachers opined that training is useful for equipping them with methods and materials for effective classroom delivery. Teachers viewed that training has provided them a vision on the goals of educating primary children, their psychological understanding in utilizing classroom teaching, knowledge and skills on different teaching methods and the role of teaching aids for younger children in understanding and learning concepts, knowledge, skills and their application. In their actual classroom practice they realized the difference in teaching at class after been trained. Even though they do not have formal lesson plan, they have learned how to split up a lesson in the book into small teaching lessons. Before this they finished the lesson in a single touch, which was complicated for younger children in understanding. Using TB/TG as a source of knowledge for both teachers and the taught, they learned how to utilize other forms of knowledge in teaching – knowledge through observation, discussion and exploration. However those forms are rarely practiced because of lack of planned teaching learning activities.

Teachers also see training in a positive way for providing skills in various teaching methods, in construction and use of various instructional methods, and in improving testing. However teachers also accepted that full use of training skill has not been achieved yet, but relevancy is accepted. However, teachers and DEO personnel indicated difficulties in proper utilization of training skills due to parental attitude and school requirements, Teacher opined that:

- When students are taken out in the field study, other classes are left unattended.
- Teachers fear parents might complain that teacher has taken their children out for a walk than teaching in the school.
- Teachers also expressed their reservation that if children are out in the field playing games, parents might comment teachers do not teach instead they spend time in play.
- All the teachers are not equally competent in teaching all the primary level subjects. Therefore it is not easy to use grade teaching in all the grades.

Teachers have contacted huge complain regarding "Creative Arts' subject. The teachers contracted frankly said that they do not have all the skill playing musical instruments, singing, dancing, drawing pictures paper work etc. What teachers do is what they know, which is not sufficient to cope the curriculum requirements. Even RPs also admitted that most trainers who conducted "Creative Arts" subject training do not to have all those skills. Though activities in "Creative Arts" were relevant, teachers lacked competency in delivering those skills.

Conduction of Training

DEO personnel expressed difficulties they have faced in conducting training.

- Emphasis is on conducting recurrent training during school holidays, which happen to be agricultural time in summer or festival time in autumn. Though teachers are paid during holidays, they are reluctant to attend training during agricultural season. Teachers' absence in the training is rampant.
- Teacher as well as DEO personnel expressed that usefulness of training would decrease if same training is conducted repeatedly or training in different name covering similar content over and over again is conducted.
- The question was also raised on utility of recurrent training if fixed content is to be covered. The suggestion was to base recurrent training on the needs of teachers.
- Question was raised on universality of recurrent training curriculum - how can district running program for 12 years and district training program for 12 months have the same recurrent training?

Consolidation of Efforts and Skills

Question was raised about exhausting implementers (district and school) with number and varieties of programs and not providing time for consolidation of effort and skills. One example provided in this respect was the use of learning outcome indicator. Teachers of Kaski districts were provided training in the use of "milestones". While they were using "milestone", they were asked to stop using "milestones" and instead use " learning indicators". Neither teachers nor the DEO personnel know reasons for such a change. Confusion and frustration led them not to use any of these.

Teamwork

Not all teachers of a primary school are trained at a time. There is a cohort of trained and untrained teachers. Transmission of the learned teaching skills through training is necessary for making a team attempt to promote effective teaching learning environment at school and teaching skills for an individual teacher through team work at school. Most of the teachers complained lack of such arrangement in the schools. Except exam preparation, no other activities are performed as teamwork. Question preparation, result-sheet preparation are the main in-group works of the teachers.

Utilization of Students Attendance Board

Training program emphasis use of Student Attendance Board to motivate students to be regular in the school. But this was found not existing in some cases, not used yet all, or not properly used. Theoretically, most of the teachers expressed Student Attendance Board as useful. Various reasons were given for lack of proper use of Student Attendance Board by the teachers:

- At the beginning students seem to be motivated, but latter green or red color had no impact, they were only colors. Also, child who would be absent would not see the red mark and the day he/she comes back to the school, the red mark would be changed to green in a minute. Color would not be much of a motivating factor.
- As children could not reach at the height where Student Attendance Board was hung, teacher had to maintain the board. Teacher did not see much use in keeping students attendance in the register and in the board at the same time.
- As children used to take away coin of bottle cover for playing, teacher faced another problem of maintaining discipline and order in the class.

Chapter V

Synthesis And Suggestions

This study focused on situational analysis of the use of curricular materials (curriculum, textbook, teacher guide) and transfer of training skill for classroom delivery. Chapter II presented findings regarding use of curricular materials for classroom delivery, chapter III dealt with transfer of training skill at the classroom, and chapter IV presented perceptions of the stakeholders regarding use of curricular materials for classroom delivery and transfer of training skill in the classroom. This chapter presents synthesis of the finding and also provides suggestions for improving the present scenario of classroom delivery.

Synthesis of the Findings

1. Classroom Instructional Practices

An examination of the teacher guides and training manuals indicates that these materials emphasize active involvement of the students in learning. Group work, discussions, field visits, inquiry, concept development, problem solving, games, use of real objects and other instructional materials are suggested. Despite concrete suggestions in the teacher guides for student centered approaches and such skills covered in the training, teacher lecturing, drill, reading and repeating from textbook, memorizing question/answer were dominant approaches found in the classroom delivery. There was also a tendency of the teachers to cover more content in one day as well.

Primary level schoolteachers' classroom practice has been mostly influenced by textbooks. The usual classroom delivery practices could be depicted in these words:

- On entering the classroom, teacher asks students for a copy of the textbook if he/she has not carried one with him/her.
- He/she asks students where they stood in the sequential order of the lessons or ask students to turn to such and such page number.
- Teacher asks one of the students to read the text or the teacher himself/herself reads it adding his/her own interpretations here and there
- In lower grades chorus repeating of the text is the usual practice and in the upper grades (grade 4, 5) memorization of the question answer is done.
- Translation method is used most in the English language classes.

A small number of teachers who involved students actively in teaching learning demonstrated better practices such as

- Used real objects (pebbles for multiplication).
- Explained and demonstrated first (protector), then asked one of the students to demonstrate the same and then got the whole class to practice it. Teacher went around and provided feedback individually.
- Used objects in the classroom and around the school in teaching English words rather than by telling their meanings in Nepali.
- Teacher encouraged students to ask questions in English among themselves.

Textbook was found to have been used by all the teachers more often than curriculum and teacher guide. Some of the teachers had used teacher guide during classroom delivery or

for the preparation of the classroom teaching learning. Curriculum was found to have been consulted by fewer number of the teachers.

Classroom delivery indicates curriculum and teacher guide being used no much. Analysis of the curriculum and teacher guide related to the concerned lesson of the classroom delivery indicate that if the teacher would have consulted curriculum and followed the suggestions provided in the teacher guide, classroom delivery would have been better than the existing ones. Better classroom delivery in the cases where curriculum and/or teacher guide were consulted compared to the cases of non-consultation also supports this statement.

Major finding from the comparison of the curriculum, textbook, and teacher guide with the observed class are summarized below:

Classroom Delivery with Respect to Curriculum

Clarity of the curriculum objectives for implementation at the classroom depends upon the nature of the subject matter as well. In this regard an analysis of the curriculum as well as perceptions of the teachers indicated that in some subjects curriculum objectives match with the content exposition in the textbook (such as mathematics) so that even if the teacher depends upon the textbook for classroom delivery, curriculum objectives would be fulfilled in most of the cases. In case of the language subjects (English and Nepali), curriculum objective is not directly related to the content exposition of the textbook. Teachers were found to deviating from curriculum objectives during classroom delivery to a large extent in language classes. Non-consultation of the curriculum was evident in language classes.

There was another type of discrepancy observed in case of curriculum and classroom delivery of social studies, environment education, and health education. Curriculum objectives related to lower levels of cognitive domain were fulfilled in the classroom delivery. However, higher levels of objective related to habit formation were not adequately covered in the classroom delivery.

There are no specific textbook for physical education and creative arts. Teachers need to depend upon curriculum and teacher guide for classroom delivery for these subjects. Only a few teachers seem to have been consulting curriculum for classroom delivery in these subjects.

Classroom Delivery with Respect to Textbook

Textbook is the curricular material, found to have been used most by the teachers during classroom delivery. But the way textbooks of various subjects were used, the emphasis seemed to be upon rote memorization of the content matter of the textbook. This concern is supported by the use of mathematics textbook for students engaged on doing problems/exercise in 69% of the cases. Frequent use of reading and repeating text, memorizing question answer, word meaning, paraphrasing teaching style in the language subject also indicate use of textbook for rote learning. In most of the observed classes, activities and exercises suggested in the textbook to involve students in problem solving, inquiry, and out of class works in social studies, environment education, and health education were not found being conducted. The tendency was to use textbook only to cover the content need, not for effective classroom delivery.

Classroom Delivery with Respect to Teacher Guide

Some of the teachers were found consulting teacher guide for classroom delivery. As in this situational analysis, all of the observed classrooms were compared with the guidelines relevant for the observed class, a number of discrepancies between the TG and classroom delivery have been noted.

The methods and activities suggested in the TGs are student -- centered in nature. Suggestions regarding discussion, question answer, problem solving, inquiry method, group works, activities outside classroom, games, use of instructional materials are undertaken only in few occasions. Instead there were deviation from these suggestions and teachers were found engaged most of the time in lecturing, making students read textbook content, do the exercises, memorize question answer. Suggestions from TGs, specifically regarding social studies, environment education, and health education, which could have been helpful in achieving higher level of curriculum objectives, were not followed in most of the cases.

Availability of the Curricular Materials and Time on Task

The concern regarding non-use of the curriculum, and teacher guide as intended might be related to the availability of the material in the schools. But in all the schools visited there were curriculum, content elaboration, teacher guides. But in none of the 16 schools visited in Kaski, Morang and Rasuwa there were complete sets. Even though there were not all the required curricular materials available, available materials were not used to the required extent.

It is also equally important that teacher and student spend specified time on classroom teaching learning if any learning is to happen. During school visit it was observed that in about 10% of the school about 30 minutes to 1 hour was wasted due to late opening and early closing. During school visit, it was found that some (less than 10%) schools opened about 15 to 30 minutes late and closed about 15 to 30 minutes early. Even the last period was off to the lower grades in some schools. Head teacher and/or teachers spending time on administrative work at the expense of classroom teaching time was also found in some schools. For example, in one of the schools head teacher was found absent throughout the day for a minor administrative work - collecting question papers for final examination from Resource Center.

These basic phenomena, teacher-student spending time on teaching learning, availability of the curricular materials and use of the available materials are crucial for effective classroom delivery. These were not up to the satisfaction level.

Lack of uniformity within the Curricular Materials

During cross matching classroom delivery with respect to curriculum, textbook and teacher guide, lack of uniformity were found within the materials. Analyzing curricular materials on the basis of the 153 observed classes, it was found that textbook was mostly consulted for classroom delivery. Even curriculum was not consulted much by the teachers. In some subjects curriculum objectives could be covered by following textbook content, in some by teacher guide. Some observations are noted below.

- Exposition of content matter in the textbook and curriculum objective match. Therefore, even if teacher did not consult curriculum, curriculum objective of mathematics subject were achieved.
- In case of language subject (English and Nepali) curriculum objectives were difficult to match with textbook content. Complexity was due to curriculum objectives stated in terms of reading, writing, listening and speaking skills and grammatical function. These cannot be easily isolated and linked with certain topic or section of the textbook content if textbook would be the only source for classroom delivery. However in case of English language, directions provided in the textbook and activities suggested in the teacher guide largely links textbook content with the curriculum objectives. In case of Nepali language, teacher guide clarifies it.
- In case of Health Education, Social Studies, Environment Science Education higher and habit formation level curriculum objectives are not adequately addressed in the textbook and teacher guide. As such, these remain only idealist objectives.

Similarly, teacher guides of different subjects lack uniformity, such as

- Teacher guide for English language of grade 5 categorically distributes textbook content to be covered in each day period. Whereas all other teacher guides suggest approximate periods for each lessons. Teachers were found to cover more content in a period and finish up the lesson in a quarter or in half of the periods than suggested.
- In mathematics subject teacher guide, unit tests are included. In other teacher guides tri-monthly and final examination tests are included.
- Methods and activities suggested in "Mero Batabaran" (My Environment) is a paraphrasing pattern. Whereas in Nepali language teacher guide additional exercises, questions, activities, poems, paragraphs are provided to be used during classroom delivery.

This shows that in the teacher guides, there is lack of uniformity in terms of format, aspects to be covered and presentation.

Some Inherent Problems Within the Curricular Materials

Subject-wise analysis indicates problems in curriculum, textbooks, and teacher guides in some places. For example, higher-level curriculum objectives are not adequately addressed in the textbook and teacher guides in some cases. There were examples and activities such as visiting health post not relevant to the primary level children. In some places teacher guide, textbook content exposition were not relevant such as exposition of the concept of bar graph and its use coming in the students' mind in an insightful manner. Similarly, there were some suggestions, which were incompatible to the usual classroom, such as lining up boys and girls into two lines in front of the class to provide concept of set.

Testing Focus on Rote Memory

Usual practice in the classroom delivery and testing emphasize and promote rote memorization. This is clearly indicated in the test items. Even in the Creative Arts

questions like, "What is music?", "How many types of dances are there? Describe." are asked.

Transfer of Training

A unique feature observed regarding teacher guide and training manual is that most of the teaching methods suggested in the teacher guide are covered in the training manual. Similarly, materials suggested in teacher guide are explained in the training manual. Thus, skill learned during training would be supportive in implementing teacher guide effectively in the classroom delivery. However, such transfer was lacking largely in the classroom delivery.

Training provides teacher with skill and practice on teacher's preparation (lesson plan, materials collection), teaching methods, instructional materials use/construction, and evaluation. Those relevant skills acquired during training were not used during classroom delivery in most of the cases in the observed classes. Training manuals cover methods of classroom organizations, enhancing classroom environment, proper use of blackboard, various methods and use of group techniques, students' attendance board, testing. These skills are yet to be translated widely in the classroom.

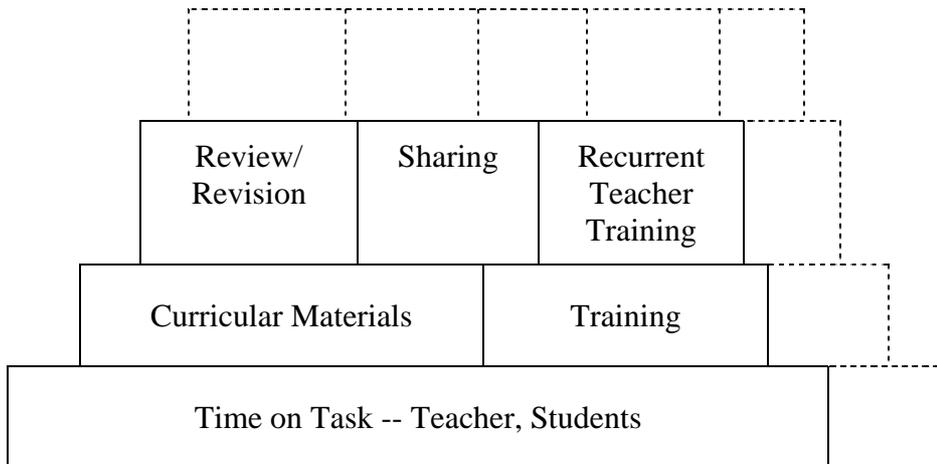
Perceptions of Teachers and DEO Personnel

Reasons provided by the teachers regarding lack of use of curriculum and TG, and lack of transfer of training were related to inadequacy of - budget, materials, (insufficient) time, monitoring and follow up, space in the classroom. Reasons provided by the teachers and DEO personnel also starts with the work lack -- lack of mandatory provision for using training skills by the teachers, lack of professional commitment of the teachers, lack of regular monitoring and evaluation, lack of effective management skill and commitment of the Head Teacher, lack of physical and financial resources, lack of knowledge of SMC members about teaching learning. For the solution of these problems, teachers and DEO personnel suggested regular supervision and monitoring, provision of professional support and reinforcement, improvement of physical facilities, evaluation of teachers with reward and punishment system. Besides these general, suggestion some of the specific suggestions were to provide textbooks on time, providing complete set of teacher guides at least for one time, provision of teacher guide on sale, implementation of teacher rationalization.

Suggestions

Development of curricular materials and training, and further revision and reorientation based upon needs and efforts need to be consolidated. Regarding effective classroom delivery, it builds up a ladder with fulfilling successive steps. Foundational structure for effective classroom delivery can be presented in this way,

Figure: Foundational Structure for Effective Classroom Delivery



It is obvious that for effective teaching learning, teachers as well as students need to spend time on task at the classroom. When teachers are engaged in classroom delivery, they require support to make it effective. These supports, at the minimum level, are curricular materials and training. When teachers are using the curricular materials and skills they have acquired from training, sometimes they might require further clarification, suggestion on particular problem, or skills on particular aspects. At this stage, sharing among colleagues will be fruitful and there might be a call for improving curricular materials. Unless the first ladder of the foundation is not stepped up, value of the upper ladder is of less significance. An attempt to build upper ladders over ladder without understanding the strength of the foundation will be like asking for beautiful rooftop, without floors underneath. With this view, this study "Effective Classroom Teaching Learning" concentrated on situation analysis on first foundational ladder (i.e. time on task) in general and on second foundational ladder (i.e. use of curricular materials and transfer of training skill) in particular. *Therefore, it is essential to monitor teacher and student time on teaching learning as well as availability and proper use of the curricular materials provided to the school/teacher. These aspects should be included within regular provision of the RPs' school supervision duties. In order to find out the situation of the availability of the curricular materials it will be essential to ask RPs to provide data regarding availability and condition of the curricular materials, in their respective schools in the cluster. Based upon the information from RPs, it will be essential to plan to distribute curricular materials at least one more time to the schools.*

Many curricular materials are provided to the schools and teachers have been provided with a number of training, but there is very little use of curricular materials and transfer of training skills. When a professionally committed teacher possess training skills, has have curricular materials in his/her disposition, transfer of training skills and use of curricular materials could be expected. But such professionalism, with use of curricular materials and transfer of training skills, was found lacking in most of the teachers. During interview and focus group discussion, teachers and district education personnel indicated lack of reward and punishment system and weak monitoring system responsible for this state of affairs. *Reward and punishment, though appealing, is difficult to establish objectively. Establishing a strong and effective monitoring mechanism is essential. Envisaged frequency and quality of the monitoring from RC, DEO and other agencies should be materialized.* In the absence of strong and effective monitoring, providing more curricular materials and more training will mean very little. Strong monitoring is equally important

as providing curricular materials or training. Frequency and quality of the monitoring by the RPs should be maintained. RPs role should be more on providing professional supervision rather than administrative one.

Developing professionalism is not an easy task. Developing effective working reward and punishment system in a short period is also difficult. Putting strong effective monitoring mechanism also takes time and effort. As facilitation and complementing activity to monitoring accountability system can be helpful. *It will be useful to establish an objective accountability system in order to ensure fulfillment of roles and responsibilities of all the concerned personnel and institutions/agencies.* One design of objective accountability system is to base on improvement in achievement of the students by subject (i.e. teacher), by grade (i.e. school), by school (i.e. Resource Center), and by RC (i.e. District). National achievement test of grade 3 (EDSC, 2001) has come up with 47 average national score of grade 3 in Mathematics. Program Implementation Plan of BPEP II (MOE, 1999) states a target of increase in average score on the national assessment at grade 3 from 50% to 75% by 2004. This means there need to be an increase of about 10% in the score of each student in mathematics in an average. On this basis target for the teacher such as 10% increase in the scores of the students in the grade the teacher is teaching; 10% increase in each grade of the school as a target for the school; similarly, in all the schools of the RC as a target for the RC; in all the RCs as a target for the district. Similar objective criteria should be developed and all the concerned personnel and institutions/agencies should be made accountable. Such specific criteria can also be helpful in addressing BPEP II plan.

It is crucial that there should be teaching learning at the classroom and teachers need to utilize curricular materials they have received and transfer the skills they have acquired in the training. It is also equally important that curricular materials should be user friendly for the optimum utilization of the curricular materials. *In this scenario it will be imperative to rethink whether it is necessary to provide curriculum as a separate document to each and every teacher/school even if 1) curriculum are not consulted by most of the teachers, 2) curriculum objectives could be reflected in other curricular materials such as textbook, teacher guide.*

The intention of the curriculum as a document could be addressed by textbook in general by the appropriate exposition of the content matter and it can be addressed by teacher guide in particular by specifying objective(s) of the lesson in explicit form. Other two curricular materials, namely textbook and teacher guide need to be provided to the teachers. Textbook is basically a reading material for the students and a guide about the scope of content matter to the teacher. Teacher guide is the most important curriculum material.

Instead of providing a number of curricular materials and make it complex for the teacher in using those materials during classroom delivery, it will more feasible and convenient to provide a single material in the form of a HANDBOOK. This handbook should have unity.

Curriculum + Teacher Guide + Uniformity = Handbook

This handbook should clearly present following aspects:

- Introduction of the lesson in the form of a single period. This should be directly related to the curriculum outcome.

- Content to be covered (approximately, but not allowing large deviation) in each lesson.
- Method, activity, instructional materials.
- Evaluation per lesson.
- Unit-wise specification of the learning outcome indicators.
- Specification grid for tri-monthly and final test.
- Specimen of the tri-monthly and final test items. If necessary also provide specimen for unit tests.

One argument that could be raised against such a comprehensive handbook is the fear that this approach will minimize room for teachers' creativity and active involvement. Therefore it is necessary to bear in mind, at the outset, that such a handbook is meant to oblige teachers at least delivery the class as suggested in the handbook and they are welcome and free to do better. But a class delivery of lower standard than expected (minimum performance level is handbook lesson) should not be accepted. In this regard, handbook can be helpful

- to determine minimal performance requirement from a teacher.
- to monitor and make judgment and provide feedback, reinforcement.
- to relate dissemination, training, and materials directly to the classroom needs.
- to evaluate classroom delivery of the teacher on the basis of minimal performance requirement of the prospective teacher in order to grant teaching license.

Another argument that could be raised is about the possibility of wastage of past endeavors and expenses in the development of curriculum and teacher guides. Actually, HANDBOOK will not be entirely a new product. Basically it will bring together dispersed materials together in a single document so that teacher will not require to consult a number of materials and ponder how to relate them. *Existing materials in the form of teacher guides, curriculum, content elaboration, learning outcome indicators, specification grid, test specimen should be brought together in a coherent, sequential manner. Essential revision, addition, deletion need to be done in order to increase quality and utility of the handbook.*

Development of a textbook or a teacher guide requires varied expertise -- content knowledge, developmental requirement of the target children, psychology of learning, adaptability to the local situation, testing and so on. Mistakes that creep in, in the form of wrong presentation of the concept, unusual example given, activity difficult in implementation being suggested, non-adaptable illustration, lack of linkage with curriculum objectives, low quality of test items and so on should be addressed.

In order to develop quality handbook, it is essential that at least 5/6 persons team (content specialist, curriculum specialist, evaluation specialist, learning psychology specialist, ministry personnel and stakeholders) work together.

Even conceptualization for providing textbook to the students and handbook for the teachers could be taken ahead for *providing textbook alone that is more structured* to facilitate instructional transactions in line with curriculum intentions and where teaching learning guidelines are incorporated. Such structured textbook should be developed in such a way as to reflect curriculum intentions and incorporate teaching learning

guidelines within the textbook so that teacher will not be required to refer to various materials for a day's class. Textbook is the mostly used curricular material and curriculum and teacher guides are used less often. These facts also support development of structured textbooks.

It is necessary to analyze textbook content exposition, teacher guide suggestion, and teacher training delivery so as to make these supportive in effective classroom delivery. Weaknesses, irrelevancies, contradictions, incompatible aspects need to be corrected in these curricular materials and training.

Examination still dominates largely teaching learning at the primary levels as well. Examination oriented teaching learning should be discouraged. But in order to make the teacher understand quality model questions such questions can be provided to the teachers. *Provide Camera Ready Copy of the quality model questions to the DEO and RCs to be used in individual schools rather than letting teachers or group of schools employing low quality, rote memorization emphasized tests.*

In conclusion, this study provides following suggestions in order to enhance the use of curricular materials and transfer of training skills for the classroom delivery.

- Ensure that teacher and student spend intended time on teaching learning at the classroom.
- Find out the situation of availability of curricular materials (curriculum, content elaboration, textbook, teacher guide) through RPs.
- If majority of the schools do not have a complete set of the curricular materials, it will be necessary to provide these materials to the schools at least one more time.
- Curricular materials need to be on sale as well. Schools should be made responsible to maintain complete set of the curricular materials at the school after these receive complete set.
- Frequency and quality of the monitoring by the RPs should be maintained. RPs role should be more on providing professional supervision rather than administrative one.
- It will be useful to establish an objective accountability system such as increasing certain mean achievement score at the grade level by the teacher, at the school level by the head teacher, at the RC level by the RP, at the district level by the DEO. This will be helpful to ensure fulfillment of roles and responsibilities of all the concerned personnel and institutions/agencies.
- Instead of providing a number of curricular materials and make it complex for the teacher in using those materials during classroom delivery, think over the feasibility of providing a single material in the form of a HANDBOOK for each subject for each grade. Existing materials in the form of teacher guides, curriculum, content elaboration, learning outcome indicators, specification grid, test specimen should be brought together in a coherent, sequential manner. Where essential revision, addition, deletion need to be done in order to increase quality and utility of the handbook.
- Analyze feasibility of attending higher level objectives at the classrooms. If curriculum objectives are clearly not possible to fulfill at the classroom, such objectives should be removed from curriculum. If curriculum objectives

require different kind of treatment (methods, materials and evaluation), teachers need to be oriented accordingly.

- There is a need to improve quality of testing as well at the primary level. If occasional test are to be conducted it will be better to provide Camera Ready Copy of the quality model questions to the DEO and RCs to be used in individual schools than teachers or group of schools employing low quality, rote memorization emphasized tests.
- It is necessary to analyze textbook content exposition, teacher guide suggestion, and teacher training delivery so as to make these supportive in effective classroom delivery. Weaknesses, irrelevancies, contradictions, incompatible aspects need to be corrected in these curricular materials and training.

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Including:

- All the textbooks of all the subjects of all the primary grades.
- All the teacher guides of all the subjects of all the primary grades.
- All the teacher training manuals of WSA, modular and 10 months package of NCED and DEC.

APPENDIX

Appendix 1: List of the schools in the sample

Morang

1. Raghupati Primary School, Biratnagar - 22
2. Bal Lower Secondary School, Rani, Biratnagar
3. Bhanu Morang Primary School, Suansari Maisthan, Biratnagar
4. Sushikshya Nikunja Primary School, Hatkhola
5. Sajilal Primary School, Indrapur

Kaski

6. Mahendra Primary School, Nagdada
7. Akala Primary School, Upallo Lamachour
8. Chandika Primary School, Batulechour - 16, Ambare
9. Mahendra Lower Secondary School, Pokhara
10. Shreeram Primary School, Simlehour
11. Dibyajyoti Primary School, Hemja - 6

Rasuwa

12. Bhimali Primary School, Dhunche
13. Sarashwati Primary School, Thade
14. Bhimsen Primary School, Thule Markhu
15. Narayansthan Primary School, Gombu Dada
16. Dhunge Primary School, Dhunge

Appendix 2: Qualification of the Teachers

| Qualification | Frequency | | | |
|---------------|-----------|-------|--------|-------|
| | Morang | Kaski | Rasuwa | Total |
| Test pass | 0 | 1 | 0 | 1 |
| SLC | 20 | 16 | 8 | 44 |
| IA/I.ED. | 9 | 4 | 1 | 14 |
| C.Ed. | 0 | 7 | 0 | 7 |
| B.A./B.Ed. | 3 | 1 | 2 | 6 |
| NA | 1 | 2 | 4 | 7 |
| Total | 33 | 31 | 15 | 79 |

Appendix 3: Work Experience of the Teachers

| Year | Frequency | | | |
|-------|-----------|-------|--------|-------|
| | Morang | Kaski | Rasuwa | Total |
| 1 | 0 | 1 | 0 | 1 |
| 2 | 1 | 3 | 0 | 4 |
| 3 | 1 | 0 | 1 | 2 |
| 4 | 0 | 0 | 1 | 1 |
| 5-10 | 4 | 8 | 5 | 17 |
| 10+ | 27 | 19 | 8 | 54 |
| Total | 33 | 31 | 15 | 79 |

Appendix 4: Work Experience of the Teachers in the Present School

| Year | Frequency | | | |
|-------|------------|-----------|------------|-----------|
| | Moran g | Kas ki | Rasuw a | Tota l |
| 1 | 0 | 6 | 2 | 8 |
| 2 | 1 | 3 | 1 | 5 |
| 3 | 4 | 1 | 2 | 7 |
| 4 | 0 | 1 | 2 | 3 |
| 5-10 | 7 | 7 | 3 | 17 |
| 10+ | 19 | 10 | 4 | 33 |
| NA | 2 | 3 | 1 | 6 |
| Total | 33 | 31 | 15 | 79 |

Appendix 5: Number of the Students in the Sample School

| Grade | I | II | III | IV | V | Total |
|-----------------|------|-----|-----|-----|-----|-------|
| District | | | | | | |
| Morang | | | | | | |
| Boys | 242 | 196 | 172 | 160 | 120 | 890 |
| Girls | 209 | 158 | 144 | 157 | 105 | 773 |
| Kaski | | | | | | |
| Boys | 192 | 124 | 99 | 90 | 77 | 582 |
| Girls | 255 | 143 | 106 | 101 | 101 | 706 |
| Rasuwa | | | | | | |
| Boys | 86 | 40 | 41 | 29 | 28 | 224 |
| Girls | 77 | 39 | 35 | 31 | 26 | 208 |
| Total | | | | | | |
| Boys | 520 | 360 | 312 | 279 | 225 | 1696 |
| Girls | 541 | 340 | 285 | 289 | 232 | 1687 |
| Grand Total | 1061 | 700 | 597 | 568 | 457 | 3383 |

Appendix 6: Tools

Appendix 7: Pictures

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