TEACHER EDUCATION PROJECT: LOAN NO. 1840 (2002-2009)
BENEFIT MONITORING AND EVALUATION (BME) REPORT

GOVERNMENT OF NEPAL MINISTRY OF EDUCATION

NATIONAL CENTER FOR EDUCATIONAL DEVELOPMENT

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Forewords

The Benefit Monitoring and Evaluation (BME) was considered to be an integral part of the project execution. During the whole project life, such BME exercise was undertaken for three times. The first was carried out to establish benchmark or baseline indicators for the use of frame of reference to monitor and evaluate the project benefits. The second was done in 2006 during the middle of the project implementation in order to conduct overall assessment of project benefits against the inputs and the planned targets. At last, the detail work was carried out to gather information regarding deliveries and to detect any deficiencies and discrepancies between the plan and execution of the program.

Keeping in view credibility and neutrality of monitoring and evaluation, independent expert services were mobilized specially for the second and third events of this exercise. The present report is meant for documenting updated progress status, major benefits, analysis of the benefits against the project objectives and targets, and lessons learnt from practical experience gained over the entire period.

Quite a few in-house technical staffs and experts were engaged with high level of professional efforts in order to bring the total endeavor to the present shape. We sincerely extend thanks to Dr. Saurav Dev Bhatta for his leadership in writing the report. Likewise, Dr. Kedar Nath Shrestha and Dr. Nasir Jalil deserve our appreciation for their guidance and constructive suggestions for refinement of this report. Consia Denmark with its local partner, Total Management Services, is acknowledged for its consulting support, management and logistical coordination for making the present event happen.

Finally, Project Coordinator Mr. Shiba kumar Sapkota and relevant team of the in-house professionals deserve credit for providing technical framework and practical guidance for undertaking every segment of the BME exercise.

Harka Prasad Shrestha
Executive Director

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Acronyms

ADB	Asian Development Bank
APs	Alternative Providers
BME	Benefit Monitoring and Evaluation
BPEP II	Basic and Primary Education Program II
CPD	Continuous Professional Development
DAG	Disadvantaged Group
DANIDA	Danish International Development Assistance
DEO	District Education Officer
DoE	Department of Education
EDSC	Education Development Service Centre
EFA	Education for All
EMIS	Education Management Information System
ETC	Education Training Centre
FOE	Faculty of Education
GoN	Government of Nepal
HSEB	Higher Secondary Education Board
ICSP	Implementing Consulting Services Project
MTR	Mid Term Review
MOE	Ministry of Education
NCED	National Center for Education Development
PEDP	Primary Education Development Project
PMs	Person-Months
PTTC	Private Teacher Training Center
RC	Resource Center
SIP	School Improvement Plan
SLC	School Leaving Certificate
SMC	School Management Committee
SSG	School Support Group
SSR	School Sector Reform
TA	Technical Assistance
TEP	Teacher Education Project
TIP	Teaching Improvement Plan
TMCC	Training Management and Coordination Committee
TMIS	Teacher Management Information System
TOT	Training of Trainers
TRC	Training Resource Centre
TSM	Teacher Support Mechanism
VDC	Village Development Committee

Executive Summary

1. Background

The Teacher Education Project (TEP) 2002-2009, builds on the Primary Education Development Project (PEDP) which was implemented between 1992 and 1998 through joint funding from the Government of Nepal (GoN) and the Asian Development Bank (ADB). The overall objective of TEP is to assist GoN to improve the quality and efficiency and access to basic education through the provision of better qualified teachers. The specific objectives of the Project is to improve the quality and coverage of teacher training by enhancing the institutional capacity of a teacher training system that encompasses pre-service, in-service, and recurrent training of primary teachers; and to increase the representation of disadvantaged groups (DAGs), particularly females, in the teaching profession. The total revised budget allocated to this project is US$ 27.8 million, of which 6.2 million has been provided by GoN and the remaining 21.6 million by ADB. The Project has been implemented by the regular administrative setup of the National Center for Educational Development (NCED).

This Benefit Monitoring and Evaluation Report (BMER) give an overview of the benefits that have accrued to the various beneficiaries of TEP since its inception in 2002. Benefit monitoring and evaluation of TEP has been carried out two times during the past seven years, in 2003 and 2006. The overall objective of this current BMER (2009) is to analyze and to document the cumulative progress and benefits of TEP in a comparative perspective with BMER 2006 and the original project targets.

2. Component-wise Benefit Analysis

TEP objectives have been operationalized into four components. These components encompass the specific activities or interventions to be carried out and the targets to be achieved in meeting the project goals. The four project components are:

(i) Building an effective and sustainable system for teacher education;
(ii) Developing effective teacher education curriculum and materials;
(iii) Providing teacher and management training; and
(iv) Educating teachers to better serve the needs of girls and other disadvantaged groups.

Building an Effective and Sustainable System for Teacher Education

The activities under this component are expected to benefit teacher training institutions such as NCED and ETCs and their professional staffs. The major activities associated with this component includes the following: construction and renovation of training facilities at NCED and ETCs; provision of national and international training programs for the professional staff at NCED and its line training agencies; and the creation of a national network of teacher training institutions through partnerships with the private sector.

Available evidence suggests that all targets related to the construction and renovation of training facilities have been achieved. A functioning visual studio with the necessary communication and multimedia facilities has been established at the Training Resource Center (TRC) in NCED. All the ETCs are now well equipped with essential office equipment, and they are now functioning media labs that can facilitate the effective design and delivery of training programs. The achievements in training-related targets are even more impressive. The total number of personnel benefiting from various in-country training programs was 218 in 2009, indicating an achievement rate of nearly 214%. Similarly, 110 NCED staff have benefited from various international training programs with support from DANIDA. These training programs, coupled with the improvements in the physical infrastructure of the training centers, have substantially bolstered the capacity of the NCED system to effectively carry out its training-related functions.

TEP has also succeeded in creating an extensive training network (ETN) through public-private partnerships to facilitate timely accomplishment of pre and in-service teacher training. A total of 66

partner institutions (Alternative Providers or APs) have been providing in-service training, and 99 private teacher training centers (PTTCs) have been providing pre-service training. These NCED accredited institutions also receive technical support from NCED. As a result of this network, the project target of providing pre-service training to 15,000 prospective teachers over the past 5 year period has already been achieved. Moreover, NCED has successfully incorporated the 10-months in-service training within the regular grade 12 education course of the Higher Secondary Education Board (HSEB), paving the way for the institutionalization of the existing pre-service training program.

Development of Teacher Education Curriculum and Materials

The activities under this component are expected to improve the overall quality of teacher training through better training curriculum and course materials. Various types of training curricula/courses have been developed and revised under this component. These include curricula for teacher training, management training and training for staff development.

As of January 2009, 12 complete sets of training curricula and materials (training curriculum, guidelines, training resource materials and TOT guide) have been developed and used, indicating a 100% achievement of targets. Both in-house trainers and outside professionals have been involved in the design and development of these curricula and materials. Furthermore, it is reported that these materials are regularly updated and revised, often with inputs from the trainees. Although no representative studies have been carried out to assess the effectiveness of these training curricula and materials, training participants have reported that these materials are indeed effective in enhancing their knowledge and skills.

Providing Teacher and Management Training

The activities under this component are expected to benefit master trainers, trainers, prospective teachers and in-service teachers. In addition, head teachers and education officials are expected to benefit from various management training programs.

Remarkable progress had been made in terms of producing master trainers and trainers (at 286% and 203%, respectively). The progress in the training of untrained teachers is also not worthy. A total of 103,996 primary school teachers have been trained in various modules of 10-month teacher training, representing a 90% achievement of TEP targets. Significant progress has also been made in the training of education officials and head teachers (at 94% and 115% respectively). However, progress in the 180-hour course and the overall condensed/special package is still much below the project target. Only 6% of the targeted 9700 teachers have received the 180-hour course and 14% of the targeted 4300 senior teachers have benefited from the overall condensed package.

Evidence on the effectiveness of the NCED training programs is rather sketchy. It has been estimated that the rate of training transfer into the classroom is only 50%. Nonetheless, it has been reported that the training programs have been somewhat effective in improving the cognitive knowledge of the trainees and orienting them to the various methods of student-centered and activity-based teaching. However, there is no evidence on the impact of teacher training on students' learning outcomes.

Educating Teachers to Better Serve the Needs of Girls and Other Disadvantaged Groups

The activities under this component are expected to benefit the historically marginalized or excluded social groups, particularly women, both by increasing their representation in the teaching profession and by making the overall school environment conducive for girls and DAG children. The major activities under this component include: providing 2500 pre-service training fellowships to women and other DAG members, and gradually incorporating them into the teaching profession; sensitizing teachers and administrators about

gender and cultural issues; and providing remedial classes to female and DAG children to enhance their learning achievement.

As of January 2009, all 2500 DAG fellowships have been distributed in 22 districts. The absorption rate of these fellows in the teaching profession has gradually improved from 12.3% in BMER 2006 to 39% by early January 2009. Similarly, about 20,000 girls and students from disadvantaged communities in 12 districts have benefited from the remedial tutorial classes. Such classes have been held with substantial assistance from 600 school support groups (SSGs). The results of such tutorial classes have been encouraging, particularly with respect to creating an awareness of the need for higher learning achievements among DAG students. It is also worth noting that many SSGs have mobilized DAG fellowship recipients for conducting the tutorial classes. Apart from helping the students, this effort has also benefited the DAG fellows by giving them opportunities to refine their teaching skills.

About 6500 district level officials, trainers, teachers, and community members have also benefited from short-term training on culture and gender sensitization. These training programs have been organized by the ETCs. Gender and cultural concerns have also been incorporated into the regular teacher training courses. It is expected that teachers and administrators participating in these programs will be sensitized to ways of minimizing discrimination and enhancing self-esteem among girls and children from disadvantaged groups. At this point in time, however, no further information is available about the effectiveness of such sensitization training programs.

3. Changes in the Primary Education System

There have been improvements over the years in the NER in primary education, from 81 in 2001 to 91.9 in 2008-09. Gender gaps are also narrowing down and the gender parity index (GPI) at the primary level has reached 0.98. The enrollment rates for traditionally excluded groups such as Dalits and Janajatis have also gradually improved. Janajatis and Dalits now constitute 40.3% and 20.2% of the total student body, respectively, at the primary level. Similarly, the dropout rate at the primary level has been reduced to 8.0%, well below the final project target of 12.5%. The current primary level repetition rate of 15.7% is also significantly below the project target of 23%. There has been a gradual improvement in the promotion rates for the primary level, from 65.6% in 2006-07 to 76.3% in 2008-09. Survival rate to grade 5 has also improved from 80.3% to 84.9% in the same period. All of these improvements indicate an overall improvement in the internal efficiency of primary education.

A national-level education project like TEP can also be expected to yield long-term economic and social benefits to the nation and its economy. As discussed above, an increase in the NER, a decrease in the dropout rate and an increase in the promotion rate in primary education over the project implementation period represent an increase in the internal efficiency of the system and thus reflect a reduction in the wastage of educational resources. Moreover, these changes also suggest that there has been an increase in the mean years of schooling per capita during the project period, which ultimately might be reflected in increased individual and social rates of returns. However, there is little Nepal-specific research-based evidence available to help us gauze the extent and degree of these benefits.

4. Conclusions, Lessons Learned and Recommendations

It can be seen that the TEP has immensely supported the Government in improving the quality and efficiency and access to basic education by strengthening the institutional capacity of the teacher training system, enhancing the professional skills of teachers, and increasing the representation of DAGs, particularly females, in the teaching profession. This can be seen from improvements in the various indicators related to access and efficiency of the system, and learning achievements of the students. When we look at the overall performance of the project in the four components as of early January 2009, we see that, on average, more than 90% of the proposed project targets in these components have been achieved. Most significantly, about 90% of the proposed 115,700 teachers have been trained in the various teacher training modules.

The top-down, inputs-focused approach adopted by TEP has been very successful in accomplishing its major target of providing training to almost all untrained teachers. In particular, it has been quite effective in enhancing the teachers' knowledge base and in orienting them towards student-centered, child-friendly and activity-based methods of classroom teaching. However, TEP was not able to institute a continuous teacher support mechanism until the last stage of the project cycle. Thus, for the major duration of the project, teachers received little follow-up support after completing their training. Moreover, the teacher support mechanism that is now being piloted seeks to use the current RC-system. Available evidence shows that the RC-system has not been so effective in extending professional support and services to the teachers under the BPEP and EFA: 2004-2009 programs. At the moment, it is unclear how this very RC-system can be used more effectively by TEP to provide additional support/services, such as the preparation of teaching improvement plans. Thus, there is a need for further consultations and deliberations on this activity. In particular, if the RC-system is to be used for implementing and institutionalizing teacher support mechanism, it is necessary that the size of the school cluster be reviewed and the RCs be adequately staffed by people who are capable of supporting the continuous professional development of the teachers at the school level.

In future, as NCED moves away from its current responsibilities of 10-months in-service training and the main responsibility of teacher training shifts to APs such as the HSEB and colleges of education, it will be necessary to ensure that the APs are producing adequately trained and qualified teacher candidates. This will require greater collaboration between NCED and pre-service training institutions. In particular, greater collaboration will be required in the following tasks: formalizing training accreditation mechanisms; revising training courses to reflect changes and revisions in the national curriculum; and providing adequate opportunities to prospective teacher candidates for comprehensive practice teaching.

There is also a lack of clarity regarding the future roles of the ETCs after they have accomplished their current mandate of training all untrained teachers by the end of TEP. Trainers and coordinators at the various ETCs are unsure about how these institutions will evolve after the implementation of School Sector Reform (SSR) Program. In future, should ETCs function as lead resource centers to provide professional support to the resource centers? Or should they provide continuous professional development support to the teachers in the current form, separately from the RCs? These issues also require further deliberations within NCED and the broader education system.

Similarly, TEP has not been able to institute a system or mechanism that monitors and measures the translation of project inputs (i.e., teacher training) into improved student learning achievements. In the absence of such a mechanism, it is difficult to disentangle many of the project's outcomes and benefits from the effects of other ongoing reform initiatives in the education sector. Thus, it is imperative that future projects/reform initiatives develop more specific mechanisms to measure project-specific outputs and outcomes.

1. Introduction

Nepal's education system has expanded tremendously since 1951 in terms of the number of schools and students. Starting from 321 primary schools and a total enrollment of about 8,000 children in 1951 (less than 0. 8% of the appropriate age-group that year) the number of primary schools in the country has now increased to 30,924 with a student population of approximately 4.7 million (MOE 2008; MOE 1971). In spite of these impressive gains, however, a large number of children from certain population groups still remain outside the formal education system. Girls, Janajatis, Dalits, Madhesis and religious minorities, in particular, continue to face difficulties in gaining access to schooling. At the same time, students who do have access to education suffer from the problem of low education quality, as evidenced by their poor performance in both national and international achievement tests. The problem of quality is especially severe in public schools – the institutions where over 87% of the nation's children get their basic education.

Thus universalizing quality primary education remains a fundamental problem, and a key goal, of Nepal's public education sector. A number of large-scale reforms have been implemented in this sector to strengthen the institutional capacity of the education system so that the problems of quality and access can be addressed effectively and efficiently in a sustainable manner. The Teacher Education Project (TEP), funded jointly by the Government of Nepal (GoN) and the Asian Development Bank (ADB) also utilizing some technical assistance amounting USD 0.3 million from DANIDA, is one such initiative.

Available evidence on educational reform and improvement shows that while we know what conditions are necessary for improving student learning outcomes, we do not know whether these conditions are sufficient. Nevertheless, it is now widely acknowledged that student learning outcomes depend on a host of interacting factors including school inputs, home inputs, pedagogical processes in the school and classroom, and other environmental variables (see Bhatta 2005). Teacher-related inputs[1] constitute the most important set of school inputs that go into the teaching-learning process and therefore play a vital role in any effective education system. The Teacher Education Project seeks to make a positive impact on Nepal's school education sector by focusing on teacher-related inputs and processes, thereby "filling a critical gap in the Government's efforts to improve the quality of basic education" (ADB 2001: 1).

This Benefit Monitoring and Evaluation Report (BMER) is largely meant for providing an overview of the benefits that have accrued to the various beneficiaries of TEP since its inception in 2002. Specifically, the monitoring and evaluation exercise is designed to comply with the project execution process as envisioned in the RRP 2001.

The remainder of this section outlines the objectives and components of TEP, and provides a description of the objectives, methodology and scope of this BMER. The major benefits of TEP are described in Section 2, where a component-wise benefit analysis of the four project components is carried out. An assessment of the progress towards meeting the TEP objectives is presented in Section 3. Section 4 discusses the progress made during this period in the primary education system, focusing on improvements in student enrollment and retention. This chapter also briefly discusses the direct benefits to primary school teachers and students, the ultimate beneficiaries of TEP interventions, as well as long-term benefits to Nepal's primary education system. Section 5 summarizes the findings of this study and also presents some concluding remarks. Section 6, the final chapter, highlights the lessons learned and the implications for the project as well as for the future of teacher education in Nepal.

[1] These inputs include teachers' knowledge of subject matter and their ability to effectively manage the teaching-learning/classroom processes.

1.1 The Context for the Teacher Education Project

The Teacher Education Project (TEP) builds on the Primary Education Development Project (PEDP) which was implemented between 1992 and 1998 through joint funding from GoN and ADB. The major accomplishments of PEDP were the establishment of the National Center for Educational Development (NCED) and nine Primary Teacher Training Centers (PTTCs), development of various training courses for teachers and education managers at different levels of the public education system, and the delivery of in-service training to primary school teachers. The objectives of TEP are consistent with ADB's education sector strategy for Nepal which emphasizes "strengthening the investments made during past projects and building on them within a more holistic, sub-sector approach" (ADB 2001: 10). More specifically, TEP "has been conceived to strengthen the capacity of the teacher training institutions for which ADB had helped create the infrastructure under PEDP" (ADB 2001: 10).

Launched in July 2002, TEP was originally scheduled to be completed in 30 June 2008. The project period has, however, been extended to July 2009. This extension has been made to synchronize the completion of TEP with the launch of the proposed School Sector Reform (SSR) project in July 2009, and to provide additional in-service training to about 27,000 primary school teachers (MTR 2006). The total budget allocated to this project is US$ 25.9 million, of which 6.3 million has been provided by GoN, remaining 19.6 million (including 0.3 million TA contribution of Danida) by ADB. The Project has been implemented by the regular administrative setup of the National Center for Educational Development (NCED).

1.2 Objectives of TEP

According to the *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Kingdom of Nepal for the Teacher Education Project* (RRP), the overall sectoral objective of TEP is "to assist the Government in improving the quality and efficiency of and access to basic education through provision of better qualified teachers" (ADB 2001: 13). The specific objectives of the Project are:

- To improve the quality and coverage of teacher training by enhancing the institutional capacity of a teacher training system that encompasses pre-service, in-service, and recurrent training of primary teachers; and,
- To increase the representation of disadvantaged groups (DAGs), particularly females, in the teaching profession.

The project seeks to meet the first objective by (a) building the government's institutional capacity for policy-making, planning, and managing teacher training programs, and (b) developing better curriculum and training materials, and training the trainers and teachers in order to enhance their professional skills. Similarly, it seeks to meet the second objective by providing pre-service teacher training fellowships to prospective teachers from disadvantaged groups, particularly women, and by sensitizing all teachers to the needs of students from disadvantaged groups.

1.3 Components of TEP

The Project objectives have been operationalized into four components. These components encompass the specific activities or interventions to be carried out and the targets to be achieved in meeting the project goals. The four project components are:

(i) Building an effective and sustainable system for teacher education;
(ii) Developing effective teacher education curriculum and materials;
(iii) Providing teacher and management training; and,
(iv) Educating teachers to better serve the needs of girls and other disadvantaged groups.

Component 1 focuses mainly on institutional capacity building for delivering training to primary school teachers by developing staff skills and improving the facilities of NCED and Education Training

Centers (ETCs). Activities under component 2 include developing training curricula and materials for teacher and management training. Component 3 involves providing various modules of pre-service, in-service and management training to primary school teachers, head teachers and education managers. And component 4 focuses on providing pre-service training fellowships to DAG members, delivering gender and cultural sensitization training to teachers, and providing tutorial support to DAG students.

1.4 Objectives, Scope and Methodology of BME 2009

Benefit Monitoring and Evaluation (BME), according to the TEP Project Document "comprises activities conducted periodically to gather information through multiple sources so as to determine whether the input deliveries for implementing program activities have rendered expected benefits to the intended beneficiaries" (ADB 2001: 22). Moreover, the same document states that "BME also seeks to detect any deficiency and discrepancy between the plan and the execution of a program in using the resources efficiently, so that timely corrections could be made to update the program and thus improve the benefits, outcomes, and impact. BME will utilize information from the EMIS and TMIS, annual and semi-annual reviews, mid-term reviews, and periodic evaluations and studies" (ADB 2001: 22). The shortlist of verifiable indicators for monitoring and evaluation, originally listed in Appendix 9 of RRP (ADB 2001) has been reproduced in this BMER in Annex 2.

Benefit monitoring and evaluation of TEP has been carried out two times during the past seven years. The first BME was conducted in 2003. The second BME was carried out in December 2006 as a follow-up to BMER 2003. Like BMER 2006, this BME Report (2009) too provides an update of the progress and the benefits accruing from TEP. The overall objective of the current BMER (2009) is to analyze and document the cumulative progress and benefits of TEP since its inception in 2002, and especially since 2006, in a comparative perspective with BMER 2006 and the original project targets in 2002 (See Annex 1 for details of these targets). The analysis is based primarily on a review of various project documents that have been produced since 2006.

The report takes into account the benefits received the different categories of the project beneficiaries (see box) as identified in the project (RRP 2001: 25).

Project beneficiaries

1. Category-1: Direct beneficiaries-teachers covered under the project
2. Category-2: Real beneficiaries- students taught by the trained teachers
3. Category-3: Direct social beneficiaries- students especially girls and the ones who belong disadvantaged community

Besides, few more categories can be considered by looking at the nature of services planned under four different program components of the project. That includes institutional beneficiaries-NCED, ETCs and other training providers; and individuals who deliver training courses namely master trainers and trainers working at various levels of institutions. It is expected that in the long run, the achievements of TEP will be reflected in enhanced learning achievements of these students.

Also note that this BME does not show the exclusive impacts of TEP on the changes in Nepal's primary education system. What we can, and have, shown here are only the proximal benefits of TEP. These proximal benefits are related to the outputs of the project, such as the number of primary teachers trained in the various modules of training packages, improvements in the infrastructure and human resources capabilities of the training-related institutions, and the number of DAG fellowships distributed. But we cannot show the ultimate or distal benefits resulting from TEP, such as improvements in the teaching skills of trained teachers or learning achievement of the students. There are many factors other than TEP that could have affected these distal benefits[2]. In order to isolate the exclusive impact of TEP on these indicators, in particular student learning outcome indicators, we would need to account for the impact of the alternative causes. Such an exercise would require, among other things, separate data for teachers trained through TEP and those trained through other programs in the education sector; before and after data on training for two sets of teachers (trained and untrained); and, before and after data on student performance for two sets of students (those taught by trained teachers and those not taught by trained teachers). Clearly, a rigorous impact evaluation of this nature is beyond the scope of this BME exercise.

[2] Factors such as the inputs provided through the Education for All: 2004-2009 Program.

This BMER uses data from a variety of sources including different NCED reports, TEP Mid-Term Review (MTR) 2006, the RRP, quarterly progress reports, and various project performance status reports. It also makes extensive use of data from Flash Reports produced by the Department of Education (DoE). Flash Reports have been published since 2004 on a bi-annual basis. Data from Flash Reports are used to assess the overall performance of the school education system using program and performance indicators specified by the Education for All (EFA): 2004-09 Program. Each Flash Report contains national and district-specific data related to student enrolment, participation and performance. It should be pointed out that it is sometimes difficult to track changes in the output indicators of interest using data from Flash reports since the Flash data formats have changed over the years. Furthermore, Flash reports in many instances do not provide disaggregated data for public and private schools separately whereas TEP interventions have been targeted only at public schools. Moreover, they do not provide data for all indicators that are analyzed in the BME (such as student learning outcomes). In such cases, proxy indicators (e.g. those assessing the internal efficiency of the system) have been used.

It should also be emphasized that while this report is an update of BMER 2006, it also looks at the changes in the primary education system since the inception of TEP in 2002. Thus, it gives an overall picture of the project progress and the various benefits accrued since its inception in 2002. An overall status update of project performance in the four components as of early January 2009 has been reproduced in Annex 3. It can be seen that, on average, more than 90% of the proposed project targets in the four different components have been achieved. More significantly, about 90% of the proposed 115,700 teachers have been trained in the various modules of teacher training.

2. Component-wise Benefit Analysis

This section discusses the progress in and benefits accruing specifically from each of the four components of TEP separately. For each

component, the section first presents an overview of the major activities and targets. It then provides a summary of the progress and benefits reported in BMER 2006. Finally, it analyzes and discusses the progress and benefits since 2006.

It should be noted that an Implementing Consulting Services Project (ICSP) has been implemented since 2005 to provide coordinated professional support to the implementation of TEP's four components outlined earlier. ICSP has envisioned that these consulting services inputs will strengthen the capacity of NCED, MOE, Education Training Centers (ETCs), Alternative Providers (APs), and other concerned agencies in a wide range of operational and management areas such as training methodology, training and materials development, Teacher Management Information System (TMIS), monitoring and evaluation, research, and different aspects of distance education delivery and management (ADB 2001: 21). A total of 285 Person Months (PMs) of consulting inputs were to be provided under the five components of ICSP: (i) Project Management, (ii) Management Training, (iii) Teacher Education, (iv) Distance Education/Open Learning, and (v) Monitoring and Evaluation. These consultants have been based at NCED and the 9 ETCs.

Especially after the implementation of a Better Mobilization Plan for ICSP since 2007, the rate of deployment and utilization of the consulting inputs rose significantly and remained at 96 % (269 person months) by the end of the project. The impact of these services on enhancing the quality of project implementation activities and capacity building of the project staff has been noted as satisfactory by NCED (NCED, 2065). Similarly, according to Consia and TMS (2009: 6), the ICSP inputs after 2007 have adopted the most recent and emerging trends in teacher education, directed to the strategic concerns and areas of interests of NCED, and more focused and needs-based. The same report has noted substantial and steady improvements in the professional capacity and ability of NCED professionals, particularly with reference to: i) the teachers' professional development policy exercise, ii) roster training consultation and roster training workshop, iii) launching/outsourcing of NCED research on Contribution of Teacher Training to Development of Primary Education in Nepal, and, iv) launching of a pilot program on teacher support mechanism in five selected districts.

2.1 Building an Effective and Sustainable System for Teacher Education

The activities under this component are expected to benefit teacher training institutions such as NCED and ETCs and their professional staff. The major activities associated with this component include:

- construction and renovation of training facilities at NCED and ETCs
- provision of various national and international training programs for the professional staff at NCED and its line training agencies
- implementation of a Teacher Information Management System (TMIS)
- accreditation of private teacher training centers and creation of extensive training network of teacher training institutions

In the case of institutional benefits, BMER 2006 noted that 100% of the targets related to building construction and renovation had already been achieved. These achievements included the construction of three training-related buildings (a training resources centre or TRC, a residence for trainees and a cafeteria), renovation and refurbishment of NCED and 9 ETC buildings, and refurbishing and renewing of recording facilities in DECs. However, BMER 2006 also noted that a functional TRC-- an operational system with the necessary communication technologies, managed and manned by adequately trained personnel, and guided by a comprehensive plan--had yet to evolve (BMER 2006: 5).

In the case of benefits to professional staff within these institutions, BMER 2006 noted that the government had not yet approved the 28 international training and study tours proposed in the RRP (ADB 2001), including study tours for 6 members of the Training Management and Coordination Committee (TMCC)[3]. The report raised concerns about the effects this non-implementation could have on the capacity of NCED (pp.5, 17). It noted, however, that 9 participants from NCED and related agencies had participated in a 6-week training program in Denmark funded by DANIDA[4]. The report also pointed out that NCED, ETC, DEO, RED and MOE personnel had benefited from a domestic capacity building training on Teacher Management Information System (TMIS), monitoring and evaluation, and action research, conducted with substantial inputs from various project consultants. These are the personnel responsible for developing and instituting a national system of teacher education. All in all, 200 staff members from NCED, ETC, and MOE had received such trainings by August 2006. This represented an impressive achievement rate of 197%.[5]

[3] TMCC has now been reorganized into Council for Educational Human Resources Development as a high-level policy body for teacher development.
[4] However, all the beneficiaries were Brahmin-Chetri males.
[5] The original project target was to train 102 staff members from NCED, ETC, and MOE.

Since December 2006, many of the concerns related to physical infrastructure and institutional capacity building at NCED and its line training agencies have been addressed. For instance, a recent NCED monitoring study reports that physical renovations, such as repair and maintenance of buildings, fencing of compound walls, and electrical and plumbing works, have been carried out in 8 ETC-As. Similarly, a functioning visual studio with the necessary communication and multimedia facilities has been established at the Training Resource Center (TRC) inside the NCED premises in Sanothimi. The study mentions that all the ETCs are now well equipped with essential office equipment. They also have functioning media labs that can facilitate the effective design and delivery of training programs (NCED 2065 vs a).

The international study tours and trainings have not materialized yet, and it is unlikely that they will take place any time during the remaining period of the project. However, between January 2007 and July 2008, a total of 110 NCED staff members benefited from various international training programs organized under the Institutional Capacity Building Program funded by DANIDA (NCED 2065 vs a: 19). The number of personnel benefiting from in-country training programs has also increased from 200 in 2006 to 218 in early January 2009, indicating a cumulative achievement rate of nearly 214% (NCED 2009). It is expected that these training programs will substantially bolster the capacity of the NCED and its line training agencies to effectively carry out their training-related functions.

Recent project documents suggest that 66 partner institutions (Alternative Providers or APs) have been providing in-service

training. And 99 private primary teacher training centers (PPTTCs)[6] have been providing pre-service training. NCED provides these APs and PPTTCs with various kinds of technical support such as training materials, TOT, and access to various professional training workshops at the ETCs. This is in line with the project goal of creating an extensive training network (ETN) through public-private partnerships to facilitate timely accomplishment of pre and in-service teacher training. As a result of this network, the project target of providing pre-service training to 15,000 prospective teachers over the past 5 year period has already been achieved. However, the quality of training provided by many of these private institutions has been reported to be less than satisfactory and NCED has annulled the affiliations of about 51 PTTCs for this reason.

Moreover, the 10-months pre/in-service teacher training program has been accredited to make it equivalent to grade-11 and the training graduates have been made eligible to directly get admitted in the Special grade-12 education under special collaboration between NCED and HSEB. The accreditation scheme has aimed at benefiting some 65000 pre/in-service training graduates for upward mobility with regard to further professional development opportunity. At the same time, it was agreed in the collaboration that existing 10-month training either for pre-service candidates or for the in-service teachers was to be phased out when backlog clearance of all untrained primary teachers is achieved by end of the extended period of the project. In this way, the teacher training, major intervention of the project, successfully integrated into qualification upgrading program, which is a regular component of the HSEB system.

Key benefits
1. physical works
2. training policy
3. staff development
4. accreditation of the 10-month teacher training

[6] Originally, the number of PTTCs was around 150. However, many PTTCs were disqualified due to the low quality of training provided by them.

2.2 Development of Teacher Education Curriculum and Materials

The activities under this component are expected to improve the overall quality of teacher training through better training curriculum/course and materials. Various types of training curricula/courses have been developed and revised under this component. These include curricula for teacher training[7], management training and training for staff development.

The progress and benefits documented by BMER 2006 in this component included the development of 12 complete sets of training materials (training curriculum, guidelines, training resource materials and TOT guide). BMER 2006 noted that these training materials had been used effectively in pre and in-service training programs. However, the report also indicated that there was no evidence of changes in the classroom situation and learning outcomes of students, and concluded that the benefits experienced by trainers and teachers had yet to be translated into benefits for students.

[7] The major teacher training curricula include curricula for the 10-month in-service and pre-service training programs, a 180-hour training curriculum and a 2.5 month condensed course.

As of January 2009, 12 sets of training curricula and materials[8] have been developed and used, indicating a 100% achievement of targets. Both in-house trainers and outside professionals have been involved in the design and development of these curricula and materials. Furthermore, it is reported that these materials are regularly updated and revised, often with inputs from the trainees and the consultants mobilized through ICSP (NCED 2065 vs a: 23). Although no representative studies have been carried out to assess the effectiveness of these training curricula and materials, training participants have reported that these materials are indeed effective in enhancing their knowledge and skills (NCED 2065 vs b: 9).

2.3 Providing Teacher and Management Training

The activities under this component are expected to benefit master trainers, trainers, prospective teachers and in-service teachers. In addition, head teachers and education officials are expected to benefit from various management training programs. The major activities under this component include:

- training of 70 master trainers and 1480 trainers
- pre-service training to 15,000 teacher candidates
- various modules of in-service training to 115,700 in-service teachers
- education management training to 600 education officials
- school management training to 3000 head teachers.

Before proceeding further, it will be useful here to discuss in brief the different teacher training packages of NCED. There are separate 10-month training courses for the primary and lower secondary/secondary level teachers. Each course is divided into three phases/modules and is delivered through a combination face-to-face training and distance-mode training. The structure of these training courses for the primary level teachers is summarized in Table 1.

BMER 2006 noted that while remarkable progress had been made in terms of producing master trainers and trainers (at 286% and 203% respectively), the progress was not as encouraging in the area of teacher training. More specifically, only about 56% of all the targeted teachers had been trained in the four training packages developed by NCED. The progress was particularly slow in the 180-hour course (at 5% achievement rate) and the overall condensed/special package for senior teachers (at 11% of achievement rate). The progress was reported to be much better in the training of education officials and head teachers.

[8] The training materials include
and 2 sets of Training Resource
Nepali, Mathematics, Social Stu
Education); and 3 sets in the Th
Training Resource Materials).

Table 1: Structure of the NCED 10-month in-service training program

Training particulars	Module 1 (Phase 1)	Module 2 (Phase II)	Module 3 (Phase III)
Primary level in-service training			
Mode of delivery	Face-to-face	Self-learning in distance mode	Face-to-face including school-based practicum
Duration	2.5 months	5 months	2.5 months
Location	ETCs	Own school/local resource center	ETCs, schools near ETCs
Residential/non residential	Residential	Non-residential	Residential

Source: Adapted from NCED (2065 vs a)

Table 2 below highlights the status of various training outputs compared to the original TEP targets. It also shows the progress after BME 2006. According to the *Project Performance Status Report presented in a review mission held in July 2009,* a total of 114,900 primary school teachers have been trained in various modules of teacher training since the implementation of the project in 2002. This represents an achievement rate of about 99% compared to the original project target of training 115,700 teachers. This is an impressive accomplishment compared to the achievement of 56% in the BMER 2006. This progress can be attributed largely to the implementation of the "Backlog Clearance Campaign" starting in July 2008. However, progress in the 180-hour course and the overall condensed/special package is still much below the project target. There has been no improvement in these targets since December 2006. Only 6% of the targeted 9700 teachers have received the 180-hour course and 14% of the targeted 4300 senior teachers have benefited from the overall condensed package. This is because both of these training packages were developed very late in the project so most teachers went directly to the first package of 10-months training. Moreover, in the case of the condensed package, it was apparently also not fully clear to the teachers whether it would be counted towards their training completion. So they opted for other packages.

Evidence on the effectiveness of the NCED training programs and their impact on classroom teaching and learning are insufficient. The Project Performance Status Report 2009 (NCED 2009: 2) mentions a 50 percent rate of training transfer into the classroom although it is not clear what is meant by this transfer. It is also not clear how this figure was estimated. The most recent monitoring report from NCED discusses the effectiveness of these programs to some extent (NCED 2065 vs a). However, the evidence presented there is not always consistent. For example, it states that the training delivery process through the ETCs, APs, and PTTCs is both 'excellent' and 'good enough' (in the same paragraph!) (NCED 2065 vs a: 42-43). NCED monitoring report also points out that "some activities such as using audio-visual and reference materials need further improvement" (NCED 2065 vs a: 43) and that "even the participants' involvement in using these materials does not seem satisfactory" (p. 43). Some of the problems of teacher training are highlighted in the NCED monitoring report. Evidently, there are problems at all levels of the training system related to the inadequacy of physical facilities in the training centers, under-qualified and under-motivated trainers, irregular and inactive trainees, and under-planned and under-managed training processes (NCED 2065 vs a: 44-47).

Thus, on the whole it has been reported that the trainings have been effective in improving (i) the cognitive and content knowledge of the trainees, and (ii) orienting them to the various methods of student-centered and activity-based teaching. However, there is no evidence of the impact of teacher training on students' learning outcomes. NCED has recently commissioned two studies to evaluate the contributions of primary teacher training programs to primary education. It is expected that the results of these studies will give more insights into the contribution of TEP.

Table 2: The status and benefits of TEP training activities

S.N.	Performance Target	Unit	Status in 2000 (Baseline)	Performance Status in BMER 2006		Cumulative Performance Status in January 2009	
			Quantity	Quantity	%	Quantity	%
1	1,480 trainers received training	No. of trainers	-	3,000	203	-	-
2	70 master trainers trained	No. of master trainers	-	200	286	-	-
3	32,000 teachers trained in Package-1	No. of teachers	17,332	19,100	60	30,429	95
4	45,000 teachers trained in Packages-2&3	No. of teachers	13,638	20,546	46	37175[9]	83
5	34,400 teachers trained in Package-4	No. of teachers	156	28,169	82	46247	134
6	9,700 teachers trained in the upgraded 180-hour course	No. of teachers	9693	500	5	536	6
7	4,300 senior teachers[10] trained in overall condensed / special package	No. of teachers	-	466	11	535	14
8	3,200 teachers trained in old 3rd package	No. of teachers	-	2.300	72	Refer to footnote 11.	-
9	15,000 teacher candidates trained in 10-month pre-service training course	No. of teachers	-	8,945	60	15,000	100
10	100 administrative officials trained annually i.e. 600 in total	No. of administrators	-	480	80	602	125
11	500 primary school head teachers trained annually; i.e. 3000 in total	No. of head teachers	-	2,040	68	3450	115[11]

Source: BMER 2006: 7; NCED 2009: 2-3; ADB 2001: Appendix 1, Appendix 9.

[9] Apparently, there are some inconsistencies between the targets listed in the RRP (ADB 2001; restated in BMER 2006: 7) and the Project Performance Status Report 2009 (NCED 2009: 3). The target in RRP for packages 2 and 3 is 45,000 (which is mistakenly stated as the target for package 2 only in BMER 2006). On the other hand, the Project Performance Status Report 2009 (NCED 2009: 2-3) states that the target is 43,300 which includes the 2300 teachers trained in the old package 3 (again, BMER 2006 lists this target of old package 3 as 3200). The performance of 76% shown in table 2 uses the target of 43,300 stated in NCED (2009: 2-3).

[10] Teachers who are of 45+ years of age and have served for 15+ years in the teaching profession.

[11] The Project Performance Status Report 2009 (NCED 2009: 3) has mistakenly recorded this as 100%.

2.4 Educating Teachers to Better Serve the Needs of Girls and Other Disadvantaged Groups

The activities under this component are expected to benefit the historically marginalized or excluded social groups, particularly marginalized women, both by increasing their representation in the teaching profession and by making the overall school environment conducive for girls and DAG children. The major activities under this component include:

- Providing 2500 pre-service training fellowships to women and other DAG members, and gradually incorporating them into the teaching profession.
- Sensitizing teachers and administrators about gender and cultural issues by incorporating culture and gender sensitization into the regular teacher training courses as well as by providing special short-term training programs.
- Providing special remedial classes to female and DAG children so that their learning achievement is enhanced.

According to BMER 2006, 1493 females and other DAG members had received the 10-month pre-service training fellowship by December 2006. Compared to the project target of 2500 DAG fellowship awards for the entire project period, this progress represented an achievement rate of about 60%. However, the report noted that the rate of absorption of these fellows into the teaching cadre was only 12.3% (p.9). It also expressed concerns about the inadequacy of the selection criteria for these fellowships.

BMER 2006 stated that three advocacy packages were produced for gender and pro-DAG sensitization activities although there is no indication of how and where they were used. It noted that these packages did not outline how the knowledge and skills learned in the workshops would be transferred into practice. The dissemination training of these packages, according to BMER 2006, appeared to be a stand-alone event rather than practically connected with the process of improving the gender context and promoting social inclusion in schools.

Recent project documents indicate that as of January 2009, all 2500 DAG fellowships have been distributed. Only 12 districts were benefiting from these fellowships before 2007-08, whereas a total of 22 districts have benefited after 2007-08. The absorption rate of these fellows in the teaching force has gradually improved from 12.3% in BMER 2006 to 43% by early July 2009[12]. The project documents have noted that this increased rate of absorption is mainly a result of the implementation of an Fellowship Effectiveness Plan 2007, which was approved by the Ministry and adopted by the DOE to increase the employment of these fellows after February 2007 by incorporating them into the *Rahat* quotas (also see MTR 2006). According to NCED (2065 vs a: 24-26), the criteria for selection of the DAG fellowship recipients has also been revised. According to this revised criteria, first priority is given to Dalit poor females, followed by Dalit females, Janajati poor females with disability and Janajati poor females, respectively.

[12] The MTR 2006 had reported this absorption rate to be 16%, which had increased to 23.82% by July 2008.

Similarly, about 20,000 girls and students from disadvantaged communities have benefited from tutorial classes that provide remedial teaching support to female and DAG primary school students. Such tutorial classes have been held in 12 project districts with substantial assistance from 600 school support groups (SSGs) that are under mobilization. The SSGs have been provided with government resources and guidelines necessary for conducting these classes. The results of such tutorial classes have been encouraging, particularly with respect to creating an awareness of the need for higher learning achievements among DAG students (NCED 2065 vs a: 26). It is also worth noting that many SSGs have mobilized DAG fellowship recipients for conducting the tutorial classes. Apart from helping the students, this effort has also benefited the DAG fellows by giving them opportunities to refine their teaching skills. These results are summarized in Table 3 below.

About 6500 district level officials, trainers, teachers, and community members have also benefited from short-term training on culture and gender sensitization. These training programs, usually of 2-4 days duration, have been organized by the respective ETCs. Gender and cultural concerns have also been incorporated into the regular teacher training courses. It is expected that teachers and administrators participating in these programs will be sensitized to ways of minimizing discrimination and enhancing self-esteem among girls and children from disadvantaged groups. At this point in time, however, no further information is available about the effectiveness of such sensitization training programs.

Table 3: The status of social inclusion related activities in TEP

S.N.	Activities	Project Target	Progress in BMER 2006	Progress by Jan 2009	Progress status in %
1	No. of DAG fellowships distributed	2500	1493	2500	100
2	Rate of recruitment of DAG fellowship graduates into the teaching profession	100%	12.3%	43%	-
3	No. of stakeholders provided with culture and gender sensitization training	nm	nm	6500	-
4	No. of SSGs mobilized	600	nm	600	100
5	No. of students benefiting from tutorial classes	nm	nm	20000	-

Source: BMER 2006; NCED 2009.
nm = not mentioned.

3. Progress in Meeting the TEP Objectives

Recall that the overall objective of TEP is to assist the Government in improving the quality and efficiency of and access to basic education through the provision of better qualified teachers. The project seeks to achieve this target by strengthening the institutional capacity of the teacher training system, enhancing the professional skills of teachers, and increasing the representation of disadvantaged groups (DAGs), particularly females, in the teaching profession. This section recapitulates the progress of TEP in meeting its objectives. It starts with an assessment of the institutional capacity of the teacher training system. This is followed by a discussion of the progress in the professional development of teachers. It finally looks at the progress in meeting TEP targets related to social inclusion in basic education.

3.1 Institutional Capacity Building for Policy-making, Planning and Managing Teacher Training

TEP has supported the development and establishment of a national teacher education system, comprising of NCED, ETCs and APs (consisting of HSEB, FOE and PPTTCs). These institutions have been equipped with the necessary physical infrastructure and training equipment such as computers and projectors, and internet access. The project's performance in this regard has been highly satisfactory (100% of the targets have been achieved). The project's performance in the area of staff capacity development has actually exceeded the original project targets. The professional and administrative staff at NCED and its line agencies has been adequately trained to respond to the pre-service and in-service training needs of the public primary education system. Similarly, efforts are under way for accreditation of the NCED-provided pre-service training by the HSEB. NCED has also been successful in integrating teacher career and professional development policies into the School Sector Reform (SSR) Program that will be implemented from 16 July 2009.

3.2 Teachers' Professional Development

BMER 2006 had noted that 85% of the primary school teachers had received at least the basic package training (p.14)[13]. Compared to Flash Report 2006-07, Flash Report 2008-09 shows an improvement in the percentage of trained teachers. According to the report, 98.2% of all public primary school teachers are fully trained. This represents an increase of more than 14 percentage points over the two year period.

The Project Performance Status Report 2009 (NCED 2009: 2-3) states that TEP has contributed 66,634 fully trained teachers to the system. This represents an 98.2% progress towards meeting the project's goal of providing training to all primary teachers. Similarly, TEP has produced

[13] It is not clear if this refers to all primary school teachers or just public primary school teachers. According to Flash Report 2006-2007, the cumulative percentage of trained and partially trained teachers is 77% in the case of all primary schools and 84.1% in the case of public primary schools (DOE 2006: 32-33). Apparently, there is some inconsistency, though small, between BMER 2006 and Flash Report 2006-07.

114900 teachers trained in various packages of 2.5 months to 7.5 months period.
As discussed earlier, this progress can be largely attributed to the implementation of a "Backlog Clearance Campaign" from July 2008. However, the Project Performance Status Report 2009 estimates that about 1.8% of the teachers will remain untrained even after the completion of the project mainly because of a number of reasons related to the teachers' personal circumstances (p. 5)[14].

Starting in January 2009, an RC-based Teacher Support Mechanism (TSM) has been formally launched in five districts on a pilot basis[15] to establish follow-up support to trained teachers through the resource centers (RCs). This RC-based TSM aims to ensure that teacher training is reflected in the classrooms and translated into enhanced learning achievement of the students. Under this concept, individual teachers are supposed to undertake a baseline/needs survey of their students' achievements and prepare a Teaching Improvement Plans (TIP) which will contain a log frame for time bound improvements in learning achievement related indicators. It is expected that resource persons will work to improve the quality of classroom instruction by engaging in periodic monitoring of classroom teaching and assisting individual teachers in the formulation and implementation of their Teaching Improvement Plans (TIP). Head teachers and School Management Committee (SMC) members are expected to provide managerial support to the teachers in implementing the TIP and monitoring the progress towards stated targets (NCED 2065 c). Moreover, a new model for Teachers' Professional Development (TPD) of the teachers has been developed to be implemented under the leadership and mobilization of the RCs, Lead RCs and ETCs (also referred to as TPD-Hub). NCED completed every technical preparation of final publication of new teacher training program with the name of TPD program designed on the basis of lessons learnt from the past experience.

[14] Reasons such as approaching retirement age, lack of interest, family obligations, etc.
[15] The pilot districts include Jhapa, Kavrepalanchowk, Rupandehi, Surkhet and Kailali.

3.3 Basic Education and Social Inclusion

Gradual improvements can be noted in the representation of students from hitherto marginalized communities and groups, such as Dalits, Janajatis and women in general. In 2001, girls constituted 44.8% of the total student body at the primary level whereas in 2008-09, their representation increased to 49.5%. The share of Dalit and Janajati students in 2008-09 was 20.2% and 40.3%, respectively. These figures are significantly higher than the shares of Dalits and Janajatis in the national population as reported in the 2001 Census.

All the targeted 2500 DAG fellowships have been distributed in 22 districts, and there has been a gradual increase in the absorption of the fellowship recipients into the teaching force in various ways. On a more general note, these fellowships have increased the number of trained teacher candidates. About 20,000 girls and students from disadvantaged communities have benefited from tutorial classes that provide remedial teaching support to female and DAG primary school students. Similarly, the targets regarding the production and dissemination of culture and gender sensitization packages have been achieved and 6500 district level officials, trainers, teachers, and community members have been provided short-term training on culture and gender sensitization

With regard to the social composition of primary school teachers, there has been a marked increase in the percentage of female teachers engaged in [public] primary education, from 22.5% in 2000 (project baseline) to 33.2% in 2008-09 (DoE 2008). According to Flash Report 2008-09, Janajati and Dalit teachers constitute 22.9% and 3.2% of the total teachers,

respectively, at the primary level. In 2006-07, Janajati and Dalit teachers constituted 17.8% and 2.5%, respectively, of the total primary school teacher population. Thus, the proportion of female, Janajati and Dalit teachers has increased by 10.7, 5.1 and 0.7 percentage points, respectively in the past two years. However, all these groups are still significantly underrepresented at the primary level, and the composition of primary school teachers is yet to reflect the social diversity of Nepali society at large.

4. Changes in the Primary Education System

The percentage of teachers trained in the basic package was only 43% at the start of the project in 2002. TEP envisions that all primary teachers will be trained in the basic package by the end of the project in July 2009 and that this training will be reflected in increased student learning outcomes. This section describes these higher order project benefits in terms of their contribution to the overall improvement in the quality of primary education in Nepal. It assesses the changes in terms of student learning achievement. In the absence of data on student achievement tests, data related to the internal efficiency of the primary education system have been used to make inferences about the changes in student learning outcomes.

4.1 Improvements in Student Enrolments and Retention

There have been improvements over the years in the Net Enrollment Rate (NER) in primary education. It has increased from 81 in 2001 to 91.9 in 2008-09 (DoE 2008). Gender disparities are also narrowing down and the gender parity index (GPI) at primary level is 0.98. Enrollment from the traditionally excluded groups such as Dalits and Janajatis has also gradually improved. Janajatis and Dalits now constitute 40.3 and 20.2% of the total student body, respectively, at the primary level.

The BMER 2006 had reported the dropout rate at primary level at 13.5% (0.5% points higher than the baseline of 13% in 2000) (p.13). According to the Flash 2008-09, the dropout rate at the primary level has been significantly reduced to 8.0%, well below the final project target of 12.5%. Thus the project target has been achieved well before the end of the project period. However, when the data are disaggregated by grades, it is observed that the dropout rate in grade one is still relatively high at 11.2%. The Flash Report further notes that the dropout rate for girls is lower than that for boys in all grades at the primary level (DoE 2008).

As for the repetition rate at the primary level, the BMER 2006 noted that it was already much lower (at 20.6%) than the final project target of 23%, and had recommended that the target be revised downward (p.13). According to the Flash report 2008-09, the primary level repetition rate has been further reduced to 15.7%, indicating a marked progress in this area. Disaggregated data show that grade-wise repetition rates are very similar to the grade-wise dropout rates: repetition rate in grade 1 is relatively high (at 28.3%), which decreases steadily to only 7.3% in grade 5. And it is slightly higher for girls compared to boys (DoE 2007).

There has been a gradual improvement in the promotion rates for the primary level, from 65.6% in 2006-07 to 76.3% in 2008-09. Survival rate to grade 5 has also improved from 80.3% to 84.9% in the same period. All of these improvements indicate towards an overall improvement in the internal efficiency of primary education.

4.2 Improvement in Student Learning Outcomes

Nepal does not regularly administer national learning achievement tests to monitor student performance. Two achievement tests were administered to a nationally representative sample of grade 3 students in 1997 and 2001 by the Education Development Service Centre to track improvements in students' learning achievements in Nepali, Mathematics and Social Studies. The EDSC findings showed that while there was substantial improvement in test scores for Social Studies, there was little progress in Nepali and Mathematics between the two years. Apart from these findings, evidence on improvements in student learning outcomes

at the primary level is not available. Consequently, BMER 2006 opted to look at the pass rates in grade 5 which was reported at 79% in August 2006 (p.13). Flash Report 2007-08 has recorded an overall pass rate of 89.3% in grade 5, which is significantly higher than that reported by BMER 2006.

4.3 Long-term Benefits to the Nation

A national-level education project like TEP can also be expected to yield long-term economic and social benefits to the nation. According to the RRP, "the major economic benefits of TEP accrue from its contributions to improvements in the internal efficiency of primary education as reflected in reduced dropout and repetition rates of primary students, since better qualified teachers will have greater knowledge and improved teaching skills". The RRP further states that "improved teacher training will also increase learning and raise achievement levels, [which], in turn, will enhance the quality of entrants to the labor force and, thereby, have a positive impact on Nepal's economy". The long-term benefits from TEP, as stated in the RRP include "greater representation of females and other disadvantaged groups in the workforce, and improved human development indicators such as reduced fertility rates and improved health outcomes" (ADB 2001: 25).

As discussed in Section 4.1 above, there has been an increase in the net enrolment rate, a decrease in the dropout rate and an increase in the promotion rate in primary education over the project implementation period. All these changes represent an increase in the internal efficiency of the system and thus reflect a reduction in the wastage of educational resources. Moreover, these changes also suggest that there has been an increase in the mean years of schooling per capita during the project period.

There is extensive research evidence from around the world on the strong link between education and economic growth at the national level. Many research studies on returns to investments in education have shown that each additional year of schooling results in increased wages for the individual and wider benefits to society as whole. The social benefits of education might be reflected in changed livelihood patterns, health practices, and even child rearing practices. For example, there is evidence from different parts of the world that more educated farmers tend to use improved seeds to increase productivity. Similarly educated communities are more likely to use contraceptives to control the population and sexually transmitted diseases, and are more open to better personal hygiene and sanitation practices. It is likely that the improvements in the education sector have also yielded such benefits to Nepal as well. However, there is little Nepal-specific research-based evidence available to help us gauze the extent and degree of these benefits.

5. Summary and Conclusions

This Benefit Monitoring and Evaluation Report 2009 has analyzed and documented the cumulative progress and benefits of the Teacher Education Project since its inception in 2002, and especially since 2006. It is mainly based on a review of various project documents, including past BME reports, and data from multiple sources. This BME does not show the exclusive impacts of TEP on the beneficiaries. Such an evaluation is beyond the scope of this study. It only lists the status of output indicators associated with TEP. However, there are many other alternative factors that could have affected these output indicators such as the inputs provided through the Education for All: 2004-2009 Program.

TEP, funded jointly by the Government of Nepal and the Asian Development Bank is a response to the problems of low quality of education and poor learning achievement in Nepal's public primary schools. The overall objective of the project is "to assist the Government in improving the quality and efficiency of, and access to basic education through provision of better qualified teachers". The project seeks to accomplish this by improving the quality and coverage of teacher training programs, and by increasing the representation of disadvantaged groups (DAGs), particularly females, in the teaching profession.

TEP has supported the development and institutionalization of a national teacher education system, comprising of NCED, ETCs and PTTCs. These institutions have been equipped with the necessary physical infrastructures and training equipments. Their professional and administrative staff has been adequately trained to respond to the pre-service and in-service training needs of the public primary education system. Accreditation of the NCED-provided pre-service training by the HSEB and integration of the teacher education component into the proposed SSR will pave the way for successful continuation of teacher training activities on a sustainable basis even after the project formally ends in July 2009.

In order to provide pre-service training to potential teacher candidates, and in-service training to all primary school teachers, new training curricula and materials have been developed and effectively implemented in the training sessions. Available evidence indicates that there has been a tremendous improvement in the percentage of trained teachers in the public education system. The project has provided various in-service training courses to about 99% of the proposed 115,700 teachers. However, the project's progress in providing the 180-hour course and the overall condensed/special package for senior teachers has been less than satisfactory. Moreover, about 13% of all public primary teachers are still untrained according to DoE (2007). Thus, the remaining period of the project needs to concentrate fully on these untrained teachers if it is to achieve its goal of providing "training for all". Furthermore, it has been consistently reported in the various project documents that these training programs are yet to translate directly into enhanced learning achievements of primary school students. This is partly due to a lack of necessary monitoring mechanisms to assess classroom teaching practices and student outcomes. However, it is also partly due to a lack of on-the-site (classroom) support and follow-up for the trained teachers. The

Teacher Support Mechanism, implemented since January 2009, is expected to address this issue. But it is yet unclear how this system will evolve over the remaining project period and thereafter.

The project also has a social inclusion component through which it seeks to provide benefits to historically marginalized or excluded social groups, particularly women, both by increasing their representation in the teaching profession and by making the overall school environment conducive for girls and DAG children. It has provided 2500 DAG pre-service training fellowships, with the expectation that these fellows will be ultimately absorbed into the teaching profession. However, their rate of absorption is still low, even though there has been a significant improvement in this regard since 2006.

Content on gender and cultural sensitization has been incorporated into the regular training courses. At the same time, a large number of teachers and education officials have been provided separate short-term training on gender sensitization. Special remedial classes have also been organized in collaboration with the local School Support Groups constituted for the purpose of helping female and DAG students in their studies. Although many traditionally marginalized groups such as Dalits and Janajatis continue to be underrepresented in the student population and teaching profession, there has been a definite increase in student and teacher diversity at the primary level during the project period. Furthermore, this change has been picking up pace in the aftermath of the recent political changes which have resulted in increasing calls for inclusion in various sectors of the Nepali state and polity.

There has also been a gradual improvement in the internal efficiency of primary education during the project period. Dropout and repetition rates have decreased and the survival rate to grade 5 has increased. The percentage of children passing the grade 5 examinations has also increased. These indicators suggest that student learning outcomes have also improved during the project period.

Thus, when we look at the overall status update of project performance in the four components as of early January 2009, it can be seen that, on average, more than 97% of the proposed project targets in the four different components have been achieved. More significantly, about 99% of the proposed 115,700 teachers have been trained in the various modules of teacher training.

6. Lessons Learned and Recommendations

Educational reform is a complex process that requires the materialization of project inputs into immediate outputs and medium to long-term outcomes that have a positive impact on the education system. Teacher Education Project has envisioned this outcome to be an improvement in the quality of Nepal's basic and primary education.

TEP has, like most other initiatives in Nepal's education sector, has adopted a top-down, inputs-focused approach, with the major activities focusing on improving the training-related infrastructure of the NCED and its line agencies, developing better training curricula, training more teachers, and improving the diversity of the teaching cadre. Evidence shows that such an approach is quite effective at delivering the inputs but not so effective at instituting behavioral changes at the classrooms level, where these inputs are ultimately translated into improved student learning outcomes.

The top-down, inputs-focused approach adopted by TEP has been very successful in accomplishing its major target of providing training to all untrained teachers. In particular, it has been quite effective in enhancing the teachers' subject knowledge and orienting them to student-centered, child-friendly and activity-based methods of classroom teaching. In future, as NCED moves away from its current responsibilities of pre-service training, it is necessary to ensure that HSEB and Faculty of Education/Tribhuvan University, who will assume the responsibility for teacher preparation program for all levels of teaching force. This will require, among others, greater collaborations among the NCED and pre-service training institutions, particularly with respect to:

- training accreditation mechanisms;
- regular revisions in the training courses so that they reflect the regular changes and revisions in the national curriculum; and,
- providing adequate opportunities to prospective teacher candidates for comprehensive practice teaching.

One of the major weaknesses of TEP has been the lack of a strong monitoring and evaluation and teacher support mechanism in place very early into the implementation of the project. Establishment and institution of such a mechanism at the classrooms level was necessary to continuously oversee the teaching-learning processes and provide professional support to the teachers to use the knowledge, skills and attitudinal changes received during training. Such a system has been established only at the very last minute of project completion (in January 2009), and thus, for the major duration of the project, teachers received little monitoring and evaluation and follow-up support after training. Nevertheless, a Monitoring and Evaluation Framework as attached in *Annex-4* , which was designed exclusively for establishing improved tools and mechanism for the entire NCED system to make effective in the days to come.

Available evidence on the effectiveness of the RC-system has shown that it has not been so effective in extending professional support and services to the teachers under the BPEP and EFA: 2004-2009 programs (see, for instance, Sharma et al. 2004, Bista and Carney 2001). At the moment, it is unclear how this very RC-system can be used more effectively by TEP to provide additional support/services, such as the preparation of teaching improvement plans. Thus, there is a need for further consultations and deliberations on this activity. In particular, if the RC-system is to be used for implementing and institutionalizing teacher support mechanism, it is necessary that the current structure of the RCs be reconceptualized. This can be done by either decreasing the size of the school cluster or by increasing the number of staff at the RC who are capable of supporting the continuous professional development of the teachers at the school level (see also Sharma 2004 and Bista and Carney 2001).

There is also a lack of clarity regarding the future roles of the ETCs after they have accomplished their current mandate of training all untrained teachers by the end of TEP. Trainers and coordinators at the various ETCs are unsure about how these institutions will evolve after the implementation of School Sector Reform (SSR) Program. In future, should

ETCs function as lead resource centers to provide professional support to the resource centers? Or should they provide continuous professional development support to the teachers in the current form, separately from the RCs? These issues are not adequately highlighted in the SSR Plan and require further deliberations within the NCED and the broader education system.

Similarly, TEP has not been able to institute a system or mechanism that monitors and measures the translation of project inputs (i.e., teacher training) into improved student learning achievements. In the absence of such a provision in place, project outcome and benefit monitoring has resorted to using indirect indicators such as the internal efficiency of the education system that is dependent on a combination of the effects of the various ongoing reform initiatives in the education sector. Thus, it is imperative that future projects/reform initiatives develop more specific mechanisms to measures project-specific outputs and outcomes.

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Annex 1: Teacher Education Project: Program Framework

Design Summary	Performance Target	Monitoring Mechanisms	Risks/Assumption
Sector Goal: Improvement in overall quality and efficiency of the primary education sub sector	□□Dropout rate decreased from 13 percent to 12.5, and repetition rate from 24.5 percent to 23. □□Grade 5 pass rates increase from 72 percent to 77. □□Teachers trained in the basic package increased from 43 percent to 100 percent.	□□EMIS □□Project monitoring data	□□Basic education continues to be a Government priority.
Purposes: a. Build capacity for policy, planning, management, and delivery of teacher training	□□130 professional staff from NCED, PTTC, and DEC are trained in job-related competencies through multiple training modalities.	□□Project monitoring data	□□MOES commitment to teacher training remains strong. □□A comprehensive training policy is formulated. □□Staff tenure at NCED, PTTC, and DEC is stable.
b. Enhance professional skills of teachers and trainers	□□Training of targeted number of - teachers (115,700 teachers receive training of varying durations); - trainers (1,480 trainers and 70 master trainers are trained) □□Student learning outcomes are improved.	□□Project monitoring data □□Studies of training impact □□Student learning evaluations	□□Teachers are available for training. □□Supervision and follow-up of trained teachers are adequate.
c. Promote representation of females and other disadvantaged groups in the teaching cadre	□□2,500 candidates from among women and other disadvantaged groups are provided fellowships for pre-service training to allow for increased intake of teachers from these groups.	□□MOES statistics □□Project monitoring data	□□MOES commitment to recruitment of female teachers is strong.
Outputs 1. An effective and sustainable system for teacher education is established through a. Strengthened professional skills of personnel	□□NCED, PTTC, and DEC administrative and management functions are improved as evidenced by training schedules being followed and streamlined administrative procedures.	□□Project monitoring data	□□Selected staffs are released for training. □□Stable staff tenure at NCED, PTTC, and DEC.
b. Designed and operationalized monitoring and evaluation system	□□TMIS information is collected, analyzed, and disseminated.	□□Project monitoring data □□Sample reports	□□Coordination between institutions responsible for administration and training is adequate.
c. NCED undertaking accreditation, licensing, and evaluation	□□Improved quality of incoming teachers is ensured through certification of minimum qualifications.	□□Project monitoring data	□□Government commitment to pre-service teacher training is strong.
d. Enhanced skills of staff in institutions imparting training	□□NCED, PTTC, and DEC personnel are trained using multiple modalities. 102 receive in-country training and 28 obtain international training.	□□Project monitoring data	□□Selected staffs are released for training, and have stable tenure.
e. Improved physical infrastructure	□□NCED training resource center is established. □□Need-based improvements and additions are made to existing NCED and PTTC infrastructure. □□DEC recording facilities are renewed and refurbished.	□□Project monitoring data	□□Quality civil works contractors are available and selected.
2. Effective teacher education	□□Learning materials are used in delivering training	□□Project monitoring	□□Supervision and feedback mechanisms

curriculum and materials are prepared.	and are activity-based.	data	are well-coordinated between the administrative and training institutions.
3. Teachers, trainers, and management personnel are trained. a. Master trainers, trainers, and teachers are trained.	□□1,480 trainers receive training. □□70 master trainers are trained. □□Teaching content and delivery skills are improved through: - 32,000 teachers trained in package 1. - 45,000 teachers trained in packages 2-3. - 34,400 teachers trained in package 4.	□□Studies of training impact	
b. Education administration officials and primary school head teachers are trained.	□□100 administration officials and 500 primary school head teachers are trained annually.	□□Project monitoring data	
4. Educated teachers who can better serve the needs of disadvantaged groups and girls a. Eligible candidates from disadvantaged groups, particularly females, are provided fellowships for pre-service teacher training.	□□2,500 eligible candidates are awarded fellowships for Pre-service training.	□□Project monitoring data	□□The Government committed to give priority in teacher employment to disadvantaged groups, particularly females. □□Selected staffs are released for training and have stable tenure.
b. Teachers and administrators are sensitized to the needs of disadvantaged groups and girls.	□□The sensitization package is prepared and integrated into the training curriculum to raise awareness of the needs of disadvantaged groups.	□□Project monitoring data	□□The Government committed to raising enrollments among the disadvantaged groups, particularly females. □□Adequate number of eligible candidates are available and will apply. □□Social environment is conducive and receptive to these efforts.
Inputs: 1. Civil works 2. Equipment and furniture 3.Instructional materials 4.Program development and studies 5.Staff development 6.Consulting services 7.Program implementation		□□Project monitoring data and other progress reports □□Reports on staff development programs □□Project accounts	□□Counterpart funds are provided on a timely basis. □□Procurement and contracting arrangements are well managed. □□Capacity of MOHE staff is strong.

DEC = Distance Education Center, EMIS = education management information system, MOHE = Ministry of Higher Education, MOES = Ministry of Education and Sports, NCED = National Center for Education Development, PTTC = primary teacher training centers, TMIS = teacher management information system. Source: ADB 2001: Appendix 1.

Annex 2: Shortlist of Verifiable Indicators for Monitoring and Evaluation, TEP

SN	Indicators	Measurement	Expected Value		
			Baseline	Mid-Project	End-Project
			2000	2003	2005/06
A	**General Key Indicators for the Basic Education Subsector**				
1	Net enrollment rate	Proportion of children of PS target age cohort enrolled in PS	71	74	77
2	Gross enrollment rate	Proportion of children enrolled in PS to the PS target age cohort	124	117	114
3	Dropout	Proportion of PS enrollees who fail to return for the next year	13	12.8	12.5
4	Repetition rate	Proportion of PS enrollees who fail to move on to the next higher grade	24.5	23.9	23
5	Teachers with package I pre-service Training	Number of teachers who have completed Package I	17,322		100 %
6	Student-teacher Ratio	Number of PS students per PS teacher	39	39	39
B	**Specific Key Indicators for Teacher Education**				
1	Relevant NCED, PTTC, and DEC staff obtaining training	Number of relevant NCED, PTTC and DEC staff completing staff development training			
2	Female teachers	Proportion of female teachers	22.5	23	24
3	Untrained teachers	Number of PS teachers with no training	33		
4	Teachers trained in package 1	Number of PS teachers completing package 1	17,332	37,407	All
5	Upgrading 180 hours training	Number of teachers with 180 hours training	9,693	8646	9693
6	Teachers trained in packages 2 and 3	Number of PS teachers completing packages 2 and 3	13,638	25,956	44,030
7	Teachers trained in Package 4	Number of PS teachers completing package 4	156	5,757	34,432
8	Fellowships awarded to women/members of disadvantaged groups	Number of fellowships awarded to women and members of disadvantaged groups			
9	Number of students benefiting from pre-service training	Number of tuition waivers awarded to women/members of disadvantaged groups	0	6,500	12,500
10	Training sessions at NCED	Number of training sessions conducted by NCED	5 cycles	6 cycles	7 cycles
11	Training sessions at PTTC	Number of training sessions conducted by PTTC	3 cycles	3 cycles	3 cycles
12	Training sessions at FOE	Number of training sessions conducted by FOE	0	1 cycle	1 cycle
13	Training sessions at by HSSs	Number of training sessions conducted by HSSs	0	1 cycle	1 cycle
14	Pre-service training school accreditation	Number of schools accredited	0	65	65
15	Workshops held by NCED	Number of workshops held by NCED	4	5	6

DEC = distance education center, FOE = faculty of education, HSS = higher secondary school, NCED = National Center for Education, PTTC = primary teacher training center.
Source: ADB 2001: Appendix 9.

Annex 3: TEP Performance Status in Basic 30 Indicators as of January 2009

S.N.	Basic Performance Indicator	Project Target	Progress Status (PS)	PS %
Overall Project contribution to the system				
1	% of fully trained teachers	nm	66634	82
2	% of partially trained teachers with at some modules ranging from 2.5 months to 7.5 months	nm	79684	98
3	Rate of Training Transfer into the classroom	nm	50	50
Component 1: Building an Effective and Sustainable System for Teacher Education				
4	Number of project staff receiving international training in various occupational competencies	28	0	0
5	Number of staff receiving in-country training in various occupational competencies	102	218	100
6	No. of new construction (TRC, Hostel, Cafeteria)	3	3	100
7	No. of organizations underGoNe basic + final renovation/completion of incomplete construction/protection works	10	10	100
8	Refurbishment of DEC's studio lab (construction of visual lab)	1	1	100
9	Establishment of DoE-linked TMIS	1	1	100
10	No. of training professionals accessed to TOT facilities for pre-service training	nm	900	100
11	No. of training professionals received TOT for in-service training	900	3000	100
12	No. of master trainers trained	70	200	100
13	International consultancy recruited (in man month)	45	45	100
14	International Consultancy utilized till end of 15 August 2008	45	43.5	97
15	National consultants recruited	240	240	100
16	National consultancy utilized till end of 15 August 2008	240	175	73
Component 2: Developing Effective Teacher Education Curriculum and Materials				
17	No. training curriculum and material sets developed and used	20	20	100
Component 3: Providing Teacher and Management training				
18	No. of teacher trained in Basic in-service	32000	30398	95
19	No. of teachers trained in condensed (180) basic training package	9700	536	6
20	No. of teachers trained in integrated second and third in service training package (also includes 2300 trained in ole pack-III)	43300	32804	76
21	No. of teachers trained in the fourth in service training (Phase-III) package	34000	39723	117
22	No. of teachers having 15+ years of experience and 45+ years of age trained in overall condensed training package	4300	535	14
22	No. of graduates in 10-month pre-service training	15000	15000	100
23	No. of administrative officials trained in various management training courses	600	562	94
24	No. of primary school head teachers trained in one-month management training course	3000	3450	100
25	No. of teachers trained in various modules of teacher training	115700	103996	90
Component 4: Serving Girls and Other Disadvantaged Groups				
26	No. candidates graduated with fellowship	2500	2500	100
27	Rate of recruitment of fellowship graduates in the teaching force	Nm	39	39
28	No. of relevant stakeholders attended culture and gender sensitization training	nm	6500	100
29	No. of School Support Groups mobilized	600	600	100
30	No. of students benefited from Tutorial classes	nm	20000	100
	Average			**>90**

Note: nm denotes "not mentioned".
Source: NCED 2009: 2-3.

Annex-4

Government of Nepal
Ministry of Education

Teacher Education Project: Loan No. 1840 (2002-2009)

Monitoring and Evaluation Framework

National Center for Educational Development
Sanothimi, Bhaktapur
December 2009

Contents

Acronyms

AP	Alternative Providers
DEO	District Education Officer
DoE	Department of Education
EMIS	Education Management Information System
ETC	Education Training Centre
ETSC	Educational Training Sub-centers
FOE	Faculty of Education
HRD	Human Resource Development
HSEB	Higher Secondary Education Board
LRC	Lead Resource Center
NCED	National Center for Education Development
PTTC	Private Teacher Training Center
RC	Resource Center
SSR	School Sector Reform
TEP	Teacher Education Project
TMIS	Teacher Management Information System
TOT	Training of Trainers

Introduction

This report presents a conceptual framework for a monitoring and evaluation (M&E) system at the National Center for Educational Development (NCED). NCED already has a functioning monitoring and follow-up support (MFS) scheme whose stated objective is to help improve training and teaching performance (NCED 2065 B.S.). The conceptual framework presented in this document builds upon the existing MFS scheme.

NCED is the government body responsible for building the professional capacity of public (community) school teachers, school administrators, and government bureaucrats working in the education sector. Accordingly, the core function of NCED is to train (i) teachers, (ii) school-level managers and administrators and (iii) government bureaucrats at various levels of the Ministry of Education (MoE).The training of teachers is the primary mandate of the Center. Its other key mandates include conducting research studies on educational issues, particularly those related to teacher training; making policy recommendations for strategic decision-making in the school education sector; accrediting non-government teacher training programs; and monitoring and evaluating teacher training programs and activities.

The primary training facilities at NCED consist of a network of 9 regional educational training centers (ETC-As), 20 secondary educational training centers (ETC-Bs) and 5 educational training sub-centers (ETSCs) strategically distributed across the country. Residential portions of NCED's standard 10-month in-service teacher training programs are conducted in these 34 training centers. In addition, NCED also has access to 46 district-level lead resource centers (LRCs) recently established by the government to function as the district-level human resource development (HRD) institutions.

In the area of teacher training, NCED only conducts in-service training to current primary, lower secondary and secondary school teachers. Pre-service training, or training for aspiring teachers with the requisite educational qualifications, is conducted through private institutions affiliated with NCED. Pre-service training is available only at the primary level. The in-service training packages offered by NCED are 10-month programs, delivered through a combination of ETC-based and school-based face-to-face training, and distance-mode training. The residential ETC-based training, which constitutes the most rigorous part of the training, takes places both in beginning and at the end of the 10-month training period. The distance-mode training takes place during the middle five months of the program. This training essentially requires the trainees to study pre-specified learning materials on their own while they are teaching in their schools. The trainees also receive some support in their learning process through group contact sessions attended by other trainees and school resource persons.

The main objective of the teacher training programs at NCED is to raise the quality of teaching in the classroom. In order to ensure that trainee teachers fulfill the minimum requirements of the training programs in which they participate, they are required to pass an exam at the end of the training period. It is expected that teachers who successfully complete the training and pass the exams will utilize the methods and knowledge gained during the training in their regular teaching process, thereby raising the quality of teaching. The M & E system presented here aims to provide information on the extent to which the above objective of the NCED training programs is being met.

While the objective of the NCED teacher training programs is to raise the quality of teaching, the ultimate beneficiaries of the training are the students. It is expected that the improved teaching practices will lead to improvements in student learning. It must be pointed out, however, that the proposed M & E system does not attempt to evaluate the impact of the teacher training programs on student learning. It simply focuses on the outputs of the teacher training programs.

A rigorous evaluation of the impact of the teacher training programs on student learning would require student learning outcome data for two sets of students: a group of students taught by trained teachers (treatment group) and another group of students taught by untrained teachers (comparison group).[16] Furthermore, it would be necessary to compile student learning data before they are taught by trained teachers (pre-test data) as well as after they are taught by these teachers (post-test data). Clearly, this type of impact evaluation is beyond the scope of the proposed M & E system.

The rest of this report is organized as follows. Section 2 presents the objectives of the proposed M & E system. Section 3 summarizes the current service delivery model of the NCED in-service teacher training programs. The next section briefly outlines the monitoring and evaluation approach taken in this report. This is followed by Section 5--the core section of this report. It describes in detail the key elements of the monitoring and evaluation plan used to evaluate how well the knowledge and skills delivered in the teacher training programs are being translated into teaching practice. Section 6 presents some concluding remarks.

Objectives of the M & E system

The main objective of the proposed M & E system is to monitor and evaluate the extent to which knowledge gained/ delivered in the teacher training programs is being utilized in the classroom process. It therefore focuses on monitoring and evaluating teaching practices in the classroom. Note that it evaluates only the proximal outcomes of training programs in that it looks at teaching practices and not at improvements in student learning resulting from the teaching training programs. A second objective of this M & E system is to provide a feedback channel through which teachers, administrators and policymakers can understand shortcomings in translating training knowledge into teaching practice and identify ways for addressing these shortcomings.

Service delivery model of the NCED in-service teacher training programs

The quality of classroom teaching is determined by a combination of factors associated with the teachers, students, and the school/classroom environment. While the teacher training programs at NCED aim to enhance the quality of teaching, it must be emphasized that these programs focus primarily on changing the knowledge base and skill levels of the teachers and do not directly deal with the students and classroom environment. Thus the teaching outcomes observed in the classroom cannot necessarily be attributed to the teacher training programs alone. The monitoring and evaluation system must also attempt to track the status of other enabling conditions that are beyond the control of the teacher.

In order to build an M & E system that focuses on evaluating how well training knowledge is being translated into classroom practice, it is important to understand the service delivery model associated with the NCED teacher training programs. While students are the ultimate beneficiaries of the NCED teacher training programs, teachers are their immediate clients. The steps through which the NCED in-service training programs reach the teachers and students are summarized below. The service delivery model for the NCED approved pre-service training programs will not be discussed here.

It is important to emphasize that the current service delivery model is expected to change with the implementation of the school sector reform (SSR) program scheduled to begin in July 2009. In particular, there is a lack of clarity regarding the future roles of the ETCs after they have accomplished their current mandate of training all untrained teachers by the end of June 2009 (Bhatta 2009). While the proposed M & E framework does take into account the agencies currently involved in the

[16] Ideally, students should be randomly assigned to the treatment and comparison groups.

delivery of training services, it does not necessarily rely on the continuation of the existing service delivery process.

The first step in the training delivery process is the development of the training package. All training packages are developed and finalized at the NCED central office in Sano Thimi by a team consisting of NCED central-level trainers and external experts. It should be noted that, currently, there is only limited involvement of ETC level trainers or teachers in this process. In theory, the training packages are supposed to be reviewed and revised each year based on finding of M & E reports and feedback obtained during trainings. In practice, however, regular revision of training packages has not been done.

Training of master trainers (MToT) comprises the second step of the training delivery process. Master trainers are based at the central NCED office and are subject-specific training experts. Their responsibility is to train other trainers who will actually conduct the teacher training programs in the various training centers around the country. MToTs are conducted by NCED experts involved in the development of the training package. Currently, there is no system of systematically evaluating the skill levels or understanding of MToT participants. The participants, on the other hand, do provide feedback to the MToT trainers during the training.

The MToT is followed by the training of trainers (ToT). These training programs are conducted by the NCED master trainers. The ToT participants are trainers from the various ETCs. Currently, there are few opportunities for periodic refresher trainings to help the trainers keep up to date with new developments in the field.

The fourth step is the training of teachers. ETC level trainers conduct these trainings. As discussed earlier, there are separate 10-month training courses for the primary and lower secondary/secondary level teachers. Each course is divided into three phases/modules and is delivered through a combination face-to-face training and distance-mode training. The structure of these courses is summarized in Table 1.

Table 1. Structure of the NCED 10-month in-service training programs

Training particulars	Module 1 (Phase I)		Module 2 (Phase II)	Module 3 (Phase III)	
Primary level in-service training					
Mode of delivery	Face-to-face		Self-learning in distance mode	Face-to-face including school-based practicum	
Duration	2.5 months		5 months	2.5 months	
Location	ETCs/ETSCs		Own school/local resource center	ETCs/ETSCs, schools near ETCs	
Residential/non residential	Residential		Non-residential	Residential	
Lower secondary and secondary level in-service training					
Mode of delivery	Face-to-face	School-based	Self-learning in distance mode	Face-to-face	School-based
Duration	1 month	1.5 months	5 months	1 months	1.5 months
Location	ETCs/ETSCs	Teacher's school	Own school/local resource center	ETCs/ETSCs	Teacher's school
Residential/non residential	Residential	Non-residential	Non-residential	Residential	Non-residential

Source: Adapted from NCED (2065 B. S.)

Note that in the case of primary-level training, teachers are required to engage in practice teaching during the ETC-based residential portions of the training (first and third phases). Each teacher's practice teaching is observed by relevant evaluators and feedback is given to the teacher. The first and third modules of the secondary/lower-secondary level training also provide opportunities for classroom observation during the school-based portions of the training. However, since the school-based portions are conducted in the teachers' own schools, it is possible

for trainers and qualified evaluators to observe the teaching practices of only a small sample of teachers.

The second module of both primary and lower secondary/secondary level-training requires teachers to study on their own using self-learning materials prepared by NCED. In addition, they are also provided learning support through radio broadcasts and group discussions during weekly contact sessions at the local resource centers. The contact sessions are facilitated by RPs and NCED trainers. In practice, these contact sessions have not proved to be effective.

The fifth step of the service delivery process is classroom teaching. The knowledge and skills gained by the trainee teachers during the training should be reflected in improved teaching practices in the classroom. Thus the classroom is where the benefits of the teacher training programs reach the students.
As the main objective of the M & E system is to evaluate how well the knowledge and skills delivered in the teacher training programs are being translated into teaching practice, the proposed system focuses primarily on the fifth step of the service delivery process. It does, however, also briefly discuss how the monitoring and evaluation of training delivery can be improved.

Monitoring and evaluation approach

As mentioned above, the primary focus of the proposed M & E system is monitoring and evaluation of the teaching process. An evaluation of the teaching process naturally requires close observation of classroom teaching by an external evaluator. However, in order to enhance the effectiveness of the M & E system, the teachers themselves must also be involved in the evaluation process. In other words, the approach taken here emphasizes a more participatory approach to M & E where the teachers themselves get involved in the development of the M & E tools and in conducting the evaluation. It also places a heavy emphasis on the roles of the school and local resource center in monitoring and evaluating the teaching process.

Monitoring and evaluation must take place at each stage of the service delivery process. And at each stage, feedback must be provided in two directions: a) to personnel who are being monitored/evaluated and b) to managers and administrators responsible for the personnel being monitored. Improvement of program performance depends heavily on the extent to which the subjects of the monitoring process obtain and utilize the feedback on their performance. The existing monitoring and evaluation system does not pay sufficient attention to this direction of feedback. Feedback provided to managers and administrators higher up in the administrative structure, on the other hand, is important for evaluating the performance of the personnel and for revising the program itself. In particular, monitoring and evaluation of the teaching process must be linked to the performance evaluation of teachers.

In the present context, the responsibility of appointing, reallocating and promoting teachers lies with the agencies under the Department of Education (DoE) rather than with NCED. Teacher training, on the other hand, is the responsibility of the agencies under NCED. Hence, it is necessary to develop a channel through which the classroom-level monitoring and evaluation findings are properly utilized by both NCED agencies and DoE agencies for the purpose of a) helping teachers improve their teaching performance and b) evaluating teacher performance.

<u>Participatory approach</u>
It has already been mentioned that the effectiveness of the M & E system partly depends on the extent to which the main subjects of the evaluation see themselves as participants in the process. Participation can take place at different stages of the evaluation including in the definition of performance indicators, development of M & E tools, collection of data, analysis of data and development of future plans of

action (Estrella and Gaventa 1998). The degree of participation, however, cannot be the same in all stages.

In the current framework, it is proposed that classroom teaching performance data be collected for all individual teachers in the public school education system using standardized class observation tools. The goal is to collect data that will be useful to all levels of the teacher training system. Developing a database of this nature requires the identification of a standard set of performance indicators and survey tools that can be used for the entire nation. Tools custom-tailored for individual teachers cannot be used for this purpose.[17] Hence, making this step participatory means ensuring the active participation of a representative set of teachers in the process of building these tools. In other words, the process of developing the tools must involve teachers in the expert group and must also include workshops where the major participants are teachers. It does not mean that every teacher in the country will be asked to provide inputs in the development of these tools.

However, as discussed later in Section 5, this M & E approach proposes to view the standard evaluation forms as "live documents" that can be modified before classroom observation takes place using inputs from individual teachers being evaluated. Thus, each individual teacher also participates in the development of tools used in the M & E Process. The information collected using these non-uniform, modified tools cannot be entered in the national database; however, this information and analyses based on this information are valuable sources of feedback for the teacher.

The proposed data collection process, by design, requires the participation of teachers. In particular, it requires that each teacher do a self-evaluation apart from the evaluation done by the person observing her classroom teaching. Furthermore, this framework also puts strong emphasis on peer evaluation so that teachers are actively involved in M & E process. At the same time, self and peer evaluations require the teachers to play the role of analysts as well. By analyzing their own and their peer's classroom teaching process, they are also able to enhance their own understanding of what is required to enhance the teaching-leaning process.

Note that this framework does not discuss the potential role of the local community in the M & E process. The local community can certainly play an important role in monitoring the administrative aspects of the school. For example, they can help the school to ensure the regular attendance of teachers and students, and also monitor the progress in enhancing the school's infrastructure. However, observing and analyzing the teaching-learning process in the classroom requires specific training and expertise. Hence, it is not reasonable to expect community representatives to regularly participate in this process.

Monitoring and evaluating classroom teaching

The classroom is where the teacher's knowledge and skills are translated into teaching practice. Hence this stage of the service delivery process is the central focus of the M & E system. The discussion below summarizes the following key elements of the classroom teaching monitoring and evaluation plan: a) objectives b) assumptions c) identification of personnel being evaluated d) indicators and measures, e) data sources and data collection approach, f) frequency and timing, g) responsible personnel, h) output, and i) feedback process. It also briefly discusses the use of the Teacher Management Information System (TMIS) in the M & E system.

Objectives

The main objective of this M & E activity is to observe the extent to which the teacher is able to translate training knowledge into practice

[17] If custom tailored tools are used for different teachers or schools, it will not be possible to enter this information in a standard national or regional database--a separate database base must be created for each teacher or school.

and provide her with feedback that will help improve her teaching performance in the future. The second objective of this activity is to evaluate the teacher's teaching performance and the state of the teaching environment for the purpose of apprising the relevant managers and administrators within the school as well as higher up in the administrative structure. The third objective is to provide feedback to NCED on the challenges and needs associated with translating training knowledge into practice so that improvements can be made in the training programs.

Assumptions

This M & E plan assumes that earlier stages of the service delivery process have been successfully completed. Thus, it assumes that teachers who have been formally certified by the NCED training program have been properly trained and that the training program has been well designed and implemented. Another assumption it makes is that resource constraints and administrative structures change over time. Thus while current resource constraints and the existing administrative structure might make it difficult to implement the proposed M & E framework immediately, it is assumed that these constraints are not be permanently binding.

Who is monitored/evaluated

As the main objective of the M & E activity is to analyze the extent to which teachers are able to translate training knowledge into practice, trained teachers are the primary subjects of the evaluation. However, in order to gain a good understanding of the improvements in teaching practices resulting from the teacher training programs, it is useful to compile teaching performance data for teachers both before and after they have received training. Hence, untrained teachers and teachers unable to complete the training programs should also be the subjects of the evaluation. Currently, only trained teachers and teachers enrolled in the training programs are monitored and evaluated by NCED.

Indicators and measures

Two different sets of indicators need to be used in the monitoring and evaluation of classroom teaching. The first set focuses on the teacher and on the teaching process. The second set focuses on the environment within which the teacher is operating. The difficulties in properly translating training knowledge into teaching practice in the absence of a conducive school environment must be recognized by the M & E personnel.

The indicators associated with the teaching process cover the following broad areas: a) class preparation, b) content coverage and organization, c) delivery approach and skills, d) use of different activities and teaching materials, e) student-teacher interactions f) classroom and time management, g) student evaluation approach, and h) engagement of students. A common goal of teacher training programs is to help teachers make significant improvements in some or all of the above areas. In other words, positive changes in these areas reflect the translation of knowledge and skills gained from teacher training into classroom practice.

A comprehensive set of indicators and measures covering these areas has already been developed by NCED. They are incorporated in the following forms currently used by NCED for monitoring and evaluation purposes (see Appendix 1, 2 and 3):

- Classroom observation forms for trained teachers, NCED form no. 13 (तालिमप्राप्त शिक्षकको कक्षा अवलोकन फारम) (NCED 2065 B.S.),
- Peer evaluation form, form no. 20 (सहपाठी कक्षा अवलोकन फारम) (NCED 2064 B.S.), and
- Facilitator/instructor classroom observation form, form no. 21 (कक्षा अवलोकन फारम, सहजकर्ता/प्रशिक्षक) (NCED 2064 B.S.).

The first and second forms include 38 and 35 different indicators, respectively. The third form uses a short list of 14 aggregate indicators. Ordinal scales are used for each indicator to rate teaching performance. The first form uses a 5 point rating scale while the second form uses a 3

point rating scale. As most of the indicators in these two forms are similar, NCED should consider using a single consolidated evaluation form. It is also useful to replace the existing 3 and 5 point rating scales by a 10 point rating scale to allow finer differentiation in performance rating. The indicators in these three forms can be used as the starting point in developing a final set of indicators for the new monitoring and evaluation system.

The indicators associated with the teaching environment should cover the following areas: course load faced by the teacher, class size, space constraints in the classroom, availability of teaching-learning materials, classroom arrangement, immovability of classroom furniture and other school infrastructure limitations. Most of the indicators associated with these areas can also be found in the Department of Education's Education Management Information System (EMIS).
The process of finalizing the indicators and M & E tools must ensure the active participation of teachers as discussed in Section 4.

Data sources and data collection approach

Information associated with classroom teaching will be collected through self-evaluations done by the teachers themselves, classroom observations, and one-one-one interviews with teachers. Classroom observations are performed by peers as well as by external monitors/evaluators.

The questions included in the self-evaluation are essentially the same as those included in the classroom observation forms. The self-evaluation is done by the teacher immediately after her class has been observed by the external evaluator. It serves the dual purpose of making the evaluation more participatory and giving the external evaluator valuable information for feedback purposes.
It is useful to view the evaluation forms as "live documents" that can be modified using inputs from the teachers being evaluated. In order to encourage the participation of the teachers in the evaluation process, the external evaluator should discuss the evaluation process and the evaluation tools (form/questionnaire) with the teacher before the evaluation takes place. The teacher and the evaluator can, at that time, incorporate new items in the existing questionnaire if necessary. Both self-evaluation and classroom observation by an external evaluator should be done using this modified evaluation form.
Peer evaluations can also use the same basic evaluation forms used for external evaluations. Any peer evaluation serves two purposes. First, it provides an avenue for giving constructive, non-threatening feedback to the teacher being evaluated. And second, it allows the evaluator to reflect upon her own strengths and weaknesses and learn from the teaching techniques used by her colleagues.

Peer evaluations, and monitoring and evaluation by external experts are already used by the M & E system at NCED. This concept note proposes to make the evaluation more informative and participatory by (i) supplementing these evaluations by data from self-evaluations done by the teachers, and (ii) using "live" evaluation forms that can be enhanced through discussions with the teachers.
Data on the teaching environment should be collected by the external evaluators through direct classroom observation and discussions with the teacher being evaluated. Some of the relevant school-level data should be obtained through discussions with the school administrators.

As will be discussed later, this evaluation framework proposes to make the local resource person (RP) the primary external evaluator of classroom teaching. The evaluations done by the RPs will be used by the teacher and school administration, by the district education office, by NCED agencies and by the RP herself. Hence it is necessary to prepare three copies of the evaluation. These copies will be filed properly at the school, at the resource center (RC) and at the district education office (DEO). In practice, color coded carbon paper forms can be used for this purpose.

Entering the classroom observation data in the TMIS database is an essential step in the data collection process. A brief discussion on TMIS is presented later. At this point, it suffices to say that the responsibility of entering the data in the system should ultimately be delegated to the RPs themselves.

Frequency and timing

The effectiveness of any monitoring and evaluation system depends partly on the frequency and timing of the evaluations. External monitoring and evaluations should be performed at least two times a year. The first such evaluation should be done in the first few weeks of classes. This will encourage the teachers to start delivering quality instructions at the beginning of the academic year itself. The second evaluation can be done in the last term of the school year. As each teacher does a self-evaluation immediately following the classroom observation by the external evaluator, self-evaluations are also performed at least two times during the academic year.

Peer evaluations should be timed so that the external and peer evaluations are evenly spread out during the year. Peer evaluations should also be done at least three times each year, two times by fellow teachers and once by the head teacher. By properly spacing the peer and external evaluations over the year, it is possible evaluate the teachers at regular intervals at least five times a year.[18]

Currently, systematic classroom observation by external experts and peers is only done during the first and third modules of the 10-month in-service training programs. There is no system of regular monitoring of classroom teaching during the school year.[19] Recognizing this deficiency in the system, the Regional Educational Directorates (REDs) and DEOs have recently begun an initiative to mobilize school supervisors (SS) and RPs for the purpose of monitoring and evaluating teacher performance. The frequency and timing of these efforts, however, are not entirely clear.

Responsible personnel

Building upon the government's initiative to mobilize the RPs and SSs for monitoring and evaluation, the proposed M & E system recommends making the RP the primary external evaluator of classroom teaching.[20] The RP will be responsible for observing classroom teaching, providing feedback to the evaluated teacher, providing feedback to the school, and sending the evaluation to the DEO. In the short run, the RP will maintain a folder for each school where individual teacher evaluations will be filed. In the long run, the RP will also be responsible for entering the evaluation information in the TMIS database. Given the key role of the RP in this M & E system, it

[18] The monitoring and evaluation approach discussed above relies on evaluations based on single class observations. The only people who are able to observe the class throughout the year are the students in the class. Hence, end-of-year evaluations done by students could also serve as an alternative useful source of information in the case of secondary school teachers. Handling data from student evaluations, however, would be too cumbersome for the M&E system. Also note that while continuous monitoring and evaluation is desirable in theory, it is necessary to ensure that M & E activities do not place an undue burden on the teachers and disrupt the normal functioning of the school.

[19] In order to gain feedback on the extent to which skills from the training programs are being translated into the classroom, NCED conducts a survey of a small number of schools and teachers three times each year. During this survey, NCED central level experts systematically observe the teaching practices of selected teachers, provide them with relevant feedback, and utilize this information in the preparation of a national-level report. Note, however, that since this M & E exercise involves only a few teachers each year, it is mainly useful for gathering information relevant for evaluating and revising the existing training programs. It is not very useful from the perspective of giving regular feedback to individual teachers.

[20] A number of studies and reports have, in the past, emphasized that involvement in classroom-based teaching should be the primary function of the RP (see, for example, Bista and Carney 2001). Thus the role of the RP proposed in this M & E framework is not new.

is essential that all RPs receive proper M & E training from NCED. Furthermore, it will also be important to redefine the overall responsibilities of the RPs so that they can spend the required time on the M & E tasks discussed here.

As mentioned earlier, internal monitoring and evaluation of each teacher will done by peers as well as by the head teacher. Classrooms observations by head teachers are especially important since they are directly responsible for leading, supporting, and evaluating the performance of teachers. The head teacher will advise teachers based on the information obtained from her direct class observations supplemented by a review of the peer-evaluations and evaluations done by the RC. She will also be responsible for periodically (e.g., each trimester) holding meetings with teachers to discuss issues related to improving the quality of instruction in the classroom. She is also the school official with whom the external evaluator (RP) interacts regularly to provide feedback to the school. As these activities will demand extra time commitment on the part of the head teachers, it is important that they be provided at least partial relief from their teaching responsibilities.

Outputs

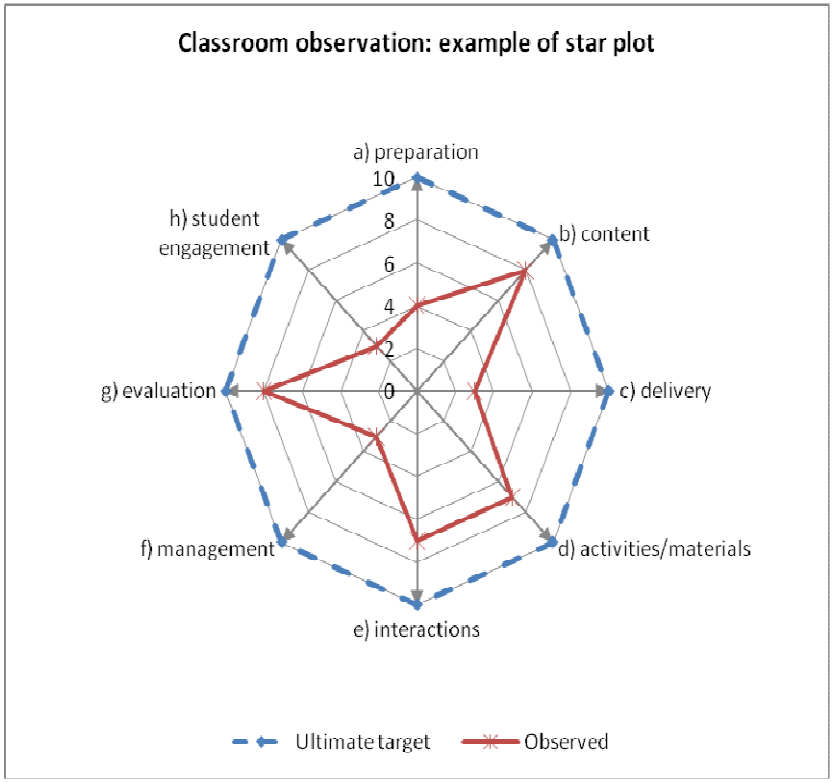
Classroom/teacher level

The filled classroom observation forms are the initial outputs of the M & E system. As suggested earlier, ratings of teaching performance using pre-specified indicators constitute the most important part of the form. In additional to these ratings, however, the filled form also includes summary comments from the evaluator. These comments include a summary of suggestions for teaching improvement, points discussed during the feedback session, commitments from the teacher regarding future efforts, constraints faced by the teacher, and recommendations for minimizing such constraints (for example, see classroom observation form # 13 in Appendix 1).

Having a long list of indicators in the observation form helps the evaluator to be comprehensive in her observation. But a long list can also make it difficult for the teacher to properly understand the findings of the observation. It is, therefore, important to have a mechanism for quickly summarizing the findings in a succinct and understandable manner immediately after that observation is complete. One useful tool that could be used for this purpose is the star plot[21]. This type of plot allows us to display the observer's ratings in the various dimensions of the teaching process in a single figure, thereby giving a quick overview of a) the dimensions where the teacher is doing particularly well or badly, and b) areas that need improvement. Note that this and other graphical tools can be very useful in providing feedback at the school level and higher levels as well.

For example, as discussed earlier, the classroom observation indicators might cover the following broad areas: a) class preparation, b) content coverage and organization, c) delivery approach and skills, d) use of different activities and teaching materials, e) student-teacher interactions f) classroom and time management, g) student evaluation approach, and h) engagement of students. The star plot shown below gives an example of a star plot covering these dimensions. The teacher's performance in each area is shown in a different axis. In this example, it is immediately clear that the teacher needs to makes substantial improvements in three areas--class preparation, delivery and class management. Thus one of the outputs of the evaluation process is this type of star plot summarizing the performance of the teacher. In order to use a star plot efficiently, the observation form would need to include a properly labeled blank star plot.

[21] The star plot is also know as radar plot, spider plot, and web plot.



The evaluator's comments as well as the star plot are two major outputs produced in the school immediately after the class observation has been completed. Another important output generated by the evaluator is a brief analysis of how her observations compare with the teacher's self evaluation (recall that a self-evaluation by the teacher under observation is also an integral part of the evaluation process). This output is aimed at providing valuable feedback to the teacher for improving her teaching process.

School level

One output at the school level is a summary evaluation report that discusses the school's strengths, weaknesses, areas in need of improvement, and suggestions in regards to classroom teaching. The head teacher or a teacher designated by the head teacher would be responsible for reviewing all the evaluation reports (self-evaluations, peer evaluations, RP evaluations) and the RP's summary reports and preparing a summary based on the review at least two times each year. This summary must also attempt to track the changes taking place in the teaching process and environment over time.
Similarly, the RP will also prepare a summary report for each school under her supervision at least two times a year using the information gathered from the classroom observations. This report will be shared with the school as well as with the district education office.

Resource center level

In addition to the summary reports for individual schools, the RP will also prepare a summary report for all the schools under her supervision once a year. This report will, among other things, present a comparative picture of the various schools being supported by the RP and will attempt to identify the best practices, strengths and common weakness prevalent in these schools. This summary should help the RPs to plan their activities during the following year. The RC level report will also be shared with the schools and the DEO.

District level

While the district education office will have access to summary reports from the various RCs, it will also useful for them to directly analyze the raw TMIS data for the district as a whole to identify the strengths, weaknesses, opportunities and threats facing the district. This information will be very relevant in making resource allocation decisions not only among schools but also among the various aspects of the teaching-learning process (including teacher training refresher courses). The analysis done at the district level would also be useful in

identifying effective as well as poorly performing schools and teachers from the perspective of classroom teaching.

ETC level

As the training of teachers is primarily the responsibility of ETCs, it is essential that each ETC analyze the TMIS data alongside the relevant district-level reports to identify (i) areas of strength and (ii) the dimensions of the classroom teaching process that need improvement in its specific catchment area. Information from these two sources should also be supplemented by periodic field visits whose main purpose would be to interact with the RPs and observe the classroom process in a sample of schools within the area supported by the ETC. While it is not clear how the structure of Nepal's teacher training system will evolve as the country moves towards a federal structure, there is no doubt that regional teacher training institutions will continue to play an important role in the education system. Thus it is important that each ETC develop the capacity to analyze how well training is being translated into classroom practice in its catchment area and revise training packages accordingly. Output from these analyses should be presented in the form of bi-annual reports.

It is also worth pointing out that under the school sector reform (SSR) program scheduled to begin in July 2009, comprehensive in-service teacher training will no longer be offered by the NCED agencies. Rather, the responsibility of training teachers will shift to alternative providers (APs)[22] who will offer pre-service training to potential teachers. Hence in the future, the M & E related output of ETCs should focus on supporting the APs and RPs in their work. In particular, the ETCs should provide technical training to the RPs and APs (including refresher training), devise training packages that suit local needs, and ensure that the activities of RPs and APs are consistent with local needs.

[22] The APs consist of the Faculty of Education; Higher Secondary Education Board approved programs, and PPTCs.

Central (NCED) level

How the teacher training system as a whole is performing in terms of translating teacher training into classroom practice is a question of central importance at the NCED level. Thus a comprehensive annual national level report based on the data collected from the M & E system is a key output of the M & E system. The various ETC and district reports themselves serve as one set of secondary data for the national level report. It is expected that NCED staff will regularly visit each ETC and obtain other relevant information from first-hand interactions with the ETC level trainers. This information will also be useful for preparing the annual report. The third source of data for this report is the TMIS database. Raw data on individual teachers available from TMIS will enable the central level researchers to not only look at the status of different classroom process indicators at the national level, but will also allow them to track changes in these indicators over time and analyze them by ETC or at different levels of geographical disaggregation.

It will also be possible to analyze the relationship between training related indicators and classroom process indicators using the TMIS data. In particular, it will be very useful to examine how the training test scores of teachers are related to the various indicators of classroom teaching performance. Evidence of a weak relationship between test scores and classroom delivery skills, for example, could provide insights into where more emphasis is required in the NCED training programs. The national level study can also identify the most effective schools nationwide and obtain best-practice information from such schools though targeted case studies. Information of this nature can be very useful for revising training packages, allocating training resources, and program planning in general.

Feedback process

Recall that one of the objectives of this M & E system is to provide a feedback to individuals and agencies at different levels of the education

system so that training knowledge can be translated more effectively into teaching practice. As mentioned earlier, after any evaluation exercise, feedback must be provided in two directions: a) to personnel who are being monitored/evaluated and b) to managers and administrators responsible for the personnel being monitored. Note that the evaluation reports discussed in the previous section can be viewed as the source of feedback to the managers and administrators at each level of the system. The discussion below summarize the process through which feedback is provided to each level, clarifying who gives the feedback, what is included in the feedback, how the feedback is given, and when the feedback is given.

Classroom/teacher level

In order to encourage the proper translation of teacher training into teaching practice, teachers must be at the center of the feedback process of the M & E system. Reflecting upon one's own strengths and weaknesses is an essential first step in tackling personal shortcomings and building upon our strengths both in our personal as well as professional lives. Thus the introduction of the self-evaluation process in this M & E system provides an important channel of feedback to the teachers. As mentioned earlier, the self-evaluation is performed at the same time as the external evaluation by the RP.

Another channel of feedback to the teachers is the peer evaluation process. After a class has been observed by peers and peer-evaluation forms have been filled, the evaluators and the teacher should discuss the findings in an informal environment. As it is often difficult for teachers to critically comment on their colleagues' teaching styles, discussion sessions between fellow teachers can focus on providing constructive suggestions to the teacher. The discussion sessions between the teacher and the head teacher, on the other hand, should cover all areas. These discussions, along with the filled evaluation forms, will provide the teacher with substantial feedback for making improvements in her teaching approach.

Inputs from the external evaluator (at least two times each year) constitute the third set of feedback comments to the teacher. An in the case of peer evaluations, the external evaluator provides feedback to the teacher on the very day the evaluation is performed. Apart from her own evaluation form, the external evaluator will also review the teacher's self-evaluation and past external evaluations before having a one-on-one discussion session with the teacher. She will also review the teacher's teaching improvement plan (TIP) before the first class observation.[23] The discussion should let the teacher present her self evaluation first, and then ask her to do a comparative study of her self-evaluation and the external evaluation. This comparative study will enable the teachers to identify problem areas that might not be readily apparent to them, and provide more opportunities for improvement. The discussion can then focus on strategies for future improvements and commitments from the teacher.

The outcomes of the discussions during the feedback sessions, whether after the peer evaluations or after the external evaluations, must be documented for future reference. These written comments will provide valuable guidance to the teacher throughout the year.

Recall that the feedback from the head teacher will be based not only on her observation of the class, but also on a review of all the other evaluation reports including self-evaluations, peer evaluations, evaluations by external evaluators, and evaluations of the classes taught by other teachers. Thus the feedback provided by the head teacher will be particularly important for the teacher. Furthermore, this process will also be relevant to the head teacher for evaluating the teaching performance of the teachers in her school.

School level

[23] The TIP is a new concept currently being piloted in two districts. This is part of the RC based teacher support mechanism.

The two primary channels of feedback to the school are the resource person and the head teacher or another person designated specifically for this task. As discussed earlier, the RP will prepare periodic reports for each school and share it with the schools. The RP will also hold discussion with the school head teacher and other staff during her school visits. These reports and discussion sessions will not only provide constructive inputs for improving the classroom process, but will also identify the constraints faced by the school and teachers and suggest ways for addressing these constraints.

The head teacher (or the designated M & E staff member) will hold monthly staff meetings where the teachers are able to share their experiences, discuss challenges and collectively generate ideas for improving the quality of instruction in the classroom. These meetings will focus not just on the delivery of classroom instruction but also on the management and reallocation of resources required for improving the classroom environment. During these meetings, the head teacher will also share the findings of the class observation reports from external evaluators. Apart from these monthly meetings, the head teacher will also hold staff meetings each trimester specifically for the purpose of sharing her own summary reports with the teachers.

Resource center level

The discussions each RP has with the head teachers and individual teachers being supported by her are important channels of feedback at the RC level. Insights obtained through these discussions are, to a large extent, incorporated in the summary reports for the individual schools and for the all the schools supported by the resource center. This information is very relevant for planning the reallocation of resources and indentifying areas where the RC should increase its emphasis.

In addition, it is also important that regular quarterly meetings be held among the resource persons in each district. These meetings will provide an opportunity for the RPs to share their experiences, learn from each other, refine their school-support plans, and apprise the DEO of the state of the teaching-learning environment in the district. These meetings must be organized by the DEO. School supervisors can potentially be delegated the responsibility of organizing and conducting these meetings. The district education office will actively participate in the meetings to provide relevant suggestions and support to the RPs. Trainers from the relevant ETC will also participate in these meetings at least twice a year both for providing inputs and for gaining a better understanding of training needs.

District level

The main feedback channels to the district education office are the RP reports and the quarterly RP meetings organized by the DEO. The nature and relevance of the RP meetings has been discussed in the previous subsection. In addition, the school supervisor should also make field visits to a random selection of schools each quarter to observe the classroom process firsthand.

ETC level

As discussed earlier, while role of the ETCs under SSR is not entirely clear, we can expect that supporting the APs and RPs and devising training packages will be a major part of their work. The feedback channels through which information relevant to these tasks reaches the ETC are field visits focused on classroom observation, district reports from the DEOs, RP reports, and RP meetings attended by ETC trainers. In addition, the ETC can get relevant feedback on their training packages during and immediately after they conduct the training of APs, RPs and SSs. The ETC can give relevant feedback to the RPs and SSs during the RP meetings and by sharing their bi-annual reports.

Central (NCED) level

Recall that a comprehensive annual national level report based on the data collected from the M & E system is a key output of the M & E system. The various sources of information required for preparing this output are the primary channels through which NCED can receive

feedback relevant for planning purposes in general and for reallocating training resources properly across geographical regions and training areas.

Use of TMIS

The discussion above makes it clear that the TMIS is a key component of the proposed M & E system. A rudimentary TMIS has already been developed by NCED and has been integrated into the government's EMIS as a distinct module.[24] The current version of the TMIS software/database, however, only includes background information on individual teachers. It does not have provisions for entering information on the classroom performance of these teachers.[25]

In order to make the TMIS useful for M & E purposes, it must be enhanced to allow the entry of (i) teaching performance information recorded in the individual classroom observation forms and (ii) information on the teaching environment faced by the individual teacher. It is also important that information on how individual teachers performed in the teacher training programs (i.e., their training test scores) be recorded in the system. Analyses of the teaching performance information entered in the TMIS will, as discussed earlier, enable the various actors involved in the teacher training and supervision process to make informed decisions and plans. While statistical analyses of raw TMIS data will require special expertise, the TMIS software should be designed to quickly generate some simple graphs and tables that can be readily produced and understood by policymakers, DEO and NCED/ETC staff, and school officials.

[24] In the past, the EMIS database only included school-level information. With the addition of the TMIS module, the new EMIS database now includes information on individual teachers as well.

[25] These limitations were also noted by the M & E specialist for TEP in 2006 (Jalil 2006).

It was suggested in Section 5.7 that, eventually, the RP should be responsible for entering the teaching evaluation information in the TMIS database. This decentralized approach to adding teacher information to the TMIS database will require the TMIS system to be accessible through a computer network. At the same time, it will also require a sound IT security system to prevent abuse through illegal access. In the short run, the responsibility of entering the classroom observation data in the TMIS can be delegated to the DEO.

Conclusions

The primary objective of the NCED teacher training programs is to enhance the quality of public education in Nepal by raising the quality of teaching in the classroom. Guided by this objective, the monitoring and evaluation framework proposed in this report puts the teacher and the classroom process at the center of the M & E process. Thus regular class observation and feedback to teachers feature very prominently in this M & E framework. Furthermore, this framework requires the active participation of teachers in the M & E process. It proposes to involve teachers in the development of standardized M & E tools, in the customization of tools at the schools level, in the class observation process, and in the data analysis and feedback process.

In this framework, the M & E process is as much a teacher support mechanism as it is a channel for providing relevant information to managers, administrators and trainers. Teachers, head teachers, and RPs are the primary monitors and evaluators of classroom teaching in this framework. Providing constructive feedback to the teacher being evaluated is a key responsibility of these monitors. The RP serves as the main external evaluator of the classroom process and is also responsible for preparing reports that will serve as valuable inputs to the DEO and NCED agencies for modifying/enhancing their programs and training packages.

The TMIS software/database is an integral part of the propose M & E system. Apart from information on the backgrounds of teachers, the TMIS database will also store teaching performance data for individual teachers collected by the RPs. Ultimately, the RPs will be responsible for entering the teacher performance data in the TMIS.

Clearly, an M & E system based on the proposed framework will require teachers and relevant personnel at the various levels of the education system to allocate some of their time to M & E activities on a regular basis. It will also require these personnel to be well trained in monitoring and evaluating the classroom process, and providing feedback to the teachers. Listed below are some recommendations related to these and other issues that will need to be tackled during the finalization of the M & E system.

- As the RPs are the primary external evaluators of classroom teaching, it is essential that their overall responsibilities be redefined so that they can spend the required time on the M & E tasks discussed in this framework. In particular, the RPs will not be able to fulfill their responsibilities if the number of schools supported by each RP is not reduced substantially. A practical formula for determining the number of schools per RP needs to be developed.

- The RPs and SSs must receive training in all areas related to the M & E process. They need to be well trained in M & E tools development, conducting class observation, providing feedback to teachers, using the TMIS system, and preparing M & E reports.

- Individual teachers and head teachers must also receive proper training in M & E tools development, conducting class observation, and providing feedback to their peers. Currently, trainees enrolled in teacher training programs offered by APs receive very little hands on experience in these areas. The existing training packages need to modify accordingly. As for teachers already in the system, NCED and its agencies will need to take responsibility for training them properly.

- The research capability of ETCs must be developed further. The staff at individual ETCs must be able to a) perform basic analyzes of TMIS data, b) synthesize information obtained from field observations, and RP and DEO reports, and (iii) prepare reports based on this information. Such report will not only aid the planning and decision making process, but will also be useful for revising training packages and providing training to RPs and SSs in classroom observation and report preparation.

- This framework requires the head teacher to play a key role in the M & E process. Given that the head teacher is, in general, overloaded with administrative and teaching responsibilities, it will be difficult for her to participate adequately in the M & E process unless she is relieved of some of these responsibilities. In practice, it will also be necessary to designate a teacher to co-ordinate the M & E process within the school. This designated point person can also be made responsible for properly filing evaluations, reviewing evaluations, making presentations, and running discussions.

- While NCED and its agencies are responsible for training teachers, the proposed framework makes RPs and teachers the primary evaluators and monitors of the classroom process. It is, thus, important for the NCED agencies to have a reliable channel of communication with the DEO, RPs, SSs and teachers. The ETCs, in particular, must have direct access to copies of reports prepared by the RPs and SSs, and ETC personnel should regularly participate in the RP meetings.

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Appendix 1: Classroom observation form for trained teachers, NCED form no. 13

शै. ज. वि. के. फाराम नं. १३

तालिम प्राप्त शिक्षकको कक्षा अवलोकन फाराम

१. विद्यालयको नाम र ठेगाना : .....

२. शिक्षकको नाम र ठेगाना : .....

३. जात : दलित ☐ जनजाति ☐ अन्य ☐

४. लिङ्ग : पुरूष ☐ महिला ☐

५ शिक्षण अनुभव : ..... वर्ष ६. शैक्षिक योग्यता :

७. तालिम (किसिम र अवधि)

क) .....महिने सेवाकालीन तालिम (..... तह ..... चरण)

ख) .....महिने पूर्वसेवाकालीन तालिम (..... तह ..... सेमेष्टर)

ग) ..... महिने ..... तालिम (..... तह ..... मोडुल)

८. अवलोकन गरेको कक्षा.....

९. शिक्षकले कक्षामा पठनपाठनमा बिताएको समय .....मिनेट

१०. अध्यापन विषय : .....

११. पाठको नाम :

१२. पाठको उद्देश्य :

१३. कक्षामा भर्ना भएका विद्यार्थी सङ्ख्या छात्र ☐ छात्रा ☐ जम्मा ☐

१४. कक्षामा आजको उपस्थिति छात्र ☐ छात्रा ☐ जम्मा ☐

१५. शिक्षकको कक्षा अवलोकन गरी देहायको रेटिङ स्केलको आधारमा सम्बन्धित कोठामा चिन्ह (✓) लगाउनुहोस्

५. धेरै राम्रो ४. राम्रो ३. सन्तोषजनक २. कमजोर १. नभएको

अवलोकनको क्षेत्र	क्रियाकलाप	५	४	३	२	१	कैफियत
पूर्वतयारी	१. योजनाको निर्माण						
	२. शिक्षण विधिको छनौट						
	३. शैक्षिक सामग्रीको तयारी						
	४. कक्षाकोठाको व्यवस्थापन						
	५. सन्दर्भ सामग्रीको व्यवस्था						
सुरूआत	६. ठीक समयमा कक्षाको सुरूआत						
	७. पाठप्रतिको उत्प्रेरणा जगाइएको						
	८. पुनरावलोकन						
प्रस्तुतीकरण	**क) विषयवस्तु**						
	९. विषयवस्तुको प्रस्तुति						
	१०. प्रस्तुतीकरणमा क्रमिकता						
	११. धारणाको स्पष्टता						
	ख) शिक्षण विधि, तरिका तथा प्रस्तुतीकरण सीप						
	१२. विधि प्रयोग						
	१३. विधिको उपयुक्तता						
	१४. शिक्षण विधि र तरिकामा विविधता						
	१५. विद्यार्थीलाई जिज्ञासा राख्ने अवसर						
	१६. जिज्ञासाको समाधान गर्न विद्यार्थीको प्रयोग						
	१७. शिक्षक र विद्यार्थी क्रियाकलापको समय अनुपात						
	१८. क्रियाकलापमा विद्यार्थीको सहभागिता						
	१९. अशक्त र सिकाइ कमजोर भएकालाई सहयोग						
	२०. क्रियाकलाप र समय सीमा						
	२१. विषयवस्तुको प्रस्तुतिमा रोचकता						
	२२. लैङ्गिक समानताका आधारमा व्यवस्थापन र शिक्षण						
	२३. जात/जातिगत विविधताको व्यवस्थापन र शिक्षण						
	२४. हाउभाउ						
	२५. बोलीमा प्रष्टता						
	ग) साधनस्रोत/सामग्री						
	२६. प्रयोग भएका चित्रको उपयुक्तता						
	२७. सामग्रीको प्रयोगमा विद्यार्थीको सङ्लग्नता						
	२८. शिक्षकद्वारा निर्मित सामग्रीको प्रयोग						
	२९. विद्यार्थीद्वारा निर्मित सामग्रीको प्रयोग						
	३०. सामग्रीको सान्दर्भिकता						
	३१. स्थानीय सामग्रीको प्रयोग						
	घ) मूल्याङ्कन						
	३२. शिक्षण योजनाअनुसार विद्यार्थीको सिकाइ उपलब्धिको लेखाजोखा						
	३३. गृहकार्य परीक्षणको व्यवस्था						
	३४. प्रोत्साहन/सकारात्मक पृष्ठपोषणको प्रयोग						
	३५. उपलब्धिको लेखाजोखा गर्दा प्रयोग गरिएका साधनहरूको उपयुक्तता						
निष्कर्ष	३६. पाठको साराशं प्रस्तुति						

अवलोकनको क्षेत्र	ीक्रियाकलाप	५	४	३	२	१	कैफियत
	३७. विद्यार्थीलाई गृहकार्यको व्यवस्था						
	३८. कक्षाको रोचक अन्त्य						

१६. कक्षा अवलोकन गर्दा पाइएका उल्लेख्य कुराहरू :

१७. कक्षा अवलोकन गर्दा पाइएका सुधार्नैपर्ने कुराहरू :

१८. पृष्ठपोषणमा छलफल गरिएका विषयवस्तुहरू :

१९. पृष्ठपोषण पछि शिक्षकको प्रतिक्रिया/प्रतिवद्धता :

२०. अवलोकन कर्ताको राय सुझाव

अवलोकन कर्ताको नाम :
हस्ताक्षर :
मिति :

Appendix 2: Peer evaluation form, form no. 20

अनुसूची - २०

सहपाठी / कक्षाअवलोकन फारम

सहपाठी शिक्षकको नाम :

अवलोकन मिति : कक्षा :

विषय : पाठ्यवस्तु पाठशीर्षक :

पूर्णाङ्क : ५

		छैन	छ भने		
क	**कक्षाव्यवस्थापन तथा कक्षावातावरण** अवलो**कन**		न्यून	मध्यम	उत्तम
१	शिक्षक विद्यार्थीबीचमा सहयोगात्मक वातावरण				
२	क्रियाकलाप सञ्चालनका लागि उपयुक्त वातावरण तयार गरिएको				
३	शिक्षक सकारात्मक र मैत्रीपूर्ण				
४	सबैले रमाइलो मानिरहेका				
५	विद्यार्थी-विद्यार्थीबीच सहयोगात्मक वातावरण				
ख	शिक्षक-क्रियाकलाप अवलोकन				
१	सबै विद्यार्थीलाई समान ध्यान र अवसर दिइएको				
२	विद्यार्थीलाई प्रश्न गर्ने अवसर दिइएको				
३	विद्यार्थीलाई आफ्ना कुरा भन्न दिइएको				
४	थप सहयोग चाहिने विद्यार्थीलाई मदत गरिएको				
५	विद्यार्थीलाई पनि कामको जिम्मेवारी दिइएको				
६	विद्यार्थीको क्षमताअनुसारका क्रियाकलाप गरिएको				
७	शिक्षकको भाषा तथा बोलीको गति विद्यार्थीको स्तरअनुसार				
८	विद्यार्थीहरूलाई उनीहरूको नामले सम्बोधन भएको				
९	सबै विद्यार्थीहरूमा दृष्टि पुऱ्याएको				
१०	शैक्षणिक पाटीमा स्पष्टसँग लेखिएको				
११	हाउभाउ र अनुहारको अभिव्यक्ति सान्दर्भिक				
१२	शिक्षक कक्षामा विभिन्न स्थानमा पुगेको ।				
ग	क्रियाकलाप सञ्चालन				
१	शिक्षकसँग शैक्षिकसामग्री भएको र प्रयोग गरेको				
२	पाठको थालनी उपयुक्त ढङ्गबाट भएको				
३	पाठ्यपुस्तकको प्रयोग भएको				
४	शिक्षकलाई विषयवस्तुको राम्रो ज्ञान				
५	क्रियाकलापमा विविधता				
६	हतार नगरी एक क्रियाकलापबाट अर्को क्रियाकलापमा उपयुक्त गतिमा अघि बढ्ने काम भएको				
७	प्रश्नहरू स्पष्टसँग र एकपटकमा एउटा सोधिएको				
८	प्रश्न समूहमा राखेपछि व्यक्ति तोकिएको				
९	गलतउत्तर आउने, अधुरो उत्तर आउने र उत्तर नआउने अवस्थामा पृष्ठपोषण दिइएको ९उचयदष्लन ।भभमदवअप० ।				
१०	सही जवाफ सबैले सुन्ने गरी दोहोऱ्याइएको				
११	उपयुक्त ढङ्गले पाठ समापन गरिएको				
घ	विद्यार्थी क्रियाकलाप अवलोकन				
१	विद्यार्थीले पाठप्रति रुचि राखेको				
२	विद्यार्थीले शैक्षिक सामग्री प्रयोग गर्न र शैक्षणिकपाटीमा लेख्न पाएको				
३	शिक्षकको निर्देशन ध्यान दिएर सुनेको				
४	सबै विद्यार्थी सक्रिय भएर क्रियाकलापमा जुटेको				
५	विद्यार्थीहरूले प्रश्न सोधी, जिज्ञासा राखेको				
६	विद्यार्थीहरूले अन्य साथीहरूको कुरा सुन्ने र प्रतिक्रिया व्यक्त गर्ने गरेको				
७	एकअर्कालाई सहयोग गर्ने गरेको				

अन्य केही भए

.....

सहजकर्ताको हस्ताक्षर

Appendix 3: Facilitator/instructor classroom observation form, form no. 21

अनुसूची - २१

कक्षाअवलोकन फारम (सहजकर्ता/प्रशिक्षक)

नाम ..... मिति : ..... विद्यार्थी सङ्ख्या :.....

पाठ-शीर्षक :..... समय :.....

कक्षाअवलोकन पटक- पहिलो / दोस्रो /तेस्रो /चौथो / पाँचौं रेजा (✓ चिन्ह लगाउने ।)

			स्तर		
		उत्तम	मध्यम	निम्न	सुझाव र टिप्पणी
१	शिक्षकका गुण (क) पेसागत व्यक्तित्व (ख) लेखन तथा प्रस्तुतीकरण				
२	तयारी (क) उद्देश्यहरू (ख) परिचय				
३	शिक्षण/सिकाइ तरिका (क) सञ्चार (ख) प्रश्नोत्तर (ग) विद्यार्थीहरूमा उत्साह / प्रेरणा (घ) पुनर्बल (ङ) निष्कर्ष				
४	विद्यार्थी सहभागिता (क) अन्तर्क्रिया (ख) व्यक्तिगत सक्रियता (ग) समूह-क्रियाकलाप				
५	शैक्षिकसामग्री (क) पाठ्यपुस्तक/(कार्यविधि) पाठ पत्रको प्रयोग (ख) उपयुक्त शैक्षिकसामग्रीको प्रयोग				
६	विद्यार्थी मूल्याङ्कन				

अवलोकनकर्ताका हस्ताक्षर

नाम : ठेगाना :

विशेष सुझाव र टिप्पणी :